From Weber to Kafka: Political Activism and the Emergence of an Inefficient Bureaucracy

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UNSW, EIEF
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SIEP in Ferrara, 9-25-2015
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Bureaucracy is essential for functioning of modern market economy:

- **Weberian**: swift/efficient bureaucracy → open markets, efficient competition, low organizational/transaction costs
- **Kafkaian**: slow/inefficient bureaucracy → barriers to entry, biased competition, high organizational/transaction costs
Politics and Bureaucracy

legislation/regulation \{ \text{politics chooses bureaucracy implements} \} \text{run economy}

- two stylized (empirical) facts:
  - more laws hinder bureaucratic efficiency
  - politically unstable countries have more laws and less efficient bureaucracy
Cross Country Evidence

Figure: WB Doing Business 2012. GDP partialled out. Depicted countries are top quartile of political instability (major govt crises per year 1980-2006).
This Paper

- fully dynamic model of interaction between politics and bureaucracy
  - politicians start reforms to enhance competence reputation
  - public observes effects of reforms only once completed
  - bureaucratic efficiency affects speed of completion of reforms

- key mechanics:
  - **mechanic**: more frequent reforms hinder bureaucratic efficiency
  - **strategic**: slower bureaucracy favors more frequent reforms
    (corruptissima re publica plurimae legis)

- focus on transition from a Weberian to a Kafkian economy:
  - political instability shocks
  - need for reforms shocks
  - effect of technocratic governments

- test our driving strategic forces with data on Italian MPs
Historical Example: Bureaucracy

- Habsburg Monarchy—19th Century: example of bureaucratic efficiency (Becker, Boeckh, Hainz, and Woessmann, 2011)
- But at a point system collapsed:
  - payment of simple tax in Wien at beginning of 20th century required 27 public officials
  - cost of collecting taxes in Dalmacia superior to tax revenue
  - 1903: English Embassy waits 10 months for info on how to pay taxes to import Canadian Whiskey (MacMillan, 2013)
Historical Example: Politics

- Historians’ stylized facts:
  - beginning of 20th century: substantial political instability due to ethnic conflicts; nationalistic pressures from more than 12 ethnic groups; tensions between ideologies
  - number of political parties exploded: 50 parties in 1911
  - number of MPs in Lower house increased from 203 to 516 over 1867-1918
  - 1967-1918: 29 Ministers Presidents
time is continuous, $\tau \geq 0$
continuum of ministries, $i \in [0, 1]$
legislatures last $\ell \geq \ell > 0$; legislature $t = 1, 2, \ldots$ starts at $\tau_t \equiv (t - 1) \ell$
at start of legislature $t$, a new “minister $it$” is drawn
Model: Politicians

- minister \( it \) privately knows her type \( \theta_{it} \in \{0, 1\} \),
  \( \Pr(\theta_{it} = 1) \equiv \pi \in (0, 1) \):
  - \( \theta_{it} = 1 \): minister is \textit{competent}
  - \( \theta_{it} = 0 \): minister is \textit{incompetent}

- minister \( it \) is endowed with a \textit{reform}: reform is \textit{good} with probability \( p\theta_{it} \), otherwise it is \textit{bad}

- Notice:
  - only competent politicians can start good reforms
  - \( p \) is meant to capture \textit{need for reforms}
  - \( \pi \) is meant to capture quality of politicians’ pool (more on this later)
Model: Bureaucracy

- $\alpha_t = \alpha(h_t)$: Poisson completion rate of reforms started in legislature $t$
  \[
  \alpha(h_t) = \begin{cases} 
  \overline{\alpha} & \text{if } h_t \leq \overline{h}^K, \\
  \underline{\alpha} & \text{if } h_t > \overline{h}^K
  \end{cases}
  \]

- $h_t$: stock incomplete reforms inherited from previous legislatures

- $\overline{h}^K$: Kafkian threshold

- Note: $\alpha_t$ is the efficiency of the bureaucracy
Model: Economy and Welfare

