Do Better Paid Politicians Perform Better?  
Disentangling Incentives from Selection

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The paper tries to answer two research questions:

1. Do higher paid politicians perform better in office due to higher incentives of being re-elected?
2. Are higher skilled people attracted by higher wages?
Motivation

- Paying politicians emotional Topics
- Complaint about high salaries of politicians vs. "If you pay peanuts you get monkeys"
- Theoretical predictions on effect of politician salary unclear
Introduction

Identification

Data

Results

Conclusion

Overview of other papers

Contribution

- Establish relationship between salary and performance of politicians
- Disentangle incentive effect from wage effect
Identification set-up

- Sharp RDD
- Endogeneity of Wages: Exploit wage formation due to population size
- Assume continuity in mayor characteristics over the thresholds
- Re-election incentive only binding if not at term limit
Results

- Most of the effect driven by more competent candidates
- Other explanations don’t find support in the data
Evaluation

Strength

- Stronger Identification due to sharp RDD
- Huge data set

Weaknesses

- Strong assumptions made
- Only one threshold exploited
- Just small communities
Identification - Hypothesis

Hypothesis

1. A higher wage attracts more citizens with higher opportunity costs into politics (effect of the wage on political selection)
2. A higher wage enhances the performance of the elected officials (effect of wage on the performance)
   1. A higher wage attracts more-skilled citizens (composition effect)
   2. A higher wage increases the cost of not being re-elected (incentive effect)
Terminology

- $X_i$ characteristics of citizens running for mayor in town $i$
- $Y_i(W_k)$ performance indicator
- $W_i$ wage paid to mayor
- $P_i$ population size
- $k \in \{l, h\}$
- Estimate of interest: Average treatment effect on sub-population $\Omega$
- $E[X_h - X_l | i \in \Omega]$ and $E[Y_h - Y_l | i \in \Omega]$
Identification - Assumptions

1. Characteristics of politicians are unaffected by Population size: $E[X_l|P = p]$ and $E[X_h|P = p]$ are continuous in $p$ at $P_c$

2. Performance of mayor is unaffected by Population size: $E[Y_l|P = p]$ and $E[Y_h|P = p]$ are continuous in $p$ at $P_c$
Under Assumption 1:
\[ E[X_l|P = P_c] = \lim_{P \uparrow P_c} X, \quad E[X_h|P = P_c] = \lim_{P \downarrow P_c} X \]

Under Assumption 2:
\[ E[Y_l|P = P_c] = \lim_{P \uparrow P_c} Y, \quad E[Y_h|P = P_c] = \lim_{P \downarrow P_c} Y \]

Potential characteristics and performance should not display discontinuity at \( P_c \)
If the assumptions not violated:

- Effect of wage on political selection:
  \[ \tau_{sel} \equiv E[X_h - X_l| P = P_c] = \lim_{P \downarrow P_c} X - \lim_{P \uparrow P_c} X \]

- Effect of wage on performance:
  \[ \tau_{per} \equiv E[Y_h - Y_l| P = P_c] = \lim_{P \downarrow P_c} Y - \lim_{P \uparrow P_c} Y \]
Disentangling Incentives

- Assume Performance has form: $Y_k = S(X_k + v_k) + I_k$
- $S(.)$ captures impact of observables $X_k$, unobservables $v_k$
- $I_k$ effect of incentive to be re-elected
Disentangling Incentives

**GOAL:** Decompose $\tau_{per} = \sigma_{per} + \varphi_{per}$ $\implies$ effect of wage on performance.

- $\sigma_{per} \equiv E\left[S(X_h + v_h) - S(X_l + v_l)\right|P = P_c] \implies$ composition effect
- $\varphi_{per} \equiv E[I_h - I_l\right|P = P_c] \implies$ incentive effect

**TOOL:** Term limit of 2 terms for decomposition.

**Assumption**

3. The (re-election) incentive effect of the wage performance is at work only when the term limit is not binding
Incentive effect in action for politicians in the first term

Politicians in the second term can have better performance incentives too, but they do not depend on wage.

In other words,

identical incentives for the politicians in the second term.

