

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

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February 2022

DeFiPP Working Paper 2022-02

# Where 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. We distinguish between municipalities in which ministers held office before being appointed to the government, and those where they lived as children. Exploiting ministers' entries into and exits from the government, we show that cities where a minister was mayor receive 30% more investment subsidies when the politician they are linked to enters into the government, and a similar size decrease when the minister leaves. We do not find these outcomes for cities that ministers lived in as children.

**KEYWORDS:** Local favoritism, distributive politics, political connections, personal connections.

**JEL CLASSIFICATION:** D72, D73, H50, H77.

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\*This paper was previously circulated under the titles “What motivates French pork: Political career concerns or private connections?” and “The returns from private and political connections: New evidence from French municipalities”. We greatly appreciate comments and suggestions from François Bourguignon, Clément de Chaisemartin, Nicolas Gavoille, Sonia Paty, Albert Solé-Ollé and Ekaterina Zhuravskaya, and from multiple seminar and conference audiences. This work was supported by the French National Research Agency (grant ANR-17-EURE-0020), by the Excellence Initiative of Aix-Marseille University – A\*MIDEX, by the Région Provence-Alpes-Côte d’Azur (APR-EX 2016 : POCF) and by the Fonds Wetenschappelijk Onderzoek – Vlaanderen (FWO) and the Fonds de la Recherche Scientifique – FNRS under EOS Project O020918F (EOS ID 30784531). Marc Sangnier thanks Clément Barbry and Paul Steffen for research assistance.

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# 1 Introduction

The literature on distributive politics has uncovered much evidence of *pork-barrelling*, i.e. situations in which high-level politicians influence the allocation of resources to favour people or places they cherish, at the expense of efficiency or policy criteria. The 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' early political careers (e.g., districts of election in parliamentary systems). Both types of connections are found to matter in different contexts. While different connections could relate to different motivations and have different effects, to date, research has only looked at one type of connection at a time, leaving open the question of their relative importance 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 that contains 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 cities 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. We use the difference-in-differences methodology of [de Chaisemartin and D'Haultfoeuille \(2021c\)](#) that makes it possible to estimate several treatment effects in a staggered design.

We find that cities 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 cities 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.

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.

This paper's findings contribute to two strands of the literature. The first is the literature that offers evidence of pork-barrel practices via connections to individual politicians.<sup>1</sup> This literature typically studies one type of connection to high-level politicians at a time. For instance, [Carozzi and Repetto \(2016\)](#) and [Mattos et al. \(2021\)](#) study birthplaces of members of parliament in Italy and Brazil, 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 Italy, 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' ancestries. Cross-country works by [Hodler and Raschky \(2014\)](#), [Gehring and Schneider](#)

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<sup>1</sup>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. \(2018\)](#).

(2018) or [Bommer et al. \(2019\)](#) 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.<sup>2</sup> 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 provide evidence that career-related connections are more important than childhood connections in explaining distortions in the allocation of funds that can arise from the behaviour of top-level politicians.

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 office. Our results indicate that ties between members of a government and lower administrative tiers also matter for the allocation of resources.

Several additional results also offer new insights about the mechanisms at play in pork-barrelling. First, we show that targeting is accurate, as neighbouring municipalities do not benefit from the additional resources that flow to cities 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

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<sup>2</sup>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.

the central government budget.

All in all, reported results are consistent with ministers rewarding supporters of their early political careers. Such behaviour matches the mechanisms of a delayed reward of past support, as well as anticipated reward of future support in case ministers plan to run for election in the same city where they once held office. Yet, only a few ministers actually run again as mayor once they have left the government. This suggests that future election concerns are not likely to play an important role. Our results can thus be interpreted as either delayed reward for past support or as rough favouritism toward cities that were important for the early career of top-level politicians.

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.<sup>3,4</sup> We collected

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<sup>3</sup>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.

<sup>4</sup>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.

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.

## 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 a majority 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. As highlighted by Peveri and Sangnier (2021), 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 cities in which ministers



were born or attended high school.<sup>5,6</sup> We exclude France’s three largest cities (Paris, Marseilles 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.

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.<sup>7</sup> Our final dataset comprises 341 politicians. For convenience, we indistinctly refer to this group as members of the government.

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 cities. 61 cities satisfy both criteria, either simultaneously or not, over the full period. Among politicians who were mayors, only 19.3% held positions in a city that is also classified as their childhood city.

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<sup>5</sup>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 where mobility is possible. In addition, hospitals are frequently located in nearby cities 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 city 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.

<sup>6</sup>Because of the geographical structure of French higher education, which is highly concentrated in a few large cities, 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.

<sup>7</sup>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.

## 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 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 A2(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.<sup>8</sup> To benefit from these investment grants, municipalities must submit a proposal for a specific project. Grant decisions are typically discretionary, as there is no pre-defined formula or explicit criteria. Once allocated, grants 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.<sup>9</sup>

The solid line in Online Appendix Figure A3 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 cities 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. Proper identification of the effect of links to the government calls for a difference-

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<sup>8</sup>National agencies include for example the *Agence nationale de l'environnement et de la maîtrise de l'énergie*, 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).

<sup>9</sup>We cannot tell from the data which central state entity paid grants, nor the projects for which grants are allocated. Information about failed grant applications by municipalities cannot be accessed.

in-differences approach that accounts for municipality and time fixed effects and allows for heterogeneous and dynamic treatment effects. In such a setting, coefficients of interest cannot be robustly estimated from a standard two-way fixed effects regression as documented by [de Chaisemartin and D’Haultfoeuille \(2020\)](#), [Borusyak et al. \(2021\)](#), [Callaway and Sant’Anna \(2021\)](#), [Goodman-Bacon \(2021\)](#), [Sun and Abraham \(2021\)](#) and [Athey and Imbens \(2022\)](#).<sup>10</sup> 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 stop when the politician to which a municipality is linked exits the government.

We use the approach by [de Chaisemartin and D’Haultfoeuille \(2021c\)](#) that builds on [de Chaisemartin and D’Haultfoeuille \(2020, 2021a\)](#) and [Callaway and Sant’Anna \(2021\)](#) to overcome the above-mentioned challenges. Let us label 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—as  $A$  and  $B$ . We estimate the effect of treatment  $A$  ( $B$ ) switching on using municipalities that never receive either treatment and municipality  $\times$  year observations such that a municipality will receive or receives treatment  $A$  ( $B$ ) and has not received treatment  $B$  ( $A$ ). We then estimate the effect of treatment  $A$  ( $B$ ) switching off using municipality  $\times$  year observations such that a municipality receives or stopped receiving treatment  $A$  ( $B$ ) and has not received treatment  $B$  ( $A$ ).<sup>11</sup> We use the history of links since 1995 to assess whether a municipality has received either treatment.<sup>12</sup> The light grey distributions displayed in Online Appendix Figures [A2\(a\)](#) and [\(b\)](#) show the final number of observations

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<sup>10</sup>See also [de Chaisemartin and D’Haultfoeuille \(2021b\)](#) and [Freyaldenhoven et al. \(2021\)](#).

<sup>11</sup>Note that simultaneously receiving treatment  $A$  and  $B$  constitutes a third treatment. Conceptually, estimating this treatment’s effect would inform us about the substitutability or the complementarity of treatments  $A$  and  $B$ . The number of municipalities that receive both treatments at the same time is however too small for this effect to be estimated.

<sup>12</sup>Given that the accounting data used for estimations only start in 2002, this amounts to impose a period of at least 7 years during which a treated municipality had no link with members of the government.

that are used for the estimation of the treatments switching on.<sup>13</sup> We obtain clustered standard errors from 100 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 the paper’s main results. Robustness checks, falsification tests and sensitivity tests are presented next. Then, a heterogeneity analysis is introduced to tentatively inform about mechanisms at play. We finally wrap-up and interpret the different results.

### 3.1 Main results

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 cities in which a minister was mayor, or lived as child. As shown by the estimated coefficients displayed in the top panel of Table 1, cities 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 cities 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 cities where a minister was mayor, but not for ministers’ childhood cities.

Figures 5(a) and (b) help to visualize the dynamics of starting treatments. They show that the dynamic experienced by cities where a minister was mayor continues after the

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<sup>13</sup>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.

