Foreign Threat and Economic Growth

Political Coase Theorem vs.Northian Political Constraints

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Theoretical interest

(Divergence and regime irrelevance)

• The endogenous policy, exogenous politics model (i.e., the political economy model) often fails to explain each country's growth performance.

- Growth divergence (autocracies)

- Regime irrelevance (democracies vs. autocracies)

Political Coase Theorem

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Outline

1. Motivation

2. Theory

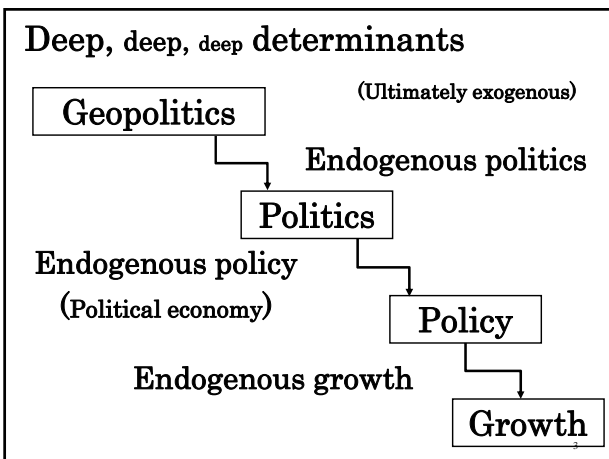3. Empirics

4. Conclusion

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Empirical interest (Causality problem)

• Politics (e.g., political stability), policy, growth are jointly-determined variables.

Political stability ⇒ High growth

High growth ⇒ Political stability

Searching for better instrument variables in growth regressions

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Deep, deep, deep determinants

Geopolitics

(Ultimately exogenous)

Endogenous politics

Politics

Endogenous policy

(Political economy)

Policy

Endogenous growth

Growth

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Political Coase Theorem

• Coase Theorem

Irrelevance of who has property rights

• Political Coase Theorem

Irrelevance of who has political powers

If democracies are efficient,

autocracies are (more) efficient.

"Firm owners do not wish to kill the goose that laid the golden eggs."
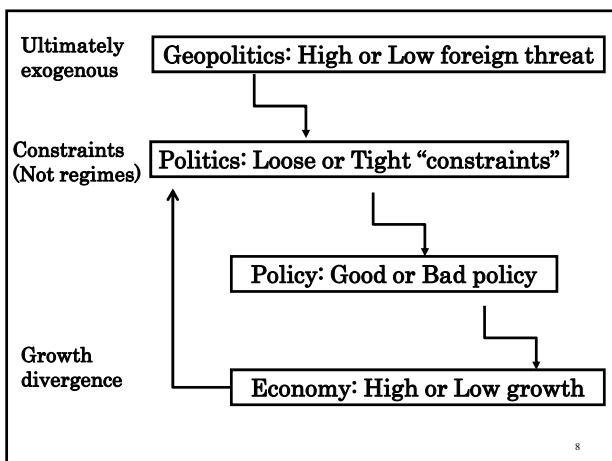
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Failure of Political Coase Theorem

- Failure of Coase Theorem
  - Transaction costs
- Failure of Political Coase Theorem
  - Political transaction costs
  (Incomplete contract)
  "Northian political constraints"
  Endogenous politics

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Political constraints in Autocracies

Development ⇒ Ruling elite

Pro: Encompassing interest ↑ (M. Olson)

Con: Masses' ability to contest power ↑ (D. North)

Foreign threat ⇒ Ruling elite

Pro: Masses' will to contest power ↓

("Common enemy" effect)

Constraint tightness=(Ability) × (Will)↓

⇒More cooperation ⇒More development

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Ultimately exogenous
| Geopolitics: High or Low foreign threat |

Constraints (Not regimes)
| Politics: Loose or Tight "constraints" |

| Policy: Good or Bad policy |

Growth divergence
| Economy: High or Low growth |

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Prior research

Theoretical

- Acemoglu and Robinson, Chaudhry and Gernar (2006)

Development ⇒ Ruling elite

Pro: Encompassing interest
  "National power"

Con: Masses' ability to contest power

Development triggered by foreign threat is destabilizing.