- representative agent:
  - zero discount rate, no access to savings
  - income at $\tau$ given by $A\tilde{k}_t$, where $\tilde{k}_\tau > 0$ is stock of public capital at $\tau$

- public capital:
  - completed good reforms yield $q$ units of public capital; bad reforms are useless
  - reform depreciates at rate $\nu$ after end of legislature (minister keeps reform up-to-date while in power)
Public Reputation

- at the end of legislature $t$, for each minister $i_t$, public observes:
  - whether a reform was started
  - whether it was completed
  - if so, the amount of capital produced

- Minister $i_t$’s expected payoff:

  $$E_t [\phi \rho_{i_t} - \gamma \theta_{i_t} I(\text{bad reform completed})]$$

- $\rho_{i_t}$ is public belief that $\theta_{i_t} = 1$ at end of legislature $t$
- $\phi > 0$: private value of reputation
- $\gamma > 0$: competent politician moral cost/additional market value
Equilibrium (Definition)

- strategies: probability of starting reform of quality $\omega_{it}$ if type $\theta_{it}$ and bureaucratic efficiency $\alpha_t$: $\sigma_{it}(\theta_{it}, \omega_{it}, \alpha_t)$
- we characterize the unique symmetric divine equilibrium of Banks and Sobel (1987) and Cho and Kreps (1987)
Public Beliefs

- fix $\sigma_{it}$. By Bayes’ rule, we can derive

$$\rho_{it} = \begin{cases} 
\rho^n_t & \text{no reform is started;} \\
\rho^y_t & \text{reform started, not completed;} \\
\rho^b_t & \text{reform started and completed: bad;} \\
1 & \text{reform started and completed: good;}
\end{cases}$$

- in any (divine) equilibrium

  - if no reform is ever started, then $\rho^y_t = 1$
  - if all reforms are always started, then $\rho^n_t = 1$
  - if no bad reform is ever started, then $\rho^b_t = 1$
Reforms

- competent politicians:
  - never start a bad reforms ($\gamma > 0$)
  - start good reform if $e^{-\alpha t} \rho^\gamma_t + (1 - e^{-\alpha t}) \geq \rho^n_t$

- incompetent politicians:
  - start bad reform if $e^{-\alpha t} \rho^\gamma_t \geq \rho^n_t$

Lemma

In equilibrium, competent politicians never start bad reforms and strictly prefer to start good reforms whenever incompetent politicians start bad reforms.

- Note: bureaucratic efficiency and longer legislatures reduce incentives to start bad reforms

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Equilibrium Beliefs

\[ \rho_{it} = \left\{ \begin{array}{l}
\rho^\text{n}_t \equiv \frac{\pi(1-p)}{\pi(1-p)+(1-\pi)(1-\sigma_t)} \quad \text{no reform is started;}
\rho^\text{y}_t \equiv \frac{\pi p}{\pi p+(1-\pi)\sigma_t} \quad \text{reform started, not completed;}
\theta \quad \text{reform started and completed.}
\end{array} \right. \]

- higher need for reforms \( p \rightarrow \text{more} \) incentives to start bad reforms because not doing so signals incompetence
- higher quality of politicians pool \( \pi \rightarrow \text{less} \) incentives to start bad reforms because minister has more reputation to lose in case of backfire

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Towards a Political Equilibrium

- Suppose $\sigma_t = 1$ (incompetent always start bad reforms)
  - Then starting a reform signals incompetence and $\rho_t^y e^{-\alpha_t^\ell} < \rho_t^n$, a contradiction

- Suppose $\sigma_t = 0$
  - Then $\rho_t^n = \rho \equiv \frac{\pi(1-p)}{1-\pi p}$ and incompetent politicians prefer not to start bad reforms if:
    \[ \alpha_t^\ell > -\ln (\rho) \]

- Otherwise $\sigma_t$ is such that incompetent politicians are indifferent:
  \[ e^{-\alpha_t^\ell} \rho_t^y = \rho_t^n \]
Proposition