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 cities of ministers do not experience such a consistent increase in investment subsidies received from the central government.<sup>14</sup>

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 cities where a minister was mayor that follows a politician’s exit from the government is persistent. There is no drop for childhood cities of ministers. This is consistent with the lack of response for these municipalities when a politician they are linked to first entered the government.

The p-values of placebo tests that follow [de Chaisemartin and D’Haultfoeuille \(2021c\)](#), which are displayed in each part of Table 1, and the visual inspection of pre-treatment estimates of Figures 5 and 6, show that cities 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 cities 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 cities 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 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

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<sup>14</sup>As shown by Figure 5(b), the effects estimated for childhood cities 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 the effect estimated for more than four years in treatment.

spent different times in treatment until it stops. We next use this benchmark value to rescale the estimated effects of switching off the treatment.<sup>15</sup> 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 leaves the government.<sup>16</sup>

### 3.2 Robustness checks and falsification tests

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 cities of ministers. Second, we construct a variable equal to one if a municipality 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 intensive margin of the effects. As shown by estimated coefficients displayed in the right part of Table 2's top panel, cities 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 cities 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.

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<sup>15</sup>The end-of-treatment benchmark is  $\tilde{\mu} = \sum_{\tau} \mu_{\tau} s_{\tau}$  with  $\tau \in \{+1, +4 \text{ and more}\}$ , where  $\mu_{\tau}$  is the estimate at  $t + \tau$  of the treatment switching on in  $t$ , and  $s_{\tau}$  is the share of municipalities (in the share of treated municipalities used to estimate the effect of the treatment switching off) that spend  $\tau$  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  $x_{\Gamma}$  is the original estimated effect at  $t + \Gamma$  of switching off the treatment in  $t$ .

<sup>16</sup>Online Appendix Figure A4 is constructed using the same approach for childhood cities of ministers.

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 use French municipalities’ full [adjacency matrix](#) to identify neighbouring municipalities of treated cities.<sup>17</sup> The right middle panel of Table 2 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 city. This serves as a placebo test and suggests that benefits from links to the governments are precisely located.

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 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.<sup>18</sup> 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 the bottom panel of Table 2 suggest that these subsidies are not affected by municipalities’ links to members of the government.

By construction, the number of treated municipalities is quite small, so we test the

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<sup>17</sup>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.

<sup>18</sup>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.



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 [A5\(a\)–\(d\)](#) 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.<sup>19</sup> As shown in Online Appendix Figure [A6\(a\)](#), very small municipalities are over-represented among municipalities that never received any investment subsidy from the central government over the 2002–2017. 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 [A6\(b\)](#). 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. 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 [3](#), estimated treatment effects are only marginally modified by this sample restriction. Second, we construct entropy weights *à la* [Hainmueller \(2012\)](#) and [Hainmueller and Xu \(2013\)](#) such that the 2010 size distribution of linked municipalities mirrors that of municipalities that are never linked to a member of the government between 1995 and 2021. We use these weights to weight observations. The estimated treatment effects are shown in the top right panel of Table [3](#). Results hardly differ from previously reported estimates.

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

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<sup>19</sup>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 cities of future top-level politicians or because holding a mayor position in a large cities is associated with higher prestige and boosts a political career more.

to identify childhood cities 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 3 displays estimated treatment effects when using only information about birthplaces to identify childhood cities 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 3 report estimates obtained when using the estimation methodologies developed by Sun and Abraham (2021), Borusyak et al. (2021) and Callaway and Sant’Anna (2021).<sup>20</sup> While point estimates differ from those obtained using the methodology of de Chaisemartin and D’Haultfoeuille (2021c), all alternative methods lead to estimated treatment effects of similar magnitude and comparable statistical significance. Significant treatment effects are generally found for cities where a minister was mayor.<sup>21</sup> In contrast, all methods confirm that changes in subsidies are small and not statistically significant for childhood cities of ministers. All in all, estimates tabulated in Table 3 demonstrate that reported results are not strongly affected by estimation method.<sup>22</sup>

### 3.3 Heterogeneity analysis

Our results show that municipalities in which members of the government 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 in which government members lived as children do not experience this increase in subsidies. In this sub-section, we explore several

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<sup>20</sup>Sun and Abraham (2021), Borusyak et al. (2021) and Callaway and Sant’Anna (2021) do not provide explicit guidelines to deal with several treatments, nor with the estimation of a treatment switching off. We thus follow recommendations by de Chaisemartin and D’Haultfoeuille (2021c) 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.

<sup>21</sup>The major discrepancy between returned estimates is found when using the methodology by Borusyak et al. (2021) to estimate the treatment effect of switching off the treatment for cities where a minister was mayor. In this case, the treatment effect is smaller and less precisely estimated.

<sup>22</sup>See Online Appendix Figures A7, A8 and A9 for graphical representations of estimates obtained with the methodologies developed by Sun and Abraham (2021), Borusyak et al. (2021) and Callaway and Sant’Anna (2021), respectively.

dimensions along which variations in treatment effects could inform us about mechanisms operating in municipalities where politicians held mayoral positions before being appointed to the French government.

We first exploit the fact that 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.<sup>23</sup> As splitting the sample harms the precision of estimated coefficients, the top panel of Table 4 reports treatment effects averaged across the first two years after entry into and exit from the government of the politicians to which municipalities are linked, as well as the difference across the two groups.<sup>24</sup> We find no statistically significant difference in estimated effects across low- and high-rank ministers.

Second, we use official budget information about expenditures of each French ministry to sort ministries according to importance.<sup>25</sup> As shown by estimates displayed in the middle panel of Table 4, treatment effects seem to be larger for cities where a minister who serves in a small ministry was mayor. These differences are however not statistically significant at conventional levels, so no clear conclusion can be drawn.

Finally, we split ministries depending on whether their competences are considered kingly.<sup>26</sup>

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<sup>23</sup>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*. A ministry hosts one high-rank minister and 1.05 low-rank ministers on average. 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.

<sup>24</sup>Online Appendix Table A1 separately reports estimates for the first two years. These treatment effects are less precisely estimated and vary across time.

<sup>25</sup>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 too. 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.

<sup>26</sup>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*.

Estimated treatment effects slightly differ across groups, as shown in the bottom panel of Table 4. As with preceding splits, differences are however not statistically significant.

All in all, we find no evidence that treatment effects vary across the status or the importance of politicians. While this result might be driven by power issues linked with sample splits, it also suggests that the reported effects can be found for all types of positions in the government.

Another dimension along which differences in treatment effects could be informative is the political alignment of municipalities with the current administration. Politicians' incentives to target subsidies to the city where they were mayor could change if the municipality changes political orientation after they leave. Unfortunately, data do not offer sufficient variation along this dimension to convincingly distinguish between aligned and non-aligned municipalities.<sup>27, 28</sup>

### 3.4 Interpretation

We find that municipalities where members of the government served as mayors receive more central government subsidies during the time in government of the politician they are linked to. This finding is consistent with favouritism from politicians, as well as with municipalities being able to use privileged access to the government and acquiring better information about grant applications. In the latter case, accumulated knowledge by municipalities should *a priori* translate into persistent higher access to subsidies. A direct way to test for this mechanism could be to use cities' success rate in grant applications as a dependent variable.

Data about grant applications are however not available and cannot be retrieved. But, since

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<sup>27</sup>Out of the 135 cities in which members of the government were mayors, only 24 are not aligned, (i.e., of a political orientation that is different from the one of the government) by the time the politician they are linked to is a member of the government. This figure reduces to 16 for the 2002–2017 period and further drops to 11 when sample restrictions that are necessary for estimation are applied. It is thus not possible to accurately estimate treatment effects for aligned and non-aligned municipalities.

<sup>28</sup>Similarly, it is not possible to accurately estimate treatment effects for male and female politicians as only 7 municipalities could be used to estimate treatment effects that apply to municipalities where female members of the government were mayors. While female politicians still represent 35.2% of observed politicians, 81.7% of them did not serve as mayor in a municipality before entering government. In contrast, 58.7% of male politicians did.

investment subsidies that are received by a municipality decrease once the politician it is linked to exits the government, it is likely that the initial increase is driven by the ministers' role.

