

MANAGERS AND PRODUCTIVITY IN THE PUBLIC SECTOR

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THIS PAPER

Question: Do managers explain the variation in public sector productivity (P)? How?

Data: Administrative data from the Italian Social Security Agency:

- Office-level administrative quarterly data on inputs, output, and quality (2011-2017)
- Matched employer-employee data (2005-2017)

Strategy: Exploit manager rotation across offices

Outcome: Direct measure of productivity:

$$P_{it} = \frac{Y_{it}}{FTE_{it} \times 3} = \frac{\sum_{k=1}^K c_{k,it} \times w_{k,t}}{FTE_{it} \times 3}$$

where Y_{it} represents output of office i in quarter t , and FTE_{it} full-time equivalent employment

Findings:

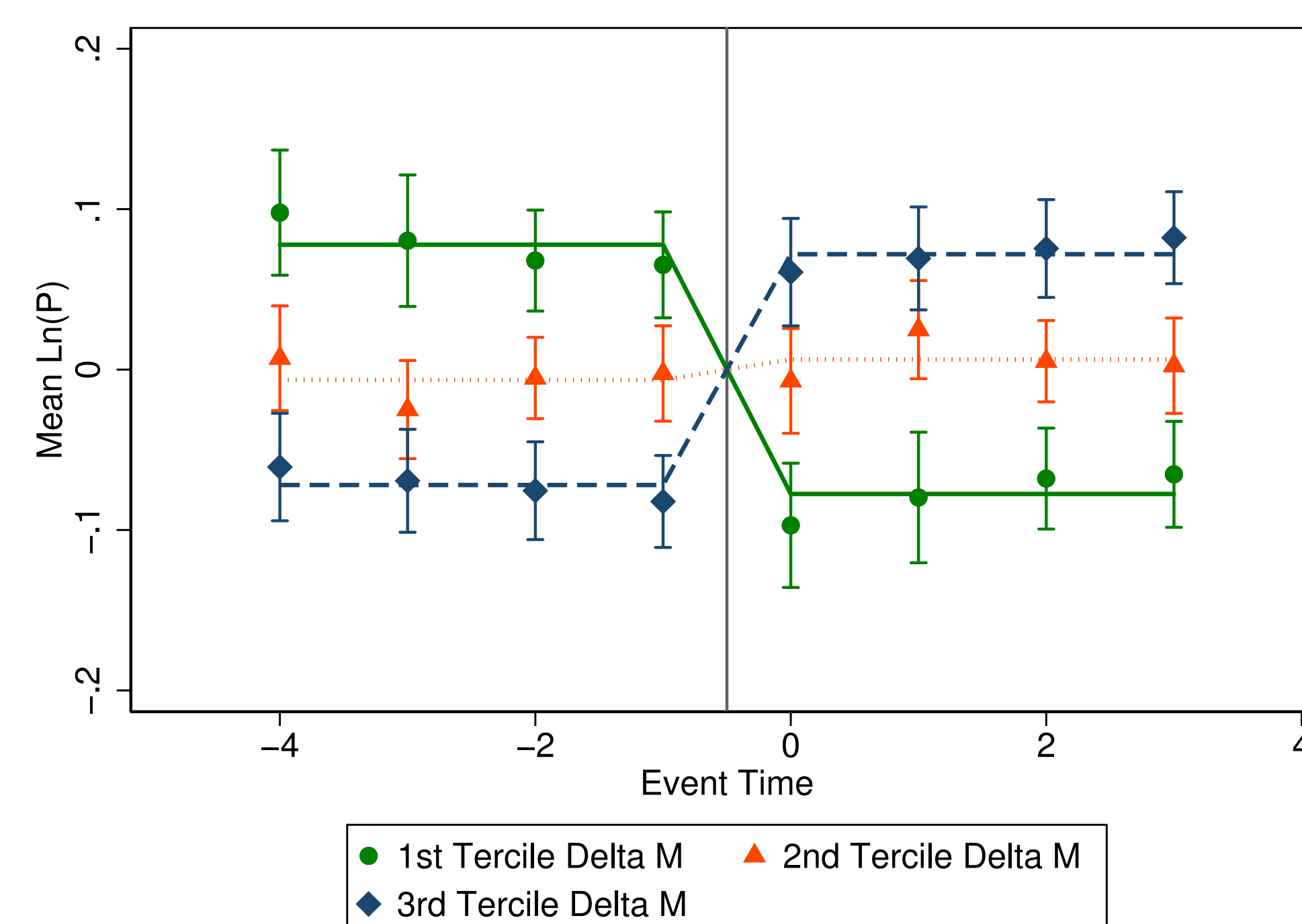
- Managers have a quantitatively meaningful impact on the productivity of the offices they oversee.
 $1\sigma \uparrow$ managerial talent $\Rightarrow \uparrow$ office productivity by 9%
- The productivity gains associated with the arrival of a more productive manager are driven by the exit of old white-collar workers. Empowering managers to directly change payrolls may generate large benefits to efficiency.
- Absent civil service reforms, allocating the best managers to offices that are both large and productive would increase aggregate agency output by at least 6.9%.

