Where and why do politicians send pork?

Evidence from central government transfers to French municipalities

## *Online Appendix*

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A   Supplementary figures and tables

Figure A1: Trust in political personalities and electoral turnout.

(a) Trust in political personalities.   (b) Turnout.
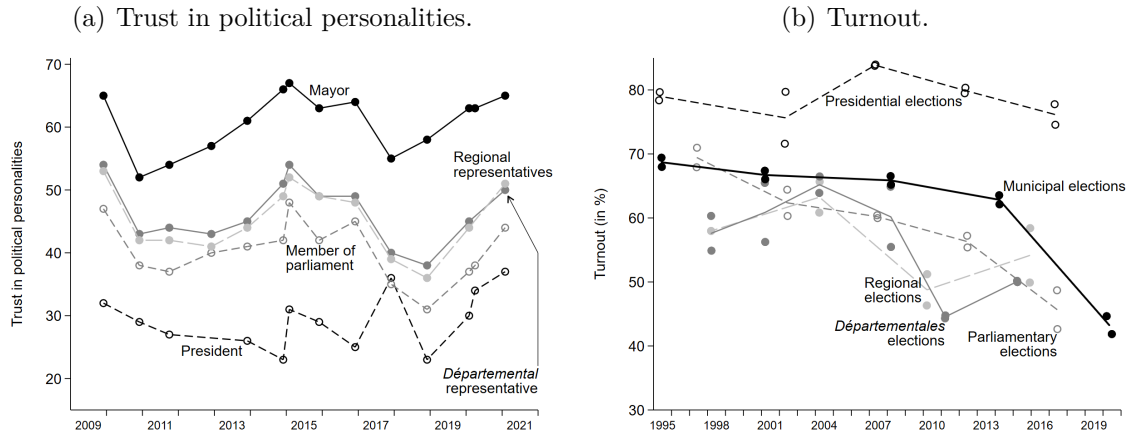
Figures and notes taken over from Peveri and Sangnier (2023). Sub-figure (a) uses the *Baromètre de la confiance politique* and plots, for each wave of the survey, the share of interviewees who report to have much or some trust in different political personalities. The question is framed as follows: "*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.
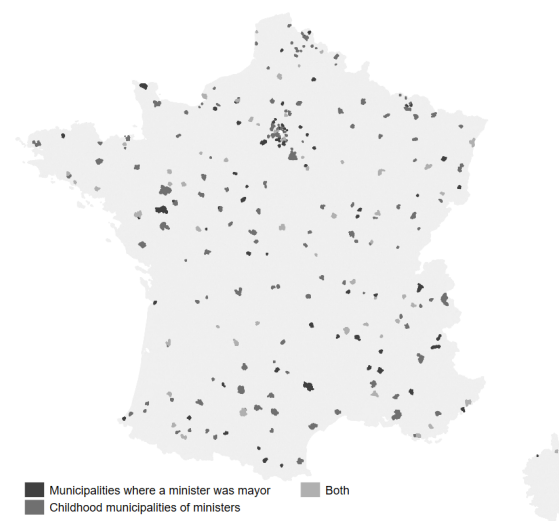
Figure A2: Spatial distributions of treatments.

(a) Municipalities where a minister was mayor.

(b) Childhood municipalities of ministers.