Lobbying from politicians in favour of selected municipalities can *a priori* occur via two mechanisms. First, politicians could use their discretionary decision power to allocate budgets they directly (via the ministry) or indirectly (via agencies supervised by a ministry) control. Second, politicians could use their influence within the central government. A way to distinguish between these two mechanisms would be to assess whether grants originate from a budget that is directly or indirectly controlled by the politician a municipality is linked to. Again, detailed data are not accessible and only total amounts received by municipalities can be retrieved. However, the fact that treatment effects do not vary across the status of ministers or the scope of ministries suggests that soft influence matters more than control of a budget.

All in all, reported results are consistent with ministers rewarding supporters of their early political career. This behaviour is consistent with a delayed reward for past support, as well as with anticipatory reward for future support if ministers plan to run for election in the same city where they once held office. To assess the plausibility of these interpretations, we use information about positions held by ministers and study their political occupation after they left the government. Figure [A10](#) displays the shares of (former) ministers who occupy any electoral mandate or a mayoral position for each year up to twenty years after leaving the central government. As much as 62.1% of ministers occupy some electoral position in the sixth year after their time in the government. However, only 8.2% of them are mayors. This figure is 12.6% for politicians who were mayors before being appointed to the government.<sup>29</sup> This shows illustrate that only a few ministers actually return as mayors in the municipality where they once held office. Anticipating a future municipal election is thus not likely to be

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<sup>29</sup>Still, as much as 100% of (former) ministers who were mayor before and after their term in central government, held that position in the same city as previously. This illustrates the strength of links between politicians and municipalities, at least for those return to mayoral positions.

the main explanation for the observed pork-barrelling as top-level politicians are more likely to occupy mandates other than municipal ones.<sup>30</sup>

## 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. Previous works have highlighted the role of both private and political connections. However, each contribution focuses on just one type of connection, making it unclear which connections and underlying motivations matter most. 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 childhood cities of members of the central government.

We use some additional evidence to investigate operating mechanisms. First, since the targeting in favour of municipalities where members of government were mayor does not seem to depend on the status of the politician in the government, nor on the size of the ministry's budget, the estimated increase in subsidies is likely to be the result of politicians' soft influence within the government rather than of formal control of public budgets. Second, members of the central government seem to reward past political support rather than to prepare for a future municipal election, since few ministers have a municipal term after their

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<sup>30</sup>Former ministers might still use cities where they held mayoral positions as beachheads to run for other local positions. 75% of the non-mayoral electoral positions they hold after their time in the government are actually located in the same administrative region as the city where they were mayors before being appointed to the government.

time in the central government.

Overall, our results highlight the key role of political motivations, rather than private attachment, to explain pork-barrel politics in this context. They suggest that ministers use their influence on the central government's subsidies to reward supporters of their early political careers.

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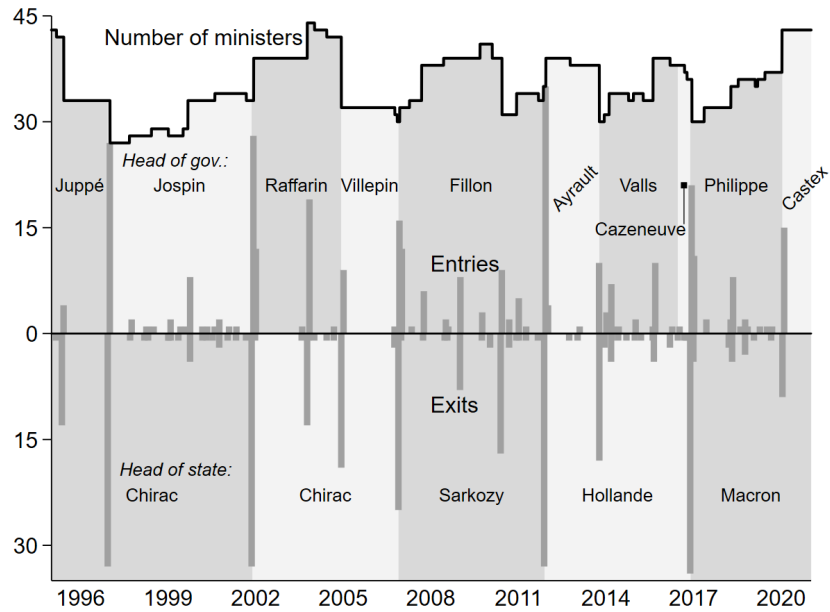
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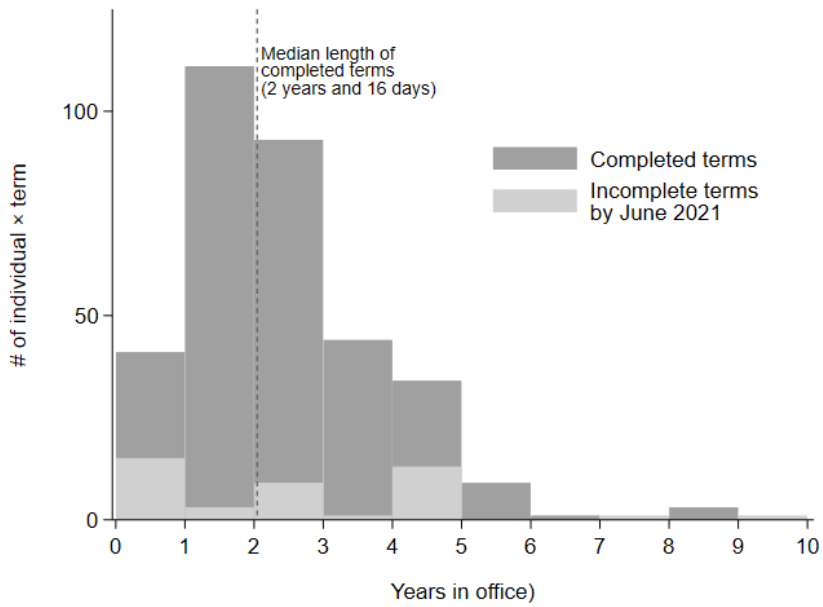
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Figure 1: Changes in the composition of the government.



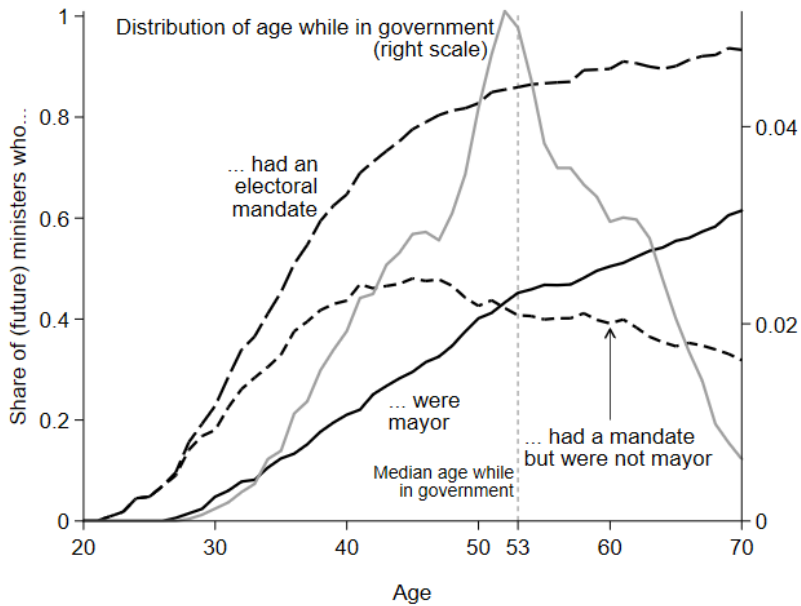
Daily number of members of the French government and monthly count of entries into and exits from the government constructed from the French government official [website](#) and [archives](#). Exits followed by re-entries within less than 30 days are ignored. In the upper part of the figure, shaded areas 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.



