Policy Positions in Mixed Member Electoral Systems: Evidence from Japan

Kosuke Imai
Princeton University

Joint work with
Shigeo Hirano (Columbia)  Yuki Shiraito (Princeton)
Masaki Taniguchi (University of Tokyo)

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“Best of Both Worlds”?

- Mixed member electoral systems:
  - Single member districts (SMDs)
  - Proportional representation (PR)

- “Best of both worlds” (Shugart and Wattenberg 2001):
  - SMD legislators represent geographically narrow interests
  - PR legislators represent wider range of voters

- Conflicting evidence in the existing literature:
  - SMD legislators focus more on constituency services (Germany, Hungary)
  - SMD and PR legislators behave similarly in roll call voting (Russia, Ukraine)

- **Question**: Do policy positions of SMD legislators differ from those of PR legislators?
- **Challenge**: Estimate policy positions in parliamentary systems
Japanese Case

- Japan’s mixed member electoral system:
  - Upper House: 146 MMDs (regional), 96 PR seats (nationwide)
  - Lower House: 300 SMDs, 180 PR seats (regional)
- Parliamentary system: strong party discipline, few roll call votes

- Asahi-Todai Survey 2003 – 2010:
  1. Panel data with 8 waves for all 6 elections
  2. Common policy questions across multiple survey waves
  3. Both incumbents and challengers
  4. Both Upper and Lower House candidates
  5. Extremely high response rate (average 85%)
  6. 9 cross-section/panel surveys of voters (not analyzed yet)

- Strategy: analyze these survey data to estimate policy positions of candidates (and voters) across chambers and time periods
## Data at Glance

<table>
<thead>
<tr>
<th>Wave Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<tbody>
<tr>
<td>House</td>
<td>L</td>
<td>L</td>
<td>U</td>
<td>L</td>
<td>U</td>
<td>L</td>
<td>L</td>
<td>U</td>
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<tr>
<td>Pre-election survey?</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td># of policy questions</td>
<td>13</td>
<td>22</td>
<td>14</td>
<td>19</td>
<td>18</td>
<td>20</td>
<td>35</td>
<td>36</td>
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<tr>
<td># of politicians</td>
<td>476</td>
<td>1159</td>
<td>482</td>
<td>1132</td>
<td>533</td>
<td>884</td>
<td>1333</td>
<td>558</td>
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<tr>
<td>incumbents</td>
<td>418</td>
<td>90</td>
<td>457</td>
<td>84</td>
<td>463</td>
<td>448</td>
<td>83</td>
<td></td>
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<tr>
<td>challengers</td>
<td>741</td>
<td>230</td>
<td>671</td>
<td>293</td>
<td>421</td>
<td>885</td>
<td>312</td>
<td></td>
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<tr>
<td>Response rate</td>
<td>0.82</td>
<td>0.95</td>
<td>0.76</td>
<td>0.91</td>
<td>0.81</td>
<td>0.83</td>
<td>0.98</td>
<td>0.82</td>
</tr>
</tbody>
</table>

- A total of 3025 candidates
- A total of 90 distinct policy questions
Overlap across Chambers and Time Periods

Within-chamber/Within-wave Pairs

Within-chamber/Between-wave Pairs

Between-chamber/Between-wave Pairs

Number of Shared Questions

Density

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Bayesian factor analysis for ordinal response (Quinn 2004; Treier and Jackman 2008) via MCMCpack

- $i$: politician
- $j_i$: $j_i$th wave for politician $i$
- $k_j$: $k$th question in the $j$th wave
- $x_{ij_i}$: policy position of politician $i$ at the time of wave $j_i$
- $y_{ij_i}k_j$: politician $i$’s answer to question $k_j$ in survey wave $j_i$

The model for the latent response variable:

$$y_{ij_i}^{*k_j} \sim \mathcal{N}(\alpha_{k_j} + \beta_{k_j}^T x_{ij_i}, 1)$$

- Proper conjugate prior distributions
- Two models: one and two-dimensional
One-dimensional model gives estimates almost identical to the first dimension estimates (corr. = 0.99)

Highly correlated with self-reported ideology (corr. = 0.82)

Constraints and interpretation:
- First dimension = security/foreign policy
- Second dimension = economic policy
Comparison with Expert Survey Estimates

- Party medians in the 1st dimension are similar.
- Shifts of party medians in the 2nd dimension for LDP and DPJ are consistent.

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Are SMD Candidates More Dispersed?

Estimated Policy Position

DPJ/PR
DPJ/SMD
LDP/PR
LDP/SMD

−2 −1 0 1 2
●
●
●
●

2003
First Dimension

2005
First Dimension

2009
First Dimension

Second Dimension

2003
Second Dimension

2005
Second Dimension

2009
Second Dimension

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Do SMD Candidates Converge within Districts?

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First Dimension

2003

LDP candidates

DPJ candidates

LDP-incumbent/DPJ-challenger
LDP-challenger/DPJ-incumbent
Others

Second Dimension

2005

2009

LDP candidates

DPJ candidates

Policy Positions
Do mixed member electoral systems offer the “best of both worlds”?

Bayesian factor analysis of comprehensive panel survey of Japanese politicians

Evidence is mixed: SMD candidates are more dispersed than PR candidates, but no obvious convergence within SMDs

Our next step is to incorporate voter survey to estimate voter preferences