■ Municipalities where a minister was mayor

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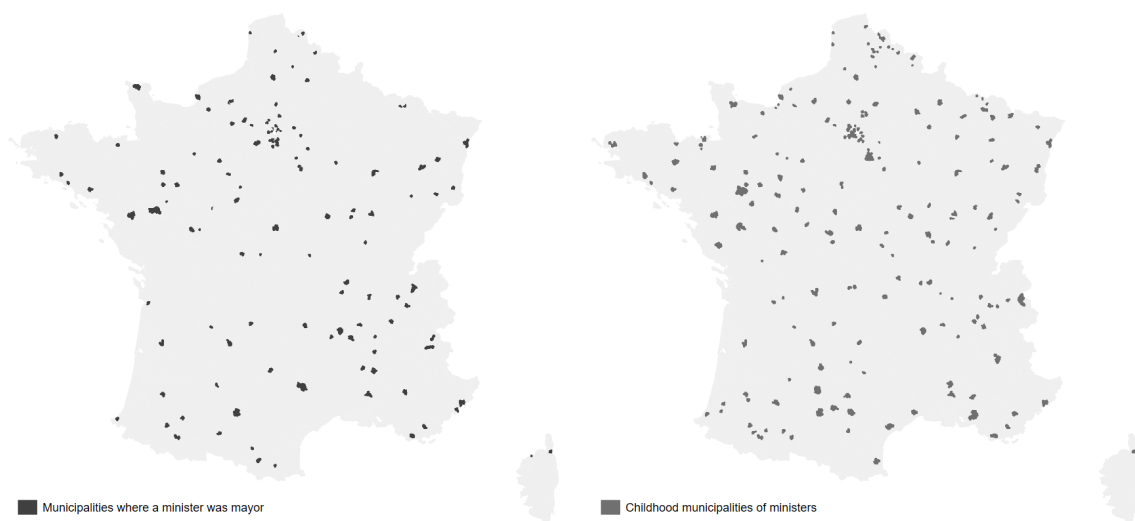
(c) Municipalities where a minister was mayor and childhood municipalities of ministers.

■ Municipalities where a minister was mayor ■ Both
■ 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.
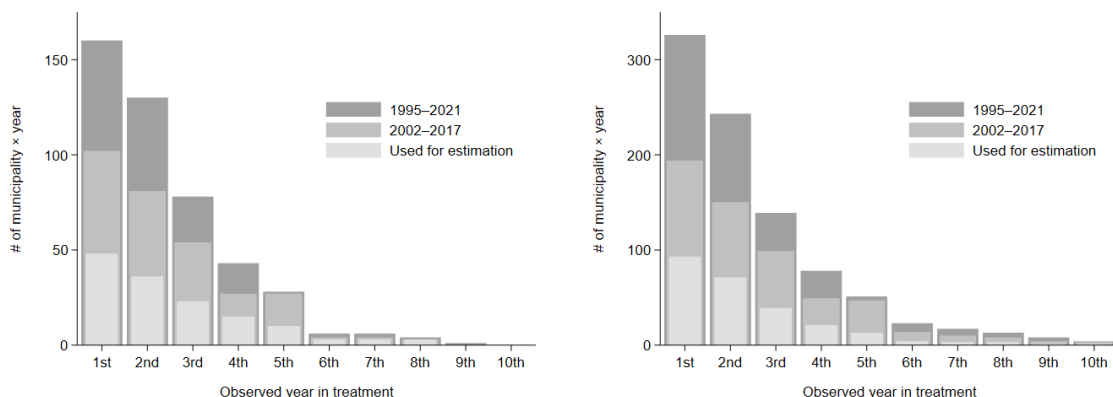
Dark grey bars use the 1995–2021 period. Medium grey bars use the 2002–2017 period (the period over which municipalities accounting data are available). Distributions constructed using all spells in the government over indicated time periods. A municipality can thus be observed more than once in the 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.
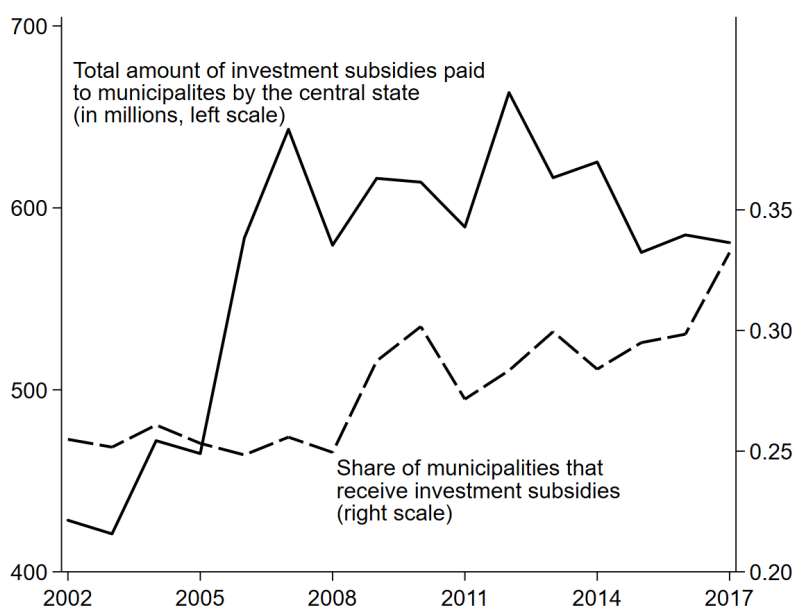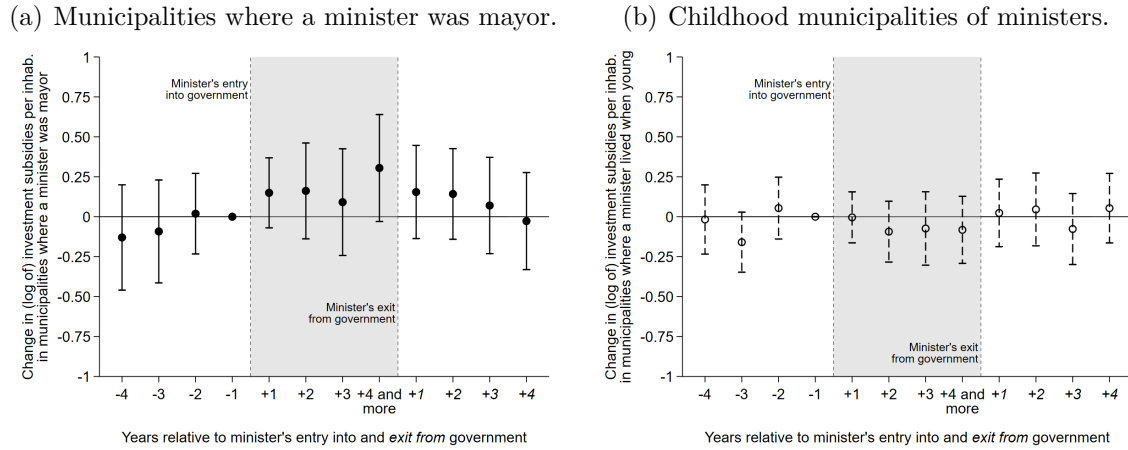