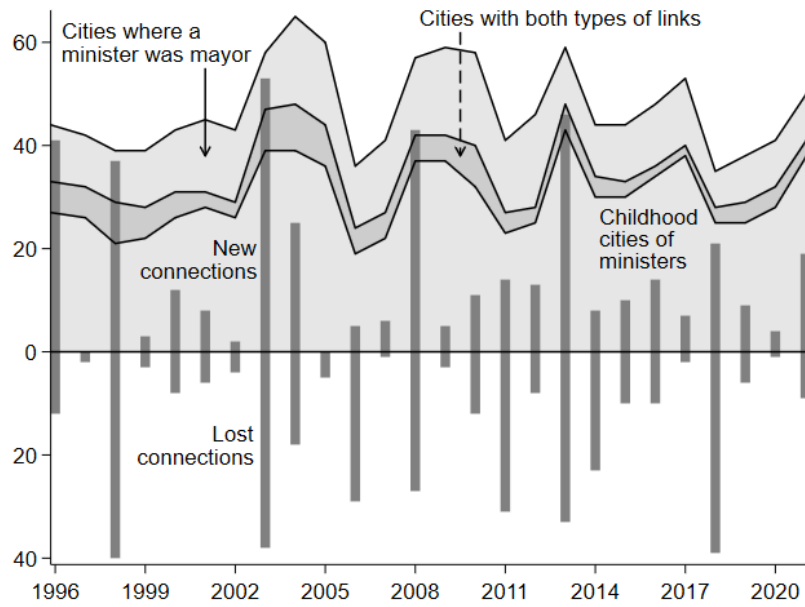
Term lengths binned in yearly intervals. Consecutive positions in the government in different responsibilities are counted as the same term. Two terms separated by 30 days or less are counted as a single term.

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



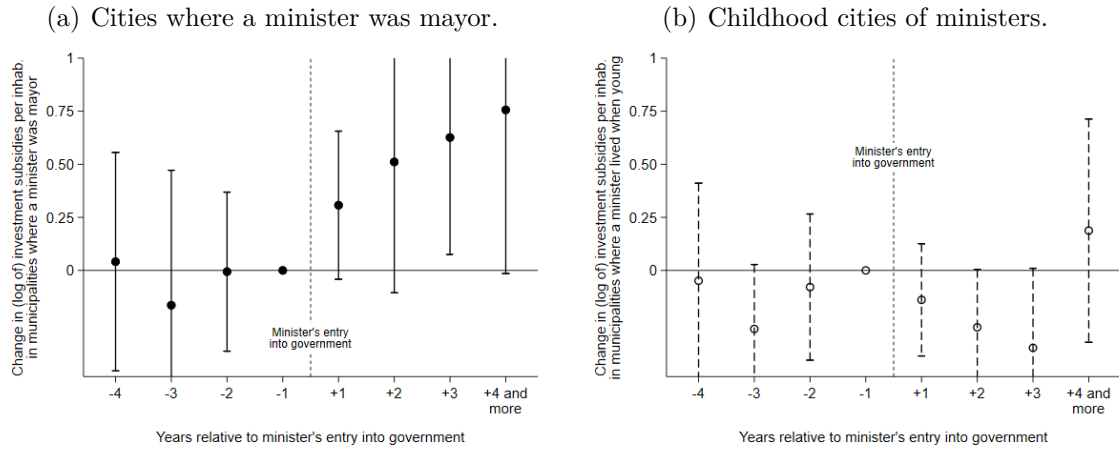
The distribution of age while in government is constructed using all completed terms in the government. Electoral mandates include all French electoral mandates.

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



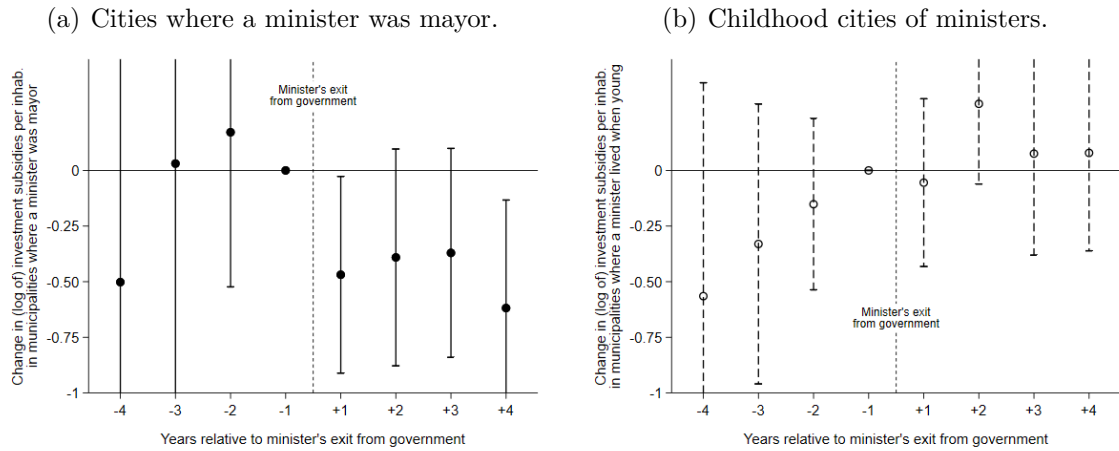
See the text for details about the identification of cities where a minister was mayor and of childhood cities of ministers, and for the detailed construction of connections to members of the current government in a given year. Upward and downward spikes count both types of connections. A connection 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 cities where a minister was mayor and by childhood cities of ministers following minister's entry into the government.



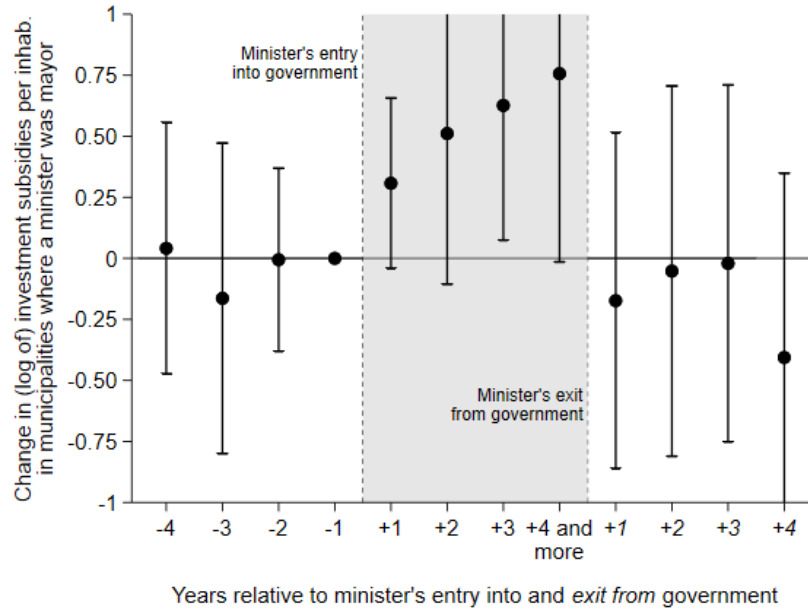
Treatment effects estimated using the methodology of [de Chaisemartin and D'Haultfœuille \(2021c\)](#). See the text for more details. 95% confidence intervals constructed from 100 bootstrap replications. The *+4 and more* treatment effect is constructed as the observation-weighted average of dynamic 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 cities where a minister was mayor and by childhood cities of ministers following minister's exit from the government.



Treatment effects estimated using the methodology of [de Chaisemartin and D'Haultfœuille \(2021c\)](#). See the text for more details. 95% confidence intervals constructed from 100 bootstrap replications. Bounds of some confidence intervals are truncated for representation reasons.

Figure 7: Changes in investment subsidies received by cities 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 cities where a minister was mayor and childhood cities of ministers following minister’s entry into and exit from the government.

Minister’s entry into government		
	Cities where a minister was mayor	Childhood cities of ministers
First year after entry into government	0.307 (0.178) [0.084]	-0.139 (0.135) [0.304]
P-value of placebos	0.901	0.231
# of switchers	48	93
Minister’s exit from government		
	Cities where a minister was mayor	Childhood cities of ministers
First year after exit from government	-0.469 (0.226) [0.038]	-0.055 (0.192) [0.776]
P-value of placebos	0.641	0.585
# of switchers	54	88

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’Haultfoeuille \(2021c\)](#). See the text for more details. Standard errors and p-values, calculated from 100 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 observations used to identify 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 cities where a minister was mayor and childhood cities of ministries following minister’s entry into and exit from the government: Robustness checks and falsification tests.

