

# Merit Recruitment in 19th and Early 20th Century European Bureaucracies

James R. Hollyer

Yale University/University of Minnesota

June 12, 2012

# Question

When and why will governments choose to appoint bureaucratic officials based on merit rather than patronage?

# Question

When and why will governments choose to appoint bureaucratic officials based on **merit** rather than patronage?

**Merit:** appointing officials based conditional on examination system, educational requirements, or open competition for posts.

## Question

When and why will governments choose to appoint bureaucratic officials based on merit rather than **patronage**?

**Merit:** appointing officials based conditional on examination system, educational requirements, or open competition for posts.

**Patronage:** appointing officials based on the prior provision of some costly service or payment to the government.

My Answer:

## My Answer:

Costs to patronage systematically vary

## My Answer:

Costs to patronage systematically vary

- Patronage as system where would-be bureaucrats purchase office through payments (either monetary or in-kind) to government

## My Answer:

Costs to patronage systematically vary

- Patronage as system where would-be bureaucrats purchase office through payments (either monetary or in-kind) to government
- Would-be bureaucrats may be excluded from patronage mechanism due to lack of political connections or financial means



## My Answer:

Costs to patronage systematically vary

- Patronage as system where would-be bureaucrats purchase office through payments (either monetary or in-kind) to government
- Would-be bureaucrats may be excluded from patronage mechanism due to lack of political connections or financial means
- Higher levels of skill amongst excluded raises opportunity costs to patronage

## My Findings:

In a panel of Western European countries running from roughly 1840-1944:

## My Findings:

In a panel of Western European countries running from roughly 1840-1944:

- Merit system is more likely to be adopted as levels of education rise in the lower and middle classes

## My Findings:

In a panel of Western European countries running from roughly 1840-1944:

- Merit system is more likely to be adopted as levels of education rise in the lower and middle classes
- Effect is particularly pronounced in less democratic polities

# Why Do We Care?

# Why Do We Care?

Bur. recruitment has implications for *state capacity*

# Why Do We Care?

Bur. recruitment has implications for *state capacity*

- Selection Mechanism

## Why Do We Care?

Bur. recruitment has implications for *state capacity*

- Selection Mechanism
  
- Incentive Mechanism



# Why Do We Care?

Bur. recruitment has implications for *state capacity*

- Selection Mechanism
- Incentive Mechanism
- 'Sociological' Mechanism

# Why Do We Care?

Bur. recruitment has implications for *state capacity*

- Selection Mechanism
  - ▶ merit process implies conditioning selection on some indicator for skill
- Incentive Mechanism
- 'Sociological' Mechanism

# Why Do We Care?

Bur. recruitment has implications for *state capacity*

- Selection Mechanism
  - ▶ merit process implies conditioning selection on some indicator for skill
  - ▶ may also affect 'types' of agents selected
- Incentive Mechanism
  
- 'Sociological' Mechanism

# Why Do We Care?

Bur. recruitment has implications for *state capacity*

- Selection Mechanism
  - ▶ merit process implies conditioning selection on some indicator for skill
  - ▶ may also affect 'types' of agents selected
- Incentive Mechanism
  - ▶ investments in connections versus skills
- 'Sociological' Mechanism

# Why Do We Care?

Bur. recruitment has implications for *state capacity*

- Selection Mechanism
  - ▶ merit process implies conditioning selection on some indicator for skill
  - ▶ may also affect 'types' of agents selected
- Incentive Mechanism
  - ▶ investments in connections versus skills
  - ▶ regularized career paths – time horizons
- 'Sociological' Mechanism

# Why Do We Care?

Bur. recruitment has implications for *state capacity*

- Selection Mechanism
  - ▶ merit process implies conditioning selection on some indicator for skill
  - ▶ may also affect 'types' of agents selected
- Incentive Mechanism
  - ▶ investments in connections versus skills
  - ▶ regularized career paths – time horizons
- 'Sociological' Mechanism
  - ▶ social status as affecting *esprit de corps*

# Why Do We Care?

Bur. recruitment has implications for *state capacity*

- Selection Mechanism
  - ▶ merit process implies conditioning selection on some indicator for skill
  - ▶ may also affect 'types' of agents selected
- Incentive Mechanism
  - ▶ investments in connections versus skills
  - ▶ regularized career paths – time horizons
- 'Sociological' Mechanism
  - ▶ social status as affecting *esprit de corps*

Findings linking recruitment to bur. performance dating to Weber

# Lack of Comparative Studies



## Lack of Comparative Studies

Bulk of lit. focuses on US federal gov't and Pendleton Acto (e.g., Jonhson & Liebcap, 1994; Skowronek, 1982).

