Resources, Enforcement, and Party Discipline under Candidate-Centered PR

Royce Carroll$^1$ Monika Nalepa$^2$

$^1$Rice University

$^2$University of Notre Dame

April 12, 2013
When are conditions for disloyalty met?

Observing disloyalty implies

- Preference divergence
- Lack of discipline enforcement capacity
When are conditions for disloyalty met?

Observing disloyalty implies

- Preference divergence
- Lack of discipline enforcement capacity

We should not expect both these conditions to be often simultaneously present in established party systems.
Where do electoral systems fit in?

- Party list systems give leaders nomination control, but Open List PR (OLPR) systems give voters control over rank
Where do electoral systems fit in?

- Party list systems give leaders nomination control, but Open List PR (OLPR) systems give voters control over rank.
- OLPR provide a clear metric for contribution to the party’s success: their vote share within the list.
Where do electoral systems fit in?

- Party list systems give leaders nomination control, but Open List PR (OLPR) systems give voters control over rank.
- OLPR provide a clear metric for contribution to the party’s success: their vote share within the list.
- OLPR formalizes the process of ‘obtaining clout’.
Where do electoral systems fit in?

- Party list systems give leaders nomination control, but Open List PR (OLPR) systems give voters control over rank.
- OLPR provide a clear metric for contribution to the party’s success: their vote share within the list.
- OLPR formalizes the process of ‘obtaining clout’.
- Consequence: measurable disparities among party members who require different levels of enforcement.
- This has observable implications for MP loyalty and party unity.
Where do electoral systems fit in?

- Party list systems give leaders nomination control, but Open List PR (OLPR) systems give voters control over rank.
- OLPR provide a clear metric for contribution to the party’s success: their vote share within the list.
- OLPR formalizes the process of ‘obtaining clout’.
- Consequence: measurable disparities among party members who require different levels of enforcement.
- This has observable implications for MP loyalty and party unity.
- We will also show that party organization can critically limit the extent to which electoral systems can have an effect on legislative behavior.
SLD vice-speaker when the President asked 15 MPs to vote in a way that would violate party discipline:
SLD vice-speaker when the President asked 15 MPs to vote in a way that would violate party discipline:

“Normally, disobedience would result in having one’s name removed from the list; among the 15, there were about 7 who were so-called ‘steam engines’ and removing them would result in losing considerable votes” (Wenderlich, interview 2011)
By contrast, a PO backbencher in his first term recalled an early experience with party discipline without such clout:
By contrast, a PO backbencher in his first term recalled an early experience with party discipline without such clout:

“In a vote to appoint constitutional court justices, the party urged its members to vote against my law school advisor. I asked the caucus whip for an exemption. It was denied even though it would not have changed the final outcome.” (Karpinski, interview 2010)
Sequence, Players and Strategies

\[ N = \{L, MP\} \]
Sequence, Players and Strategies

- \( N = \{L, MP\} \)
- \( S_L = \{A_L^1 \times A_L^2\} \), where
  - \( A_L^1 = \{0, x\} \)
  - \( A_L^2 \)
  - \( f : A_L^1 \times A_{MP} \rightarrow \{0, 1\} \)
Sequence, Players and Strategies

- $N = \{L, MP\}$
- $S_L = \{A^1_L \times A^2_L\}$, where
  - $A^1_L = \{0, x\}$
  - $A^2_L = \{f : A^1_L \times A_{MP} \to \{0, 1\}\}$
- $S_{MP} = \{f : A^1_L \to \{0, x\}\}$