	Investment subsidies per inhabitant		Receiving investment subsidies	
	Cities where a minister was mayor	Childhood cities of ministers	Cities where a minister was mayor	Childhood cities of ministers
First year after entry into government	14.323 (6.874) [0.037]	-3.203 (2.159) [0.138]	0.082 (0.050) [0.102]	-0.013 (0.042) [0.758]
First year after exit from government	-14.948 (8.142) [0.066]	3.439 (2.742) [0.210]	-0.086 (0.048) [0.070]	-0.094 (0.044) [0.033]
	Uniform time without treatment		Neighbouring municipalities	
	Cities where a minister was mayor	Childhood cities of ministers	Cities where a minister was mayor	Childhood cities of ministers
First year after entry into government	0.285 (0.164) [0.081]	-0.119 (0.129) [0.357]	0.091 (0.093) [0.328]	-0.042 (0.059) [0.478]
First year after exit from government	-0.423 (0.212) [0.047]	-0.085 (0.218) [0.697]	-0.110 (0.107) [0.305]	0.115 (0.091) [0.207]
	Per inhab. global operating allocation (log of)		Per inhab. investment subsidies from other administrative tiers (log of)	
	Cities where a minister was mayor	Childhood cities of ministers	Cities where a minister was mayor	Childhood cities of ministers
First year after entry into government	-0.014 (0.011) [0.215]	-0.015 (0.008) [0.045]	0.288 (0.201) [0.152]	0.023 (0.121) [0.847]
First year after exit from government	-0.027 (0.020) [0.189]	-0.006 (0.013) [0.646]	0.088 (0.195) [0.652]	0.024 (0.188) [0.900]

Each cell reports estimates from a separate estimation. Treatment effects estimated using the methodology of [de Chaisemartin and D’Haultfoeuille \(2021c\)](#). See the text for more details. Standard errors and p-values, calculated from 100 bootstrap replications, between parentheses and brackets, respectively. 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, neighbouring municipalities of treated municipalities are considered as treated and actually treated municipalities are excluded from the sample. 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 cities where a minister was mayor and childhood cities of ministers following minister’s entry into and exit from the government: Accounting for differences in municipalities’ size, defining childhood cities as birthplaces of ministers and alternative estimation methods.

	Excluding municipalities that never receive subsidies		Population-balancing weights	
	Cities where a minister was mayor	Childhood cities of ministers	Cities where a minister was mayor	Childhood cities of ministers
First year after entry into government	0.307 (0.177) [0.084]	-0.144 (0.132) [0.277]	0.290 (0.170) [0.087]	-0.147 (0.129) [0.252]
First year after exit from government	-0.477 (0.234) [0.041]	-0.057 (0.206) [0.782]	-0.466 (0.203) [0.022]	-0.061 (0.201) [0.763]
	Birthplaces as childhood cities of ministers		Sun and Abraham (2021) treatment effects	
	Cities where a minister was mayor	Childhood cities of ministers	Cities where a minister was mayor	Childhood cities of ministers
First year after entry into government	0.254 (0.148) [0.087]	-0.193 (0.163) [0.235]	0.301 (0.165) [0.068]	-0.137 (0.118) [0.247]
First year after exit from government	-0.448 (0.218) [0.039]	-0.177 (0.183) [0.335]	-0.255 (0.126) [0.043]	0.022 (0.141) [0.874]
	Borusyak et al. (2021) treatment effects		Callaway and Sant’Anna (2021) treatment effects	
	Cities where a minister was mayor	Childhood cities of ministers	Cities where a minister was mayor	Childhood cities of ministers
First year after entry into government	0.473 (0.175) [0.007]	-0.042 (0.094) [0.658]	0.307 (0.169) [0.068]	-0.139 (0.120) [0.246]
First year after exit from government	-0.156 (0.125) [0.210]	0.028 (0.122) [0.816]	-0.263 (0.128) [0.040]	0.002 (0.143) [0.991]

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’Haultfoeuille \(2021c\)](#) 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’Haultfoeuille \(2021c\)](#) and using population-balancing weights *à la* [Hainmueller \(2012\)](#) in the top right panel. Treatment effects estimated using the methodology by [de Chaisemartin and D’Haultfoeuille \(2021c\)](#) and identifying childhood cities 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. \(2021\)](#) and [Callaway and Sant’Anna \(2021\)](#) in the middle right, bottom left and bottom right panels, respectively. 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.

Table 4: Changes in investment subsidies received by cities where a minister was mayor following minister’s entry into and exit from the government: Heterogeneity along ministers’ status.

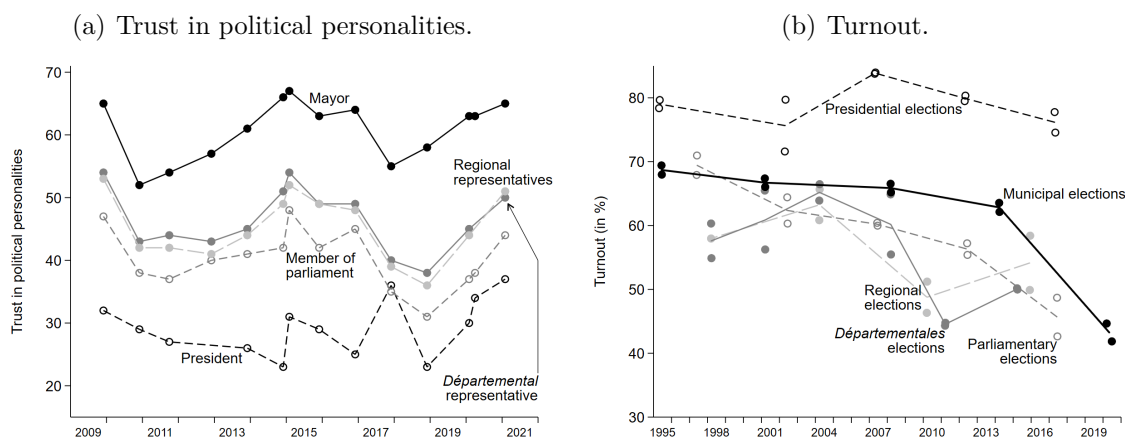
Cities where a minister was mayor: Low- and high-rank ministers			
	Low-rank minister	High-rank minister	Difference
First two years after entry into government	0.432 (0.189) (0.022)	0.459 (0.306) (0.133)	-0.027 (0.376) (0.942)
First two years after exit from government	-0.634 (0.226) (0.005)	-0.767 (0.238) (0.001)	0.132 (0.340) (0.698)
Cities where a minister was mayor: Small and large ministries			
	Small ministries	Large ministries	Difference
First two years after entry into government	0.668 (0.278) (0.016)	0.243 (0.170) (0.152)	0.425 (0.327) (0.193)
First two years after exit from government	-0.764 (0.258) (0.003)	-0.560 (0.210) (0.008)	-0.204 (0.339) (0.549)
Cities where a minister was mayor: Non-kingly and kingly ministries			
	Non-kingly ministries	Kingly ministries	Difference
First two years after entry into government	0.243 (0.231) (0.293)	0.418 (0.272) (0.125)	-0.175 (0.361) (0.628)
First two years after exit from government	-0.565 (0.315) (0.073)	-0.551 (0.289) (0.057)	-0.014 (0.343) (0.967)

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’Haultfoeuille \(2021c\)](#). See the text for more details. Standard errors and p-values, calculated from 100 bootstrap replications, between parentheses and brackets, respectively. See the text for the definition of the different groups. Reported estimates are the average of the treatment effects estimated in the first two years after the event. See Online Appendix Table A1 for the separate estimates of the treatment effect in the first two years.

## Online Appendix

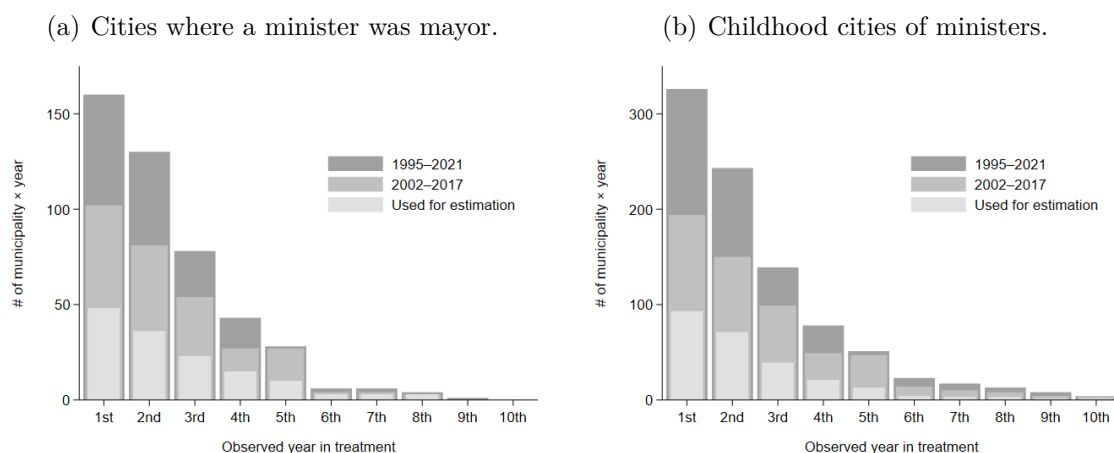
## A Supplementary tables and figures

Figure A1: Trust in political personalities and electoral turnout.