In 2000 constant euros.

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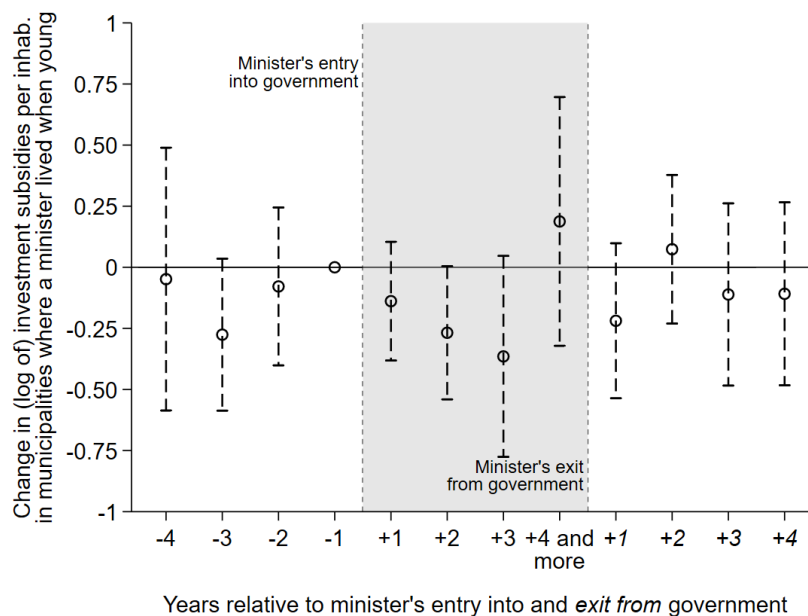
The left and middle parts of this figure are identical to the two parts of Figure 5(b). The right part of this figure displays rescaled treatment effects from the right part of Figure 6(b). See notes to Figures 5 and 6. See the text for details about the rescaling procedure.