Carroll and Nalepa

Resources, Enforcement, and Party Discipline
Sequence, Players and Strategies

- $N = \{L, MP\}$
- $S_L = \{A^1_L \times A^2_L\}$, where $A^1_L = \{0, x\}$ $A^2_L = \{f : A^1_L \times A_{MP} \rightarrow \{0, 1\}\}$
- $S_{MP} = \{f : A^1_L \rightarrow \{0, x\}\}$
- $b_L$ and $b_V \in \mathbb{R}$ are Leader’s and voters’ ideal points
Sequence, Players and Strategies

\[ N = \{ L, MP \} \]

\[ S_L = \{ A_L^1 \times A_L^2 \}, \text{ where} \]

\[ A_L^1 = \{ 0, x \} \quad A_L^2 = \{ f : A_L^1 \times A_{MP} \rightarrow \{ 0, 1 \} \} \]

\[ S_{MP} = \{ f : A_L^1 \rightarrow \{ 0, x \} \} \]

\[ b_L \text{ and } b_V \in \mathbb{R} \text{ are Leader’s and voters’ ideal points} \]
Payoffs

- Utility of the MP depends on voters’ ideal point \( b_V \), L’s strategy, and party resources, \( r \)
**Payoffs**

- Utility of the MP depends on voters’ ideal point $b_V$, L’s strategy, and party resources, $r$

  $$U_{MP}(s_L, s_{MP}) = -(b_V - a_{1MP}^1)^2 + v(r) + V(d)\pi,$$

  where

  $$v(r) = \begin{cases} r & a_L^1 = a_{MP}^1 \\ 0 & \text{otherwise} \end{cases}$$

- $r > 0$ represents the resources the leadership can offer the MP
- Preferences of the Leader depend on $b_L$, L’s ideal point, MP’s strategy and vote share, $\pi \in [-1, 1]$, and discipline enforcement capacity, $d$:
Payoffs

- Utility of the MP depends on voters’ ideal point \( b_V \), L’s strategy, and party resources, \( r \)

\[
U_{MP}(s_L, s_{MP}) = -(b_V - a_{MP}^1)^2 + v(r) + V(d)\pi,
\]

\[
v(r) = \begin{cases} 
  r & a_L^1 = a_{MP}^1 \\
  0 & \text{otherwise}
\end{cases}
\]

- \( r > 0 \) represents the resources the leadership can offer the MP
- Preferences of the Leader depend on \( b_L \), L’s ideal point, MP’s strategy and vote share, \( \pi \in [-1, 1] \), and discipline enforcement capacity, \( d \) :

\[
U_L(s_L, s_{MP}) = -(b_L - a_{MP}^1)^2 - \pi V(d),
\]

where
Utility of the MP depends on voters’ ideal point $b_V$, L’s strategy, and party resources, $r$

$$U_{MP}(s_L, s_{MP}) = -(b_V - a_{MP}^1)^2 + v(r) + V(d)\pi,$$ where

$$v(r) = \begin{cases} r & a_L^1 = a_{MP}^1 \\ 0 & \text{otherwise} \end{cases}$$

$r > 0$ represents the resources the leadership can offer the MP

Preferences of the Leader depend on $b_L$, L’s ideal point, MP’s strategy and vote share, $\pi \in [-1, 1]$, and discipline enforcement capacity, $d$

$$U_L(s_L, s_{MP}) = -(b_L - a_{MP}^1)^2 - \pi V(d),$$ where

$$V(d) = \begin{cases} d & a_L^2 = 1 \\ 0 & \text{otherwise} \end{cases}$$

$d > 0$ represents effect of enforcing discipline internalized by party leadership.
Payoffs

- Utility of the MP depends on voters’ ideal point $b_V$, L’s strategy, and party resources, $r$
  
  $U_{MP}(s_L, s_{MP}) = -(b_V - a_{MP}^1)^2 + v(r) + V(d)\pi$, where
  
  $v(r) = \begin{cases} 
  r & a_L^1 = a_{MP}^1 \\
  0 & \text{otherwise} 
  \end{cases}$

- $r > 0$ represents the resources the leadership can offer the MP
- Preferences of the Leader depend on $b_L$, L’s ideal point, MP’s strategy and vote share, $\pi \in [-1, 1]$, and discipline enforcement capacity, $d$:

  $U_L(s_L, s_{MP}) = -(b_L - a_{MP}^1)^2 - \pi V(d)$, where

  $V(d) = \begin{cases} 
  d & a_L^2 = 1 \\
  0 & \text{otherwise} 
  \end{cases}$

  $d > 0$ represents effect of enforcing discipline, internalized by party leaders.
Proposition 1