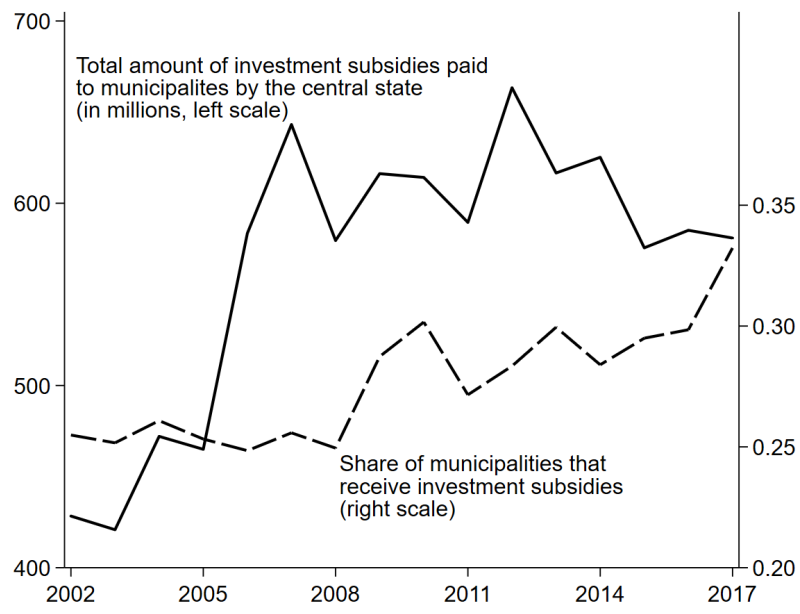
Figures and notes taken over from [Peveri and Sangnier \(2021\)](#). Sub-figure (a) uses the *Baromètre de la confiance politique* and plots, for each wave of the survey, the share of interviewees who report to have much or some trust in different political personalities. The question is framed as follows: “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: Distributions of observed years in treatments.



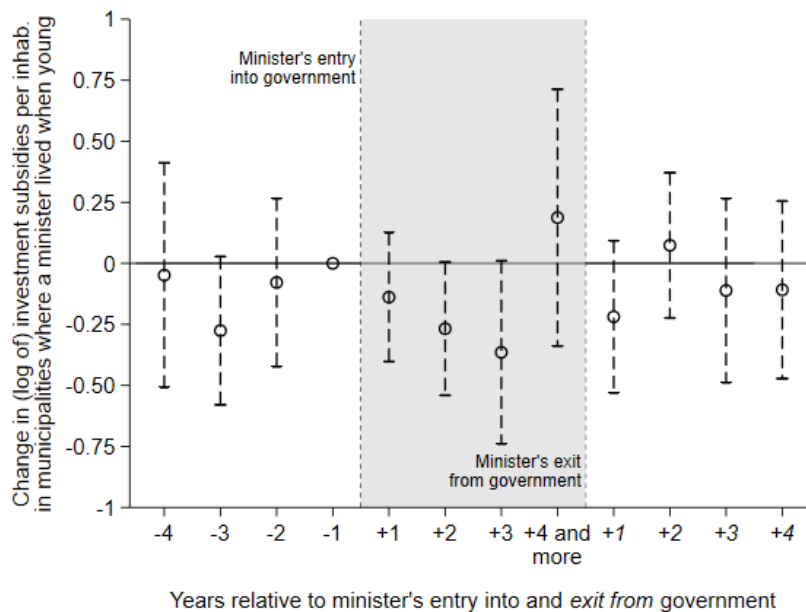
Dark grey bars use the 1995–2021 period. Medium grey bars use the 2002–2017 period (the period over which municipalities accounting data are available). Distributions constructed using all spells in the government over indicated time periods. A municipality can thus be observed more than once in the 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 A3: Total amount of investment subsidies paid by the central state to municipalities and share of beneficiary municipalities.



In 2000 constant euros.

Figure A4: Changes in investment subsidies received by childhood cities of ministers following minister's entry into and exit from the government, with rescaled exit-estimates.

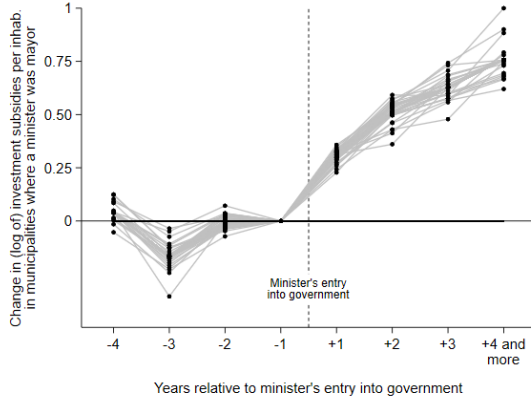


The left and middle parts of this figure are identical to the two parts of Figure 5(b). The right part of this figure displays rescaled treatment effects from the right part of Figure 6(b). See notes to Figures 5 and 6. See the text for details about the rescaling procedure.

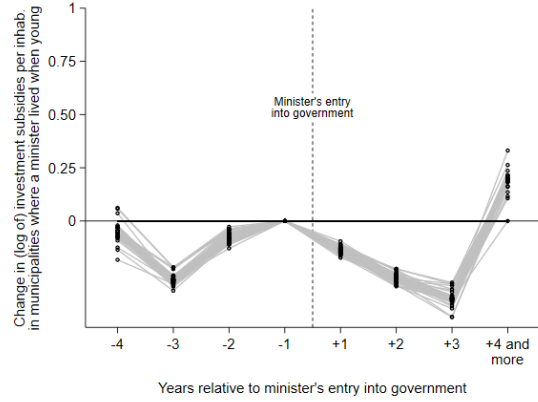


Figure A5: Changes in investment subsidies received by cities where a minister was mayor and by childhood cities of ministries following minister's entry into and exit from the government, removing municipalities one-by-one.

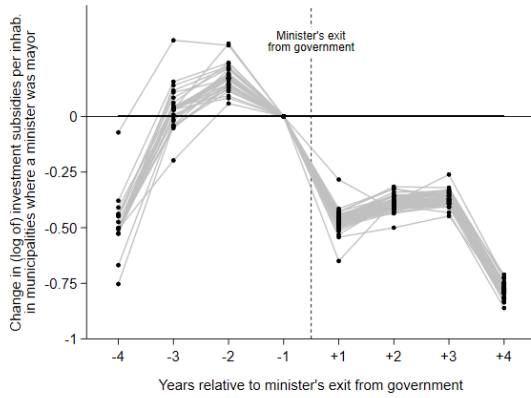
(a) Cities where a minister was mayor, treatment start.



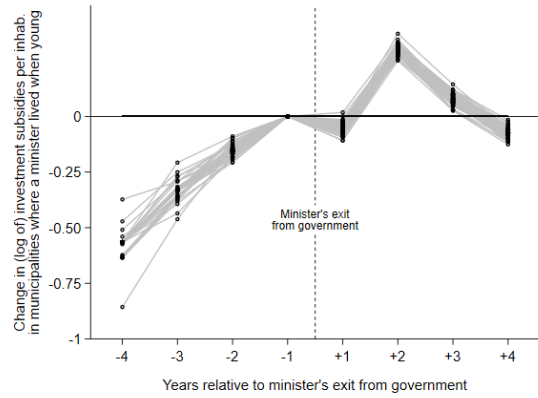
(b) Childhood cities of ministers, treatment start.