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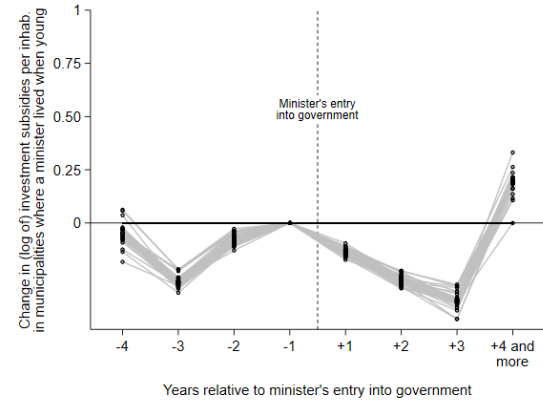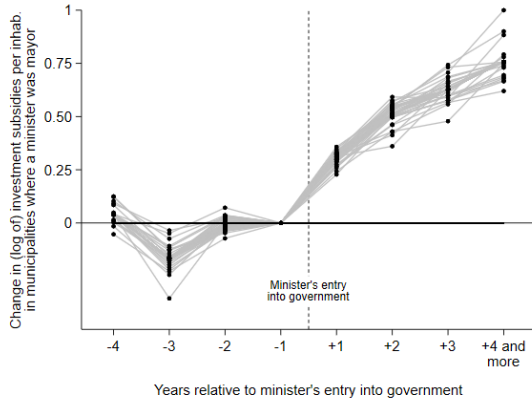
(c) Municipalities where a minister was mayor, treatment stop.

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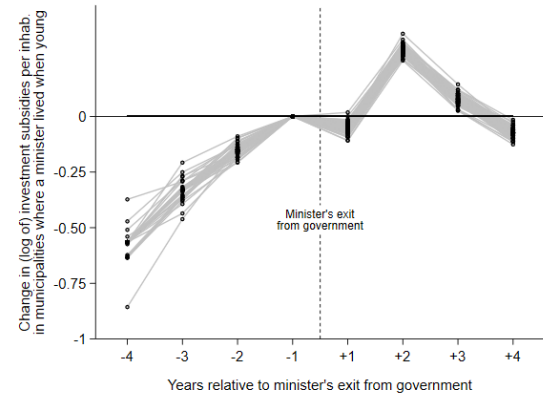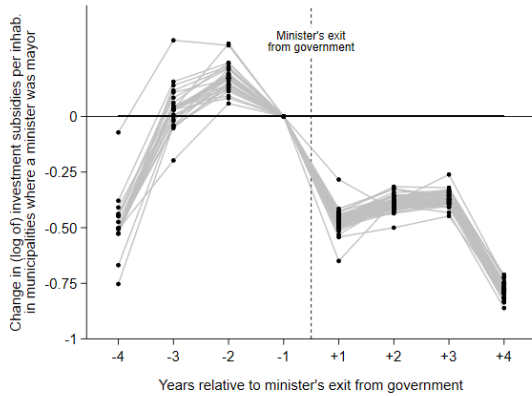
These figures mimic Figures 5(a)–6(b) but plots series of estimates obtained when removing treated municipalities one-by-one. See notes to Figures 5(a)–6(b).