If the Leader is dealing with a **Backbencher**, the following strategy profiles form a Subgame Perfect Nash Equilibrium:
Proposition 1

If the Leader is dealing with a Backbencher, the following strategy profiles form a Subgame Perfect Nash Equilibrium:

1. \((x, 1, 0; 0, 0)\) whenever \(b_V < \frac{x}{2} + \frac{r - \pi d}{2x}\).
2. \((0, 1, 0; 0, x)\) whenever \(\frac{x}{2} - \frac{r - \pi d}{2x} \leq b_V \leq \frac{x}{2} + \frac{r - \pi d}{2x}\) and \(b_L < \frac{x}{2}\).
3. \((0, 1, 0; x, x)\) and \((x, 0, 0; x, x)\) whenever \(b_V > \frac{x}{2} + \frac{r - \pi d}{2x}\).
4. \((x, 0, 1; 0, x)\) whenever \(\frac{x}{2} - \frac{r - \pi d}{2x} \leq b_V \leq \frac{x}{2} + \frac{r - \pi d}{2x}\) and \(b_L \geq \frac{x}{2}\).
Proposition II

If the Leader is dealing with a **Steam Engine**, the following strategy profiles form a Subgame Perfect Nash Equilibrium:
Proposition II

If the Leader is dealing with a **Steam Engine**, the following strategy profiles form a Subgame Perfect Nash Equilibrium:

1. \((0, 0, 0; 0, 0)\) whenever \(b_V < \frac{x}{2} + \frac{r}{2x}\) and \(b_L < \frac{x}{2}\)
2. \((x, 0, 0; 0, 0)\) whenever \(b_V < \frac{x}{2} + \frac{r}{2x}\) and \(b_L \geq \frac{x}{2}\)
3. \((0, 0, 0; 0, x)\) whenever \(\frac{x}{2} - \frac{r}{2x} \leq b_V \leq \frac{x}{2} + \frac{r}{2x}\) and \(b_L < \frac{x}{2}\)
4. \((x, 0, 0; 0, x)\) whenever \(\frac{x}{2} - \frac{r}{2x} \leq b_V \leq \frac{x}{2} + \frac{r}{2x}\) and \(b_L \geq \frac{x}{2}\)
5. \((0, 0, 0; x, x)\) whenever \(b_V > \frac{x}{2} + \frac{r}{2x}\) and \(b_L < \frac{x}{2}\)
6. \((x, 0, 0; x, x)\) whenever \(b_V > \frac{x}{2} + \frac{r}{2x}\) and \(b_L \geq \frac{x}{2}\)
Steam engines with preferences similar to the leader behave like Backbenchers.
Comparative Statics: Backbenchers and Steam Engines

- Steam engines with preferences similar to the leader behave like Backbenchers.
- What counts as “similar” preferences depends on party resources, $r$. 

$\pi = 1$

**Steam Engine**

$\frac{x}{2} - \frac{r}{2}x$

MP votes for $x$, irrespective of $L$

$\frac{x}{2} + \frac{r}{2}x$

$L$ chooses whichever policy he prefers and MP votes according to $L$'s choice

**Region B**

$\pi = -1$

**Backbencher**

$L$ chooses whichever policy he prefers and MP votes according to $L$'s choice

**Area 3**
Steam engines with preferences similar to the leader behave like Backbenchers.

What counts as “similar” preferences depends on party resources, \( r \).

For more constituent-oriented preferences, Backbenchers need discipline to support the leadership (threat of enforcing discipline is credible).
MP votes for 0, irrespective of $L$ chooses whichever policy he prefers and MP votes according to $L$'s choice.

L chooses whichever policy he prefers and MP votes according to $L$'s choice.

$\pi = 1$

Region A

$\pi = -1$

Region B

$\frac{x}{2} - \frac{r}{2x}$

$\frac{x}{2} + \frac{r}{2x}$

Area 2

Backbencher Steam Engine

Area 3
Steam engines with preferences similar to the leader behave like Backbenchers.