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



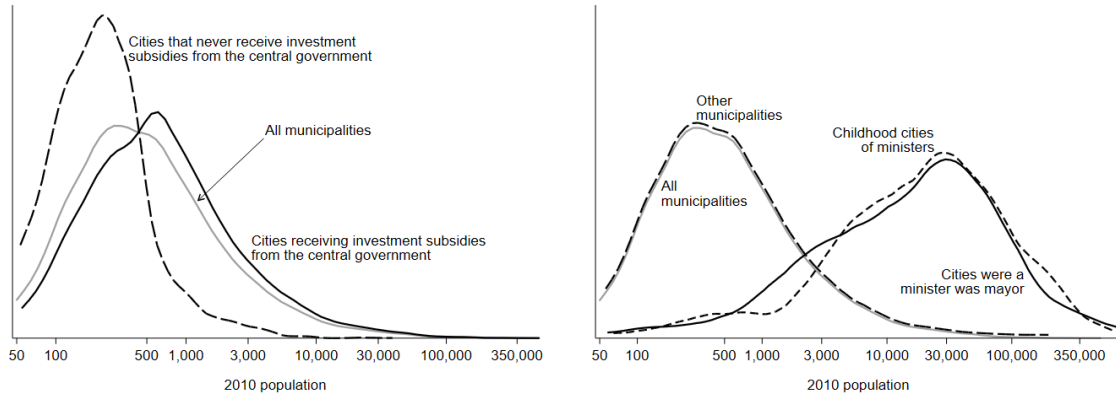
(d) Childhood cities of ministers, treatment stop.



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 A6: Distributions of municipalities' size depending on links to ministers and on receiving investments subsidies from the central government.

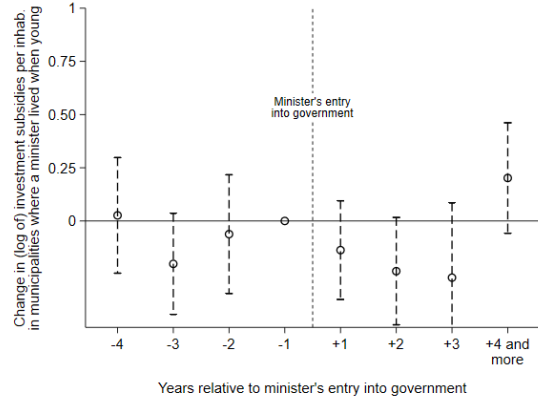
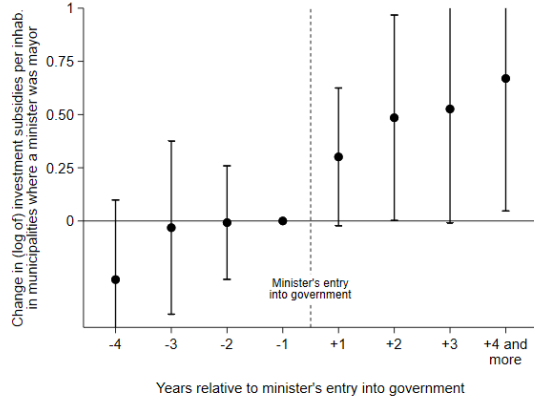
(a) Size distributions of municipalities depending on received subsidies. (b) Size distributions of municipalities depending on links to ministers.



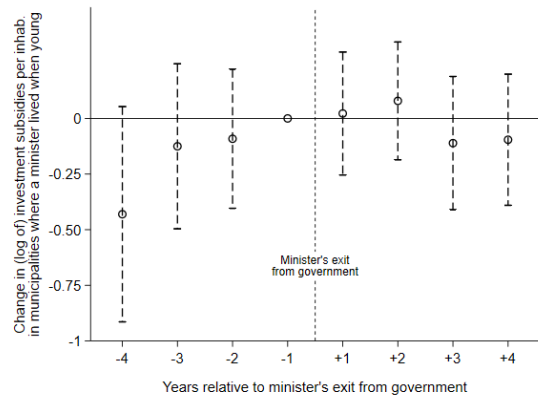
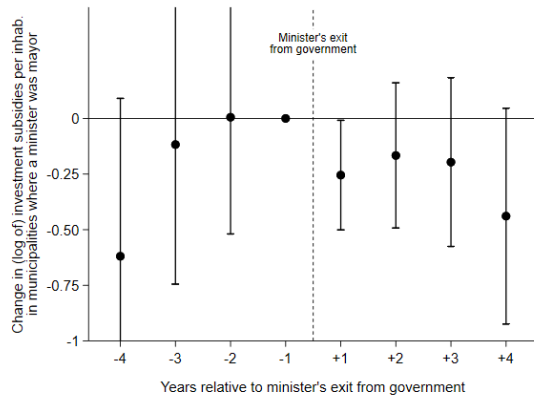
Distributions constructed using 2010 population. The full history of ministers' appointments over the 1995–2021 period is used to categorize municipalities depending on links to ministers. The full history of investment subsidies received from the central government over the 2002–2017 period is used to categorize municipalities depending on whether they ever received subsidies or not. On 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”

Figure A7: Changes in investment subsidies received by cities where a minister was mayor and by childhood cities of ministers following minister's entry into and exit from the government: Sun and Abraham (2021) treatment effects.

(a) Cities where a minister was mayor, treatment start. (b) Childhood cities of ministers, treatment start.



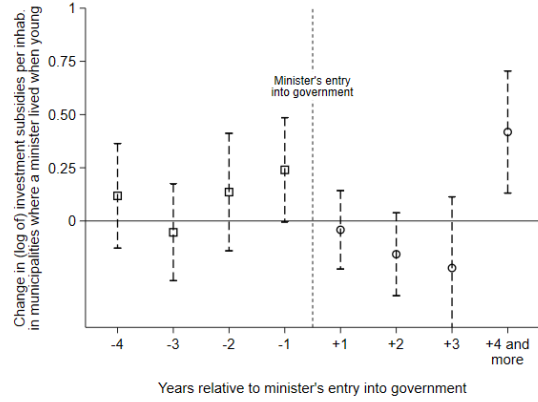
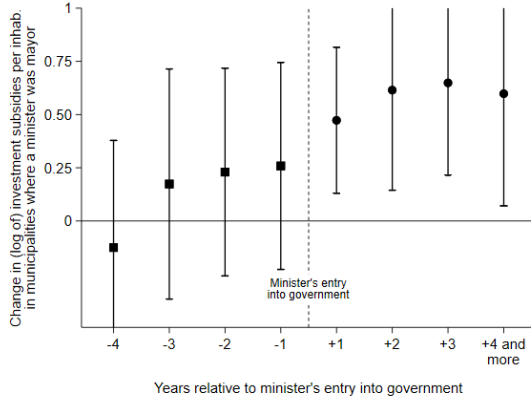
(c) Cities where a minister was mayor, treatment stop. (d) Childhood cities of ministers, treatment stop.



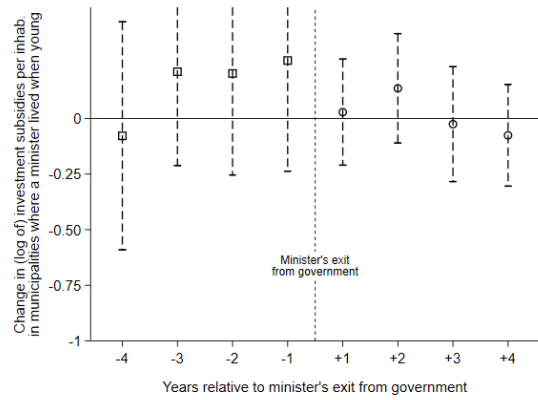
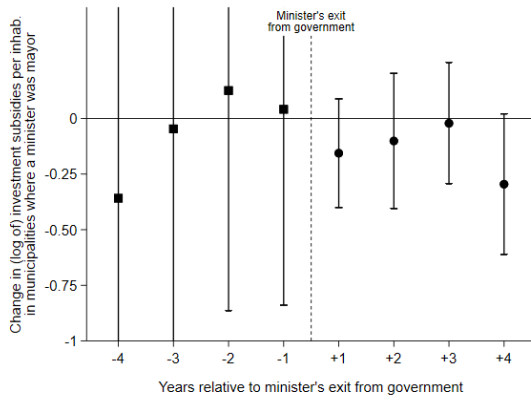
Treatment effects estimated using the methodology of Sun and Abraham (2021). 95% confidence intervals constructed standard errors clustered at the municipality level. The +4 and more treatment effect is constructed as the observation-weighted average of dynamic effects estimated for all years from  $t + 4$  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 A8: Changes in investment subsidies received by cities where a minister was mayor and by childhood cities of ministers following minister's entry into and exit from the government: [Borusyak et al. \(2021\)](#) treatment effects.