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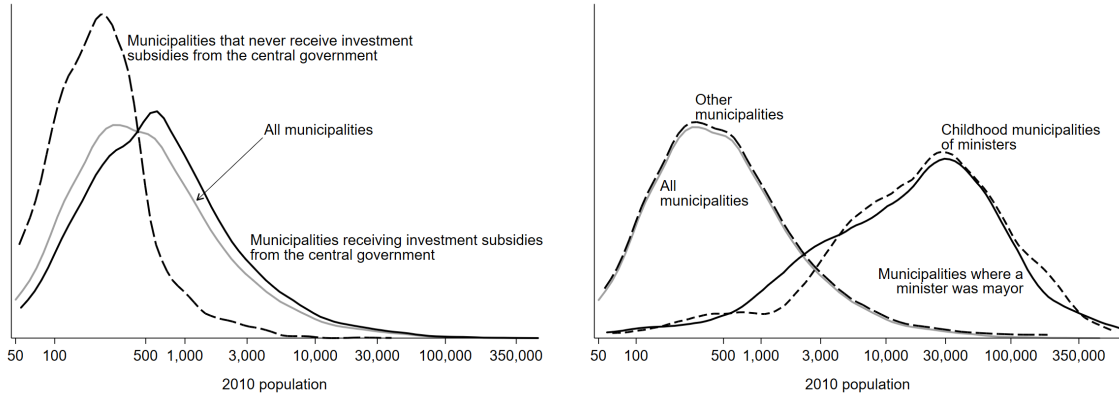
(c) Raw and matched size distributions of municipalities depending on treatment status.
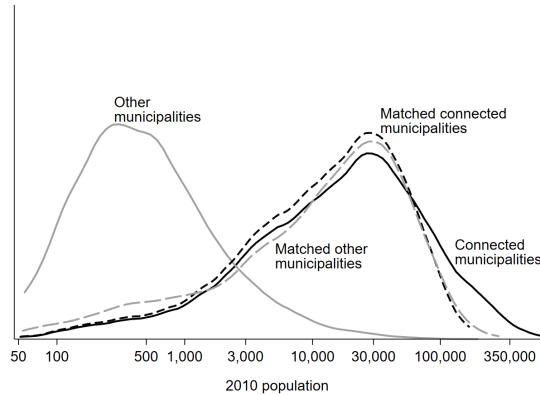

Distributions constructed using 2010 population. The full history of ministers' appointments over the 1995–2021 period is used to categorize municipalities depending on links to ministers. The full history of investment subsidies received from the central government over the 2002–2017 period is used 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.
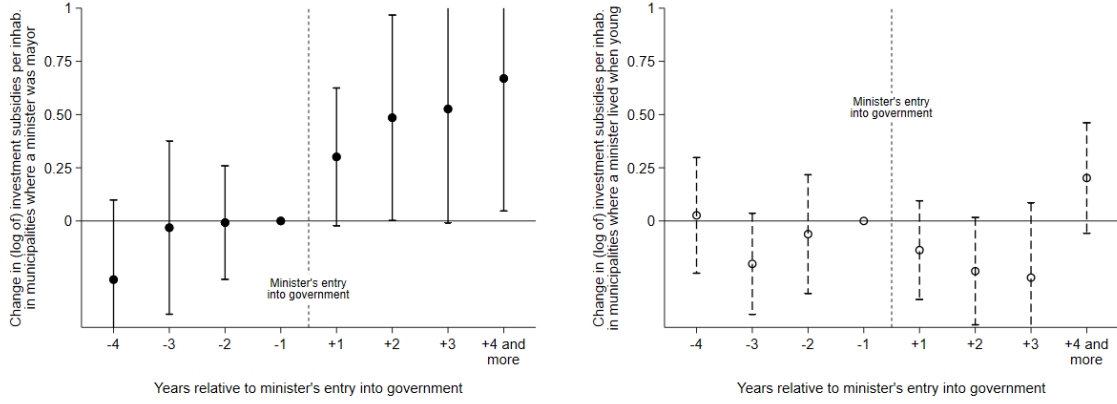
(c) Municipalities where a minister was mayor, treatment stop.

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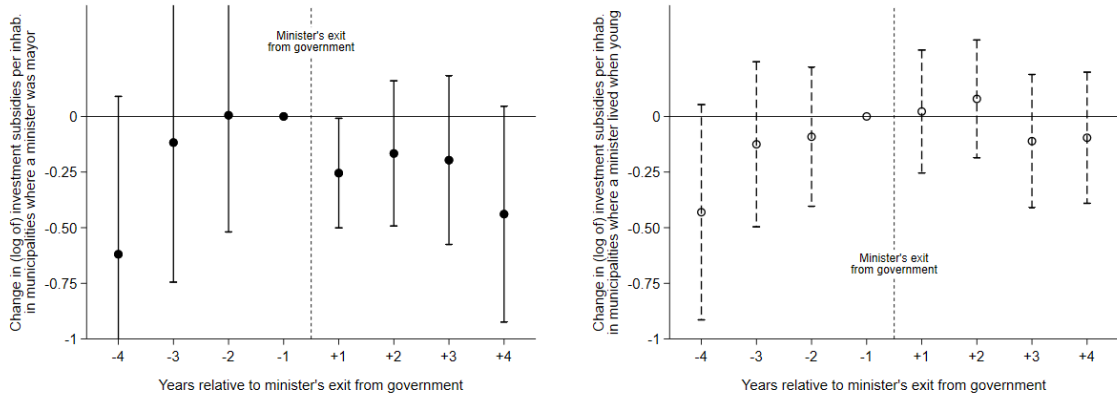
Figure A10: Changes in investment subsidies received by municipalities where a minister was mayor and by childhood municipalities of ministers following minister's entry into and exit from the government: Borusyak et al. (2024) treatment effects.