--- Tsarist Russia (finally overthrown by socialist revolution)

- Our paper

--- More stable Asian autocracies such as Meiji Japan

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Economics of autocracies

What happens when non-representative governments choose public policies?　vs. Max [Social welfare]

Social divide　　"Privileged" vs. "Unprivileged"

1. Max [The "privileged" welfare]
2. The "unprivileged" are not passive

   (Resistance to the existing order)

   Strategic interaction of two active players

The "privileged" maximize their welfare

   subject to the reaction function of the "unprivileged"

Northian constraints

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Threats motivate development: Examples

Russia: The Crimean War　　Alexander II

Turkey: The decline of the Ottoman Empire　Kemal Atatürk

Japan: The Meiji Restoration　　The Meiji Emperor

Taiwan: Communism Threat　　Chiang Kai Shek

Korea: Communism Threat　　Park Chung Hee

*Bhutan: China-India　(GNH)　King Wangchuck*

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Prior research
Empirical
- Barro (1991), Benhabib and Spiegel (1992), Alesina and Perotti (1993) , Alesina et al.(1996)

  <u>Internal</u> conflict in a <u>Domestic</u> country on the <u>Domestic</u> growth

  ---Negative
- Ades and Chua (1997)（Easterly and Levine (1998)）

  <u>Internal</u> conflict in <u>Foreign</u> countries on the <u>Domestic</u> growth

  ----Negative spillover
- Our paper

  <u>External</u> conflict among <u>Foreign</u> countries on the <u>Domestic</u> growth

  ----Positive spillover

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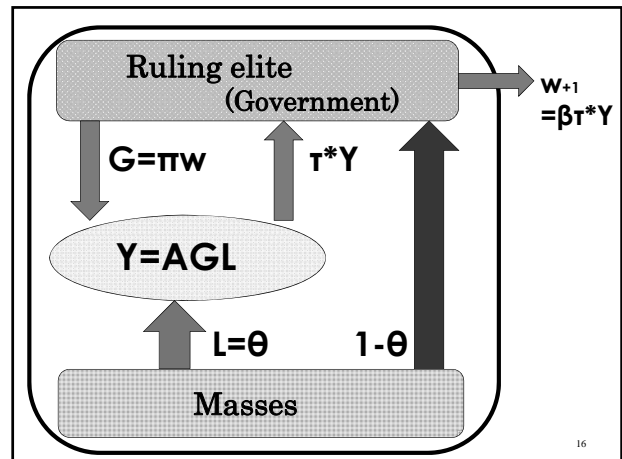
The (geo)political economy model

1. Ruling elite, Masses

   (Class Society)
2. Monopolization of Political Power

   (Non-representative Regime)
3. Conflicts:　Domestic and External

   (Revolution) - (Invasion)