DO MANAGERS MATTER?

I use a two-way fixed effect model to separately identify the impact of managerial ability and institutional factors on productivity

$$\ln(P)_{it} = \alpha_i + \tau_t + \theta_{m(i,t)} + u_{it}$$

where i and t index office and quarters respectively, α_i is the office FE, τ_t time FE, and $\theta_{m(i,t)}$ manager FE.



	Component	Share
Var(Ln(P))	0.1106	100 %
Var(Manager)	0.0102	9.22%
Var(Office)	0.0319	28.84 %
Var(Time)	0.0408	36.89%
Cov(Manager, Office)	-0.0096	-8.68%
Cov(Time, Manag. + Office)	0.0015	1.39%
N	2,735	

Note: This table reports the biased corrected variance-covariance decomposition of log productivity. The sample includes the largest connected set, 2011q1-2017q2.

WHAT MAKES A PRODUCTIVE MANAGER?

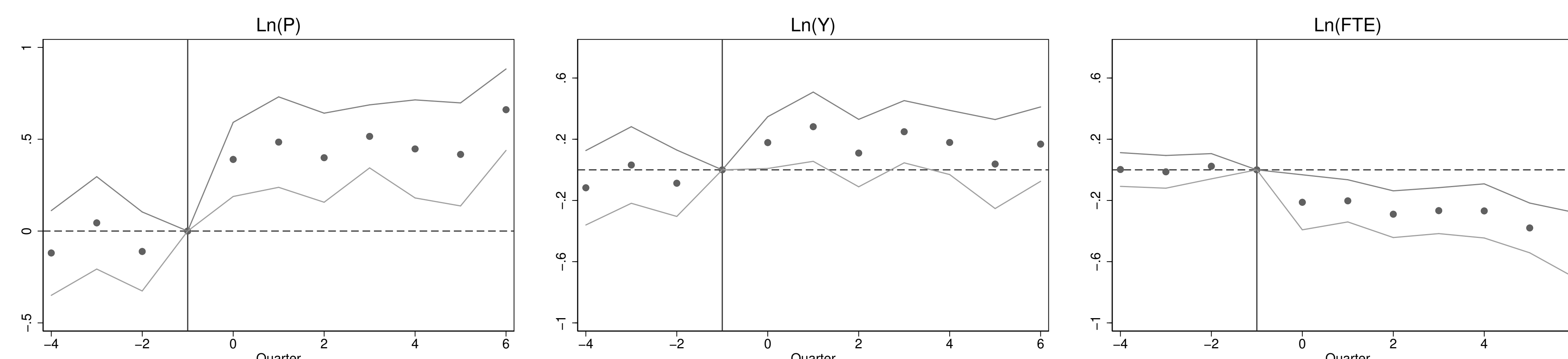
I utilize manager rotations as a quasi-experimental analog of random assignment of managers to offices to characterize how managers matter.

$$\Delta y_i^k = \pi_0^k + \pi_1^k \Delta \bar{M}_i^{L,k} + \Gamma^k X_i + \Delta \epsilon_i^k$$