## Lack of Comparative Studies

Bulk of lit. focuses on US federal gov't and Pendleton Acto (e.g., Jonhson & Liebcap, 1994; Skowronek, 1982).

- 'spoils system' of 19th Cent. US not common to other settings

## Lack of Comparative Studies

Bulk of lit. focuses on US federal gov't and Pendleton Acto (e.g., Jonhson & Liebcap, 1994; Skowronek, 1982).

- 'spoils system' of 19th Cent. US not common to other settings
- two-party system and separation of powers also not common

## Lack of Comparative Studies

Bulk of lit. focuses on US federal gov't and Pendleton Acto (e.g., Jonhson & Liebcap, 1994; Skowronek, 1982).

- 'spoils system' of 19th Cent. US not common to other settings
- two-party system and separation of powers also not common

Existing comparative lit. reaches wildly divergent conclusions

## Lack of Comparative Studies

Bulk of lit. focuses on US federal gov't and Pendleton Acto (e.g., Jonhson & Liebcap, 1994; Skowronek, 1982).

- 'spoils system' of 19th Cent. US not common to other settings
- two-party system and separation of powers also not common

Existing comparative lit. reaches wildly divergent conclusions

- democracy/pol. competition → merit (Egorov & Sonin, 2004; Mueller, 2009)

## Lack of Comparative Studies

Bulk of lit. focuses on US federal gov't and Pendleton Acto (e.g., Jonhson & Liebcap, 1994; Skowronek, 1982).

- 'spoils system' of 19th Cent. US not common to other settings
- two-party system and separation of powers also not common

Existing comparative lit. reaches wildly divergent conclusions

- democracy/pol. competition → merit (Egorov & Sonin, 2004; Mueller, 2009)
- 'insulation' → merit (Evans, 1995; Haggard, 1990; Lapuente & Nistoskaya, 2009)

## Lack of Comparative Studies

Bulk of lit. focuses on US federal gov't and Pendleton Acto (e.g., Jonhson & Liebcap, 1994; Skowronek, 1982).

- 'spoils system' of 19th Cent. US not common to other settings
- two-party system and separation of powers also not common

Existing comparative lit. reaches wildly divergent conclusions

- democracy/pol. competition → merit (Egorov & Sonin, 2004; Mueller, 2009)
- 'insulation' → merit (Evans, 1995; Haggard, 1990; Lapuente & Nistoskaya, 2009)

Little by way of quantitative empirics, particularly across countries.

# Mechanics of Patronage



## Mechanics of Patronage

Patronage: an transactional exchange in which office-seekers offer *ex ante* monetary or in-kind payments to gov't for posts

## Mechanics of Patronage

Patronage: an transactional exchange in which office-seekers offer *ex ante* monetary or in-kind payments to gov't for posts

- Posts awarded to highest bidder

## Mechanics of Patronage

Patronage: an transactional exchange in which office-seekers offer *ex ante* monetary or in-kind payments to gov't for posts

- Posts awarded to highest bidder
- May or may not be detrimental to skill

## Mechanics of Patronage

Patronage: an transactional exchange in which office-seekers offer *ex ante* monetary or in-kind payments to gov't for posts

- Posts awarded to highest bidder
- May or may not be detrimental to skill
  - ▶ if positive returns to skill in office, capable seekers may bid more

# Mechanics of Patronage

Patronage: an transactional exchange in which office-seekers offer *ex ante* monetary or in-kind payments to gov't for posts

- Posts awarded to highest bidder
- May or may not be detrimental to skill
  - ▶ if positive returns to skill in office, capable seekers may bid more
- some portion of the population 'credit constrained'

# Mechanics of Patronage

Patronage: an transactional exchange in which office-seekers offer *ex ante* monetary or in-kind payments to gov't for posts

- Posts awarded to highest bidder
- May or may not be detrimental to skill
  - ▶ if positive returns to skill in office, capable seekers may bid more
- some portion of the population 'credit constrained'
  - ▶ Lack requisite pol. connections, high opportunity costs to pol. services, etc.