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No foreign threat

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No revolution

Revolution

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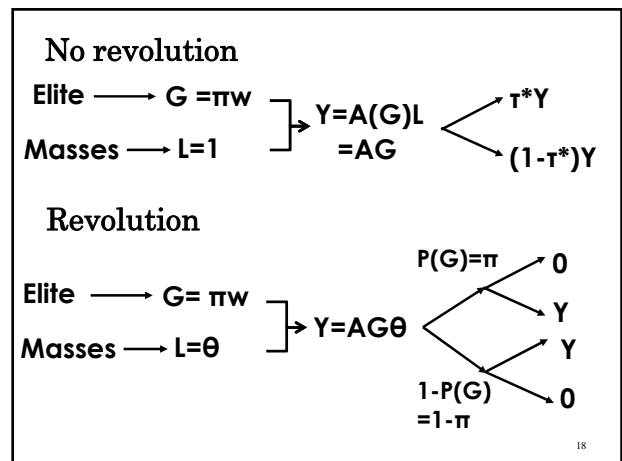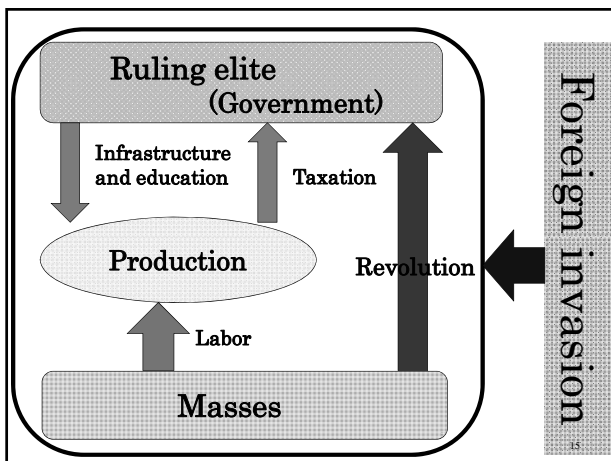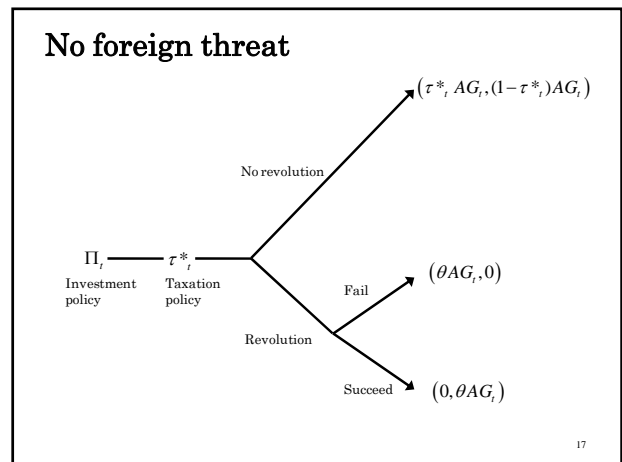
Inefficiency of Revolution

$Y=AG \rightarrow Y=AG\theta$

Taxation policy

Scope for "Coasian Bargaining"

(Strategic moderation of taxation
aiming at suppressing revolution)

$(1-\tau^*)AG \geqq \pi AG\theta$

$\Rightarrow \tau^*=1-\pi\theta$ (Northian constraint)

Ability (π) vs. Will (θ)

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Four states of conflicts

(No revolution, No invasion)

(Revolution, No invasion)

(No revolution, Invasion)

(Revolution, Invasion)

Prob. of invasion： η

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Investment policy

$\pi \uparrow \Rightarrow$ Trade-off

τ^* (Encompassing power) $\downarrow$

Y (Encompassing interest) $\uparrow$

Max $\tau^*Y = (1-\pi\theta)A\pi w$

$\Rightarrow \pi=1/2\theta, \tau^*=1/2$

Growth $Y/Y_{-1}=A\pi\beta \tau^*=A\beta/4\theta$

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No revolution

Elite $\longrightarrow$ G = πw

Masses $\longrightarrow$ L=ϕ

$\rightarrow$ Y=AGϕ

Q: $\tau^*Y, (1-\tau^*)Y$

1-Q: 0, 0

Revolution

Elite $\longrightarrow$ G=πw

Masses $\longrightarrow$ L=$\theta\phi$

$\rightarrow$ Y=AG$\theta\phi$

q: π: 0,Y ; 1-π: Y,0

1-q: 0,0

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Foreign threat

Π_t Investment policy — τ^*_t Taxation policy

No revolution
No invasion → $(\tau^*_t AG_t, (1-\tau^*_t)AG_t)$

No revolution
Invasion
  Win → $(\tau^*_t \phi AG_t, (1-\tau^*_t)\phi AG_t)$
  Lose → $(0,0)$

