Institutional Choice of Electoral Management Bodies (EMBs)

Kenichiro Yashima
Boston University
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Outline

* **Research Question**
* **EITM Framework**
* **Data and Measurement**
* **Empirical Findings**
* **Conclusions**

Research Question

* What factors explain the variation of EMBs? When and how do they matter?

* What are the relevant aspects of EMBs?
- ACE Network provides three-fold taxonomy of EMB (governmental, mixed, independent) … does it capture the main political dynamics over EMB?

[ACE Network taxonomy]

* ***Independent***: EMB are institutionally independent, autonomous from the executive branch of government and has and manages its own budget (142)
* ***Mixed***: a dual structure that has a policy, monitoring, or supervisory EMB that is independent of the executive branch of government … and an implementation EMB located within a government (25)
* ***Governmental***: elections organized and managed by the executive branch of government (45)

[reasons to doubt ACE …]

* Confusion of “freedom from” and “freedom to” (Schedler 2003)

* Approach: two types of autonomy

1) **Administrative:** autonomy vis-à-vis Executive
2) **Legislative:** autonomy vis-à-vis Legislature

EITM Framework

* **Step 1:** Identify a theoretical concept of human behavior of interest and relate it to a statistical concept.
* **Step 2:** Develop behavioral (formal) and statistical analogues.
* **Step 3:** Unite the theoretical and statistical analogues in testable theory.

Step 1: concepts

* **Theoretical concept:**

  decision making (by political parties)

* **Statistical Concept:**

  discrete choice

a) Choice of "EMB model" (3 categories)
b) Delegation of authority (dichotomous action)

Step 2: analogues

* **Behavioral (formal) concept:** decision theory
  - Parties choose institutions of EMBs to maximize their expected utilities [utility maximization]
  - Two choices – administrative and legislative autonomy
* **Statistical concept:** discrete choice modeling
  - EMB model (3-fold): ordered or multinomial logit
  - Delegation (binary): logit

(step 2) behavioral: setup

* Uni-dimensional competition between two parties (left and right, $0 = x_L < x_L^* < x_R^* < 1 = x_R$)
* Probabilities of winning $\pi(\mu)$ under equilibrium may vary.
  * Supporting assumptions:
  - Parties are uncertain with the preference of the median
  - Parties are *both* office- and policy-seeking, and the "weights" might be different

(step 2) setup (cont.)

* **Institutions:** Legislature, Executive, EMB
* Legislature has **two choices:** whether to give legislative and administrative autonomy to EMB
* Legislature and EMB jointly choose the electoral rule, and Executive and EMB jointly administer the election.
* Left party wins the majority in Legislature with the probability of $\pi(\mu)$.

(step 2) setup (cont.)

* The "median" voter under existing electoral rule is closer to party R than the theoretical ideal "median."

* Preference of EMB:
- ***Administrative stage*:** fair implementation of election, however biased the rule is (no executive fraud)
- ***Rule-making stage*:** Realization of theoretical ideal.

(step 2) [notation…]

* μ: median voter given the electoral rule
* $\pi(\cdot)$: probability of winning given the "median"
* ω: difficulty of fraud
* a: electoral uncertainty
* k: cost of social unrest
* τ: "bias" of the electoral rule (gap btw μ and x_m^*)

(step 2) administrative autonomy

* Expected utility of party L may be written as:

$$U_L(\mu|nonauto_{adm}) = \pi(\mu)\left[\pi\left(\mu-\frac{1}{4\omega}\right)(-|x_L^*|)+\left(1-\pi\left(\mu-\frac{1}{4\omega}\right)\right)(-|x_R^*|)\right] + \left(1-\pi(\mu)\right)\left[\pi\left(\mu+\frac{1}{4\omega}\right)(-|x_L^*|)-\left(1-\pi\left(\mu+\frac{1}{4\omega}\right)\right)(-|x_R^*|)\right] - \frac{k}{4\omega^2}$$

$$U_L(\mu|auto_{adm}) = \pi(\mu)(-|x_L^*|)+\left(1-\pi(\mu)\right)(-|x_R^*|)$$

(step 2) admin. autonomy (cont.)