## Mechanics of Patronage

Patronage: an transactional exchange in which office-seekers offer *ex ante* monetary or in-kind payments to gov't for posts

- Posts awarded to highest bidder
- May or may not be detrimental to skill
  - ▶ if positive returns to skill in office, capable seekers may bid more
- some portion of the population 'credit constrained'
  - ▶ Lack requisite pol. connections, high opportunity costs to pol. services, etc.

*There can be no doubt that our high Aristocracy have been accustomed to employ the civil establishment as a means of providing for the Waifs and Strays of their families.*

*-Sir Charles Trevelyan (as cited in Mueller, 1984)*

# Mechanics of Merit



## Mechanics of Merit

Screen candidates for office based on an (imperfect) indicator for competence

## Mechanics of Merit

Screen candidates for office based on an (imperfect) indicator for competence

- To the extent that this indicator is valid, merit is (weakly) more likely to select competent applicants

## Mechanics of Merit

Screen candidates for office based on an (imperfect) indicator for competence

- To the extent that this indicator is valid, merit is (weakly) more likely to select competent applicants
- To the extent that competition is open, merit is less likely to exclude would-be bureaucrats from applying for posts

## Mechanics of Merit

Screen candidates for office based on an (imperfect) indicator for competence

- To the extent that this indicator is valid, merit is (weakly) more likely to select competent applicants
- To the extent that competition is open, merit is less likely to exclude would-be bureaucrats from applying for posts
- But, entails the loss of patronage rents for gov't

## Mechanics of Merit

Screen candidates for office based on an (imperfect) indicator for competence

- To the extent that this indicator is valid, merit is (weakly) more likely to select competent applicants
- To the extent that competition is open, merit is less likely to exclude would-be bureaucrats from applying for posts
- But, entails the loss of patronage rents for gov't

*[After the adoption of merit examinations], the [Prussian] bureaucracy provided a carefully regulated opportunity for upward mobility through entrance into its ranks.*

*-Gillis (1971)*

## Mechanics of Merit

Screen candidates for office based on an (imperfect) indicator for competence

- To the extent that this indicator is valid, merit is (weakly) more likely to select competent applicants
- To the extent that competition is open, merit is less likely to exclude would-be bureaucrats from applying for posts
- But, entails the loss of patronage rents for gov't

*[After the adoption of merit examinations], the [Prussian] bureaucracy provided a carefully regulated opportunity for upward mobility through entrance into its ranks.*

*-Gillis (1971)*

*[Of entrants to the ICS] some 30 per cent of the candidates were sons of men who, by the standards of the day, came from the lower middle class or even further down the social scale.*

*-Reader (1966)*

# The Conditioning Role of Political Institutions

# The Conditioning Role of Political Institutions

Political institutions determine breadth of access to patronage mechanism



# The Conditioning Role of Political Institutions

Political institutions determine breadth of access to patronage mechanism

- suffrage restrictions

# The Conditioning Role of Political Institutions

Political institutions determine breadth of access to patronage mechanism

- suffrage restrictions
- composition of 'winning coalition'

# The Conditioning Role of Political Institutions

Political institutions determine breadth of access to patronage mechanism

- suffrage restrictions
- composition of 'winning coalition'

Breadth of access to patronage determines effects of changing distribution of skills:

# The Conditioning Role of Political Institutions

Political institutions determine breadth of access to patronage mechanism

- suffrage restrictions
- composition of 'winning coalition'

Breadth of access to patronage determines effects of changing distribution of skills:

- when narrow, small shift in skills away from elite may have large effects

# The Conditioning Role of Political Institutions

Political institutions determine breadth of access to patronage mechanism

- suffrage restrictions
- composition of 'winning coalition'

Breadth of access to patronage determines effects of changing distribution of skills:

- when narrow, small shift in skills away from elite may have large effects
- when broad, large shifts necessary to have same effect on bur. competence

# Empirical Predictions

# Empirical Predictions

**Assumption:** Temporal variation in rates of educational enrollment during this period reflect changing skill levels of politically marginalized.