Stronger incentives for politicians in the first time and above threshold
Disentangling Incentives

- $TL$: index for the term limit with
  - $TL = 0 \implies$ mayor is in the first term
  - $TL = 1 \implies$ mayor is in the second term.
- Now, potential outcome depending both on $W$ and $TL$
- That is, $Y_{jk}$ with $k \in \{l, h\}$ and $j \in \{0, 1\}$
Disentangling Incentives

- Under Assumption 3:

\[
\begin{align*}
W = W_l & \\
W = W_h & \\
TL = 0 & Y_{l0} = S(X_{l0} + v_{l0}) + I_l & Y_{h0} = S(X_{h0} + v_{h0}) + I_h \\
TL = 1 & Y_{l1} = S(X_{l1} + v_{l1}) + \exp & Y_{h1} = S(X_{h1} + v_{h1}) + \exp
\end{align*}
\]

- \( \exp \) administrative experience
- \( S(X_{k0} + v_{k0}) \neq S(X_{k1} + v_{k1}) \) in general
- Therefore restrict to mayors elected for two consecutive terms
Disentangling Incentives

- Under Assumptions 1-3:
  - $\tau_{per} = E[Y_{h0} - Y_{l0}|P = P_c] = \lim_{P \downarrow P_c|TL=0} Y - \lim_{P \uparrow P_c|TL=0} Y$
    $\implies$ overall effect of wage on performance
  - $\sigma_{per} = E[Y_{h1} - Y_{l1}|P = P_c] = \lim_{P \downarrow P_c|TL=1} Y - \lim_{P \uparrow P_c|TL=1} Y$
    $\implies$ composition effect
  - $\varphi_{per} = E[(Y_{h0} - Y_{l0}) - (Y_{h1} - Y_{l1})|P = P_c] =$
    \[
    \left(\lim_{P \downarrow P_c|TL=0} Y - \lim_{P \uparrow P_c|TL=0} Y\right) - \left(\lim_{P \downarrow P_c|TL=1} Y - \lim_{P \uparrow P_c|TL=1} Y\right)
    \]
    $\implies$ incentive effect
Methodology

- Use sharp RDD at 5,000 habitants threshold
- Non-parametric fit
- One variable per regression
Data

- Use Italian municipalities
- Remuneration of mayor depends on population size
- Only 3 out of 9 wage thresholds determine a variation in mayors remuneration only
- 5,000 threshold used, 1,000 and 50,000 not appropriate due to data limitation
- Use cities from 3,250 to 6,750 inhabitants
<table>
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<td>1,291</td>
<td>15%</td>
<td>18</td>
<td>4</td>
<td>12</td>
<td>single</td>
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<td>50%</td>
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<td>4</td>
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<td>10,000–15,000</td>
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<td>55%</td>
<td>22</td>
<td>6</td>
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<td>no/no</td>
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<td>15,000–20,000</td>
<td>3,099</td>
<td>55%</td>
<td>22</td>
<td>6</td>
<td>20</td>
<td>runoff</td>
<td>no</td>
<td>no/no</td>
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<td>20,000–30,000</td>
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<td>55%</td>
<td>22</td>
<td>6</td>
<td>20</td>
<td>runoff</td>
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<td>yes/no</td>
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<tr>
<td>30,000–50,000</td>
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<td>55%</td>
<td>36</td>
<td>6</td>
<td>30</td>
<td>runoff</td>
<td>allowed</td>
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<td>50,000–60,000</td>
<td>4,132</td>
<td>75%</td>
<td>36</td>
<td>6</td>
<td>30</td>
<td>runoff</td>
<td>allowed</td>
<td>yes/no</td>
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<td>60,000–100,000</td>
<td>4,132</td>
<td>75%</td>
<td>36</td>
<td>6</td>
<td>30</td>
<td>runoff</td>
<td>allowed</td>
<td>yes/yes</td>
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<td>100,000–250,000</td>
<td>5,010</td>
<td>75%</td>
<td>36</td>
<td>10</td>
<td>40</td>
<td>runoff</td>
<td>yes</td>
<td>yes/yes</td>
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<tr>
<td>250,000–500,000</td>
<td>5,784</td>
<td>75%</td>
<td>36</td>
<td>12</td>
<td>46</td>
<td>runoff</td>
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<td>Above 500,000</td>
<td>7,798</td>
<td>75%</td>
<td>36</td>
<td>14-16</td>
<td>50-60</td>
<td>runoff</td>
<td>yes</td>
<td>yes/yes</td>
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</table>