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

(b) Childhood municipalities of ministers, treatment start.
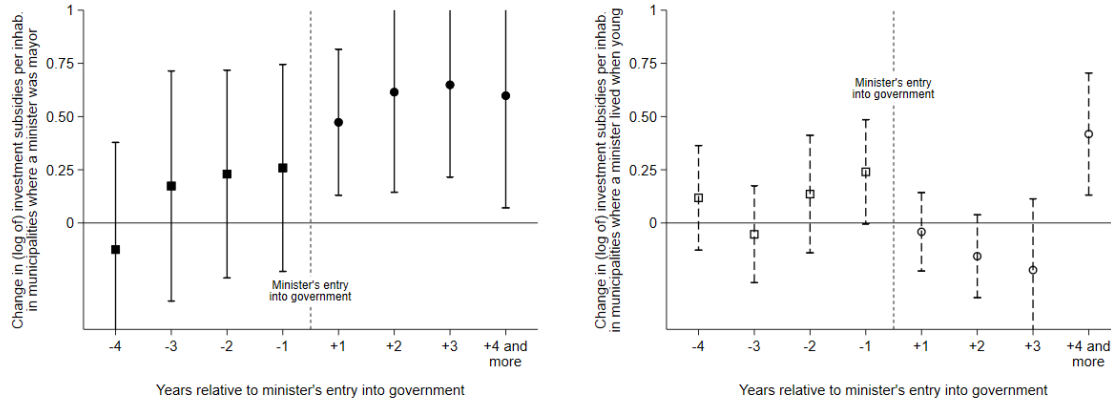

(c) Municipalities where a minister was mayor, treatment stop.

(d) Childhood municipalities of ministers, treatment stop.
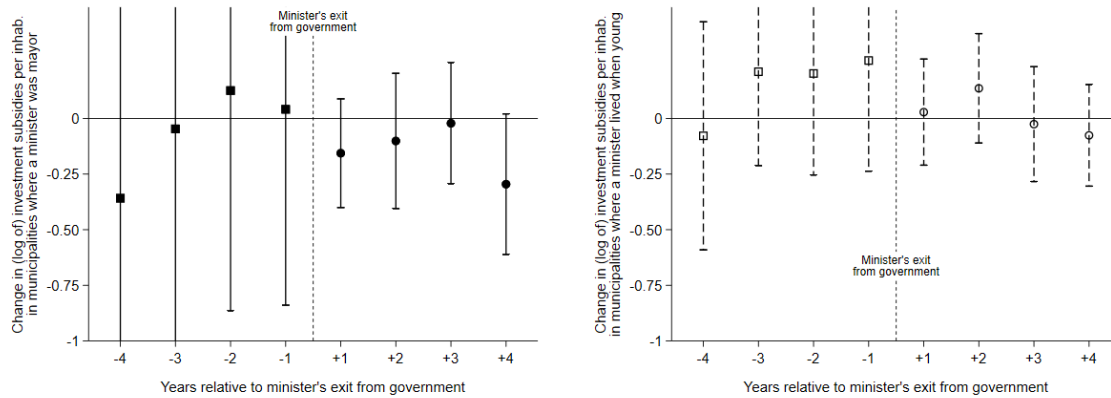