* Taking the difference …

$$U_L(\mu|auto_{adm}) - U_L(\mu|nonauto_{adm})$$
$$= -\frac{D}{4\omega a}\pi(\mu) + \frac{D}{8\omega a} + \frac{k}{4\omega^2}$$

Where $D \equiv x_R^* - x_L^*$.

* Both parties prefer autonomous parties when …

$$\frac{1}{2} - \frac{ak}{\omega D} < \pi(\mu) < \frac{1}{2} + \frac{ak}{\omega D}$$

$$\Leftrightarrow \left|\frac{1}{2} - \pi(\mu)\right| < \frac{ak}{\omega D}$$

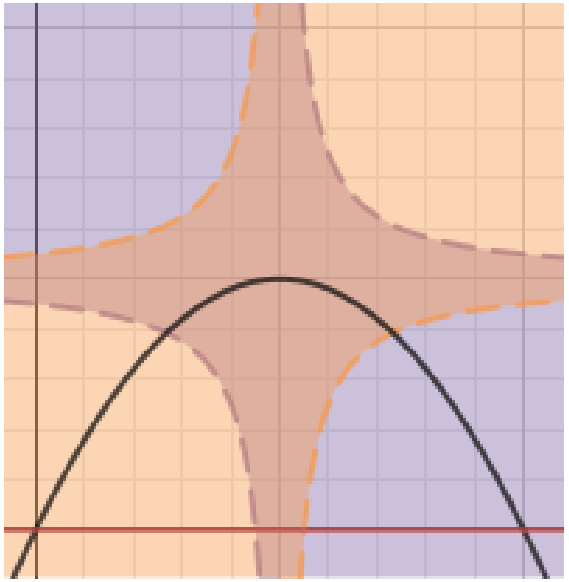
(step 2) [implications 1]

$$\left|\frac{1}{2} - \pi(\mu)\right| < \frac{\alpha k}{\omega D}$$

* π (probability of winning): ***more*** competitive, ***more*** likely to adopt autonomous EMB. [delegation theory!]
* α (electoral uncertainty): ***more*** uncertain, ***more*** likely to adopt autonomous EMB.
* k (social unrest): ***more*** social unrest caused by fraud, ***more*** likely to adopt autonomous EMB.
* ω (difficulty of fraud): ***more*** difficult, ***LESS*** likely to adopt autonomous EMB.
* D (ideological divergence): ***more*** ideologically polarized, ***less*** likely to adopt autonomous EMB.

(step 2) adm. autonomy (cont.)

* Impact of presidentialism?



Horizontal: π

Vertical: probability of divided government (s).

The figures shows that presidential system is ***more*** likely to delegate administrative autonomy to EMBs than parliamentary systems.

(step 2) adm. autonomy (cont.)

* $\varphi = \pi * (1 - s) + (1 - \pi) * s = \pi + s - 2\pi s$

[φ denotes the probability of occupying Executive]

- Plugging it into the inequality gives the parabolas.

* $s = \pi(1 - \varphi) + (1 - \pi)\varphi = -2\pi^2 + 2\pi$

[s denotes the probability of divided government]

- Represents the situation in which Executive and Legislature are selected by random draw.

(step 2) rule autonomy

* Long-term equilibrium??

$$\begin{pmatrix} P(L) \\ P(R) \end{pmatrix} = \begin{pmatrix} P(L|L) & P(L|R) \\ P(R|L) & P(R|R) \end{pmatrix} \begin{pmatrix} P(L) \\ P(R) \end{pmatrix}$$

$$= \begin{pmatrix} \pi\left(\mu - \frac{1}{4\omega}\right) & \pi\left(\mu + \frac{1}{4\omega}\right) \\ 1 - \pi\left(\mu - \frac{1}{4\omega}\right) & 1 - \pi\left(\mu + \frac{1}{4\omega}\right) \end{pmatrix} \begin{pmatrix} P(L) \\ P(R) \end{pmatrix}$$

$$P(L) + P(R) = 1.$$

* Solving this, we obtain:

$$P(L) = \pi(\mu) + \frac{1}{8\omega a}(2\pi(\mu) - 1)$$

(step 2) rule autonomy (cont.)

$$U_L\left(\mu \middle| nonauto_{leg}\right)$$

$$= P(L)(-|x_L^*|) + \left(1 - P(L)\right)(-|x_R^*|) - \frac{k}{4\omega^2}$$

$$U_L\left(\mu \middle| auto_{leg}\right)$$

$$= \pi(x_m^*)(-|x_L^*|) + \left(1 - \pi(x_m^*)\right)(-|x_R^*|) - \delta$$

[we set $\delta = 0$ here.]