Notes: Population is the number of resident inhabitants as measured by the last available Census. Wage Mayor and Wage Ex. Com. refer to the monthly gross wage of the mayor and the members of the executive committee, respectively; the latter is expressed as a percentage of the former, which refers to 2000 and is measured in euros. Fee Council is the reimbursement per session paid to councillors and is measured in euros. The wage thresholds at 1,000 and 10,000 were introduced in 2000; all of the others date back to 1960. Ex. Com. Size is the maximum allowed number of executives appointed by the mayor. Council Size is the number of seats in the City Council. All of the size thresholds were set in 1960. Since 1993, Electoral Rule can be either single round (with 60% premium) or runoff (with 66% premium) plurality voting. Neighborhood Councils are bodies that represent different neighborhoods within the city and are provided with independent budgets. Hospital/Health captures whether the municipality is allowed to have a hospital or a health-care district, respectively.
Data - Politicians

- Town characteristics from ANCI (*Associazione Nazionale Comuni Italiani*)
- Individual politician data from Statistical Office of the Italian Ministry of Internal Affairs
- Period: 1993-2005
Results - Political Selection
Results-Political Selection

Analysis of selection of candidates into politics due to sharp wage increase

- Best three candidates and mayors considered separately.
- Local linear regression with optimal symmetric bandwidth, which has nice bias properties.
Figure 1. Candidate characteristics around the 5,000 threshold. Terms from 1993 to 2001. Cities with population between 3,250 and 6,750 inhabitants. The dashed lines are local linear regression (LLR) with optimal symmetric bandwidth $\Delta$ (see Table 3), and the solid lines are running mean smoothings of the variable on the vertical axis (with a bandwidth of 1), performed separately on either side of the 5,000 threshold. The circles are the observed values averaged in intervals of 100 inhabitants. Age and Years school are measured in years; the other variables are dummies. Not employed includes unemployed, retired, and any other individual out of the labor force. Entrepreneur includes self-employed and entrepreneurs. White collar includes lawyers, professors, physicians, and managers. Blue collar includes blue collars, clerks, and technicians.
**Figure 2.** Mayor characteristics around the 5,000 threshold. Terms from 1993 to 2001. Cities with population between 3,250 and 6,750 inhabitants. The dashed lines are local linear regression (LLR) with optimal symmetric bandwidth $\Delta$ (see Table 3), and the solid lines are running-mean smoothings of the variable on the vertical axis (with a bandwidth of 1), performed separately on either side of the 5,000 threshold. The circles are the observed values averaged in intervals of 100 inhabitants. *Age* and *Years school* are measured in years; the other variables are dummies. *Not employed* includes unemployed, retired, and any other individual out of the labor force. *Entrepreneur* includes self-employed and entrepreneurs. *White collar* includes lawyers, professors, physicians, and managers. *Blue collar* includes blue collars, clerks, and technicians.
Consistent with the previous results, placebo tests were conducted by estimating the effect at 500 fake thresholds. The use of a third polynomial degree fit revealed no significant effect apart from the 5,000 threshold. Separate RDD estimates were calculated for the North and South, with the effect being more pronounced in the South.
Results - Effect of wage on performance
Effect of wage on performance

Examine whether salary affects mayors’ performance.

▷ Only mayors holding office for two consecutive periods included.

▷ Overall effect, Composition effect, Incentive effect (Overall—Composition)
Budget Components per Capita-Overall Effect
Budget Components per Capita-Composition Effect
## Efficiency measures

<table>
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<th>Speed of collection</th>
<th>Speed of payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Overall (no term limit)</td>
<td>4.534*</td>
<td>1.636*</td>
</tr>
<tr>
<td></td>
<td>(2.482)</td>
<td>(0.923)</td>
</tr>
<tr>
<td>B. Composition (term limit)</td>
<td>0.933</td>
<td>0.948</td>
</tr>
<tr>
<td></td>
<td>(2.742)</td>
<td>(1.011)</td>
</tr>
<tr>
<td>C. Re-election (A – B)</td>
<td>3.601</td>
<td>0.688</td>
</tr>
<tr>
<td></td>
<td>(3.597)</td>
<td>(1.066)</td>
</tr>
<tr>
<td>Δ</td>
<td>900</td>
<td>1,500</td>
</tr>
<tr>
<td>Obs.</td>
<td>624</td>
<td>1,016</td>
</tr>
</tbody>
</table>

Notes: Effect of the 33% wage increase at the 5,000 threshold on efficiency measures. Terms from 1993 to 2001; only mayors observed over two consecutive terms, with binding term limit in the second. Cities with population between 3,250 and 6,750 inhabitants. Local Linear Regression (LLR) with optimal symmetric bandwidth Δ. All variables are in percentage points, and averaged over the mayoral term (election years excluded): *Speed of collection* is the ratio between collected and assessed revenues; *Speed of payment* is the ratio between paid and committed outlays for public expenditure. Standard errors robust to clustering at the municipality level are in parentheses.