What counts as “similar” preferences depends on party resources, $r$.

For more constituent-oriented preferences, Backbenchers need discipline to support the leadership (threat of enforcing discipline is credible).

- Credible threat of enforcement decreases with vote share, $\pi$.
- Credible threat of enforcement increases with party organization $d$. 
MP votes for 0, irrespective of L. L chooses whichever policy he prefers and MP votes according to L’s choice.

MP votes for x, irrespective of L.

\[ \frac{x}{2} - \frac{r}{2x} \]

Backbencher Steam Engine

Area 2

Region B

Region A

Area 3

\[ \frac{x}{2} - (r + d \pi) / 2x \]

\[ \frac{x}{2} + \frac{r}{2x} \]
Steam engines with preferences similar to the leader behave like Backbenchers.

What counts as “similar” preferences depends on party resources, \( r \).

For more constituent-oriented preferences, Backbenchers need discipline to support the leadership (threat of enforcing discipline is credible).

- Credible threat of enforcement decreases with vote share, \( \pi \).
- Credible threat of enforcement increases with party organization \( d \).

The threat of enforcement is not credible when

\[
b \leq \frac{x}{2} - \frac{r + d \pi}{2x}
\]

(for extreme voter preferences, backbenchers follow their constituents and get disciplined).
MP votes for 0, irrespective of $L$ chooses whichever policy he prefers and MP votes according to $L$’s choice.

Area 1

Region A

Region B

Area 2

Area 3

Backbencher Steam Engine

$x/2 - r/2x$

$x/2 + r/2x$

$b_V$

$x/2 - (r + d \pi)/2x$

$\pi = 1$

$\pi = -1$
Comparative Statics: Backbenchers and Steam Engines

- Steam engines with preferences similar to the leader behave like Backbenchers.
- What counts as “similar” preferences depends on party resources, $r$.
- For more constituent-oriented preferences, Backbenchers need discipline to support the leadership (threat of enforcing discipline is credible).
  - Credible threat of enforcement decreases with vote share, $\pi$.
  - Credible threat of enforcement increases with party organization $d$.
- The threat of enforcement is not credible when $b_V \geq (\leq) \frac{x}{2} + (-) \frac{r + d \pi}{2x}$ (for extreme preferences, backbenchers follow constituencies and get disciplined).
- In equilibrium, Steam Engines are never disciplined.
Hypothesis for MP Variation in Loyalty

Across MPs: Observed party loyalty should be lower for MPs with the largest vote shares on the party list but this should be conditional on how far their preferences diverge from that of the leadership.
Operationalization

- Loyalty: MP loyalty scores (Mainwairing and Perez Linan 1997) using roll call votes from Polish Sejm, 1997-2011
Operationalization

- **Loyalty**: MP loyalty scores (Mainwairing and Perez Linan 1997) using roll call votes from Polish Sejm, 1997-2011
- “Steam engines” concept: measured as MP’s vote share within their party list
Operationalization

- Loyalty: MP loyalty scores (Mainwairing and Perez Linan 1997) using roll call votes from Polish Sejm, 1997-2011
- “Steam engines” concept: measured as MP’s vote share within their party list
- Preferences: percent of bills cosponsored with MPs outside one’s own party. An indication of underlying differences with party leadership positions
Operationalization

- Loyalty: MP loyalty scores (Mainwairing and Perez Linan 1997) using roll call votes from Polish Sejm, 1997-2011
- “Steam engines” concept: measured as MP’s vote share within their party list
- Preferences: percent of bills cosponsored with MPs outside one’s own party. An indication of underlying differences with party leadership positions
- Tobit model with party random intercepts
Operationalization

- **Loyalty**: MP loyalty scores (Mainwaring and Perez Linan 1997) using roll call votes from Polish Sejm, 1997-2011
- **“Steam engines” concept**: measured as MP’s vote share within their party list
- **Preferences**: percent of bills cosponsored with MPs outside one’s own party. An indication of underlying differences with party leadership positions
- **Tobit model** with party random intercepts
- **Variables**: interaction between vote share and outside cosponsorship, dummies for each term, control for party PM status
Conditional Effect of Vote Share on Party Loyalty