(a) Cities where a minister was mayor, treatment start. (b) Childhood cities of ministers, treatment start.



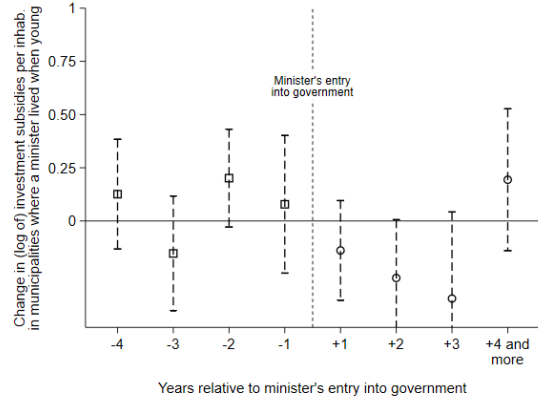
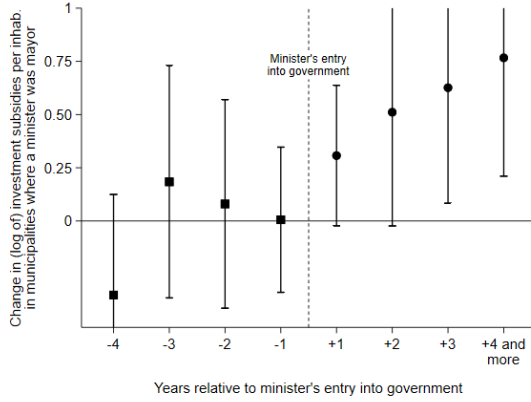
(c) Cities where a minister was mayor, treatment stop. (d) Childhood cities of ministers, treatment stop.



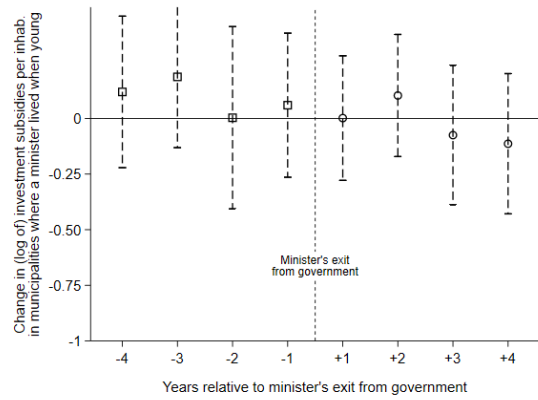
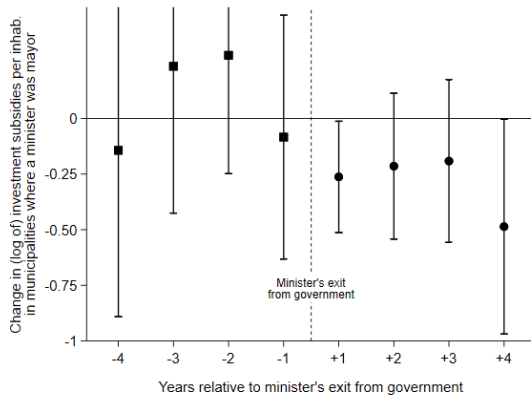
Treatment effects estimated using the methodology of [Borusyak et al. \(2021\)](#). 95% confidence intervals constructed standard errors clustered at the municipality level. The *+4 and more* treatment effect is constructed as the observation-weighted average of dynamic effects estimated for all years 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. Pre-treatment effects, signalled by square markers, test for changes in each pre-treatment period.

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

(a) Cities where a minister was mayor, treatment start. (b) Childhood cities of ministers, treatment start.

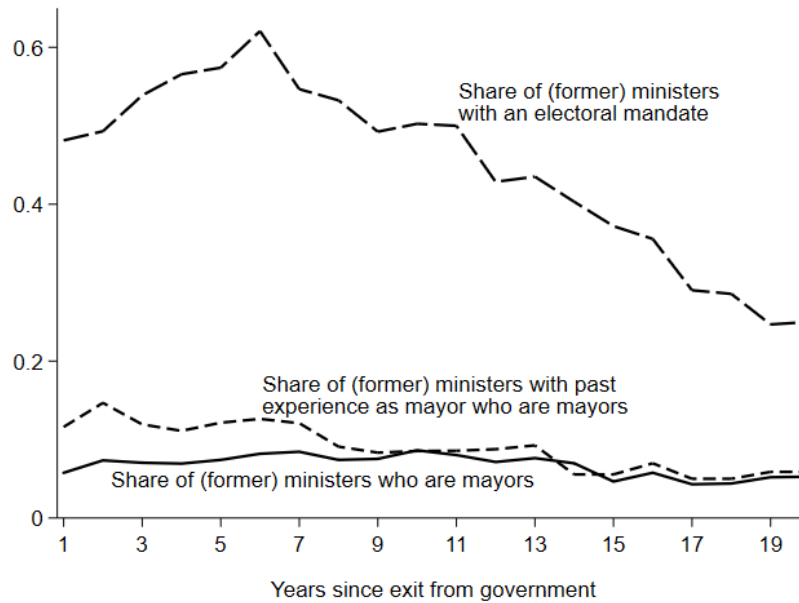


(c) Cities where a minister was mayor, treatment stop. (d) Childhood cities of ministers, treatment stop.



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 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. Pre-treatment effects, signalled by square markers, test for changes in each pre-treatment period.

Figure A10: Share of (former) ministers who occupy electoral positions after they left the government.



Shares  $x$  years after exit from government constructed conditional on a politicians having left the government for at least  $x$  years by June 2021. Electoral mandates includes all French electoral mandates. The short-dashed line restrict the sample to former ministers who were mayors before being appointed to the government.

Table A1: Changes in investment subsidies received by cities where a minister was mayor following minister's entry into and exit from the government: Heterogeneity along ministers' status, separate estimates for the first two years after the event.

Cities where a minister was mayor: Low- and high-rank ministers			
	Low-rank minister	High-rank minister	Difference
First year after entry into government	0.344 (0.201) (0.087)	0.235 (0.208) (0.259)	0.109 (0.311) (0.726)
Second year after entry into government	0.573 (0.260) (0.028)	0.736 (0.576) (0.202)	-0.163 (0.648) (0.802)
First year after exit from government	-0.631 (0.245) (0.010)	-0.776 (0.246) (0.002)	0.145 (0.348) (0.678)
Second year after exit from government	-0.638 (0.267) (0.017)	-0.757 (0.345) (0.028)	0.119 (0.438) (0.785)
Cities where a minister was mayor: Small and large ministries			
	Small ministries	Large ministries	Difference
First year after entry into government	0.635 (0.232) (0.006)	0.030 (0.182) (0.868)	0.605 (0.312) (0.052)
Second year after entry into government	0.721 (0.552) (0.191)	0.506 (0.223) (0.023)	0.215 (0.584) (0.713)
First year after exit from government	-0.827 (0.362) (0.022)	-0.594 (0.223) (0.008)	-0.233 (0.410) (0.570)
Second year after exit from government	-0.697 (0.277) (0.012)	-0.521 (0.281) (0.064)	-0.176 (0.400) (0.660)
Cities where a minister was mayor: Non-kingly and kingly ministries			
	Non-kingly ministries	Kingly ministries	Difference
First year after entry into government	0.100 (0.178) (0.574)	0.552 (0.282) (0.050)	-0.452 (0.330) (0.171)
Second year after entry into government	0.444 (0.403) (0.270)	0.187 (0.360) (0.604)	0.257 (0.557) (0.644)
First year after exit from government	-0.636 (0.320) (0.047)	-0.578 (0.232) (0.013)	-0.058 (0.335) (0.863)
Second year after exit from government	-0.487 (0.389) (0.210)	-0.520 (0.389) (0.181)	0.033 (0.448) (0.942)

For the first two columns, each panel×sub-panel reports two estimates from the same estimation. In the third column, each panel×sub-panel reports the differences between estimates from the first two columns. See notes of Table 4 for more details.