# Empirical Predictions

**Assumption:** Temporal variation in rates of educational enrollment during this period reflect changing skill levels of politically marginalized.

**Predictions:**



# Empirical Predictions

**Assumption:** Temporal variation in rates of educational enrollment during this period reflect changing skill levels of politically marginalized.

**Predictions:**

- 1 Increased educational enrollment rates increases the probability with which merit reforms are adopted

# Empirical Predictions

**Assumption:** Temporal variation in rates of educational enrollment during this period reflect changing skill levels of politically marginalized.

## Predictions:

- 1 Increased educational enrollment rates increases the probability with which merit reforms are adopted
- 2 Effect is *moderated* by political institutions, largest where institutions are least inclusive

# Merit Recruitment

# Merit Recruitment

Focus on *changes* in *de jure* recruitment policies.

# Merit Recruitment

Focus on *changes* in *de jure* recruitment policies.

Meritocratic changes:

# Merit Recruitment

Focus on *changes* in *de jure* recruitment policies.

Meritocratic changes:

- Intro. of exams, increased competitiveness of exams

# Merit Recruitment

Focus on *changes* in *de jure* recruitment policies.

Meritocratic changes:

- Intro. of exams, increased competitiveness of exams
- Intro. of educational requirements

# Merit Recruitment

Focus on *changes* in *de jure* recruitment policies.

Meritocratic changes:

- Intro. of exams, increased competitiveness of exams
- Intro. of educational requirements
- Intro. of competitive postings



# Merit Recruitment

Focus on *changes* in *de jure* recruitment policies.

Meritocratic changes:

- Intro. of exams, increased competitiveness of exams
- Intro. of educational requirements
- Intro. of competitive postings

$merit_{i,t} \in \{0, 1\}$  coded as 1 in year of such reforms, 0 otherwise

# Merit Recruitment

Focus on *changes* in *de jure* recruitment policies.

Meritocratic changes:

- Intro. of exams, increased competitiveness of exams
- Intro. of educational requirements
- Intro. of competitive postings

$merit_{i,t} \in \{0, 1\}$  coded as 1 in year of such reforms, 0 otherwise

Coded based on secondary sources for 12 Western European countries from 1800-1945.

# Educational Enrollment

- **Flora (1987):** Primary education enrollment, divided by pop. aged 0-14 (Rothenbacher, 2002)
- **Mitchell (1975):** Primary and secondary enrollment, divided by pop. aged 0-14 (Rothenbacher, 2002)
- **Lindert (2004):** Primary school students per 1000 children aged 5-14

# Educational Enrollment

- **Flora (1987):** Primary education enrollment, divided by pop. aged 0-14 (Rothenbacher, 2002)
- **Mitchell (1975):** Primary and secondary enrollment, divided by pop. aged 0-14 (Rothenbacher, 2002)
- **Lindert (2004):** Primary school students per 1000 children aged 5-14

Interpolate gaps of less than 10 years. Exponential growth rates in raw enrollment numbers, linear for Lindert data.

# Political Inclusiveness

- **Dem. Participation:** Electoral participation (% aged 20 and above) (Flora, 1987). Set to 0 for periods when polity indicates executive recruitment hereditary or via designated succession.
- **Polity:** Polity2 score from the Polity IV dataset.
- **Wide Suffrage:** Indicator equal to 1 for universal or 'independent' male suffrage (Przeworski, 2009). Adjusted to zero if Polity2 indicates executive recruitment hereditary or via designated succession.