In the unique equilibrium, competent politicians start a reform if and only if it is good; incompetent politicians start a (bad) reform with probability

$$\sigma(0,0,\alpha_t) = \begin{cases} 0, & \text{if } \alpha_t \ell > -\ln(p) \\ p - \frac{p(1-p)(1-e^{-\alpha_t \ell})}{(1-\pi)[1-p(1-e^{-\alpha_t \ell})]}, & \text{otherwise.} \end{cases} \quad (1)$$

- more bad reforms if $p$ large or $\alpha_t \ell$ and $\pi$ small:
  - $\alpha_t \ell$ large $\rightarrow$ high risk of backfire before end of legislature
  - $p$ large $\rightarrow$ no reform signals incompetence
  - $\pi$ large $\rightarrow$ more to lose in case of backfire
Lemma

The steady state average-over-time capital stock (aggregate welfare) is equal to

\[ \bar{k}^* = \int_0^\ell \frac{\tilde{k}_{t+s}}{\ell} ds = \frac{q \pi p}{\nu \ell} \left( 1 - \frac{\nu e^{-\alpha^* \ell}}{\alpha^* + \nu} \right). \] (2)

Proposition

Aggregate welfare is monotonically increasing in the steady state completion rate of reforms \( \alpha^* \).
what happens if we shut down bad reforms altogether?

Proposition

If politicians start a reform if and only if it is good, then

1. average-over time capital stock equals

\[ \bar{k}_{FB}^* \equiv \frac{q \pi p}{\nu \ell} \left( 1 - \frac{\nu e^{-\alpha \ell}}{\alpha + \nu} \right); \]

2. the optimal length of a legislature is the minimal length \( \ell \).

as only good reforms can be started, more frequent ideas/talented politicians increase flow of public capital
Multiple Steady States

**Weberian Economy:** only good reforms are started and bureaucracy is Weberian ($\alpha_t = \bar{\alpha}$)

**Kafkian Economy:** some bad reforms are started and bureaucracy is Kafkian ($\alpha_t = \underline{\alpha}$)

**Proposition**

(i) Kafkian steady-state aggregate welfare is lower than Weberian steady-state aggregate welfare, and (ii) both are lower than $\bar{k}_{FB}$ if $\ell > \underline{\ell}$.

- (i): same flow of good reforms, but more inefficient bureaucracy (slower completion rate);
- (ii): same flow of good reforms per legislature, but less frequent ideas/talented politicians
Equilibrium Dynamics

- focus on transition from Weberian to Kafkian economy

**Assumption**

*The Weberian completion rate reforms $\bar{\alpha}$ is such that*

$$\frac{\pi p}{e^{\bar{\alpha} \ell} - 1} \leq h^K$$

*and $\bar{\alpha} \ell \geq -\ln(\rho)$.*

- this guarantees existence of a Weberian steady state
Proposition

A Kafkian steady state exists if and only if

$$\alpha \ell < \ln \left( \frac{1 - \pi p}{\pi (1 - p)} \right)$$ (3)

and

$$h^K \equiv \frac{p}{[p + (1 - p) e^{\alpha \ell}](e^{\alpha \ell} - 1)} > h^K$$ (4)

- Kafkian steady-state is more likely to exist when
  - need for reforms is high
  - **legislatures are short**
  - there are few competent politicians
  - Kafkian bureaucracy is highly inefficient
Equilibrium Law of Motion

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From Weber to Kafka
Three Paths to Kafka

1. temporary increase in *need for reforms* (e.g., economic crisis):
   - short term: increases rate of bad reforms as not starting one signals incompetence
   - long term: more hanging reforms next legislature→slower bureaucracy→more bad reforms (vicious cycle)
Equilibrium Law of Motion
Three Paths to Kafka

1. temporary increase in *need for reforms* (economic crisis)
2. temporary decrease in *length of legislatures* (political instability)
   - short term: increases rate of bad reforms as harder for bad reforms to backfire
   - long term: more hanging reforms next legislature → slower bureaucracy → more bad reforms (vicious cycle)
Three Paths to Kafka