* Taking the difference, we obtain:

$$U_L\left(\mu \middle| auto_{leg}\right) - U_L\left(\mu \middle| nonauto_{leg}\right)$$

$$= -\frac{D}{4\omega a}\pi(\mu) + \frac{D(4\tau\omega + 1)}{8\omega a} + \frac{k}{4\omega^2}$$

(step 2) rule autonomy (cont.)

* Thus, Left party prefers autonomous EMB when:

$$\pi(\mu) < \frac{1}{2} + \frac{ak + 2\tau\omega^2 D}{\omega D}$$

* Both parties prefer autonomous EMB when:

$$\frac{1}{2} + 2\tau\omega - \frac{ak}{\omega D} < \pi(\mu) < \frac{1}{2} + 2\tau\omega + \frac{ak}{\omega D}$$

$$\Leftrightarrow \omega \left| \frac{1}{2} - \pi(\mu) + 2\tau\omega \right| < \frac{ak}{D}$$

(step 2) [implications 2]

$$\omega \left| \frac{1}{2} - \pi(\mu) + 2\tau\omega \right| < \frac{ak}{D}$$

* ω (difficulty of manipulation): ***more*** difficult, ***LESS*** likely to adopt autonomous EMB. However, the impact is larger on average if $\pi(\mu) < \frac{1}{2}$. [whiteboard!]
* τ (deviation from the ideal): does not affect the likelihood of autonomous EMB, but changes the impact of ω.
* $\pi(\mu)$ (probability that Left wins): the "vertex" becomes larger compared to administrative autonomy.

(step 2) rule autonomy (cont.)

* Impact of presidentialism?

➢ Since the control of Executive is irrelevant for rule-making, *there would exist* ***no difference*** *between presidential and parliamentary systems regarding rule-making autonomy*.

How to Test the theory … Experiments??

* Possible design … ???

e.g. 2 players, competing for sth. victory at time t affects the future possibility of winning. When do they agree to rule out “cheating”? … ???

Step 3: unification

* EMB model (ACE Network)
- 3 categories (government, mixed, independent)
- Multinomial logistic regression is more appropriate than ordered logistic regression.
- We generally expect the pattern of administrative autonomy, but relevant factors would differ by pair.

* Delegation
- We expect the pattern of rule-making autonomy.

Data and Measurement

* Dependent variables
- EMB models (ACE network)

  Governmental, Mixed, Independent (3-fold)

  Cross-sectional data of countries
- Delegation (ACE network)

  whether a country delegate an authority of delimiting constituency boundary to EMB or the boundary commission (binary)

Data and Measurement (cont.)

* Key Independent variables
  - Long-term probability that a left party win ($\pi(\mu)$)
    - Constructed from **DPI2012 dataset** (Beck et al. 2001)
    - The ratio that the largest governmental party is either left or center during 1973-2010
  - Separation of powers
    - Re-categorized from **DD2010 dataset** (Cheibub et al. 2010) into 3 categories (non-democracy, parliamentary, presidential)
    - variable from DPI2012 is also used for comparison.
  - Difficulty of manipulation (ω): pc GDP (log) as a proxy

Data and Measurement (cont.)