Revolution
No invasion
  Fail → $(\theta AG_t, 0)$
  Succeed → $(0, \theta AG_t)$

Revolution
Invasion
  Fail
    Win → $(\theta\phi AG_t, 0)$
    Lose → $(0,0)$
  Succeed
    Win → $(0, \theta\phi AG_t)$
    Lose → $(0,0)$

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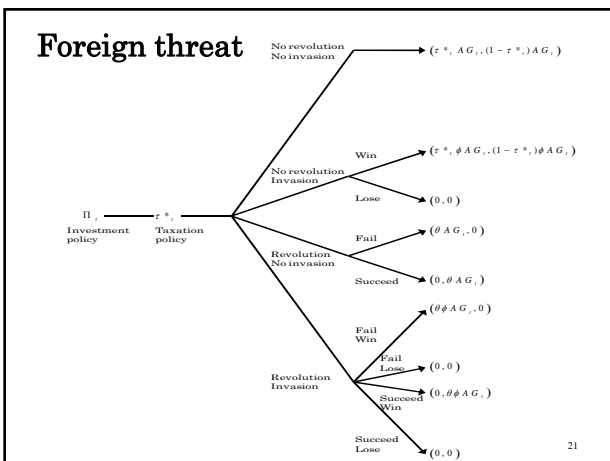
Taxation policy

"Coasian Bargaining"— $\theta<1$, Q>q

$(\eta\phi Q + 1-\eta)(1-\tau^*)AG \geqq (\eta\phi q + 1-\eta)\pi AG\theta$

$\Rightarrow \tau^*=1-\pi\theta\Psi$ (More relaxed constraint)

$\Psi= (\eta\phi q+ 1-\eta) / (\eta\phi Q+ 1-\eta) <1, \partial\Psi/\partial\eta<0$

"Common enemy" effect

Ability (π) $\uparrow$ vs. Will ($\theta\Psi$) $\downarrow$

Investment policy

Max $(\eta\phi Q+ 1-\eta)\tau^*Y \Rightarrow \pi=1/2\theta\Psi, \tau^*=1/2$

Growth $Y/Y_{-1}=A\beta/4\theta\Psi$ $\Psi<1, \partial\Psi/\partial\eta<0$

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More threat（Geopolitics）

→More relaxed constraint（Politics）

→More efficient policy（Policy）

→ Higher growth（Economy）

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Table 1: Growth and Threats of Foreign Invasion
Dependent Variable: Per capita GDP Growth

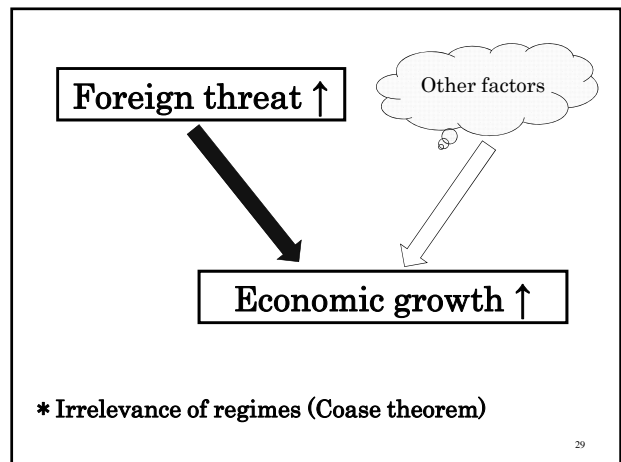|	1	2	3
Initial GDP per capita	-0.007 (-2.953)	-0.009 (-3.517)	-0.010 (-3.509)
Initial schooling years	0.014 (6.476)	0.007 (3.535)	0.007 (3.393)
Population growth		-0.396 (-2.300)	-0.361 (-1.935)
Investment		0.014 (4.057)	0.014 (3.839)
Openness		-0.003 (-1.417)	-0.003 (-1.378)
Autocracy			-0.002 (-1.378)
TFI	0.015 (6.331)	0.010 (4.853)	0.011 (4.860)
WAR	-0.003 (-2.450)	-0.002 (-1.566)	-0.001 (-1.623)
Adjusted R-squared	0.419	0.505	0.502
Numbers of Observations	84	82	82