# Model

# Model

Collapse data to 5 year intervals

# Model

Collapse data to 5 year intervals

Conditional Logit Model:

$$\begin{aligned} \textit{merit}_{i,t} = & \textit{Logit}(\alpha_i + \gamma \textit{education}_{i,t-1} + \delta \textit{participation}_{i,t-1} \\ & + \lambda \textit{education}_{i,t-1} * \textit{participation}_{i,t-1} + \mathbf{X}_{i,t-1}\beta + \mathbf{T}\zeta) \end{aligned}$$



# Model

Collapse data to 5 year intervals

Conditional Logit Model:

$$\begin{aligned} \textit{merit}_{i,t} = & \textit{Logit}(\alpha_i + \gamma \textit{education}_{i,t-1} + \delta \textit{participation}_{i,t-1} \\ & + \lambda \textit{education}_{i,t-1} * \textit{participation}_{i,t-1} + \mathbf{X}_{i,t-1}\beta + \mathbf{T}\zeta) \end{aligned}$$

**Controls:**

# Model

Collapse data to 5 year intervals

Conditional Logit Model:

$$\begin{aligned} \text{merit}_{i,t} = & \text{Logit}(\alpha_i + \gamma \text{education}_{i,t-1} + \delta \text{participation}_{i,t-1} \\ & + \lambda \text{education}_{i,t-1} * \text{participation}_{i,t-1} + \mathbf{X}_{i,t-1}\beta + \mathbf{T}\zeta) \end{aligned}$$

## Controls:

- GDP *per capita* (Maddison, 2007)

# Model

Collapse data to 5 year intervals

Conditional Logit Model:

$$\text{merit}_{i,t} = \text{Logit}(\alpha_i + \gamma \text{education}_{i,t-1} + \delta \text{participation}_{i,t-1} + \lambda \text{education}_{i,t-1} * \text{participation}_{i,t-1} + \mathbf{X}_{i,t-1}\beta + \mathbf{T}\zeta)$$

## Controls:

- GDP *per capita* (Maddison, 2007)
- International War (Correlates of War, 2010)

# Model

Collapse data to 5 year intervals

Conditional Logit Model:

$$\text{merit}_{i,t} = \text{Logit}(\alpha_i + \gamma \text{education}_{i,t-1} + \delta \text{participation}_{i,t-1} + \lambda \text{education}_{i,t-1} * \text{participation}_{i,t-1} + \mathbf{X}_{i,t-1}\beta + \mathbf{T}\zeta)$$

## Controls:

- GDP *per capita* (Maddison, 2007)
- International War (Correlates of War, 2010)

# Model

Collapse data to 5 year intervals

Conditional Logit Model:

$$\text{merit}_{i,t} = \text{Logit}(\alpha_i + \gamma \text{education}_{i,t-1} + \delta \text{participation}_{i,t-1} + \lambda \text{education}_{i,t-1} * \text{participation}_{i,t-1} + \mathbf{X}_{i,t-1}\beta + \mathbf{T}\zeta)$$

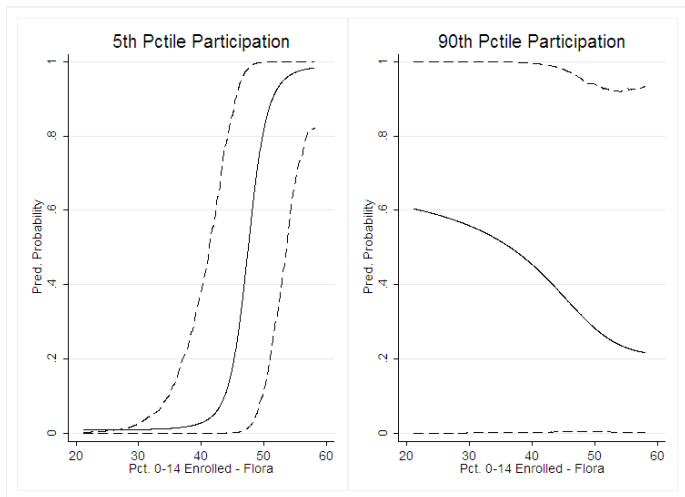
## Controls:

- GDP *per capita* (Maddison, 2007)
- International War (Correlates of War, 2010)

## Estimates

	Flora Ed. Measures		Mitchell Ed. Measures		Lindert Ed. Measures	
Education <i>per capita</i>	0.916*** [0.249,1.584]	0.754*** [0.206,1.302]	0.198 [-0.076,0.472]	0.198 [-0.070,0.465]	0.122 [-0.077,0.321]	0.135 [-0.042,0.311]
Dem. Partic.	0.717** [0.096,1.338]	0.587** [0.078,1.095]	0.218 [-0.052,0.487]	0.223 [-0.050,0.495]	0.038 [-0.162,0.238]	0.009 [-0.172,0.190]
Education × Dem. Partic.	-0.015** [-0.028,-0.002]	-0.012** [-0.023,-0.002]	-0.005* [-0.010,0.001]	-0.005* [-0.010,0.001]	-0.001 [-0.004,0.002]	-0.001 [-0.003,0.002]
GDP <i>per capita</i>	-0.002 [-0.005,0.001]		-0.001 [-0.003,0.001]		0.001 [-0.002,0.004]	
War	-0.821 [-3.009,1.368]		-0.732 [-2.740,1.275]		-0.870 [-2.486,0.745]	
Ever Merit	-1.635 [-5.378,2.107]	-1.680 [-5.137,1.777]	-0.726 [-4.753,3.301]	-1.280 [-5.096,2.536]	-0.479 [-3.018,2.060]	-0.465 [-2.673,1.742]
Cubic Time Polynomial	✓	✓	✓	✓	✓	✓
# of Countries	6	6	6	6	6	6
# of Obs	65	65	64	64	80	82

# Predicted Probabilities

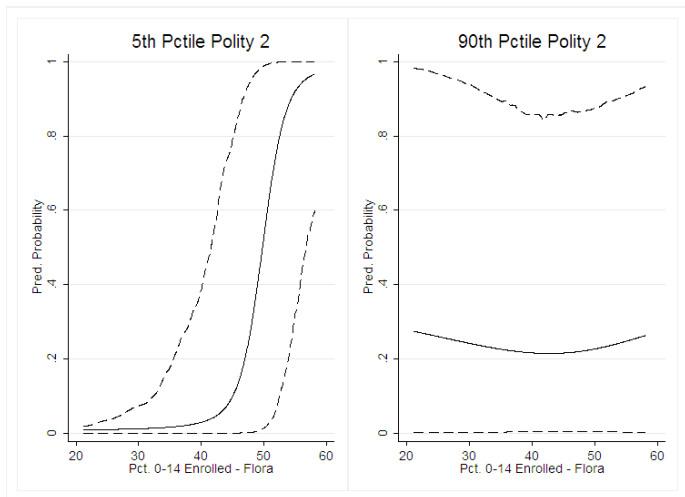


# Polity Estimates

	Flora Ed. Measures		Mitchell Ed. Measures		Lindert Ed. Measures	
Education <i>per capita</i>	0.575** [0.080,1.071]	0.496** [0.101,0.890]	0.201 [-0.066,0.467]	0.185 [-0.056,0.427]	0.091 [-0.039,0.220]	0.046 [-0.042,0.134]
Polity 2	2.625* [-0.326,5.577]	2.152* [-0.104,4.408]	1.355 [-0.317,3.028]	1.255 [-0.267,2.777]	0.203 [-0.302,0.707]	0.150 [-0.252,0.551]
Education × Polity 2	-0.058* [-0.121,0.005]	-0.047* [-0.094,0.000]	-0.028* [-0.061,0.005]	-0.026* [-0.055,0.004]	-0.002 [-0.010,0.006]	-0.002 [-0.008,0.005]
GDP <i>per capita</i>	0.001 [-0.002,0.005]		0.000 [-0.003,0.003]		-0.000 [-0.003,0.002]	
War	-0.399 [-2.454,1.657]		-0.750 [-2.818,1.318]		-0.169 [-1.446,1.109]	
Ever Merit	-3.236 [-10.544,4.072]	-2.434 [-8.665,3.798]	-1.352 [-5.956,3.253]	-1.458 [-5.759,2.843]	-0.835 [-3.118,1.448]	-0.745 [-2.712,1.221]
Cubic Time Polynomial	✓	✓	✓	✓	✓	✓
# of Countries	6	6	6	6	9	10
# of Obs	67	67	69	69	115	125