* Summary Statistics

	N	MEAN	SD	MIN	MAX
Left Ratio	176	0.35	0.33	0	1
GDP per capita (log)	195	8.63	1.55	5.42	12.05
Boundary	100	0.31	0.46	0	1

	Total	Governmental	Mixed	Independent
EMB Model	212	45	25	142

	Total	Parliamentary	Presidential	Dictatorship
Regime	192	80	38	74

Empirical Results (1)

* EMB model

Base: Governmental	(1)				(2)				(3)			
	BETA	RSE	p		BETA	RSE	p		BETA	RSE	p	
Gov-mixed												
GDP per capita (log)	-0.97	0.31	0.002	***	-1.73	0.47	<0.001	***	-2.43	0.58	<0.001	***
Regime (base: parl)												
Presidnetial	-1.60	0.95	0.094	*					-2.78	1.15	0.015	**
Dictatorship	-3.77	1.19	0.001	***					-5.48	1.36	<0.001	***
Left-ratio					12.48	4.17	0.003	***	4.01	4.78	0.402	
(Left-ratio)^2					-15.15	4.46	0.001	***	-6.52	5.10	0.201	
Cons.	9.76	3.12	0.002	***	15.44	4.41	<0.001	***	25.00	6.23	<0.001	***
Gov-ind.												
GDP per capita (log)	-1.20	0.25	<0.001	***	-2.16	0.41	<0.001	***	-2.61	0.57	<0.001	***
Regime (base: parl)												
Presidential	0.24	0.63	0.709						-1.02	0.85	0.228	
Dictatorship	-8.34	0.60	0.163						-2.01	0.88	0.022	**
Left-ratio					12.26	3.06	<0.001	***	8.06	3.47	0.020	**
(Left-ratio)^2					-16.27	3.33	<0.001	***	-12.55	3.82	0.001	***
Cons.	12.56	2.60	<0.001	***	21.26	4.12	<0.001	***	27.26	6.19	<0.001	***
Chi^2			<0.0001				<0.0001				<0.0001	
Pseudo R2			0.2323				0.301				0.3913	
N			181				166				165	

Empirical Results (2)

* Delegation (boundary)

	(1)			(2)				(3)			
	BETA	RSE	p	BETA	RSE	p		BETA	RSE	p	
GDP per capita (log)	-0.20	0.17	0.244	-0.34	0.17	0.051	*	-0.36	0.18	0.048	**
Regime (base: parl)											
Presidential	0.31	0.61	0.615					0.32	0.67	0.637	
Dictatorship	-0.40	0.57	0.491					-0.32	0.63	0.616	
Left-ratio				5.85	2.64	0.027	**	5.43	2.78	0.051	*
(Left-ratio)^2				-6.27	2.85	0.028	**	-5.74	3.07	0.062	*
Cons.	1.02	1.53	0.503	1.45	1.35	0.281		1.75	1.57	0.267	
Chi-squared			0.5413			0.0777	*			0.1851	
Pseudo R-squared			0.0198			0.0600				0.0675	
N			89			80				80	

Empirical Results (3)

* Delegation (cont.)

	Left-ratio < 0.4				Left-ratio > 0.4		
	BETA	RSE	p		BETA	RSE	p
GDP per capita (log)	-0.6	0.24	0.012	**	-0.20	0.40	0.612
Regime (base: parl)							
Presidential	0.65	0.96	0.495		0.78	1.01	0.44
Dictatorship	0.09	0.81	0.908		-1.72	1.09	0.12
Left-ratio	11.18	9.21	0.225		12.46	22.93	0.587
(Left-ratio)^2	-8.47	23.42	0.718		-7.42	16.06	0.644
Cons.	2.94	1.93	0.128		-3.64	7.74	0.638
Chi-squared			0.0323				31
Pseudo R-squared			0.1701				0.397
N			49				0.1136

Empirical Results (cont.)

Findings generally consistent with predictions, with some surprise.

* For EMB model, it generally follows the predictions for administrative autonomy, but we also find evidence of confusion.
* Separation of powers *only* matters for EMB model [but opposite sign!!], *not* for boundary delegation.
* Probability that Left wins matters in both regressions, but *the vertex of the quadratic curve is consistently larger in the case of boundary delegation*.
* Left-ratio matters *even after* the regime (democracy) is controlled.
* For delegation, impact of GDP is weaker in high π.

Conclusions

* Theoretical implications

- Bringing "partisanship" back into the delegation theory
- Integrating two literatures: democracy assistance and American politics
- Distinction between administrative and legislative autonomy
- Reconsideration of data-collecting strategy

Conclusions (cont.)

* Normative implications

* Future research
- Impact of presidentialism? Need more theory
- Variables suggested by theory? Need more data
- Temporal variation? Short-term strategy?

Thank You!!!