1. temporary increase in *need for reforms* (economic crisis)

2. temporary decrease in *length of legislatures* (political instability)

3. short-lived *technocratic governments*:
   - short term: increases rate of *good* reforms (and decreases rate of bad reforms)
   - long term: more hanging reforms next legislature $\rightarrow$ slower bureaucracy $\rightarrow$ more bad reforms (vicious cycle)
Interventions and Optimal Legislatures

Possible solutions:

- constitutional provision limiting further interventions on same topic;
- authority (or parliament) for control on uncompleted reforms issuing public recommendation to drop them;
- short term technological investment on bureaucracy;
- limit to political instability: optimal duration of legislature is longer than $ℓ$. 

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Gresham’s Law

- “Bad bureaucracy drives out good politicians”
- $L(U_1/U_0), L' > 0, L'' > 0$: (relative) supply of competent politicians, where $U_\theta$ is expected payoff of politician of type $\theta$ if elected
- in equilibrium: $\pi = L(U_1/U_0)$

Proposition (The Gresham’s law of bureaucracy)

A fall in the efficiency of bureaucracy $\alpha_t$ leads to a fall in the relative supply of competent politicians, so $\pi$ falls.
Empirical Evidence on Key Mechanism

- Panel data of Italian MPs over 6 legislatures (1987-2008)
- **Test:** in short legislatures, incompetent politicians propose more bills

\[ A_{it} = \alpha + \beta Z_{it} + \gamma B_{itl} + \delta l_{l} \times B_{itl} + f_{l} + \epsilon_{itl} \]

- \( A_{itl} \): legislative activism (MPs bills proposals and bills success)
- \( B_{itl} \): MPS quality (earning and compensation before and during term)
- \( l_{l} \): length of legislature (3/6 legislatures end prematurely)
# Summary Statistics

## Summary statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of bills</td>
<td>6.69</td>
<td>3</td>
<td>11.71</td>
</tr>
<tr>
<td>Number of laws</td>
<td>0.91</td>
<td>0</td>
<td>2.12</td>
</tr>
<tr>
<td>Success rate</td>
<td>0.08</td>
<td>0</td>
<td>0.179</td>
</tr>
</tbody>
</table>
### Effects of quality of politicians on approval rate of bills

<table>
<thead>
<tr>
<th>Quality measure</th>
<th>Fixed effects</th>
<th>Average residuals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; median</td>
<td>&lt; 25th pct</td>
</tr>
<tr>
<td>Low quality politician</td>
<td>-0.04*** (0.000)</td>
<td>-0.06*** (0.000)</td>
</tr>
<tr>
<td>Observations</td>
<td>3,612</td>
<td>3,612</td>
</tr>
</tbody>
</table>

Results of Tobit estimates of the share of approved bills on MP quality, measured by gross market return to human capital. All regressions control for MPs demographic characteristics (age, gender, marital status, number of kids, level of education, dummies for region of birth), dummies for chamber of parliament, life senator, previous parliament experience, appointment in party at nation and local level, member of European parliament, president or secretary of a committee, member of a committee, deputy-president or minister in government, political affiliation (left or right), and a full set of legislature dummies. Robust standard errors; p-values are shown in parenthesis; *** significant $\leq 1\%$; ** significant $< 5\%$; * significant $\leq 10\%$. 