![Graph showing the marginal effect of vote share on loyalty against % outside cosponsorship. The graph illustrates a negative relationship between the two variables, with the marginal effect decreasing as the percentage of outside cosponsorship increases.]
Government Status and Party Unity Over Time

<table>
<thead>
<tr>
<th>Term</th>
<th>SLD Party Unity Score</th>
<th>PIS Party Unity Score</th>
<th>PO Party Unity Score</th>
<th>SRP Party Unity Score</th>
<th>LPR Party Unity Score</th>
<th>PSL Party Unity Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure: Government Status and Party Unity Over Time
Conclusions

- Disloyalty should occur only when two conditions are in place:
  1. The leader cannot enforce discipline due to:
     1. MP clout: contributes decisively to the party’s goals
     2. Lack of resources (govt status)
  2. The MP’s preferences diverge from that of the party leader’s

- These conditions are less likely to occur in institutionalized party systems due to the structure of recruitment, the strength of party reputations, and the stability of party support bases.

- Party organizations mediate the effect of electoral systems and explain much of the variation in party loyalty/unity in nascent democracies.
### Tobit Regression: Party Loyalty Across MPs

<table>
<thead>
<tr>
<th></th>
<th>(1) All</th>
<th>(2) All</th>
<th>(3) First Excluded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vote Share</td>
<td>-0.884***</td>
<td>-4.108***</td>
<td>-7.733***</td>
</tr>
<tr>
<td></td>
<td>(0.333)</td>
<td>(0.692)</td>
<td>(1.669)</td>
</tr>
<tr>
<td>Outside Cosponsorship</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.773***</td>
<td>0.994***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.086)</td>
<td>(0.118)</td>
<td></td>
</tr>
<tr>
<td>Vote Share X Outside Cosponsorship</td>
<td>-1.479***</td>
<td>-2.925***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.260)</td>
<td>(0.641)</td>
<td></td>
</tr>
<tr>
<td>PM Party</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.857**</td>
<td>3.160***</td>
<td>3.437***</td>
</tr>
<tr>
<td></td>
<td>(1.110)</td>
<td>(1.125)</td>
<td>(0.985)</td>
</tr>
<tr>
<td>First</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.0723</td>
<td>-0.037</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.115)</td>
<td>(0.128)</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.577</td>
<td>1.470</td>
<td>1.797</td>
</tr>
<tr>
<td></td>
<td>(1.239)</td>
<td>(1.250)</td>
<td>(1.107)</td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.977</td>
<td>2.606**</td>
<td>2.905**</td>
</tr>
<tr>
<td></td>
<td>(1.297)</td>
<td>(1.329)</td>
<td>(1.173)</td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.976</td>
<td>1.419</td>
<td>1.722</td>
</tr>
<tr>
<td></td>
<td>(1.275)</td>
<td>(1.303)</td>
<td>(1.186)</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>94.66***</td>
<td>95.842***</td>
<td>95.97***</td>
</tr>
<tr>
<td></td>
<td>(1.058)</td>
<td>(1.078)</td>
<td>(0.970)</td>
</tr>
<tr>
<td>Observations</td>
<td>2,065</td>
<td>1,741</td>
<td>1,128</td>
</tr>
<tr>
<td>Number of pid</td>
<td>28</td>
<td>26</td>
<td>25</td>
</tr>
</tbody>
</table>

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1
Conditions for observing disloyalty
A Model of Party Discipline
Empirical Implications
Data and Empirical Results
Conclusions
Other work: Agenda setting and legislative success

Passage Rate of Cabinet Bills

Month
Conditions for observing disloyalty
A Model of Party Discipline
Empirical Implications
Data and Empirical Results
Conclusions

Other work: Agenda setting and legislative success

Carroll and Nalepa
Resources, Enforcement, and Party Discipline
Other work: Agenda setting and legislative success