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Empirics

Cross-country growth regressions

Countries   autocracies and democracies
(1960-90)   (54) + (30) = (84)
excluding socialist countries

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Foreign threat ↑   Other factors

Economic growth ↑

＊Irrelevance of regimes (Coase theorem)

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Two (geo)political instability variables

Threat

$$TFI_i = \log \sum_{j \neq i} \frac{\text{Number of international conflicts Country j engaged in}}{\text{Distance from Country i to Country j}}$$

Outbreak

$$WAR_i = \log(\text{Number of domestic and international conflicts of Country i})$$

CEPII Geographical Distances Data Set.

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Table 2: Growth, Factor Accumulation, and Threats of Foreign Invasion
Dependent Variable: Per capita GDP Growth

	1	2	3	4
Initial GDP per capita	-0.002 (-1.057)	-0.007 (-3.381)	-0.002 (-1.501)	-0.000 (-0.419)
Initial schooling years	0.007 (3.421)	0.012 (6.384)	0.002 (1.353)	0.001 (0.821)
Growth in physical capital	0.410 (6.660)			0.253 (7.068)
Change in schooling years		0.117 (2.934)		-0.018 (-0.926)
Growth in TFP			1.147 (11.56)	0.873 (10.57)
TFI	0.007 (3.012)	0.012 (5.312)	0.005 (4.166)	0.003 (1.316)
WAR	-0.002 (-2.520)	-0.002 (-2.224)	-0.002 (-3.837)	-0.000 (-0.842)
Adjusted R-squared	0.682	0.465	0.812	0.890
Numbers of Observations	84	84	78	78

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Table 3 : Factor Accumulation and Threats of Foreign Invasion

Dependent Variable	1 Growth in physical capital	2 Change in schooling years	3 Growth in TFP
Initial GDP per capita	-0.012 (-3.126)	0.010 (1.565)	-0.004 (-2.077)
Initial schooling years	0.015 (4.249)	0.007 (1.226)	0.009 (5.160)
TFI	0.016 (4.354)	0.018 (2.767)	0.007 (3.860)
WAR	-0.002 (-1.162)	-0.004 (-1.431)	-0.000 (-0.388)
Adjusted R-squared	0.223	0.072	0.343
Numbers of Observations	84	84	78

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Foreign threat ↑

Endogenous Policy

Investment → consumption

Physical ↑　　Human ↑　　TFP ↑

＊ Irrelevance of regimes (Coase theorem)