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### Effects on the number of bills proposed

<table>
<thead>
<tr>
<th>Quality measure</th>
<th>Fixed effect</th>
<th>Mean residual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low quality politician</td>
<td>-0.63 (0.266)</td>
<td>0.00 (0.995)</td>
</tr>
<tr>
<td>Complete legislature × low quality politician</td>
<td>-1.21** (0.036)</td>
<td>-1.10** (0.044)</td>
</tr>
</tbody>
</table>

Observations: 4,903
R-squared: 0.104

OLS estimates of the number of bills presented by MPs on MP quality, measured by gross market return to human capital. All regressions control for MPs demographic characteristics (age, gender, marital status, number of kids, level of education, dummies for region of birth), dummies for chamber of parliament, life senator, previous parliament experience, appointment in party at nation and local level, member of European parliament, president or secretary of a committee, member of a committee, deputy-president or minister in government, political affiliation (left or right), and a full set of legislature dummies. Robust standard errors; p-values are shown in parenthesis: *** significant <= 1%; ** significant < 5% ; * significant <= 10%.
## Effects on number of bills proposed: Robustness

<table>
<thead>
<tr>
<th>Quality measure</th>
<th>Fixed effects</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25th</td>
<td>No outl.</td>
<td>≥ one bill</td>
<td>25th</td>
<td>No outl.</td>
<td>≥ one bill</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low quality politician</td>
<td>-0.44</td>
<td>-0.32</td>
<td>-1.13</td>
<td>-0.36</td>
<td>-0.37</td>
<td>0.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.369)</td>
<td>(0.399)</td>
<td>(0.136)</td>
<td>(0.417)</td>
<td>(0.207)</td>
<td>(0.753)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete legis. × low quality polit.</td>
<td>-0.99*</td>
<td>-0.97**</td>
<td>-0.88</td>
<td>-0.99</td>
<td>-0.81**</td>
<td>-1.12*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.089)</td>
<td>(0.014)</td>
<td>(0.227)</td>
<td>(0.117)</td>
<td>(0.036)</td>
<td>(0.09)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>4,903</td>
<td>4,852</td>
<td>3,613</td>
<td>4,903</td>
<td>4,852</td>
<td>3,613</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-squared</td>
<td>0.103</td>
<td>0.131</td>
<td>0.100</td>
<td>0.103</td>
<td>0.132</td>
<td>0.098</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results of OLS estimates of the number of bills presented on MP quality. In the first column this is measured by net tax income prior to election. In columns 2 and 3 by gross income prior to election. Column 2 drops observations with more than 54 bills (the 99th percentile of the number of bills distribution); the third column only considers MPs with a positive number of bills presented. All regressions control for MPs demographic characteristics (age, gender, marital status, number of kids, level of education, dummies for region of birth), dummies for chamber of parliament, life senator, previous parliament experience, appointment in party at nation and local level, member of European parliament, president or secretary of a committee, member of a committee, deputy-president or minister in government, political affiliation (left or right), and a full set of legislature dummies. Robust standard errors; p-values are shown in parenthesis: *** significant <= 1%; ** significant < 5%; * significant <= 10%.

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## Effects on the number of laws passed

<table>
<thead>
<tr>
<th>Quality measure</th>
<th>FE &lt; median</th>
<th>Residual &lt; median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low quality politician</td>
<td>0.01</td>
<td>-0.02</td>
</tr>
<tr>
<td></td>
<td>(0.921)</td>
<td>(0.753)</td>
</tr>
<tr>
<td>Complete legislature × low quality politician</td>
<td>-0.32**</td>
<td>-0.15</td>
</tr>
<tr>
<td></td>
<td>(0.016)</td>
<td>(0.255)</td>
</tr>
<tr>
<td>Observations</td>
<td>3,613</td>
<td>3,613</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.161</td>
<td>0.160</td>
</tr>
</tbody>
</table>

Results of OLS estimates of the number of laws presented by MPs on MP quality, measured by gross market return to human capital. All regressions control for MPs demographic characteristics (age, gender, marital status, number of kids, level of education, dummies for region of birth), dummies for chamber of parliament, life senator, previous parliament experience, appointment in party at nation and local level, member of European parliament, president or secretary of a committee, member of a committee, deputy-president or minister in government, political affiliation (left or right), and a full set of legislature dummies. Robust standard errors; p-values are shown in parenthesis: *** significant $<= 1\%$; ** significant $< 5\%$; * significant $<= 10\%$. 

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