*Significant at 10%.
Results

- Better paid politicians reduce size of government
- Better paid politicians make government slightly more efficient
- Re-election effect insignificant
Results—Effect of wage on performance

- Executive committee characteristics not taken into account. (Their compensation also changes with the threshold.)
- Executive committee compensation by population:
  - 1,000-5,000 → 433 €
  - 5,000-10,000 → 1,394 €
  - nearly 220% increase!
Evaluation of such an increase on the income of executive committee might be required.

If increase significantly alters executive committee’s income  \(\Rightarrow\) Jump can occur at the threshold.

If discontinuity occurs for the executive committee characteristics  \(\Rightarrow\) curse of dimensionality problem. (multivariate non-parametric regression)
Robustness

- Placebo-tests
- Smooth density assumption is tested
- Control for invariant municipality-characteristics (comparing different municipalities with each other)
Conclusion - Summary

- Test whether politicians perform better when better paid
- Use sharp RDD identification strategy
- Findings: Better payment increases qualification of mayor
- These mayors reduce government size
- Disentangle effect of incentives: No incentive effect of re-election
- Effect driven by different qualification of different candidates
Conclusion - Evaluation

► Claim: Better paid politicians make government perform better

► What is shown: Better paid politicians reduce government size and make government slightly more efficient.

► Just because some efficiency indicators are better doesn’t mean cutting on expenses is performing better, could be more efficient but still unfavourable for voters!
Conclusion - Lessons

- Methodology brings problems
- Be careful with what you claim
- Term limit is not decreasing incentives or efficiency
- Different payment attracts different candidates ("If you pay peanuts you get monkeys" is confirmed)
It’s the occupation, stupid! Explaining candidates’ success in low-information elections by Mario Mechtel
It’s the occupation, stupid! Explaining candidates’ success in low-information elections

- Impact of occupation on electoral success
- Use 2009 Baden-Württemberg local elections (Gemeinderat)
- Election Law allows not only to vote for parties but for specific candidates of that party
- Party list can be as big as there are seats in council
- Voters can give as many votes as there are seats in the assembly
- Ballot paper contains information on forename and surname, occupation, academic title, and address
It’s the occupation, stupid! Explaining candidates’ success in low-information elections

- Assume low information election (Many candidates, Small financial consequences, low media coverage, low Voter turnout)
- Some professions are more favorable than others: -7 positions for sales people, +10 positions for farmers
- Female candidates have an advantage
- Holding a doctoral degree is beneficial
- Foreign names have negative effect
It’s the occupation, stupid! Explaining candidates’ success in low-information elections

▶ OLS regressions
▶ Party fixed effects could be included. (Position gain might be different across parties.)
▶ Regional fixed effects could be included.
▶ Still important paper indicating candidate characteristics matter.
▶ Low information election works similar to natural experiment.
Women as Policy Makers: Evidence from a Randomized Policy Experiment in India by Raghabendra Chattopadhyay and Esther Duflo
Women as Policy Makers: Evidence from a Randomized Policy Experiment in India

- Reservation policy in India: One third of village head positions are reserved for Women
- Villages are randomly selected
- Survey in two districts: Birbhum in West Bengal and Udaipur in Rajasthan
- Research Question: Does reservation affect policy choices?
Preferences are measured by formal request brought to Council.

Result: Villages with Women heads invest more in fields women requested (Women requested more investment in drinking water in both districts and investment in drinking water was higher in villages with female head).

Robustness Checks: Re-election motive, experience, disadvantaged background.
Women as Policy Makers: Evidence from a Randomized Policy Experiment in India

- Randomness assumption is reliable
- Politicians’ gender matters.
- Formal request constituted information set for village head, lessening the concerns for omitted variables.
- Reverse causality wouldn’t matter anyway.
- In brief, clear causation established.
Summary

- Legislation of politics (Quotas, Payment, Ballot Paper) matters
- Different legislation attracts different politicians who choose different policies
- Needs to be taken into account when thinking about Quotas, Payment or even how Ballot Paper looks like