# Polity Predicted Probabilities



# Widespread Suffrage Estimates

	Flora Ed. Measures		Mitchell Ed. Measures		Lindert Ed. Measures	
Education <i>per capita</i>	0.327** [0.019,0.635]	0.345** [0.030,0.661]	0.181 [-0.112,0.474]	0.184 [-0.111,0.479]	0.100 [-0.040,0.240]	0.086 [-0.035,0.200]
Wide Suffrage	3.878 [-7.936,15.693]	4.853 [-6.310,16.015]	4.330 [-6.614,15.275]	4.150 [-6.601,14.901]	0.491 [-6.100,7.082]	2.127 [-3.972,8.227]
Education × Wide Suffrage	-0.146 [-0.427,0.135]	-0.175 [-0.443,0.094]	-0.137 [-0.398,0.124]	-0.138 [-0.396,0.120]	-0.038 [-0.156,0.081]	-0.066 [-0.177,0.045]
GDP <i>per capita</i>	-0.001 [-0.003,0.002]		-0.001 [-0.003,0.002]		-0.001 [-0.003,0.001]	
War	-0.225 [-2.215,1.766]		-0.672 [-2.740,1.397]		-0.075 [-1.396,1.246]	
Ever Merit	-0.801 [-4.647,3.045]	-1.202 [-4.857,2.454]	-0.900 [-4.595,2.796]	-1.158 [-4.839,2.523]	-1.001 [-3.337,1.334]	-1.371 [-3.178,0.436]
Cubic Time Polynomial	✓	✓	✓	✓	✓	✓
# of Countries	6	6	6	6	9	10
# of Obs	67	67	70	70	116	130

# Compulsory Ed. and Enrollment Rates

	<b>Expansion of Comp. Ed.</b>	<b>Primary Ed. Comp.</b>	<b>Years Compulsory Ed.</b>
$\Delta$ compulsory	1.349 [-0.441,3.140]	1.925 [-0.710,4.561]	0.401** [0.006,0.796]
$\Delta$ GDP <i>per capita</i>	-0.002* [-0.003,0.000]	-0.001 [-0.003,0.000]	-0.001* [-0.003,0.000]
Constant	1.298*** [0.600,1.995]	1.303*** [0.605,2.001]	1.276*** [0.589,1.962]
# of Obs.	114	114	114

# Estimates Controlling for Compulsory Ed.

	<b>Compulsory Ed.</b>	<b>Years Compulsory Ed.</b>
Flora Ed. <i>per capita</i>	0.936*** [0.282,1.590]	0.910*** [0.255,1.566]
Dem. Participation	0.588* [-0.025,1.201]	0.669** [0.017,1.321]
Flora Ed. <i>per capita</i> × Dem. Participation	-0.013** [-0.025,-0.000]	-0.014** [-0.027,-0.001]
Compulsory	-3.497 [-9.922,2.927]	-0.166 [-0.968,0.637]
Controls	✓	✓
Cubic Time Polynomial	✓	✓
# of Countries	6	6
# of Obs	65	65

# Conclusion

# Conclusion

## Findings:

# Conclusion

## Findings:

- 1 Expanded education enrollment assoc. with adoption of merit reform in exclusive pol. systems

# Conclusion

## Findings:

- 1 Expanded education enrollment assoc. with adoption of merit reform in exclusive pol. systems
- 2 Little to no relationship in inclusive pol. systems



# Conclusion

## Findings:

- 1 Expanded education enrollment assoc. with adoption of merit reform in exclusive pol. systems
- 2 Little to no relationship in inclusive pol. systems

Consistent with theory stressing the supply-side costs to patronage