Treatment effects estimated using the methodology of Borusyak et al. (2024). 95% confidence intervals constructed standard errors clustered at the municipality level. The *+4 and more* treatment effect is constructed as the observation-weighted average of dynamic effects estimated for all years form $t+4$ 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.
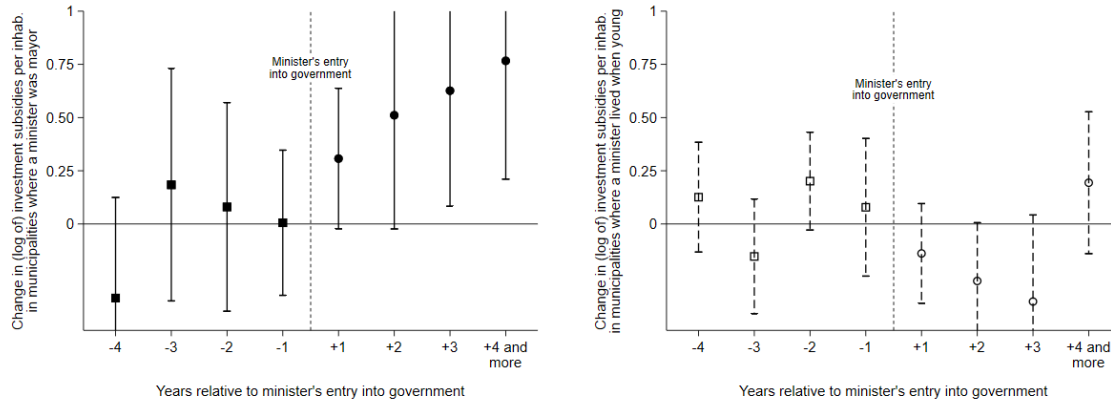

(c) Municipalities where a minister was mayor, treatment stop.
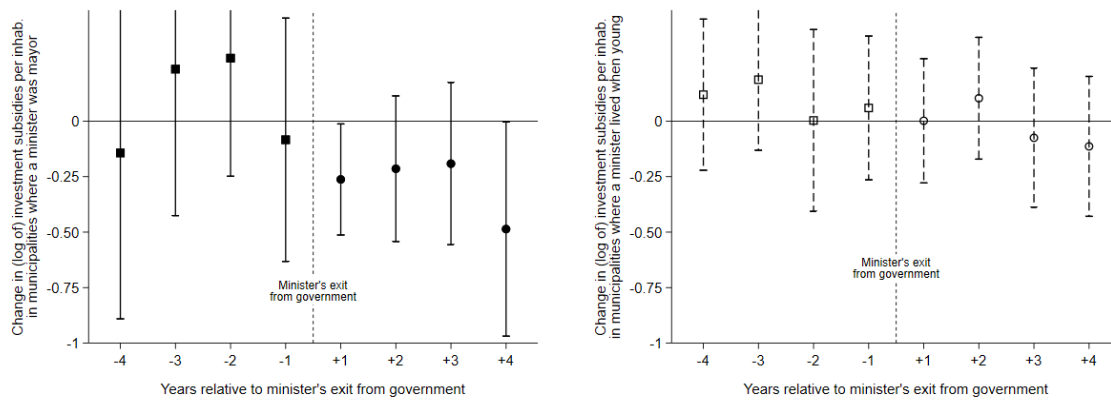
(d) Childhood municipalities of ministers, treatment stop.

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 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.

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.

References

Borusyak, Kirill, Xavier Jaravel, and Jann Spiess. "Revisiting Event Study Designs: Robust and Efficient Estimation." *The Review of Economic Studies* rdae007.

Callaway, Brantly, and Pedro H. C. Sant'Anna. "Difference-in-Differences with multiple time periods." *Journal of Econometrics* 225, 2: (2021) 200–230.

de Chaisemartin, Clément, and Xavier D'Haultfœuille. "Two-way fixed effects and differences-in-differences estimators with several treatments." *Journal of Econometrics* 236, 2.

Peveri, Julieta, and Marc Sangnier. "Gender differences in re-contesting decisions: New evidence from French municipal elections." *Journal of Economic Behavior & Organization* 214, C: (2023) 574–594.

SciencesPo - CEVIPOF. "Le Baromètre de la confiance politique.", accessed on March 31, 2021. Waves 1–12, https://www.sciencespo.fr/cevipof/fr/content/les-resultats-par-vague.html.

Sun, Liyang, and Sarah Abraham. "Estimating dynamic treatment effects in event studies with heterogeneous treatment effects." *Journal of Econometrics* 225, 2: (2021) 175–199.