where k represents event time and

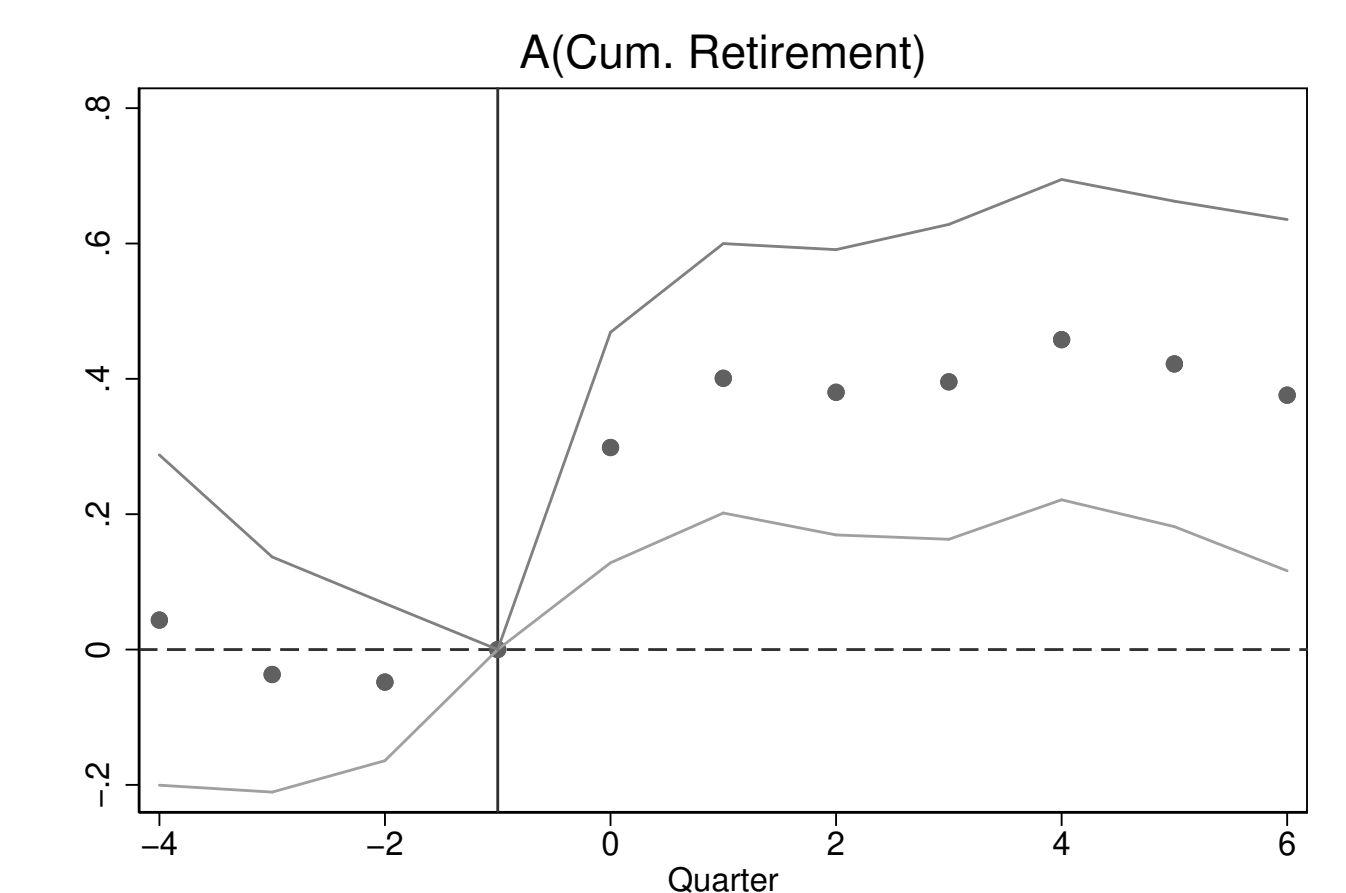
$$\Delta \bar{M}_i^{L,k} = \hat{\theta}_{i,incoming}^{L,k} - \hat{\theta}_{i,outgoing}^{L,k}$$

The $\hat{\theta}_i^L$'s are the leave-out estimated manager effect of the incoming and outgoing managers, respectively.



- Most of the productivity gains are driven by a reduction in FTE rather than an increase in output

MECHANISMS



- The rise in productivity associated with the arrival of a more productive manager is mainly driven by exit of older workers (retirement)
- Productive managers keep up production without resorting to more overtime hours to compensate for the reduction in FTE
- No trade-off between productivity and quality of service provided

COUNTERFACTUAL EXERCISES

In the absence of civil service reforms, I evaluate the efficiency gains from alternative managerial allocation schemes.

	ΔY
Policy 1: Reassign	6.9%
Policy 2: Fire bottom 20%	2.9%
Policy 3: Fire bottom 20% + Reassign	7.4%
Policy 4: Random allocation	2%

CONCLUSIONS

These results imply that broadly empowering managers to make payroll decisions would generate large efficiency gains for public sector offices.

As passing such drastic civil service reforms may not be feasible, governments can substantially increase output by reallocating managers across sites.