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Foreign threat ↑

Physical ↑　　Human ↑　　TFP ↑

Economic growth ↑

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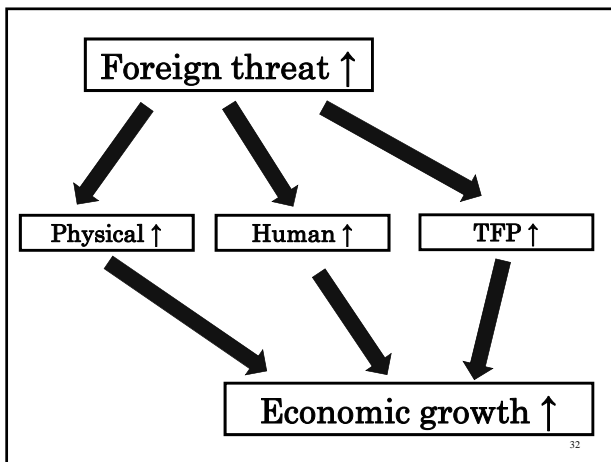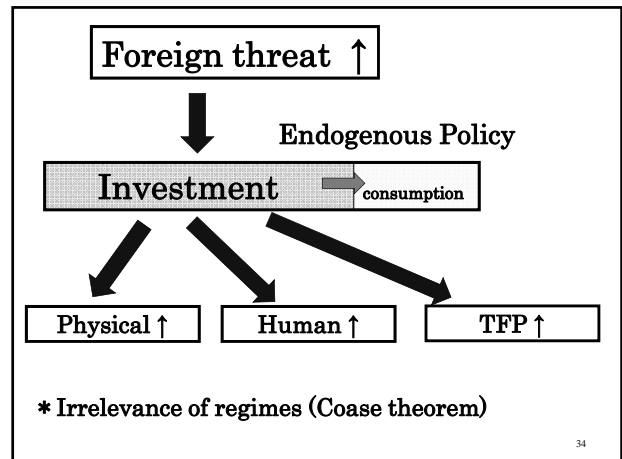
Table 5: Political Regime- Autocracy

Dependent Variable	TFI	WAR	Adjusted R-squared	Numbers of Observations
Per capita GDP growth	0.016 (5.069)	-0.003 (-1.776)	0.356	54
Growth in physical capital	0.019 (4.026)	-0.002 (-0.896)	0.193	54
Change in schooling years	0.024 (3.824)	-0.005 (-1.447)	0.233	54
Growth in TFP	0.009 (3.595)	-0.000 (-0.432)	0.372	50
Government spending on education	0.198 (2.462)	-0.108 (-2.837)	0.087	53
Government spending on investment	0.456 (3.413)	-0.157 (-1.946)	0.170	51
Government spending on consumption	-0.524 (-2.976)	-0.030 (-0.403)	0.335	53
Total Government spending	0.037 (0.265)	-0.013 (-0.266)	0.059	53

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Table 4: Government Expenditures and Threats of Foreign Invasion

Dependent Variable	1 Government spending on education	2 Government spending on investment	3 Government spending on consumption	4 Total Government spending
Initial GDP per capita	0.125 (1.639)	0.035 (0.234)	-0.621 (-4.539)	-0.027 (-0.303)
Initial schooling years	0.055 (0.560)	0.237 (1.752)	0.051 (0.485)	0.023 (0.320)
Autocracy	-0.048 (-0.516)	0.064 (0.373)	-0.107 (-0.647)	0.123 (1.046)
TFI	0.181 (2.649)	0.276 (2.204)	-0.331 (-2.214)	0.084 (0.873)
WAR	-0.094 (-3.078)	-0.087 (-1.407)	-0.061 (-1.124)	0.016 (0.440)
Adjusted R-squared	0.255	0.042	0.353	0.014
Numbers of Observations	83	80	83	83

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Table 6: Political Regime - Democracy

Dependent Variable	TFI	WAR	Adjusted R-squared	Numbers of Observations
Per capita GDP growth	0.008 (2.432)	-0.002 (-2.735)	0.636	30
Growth in physical capital	0.011 (2.696)	-0.002 (-1.652)	0.343	30
Change in schooling years	0.007 (0.609)	-0.002 (-0.612)	0.065	30
Growth in TFP	0.005 (1.985)	-0.001 (-1.598)	0.288	28
Government spending on education	0.127 (0.977)	-0.047 (-0.983)	0.226	30
Government spending on investment	0.261 (1.580)	-0.052 (-0.907)	0.016	29
Government spending on consumption	0.190 (0.751)	-0.137 (-1.218)	0.317	30
Total Government spending	0.216 (1.449)	0.055 (1.152)	0.199	30

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Foreign threat ↑

Endogenous politics

Autocracy   Democracy

Investment ↑   Consumption ↓

＊Relevance of Northian constraints

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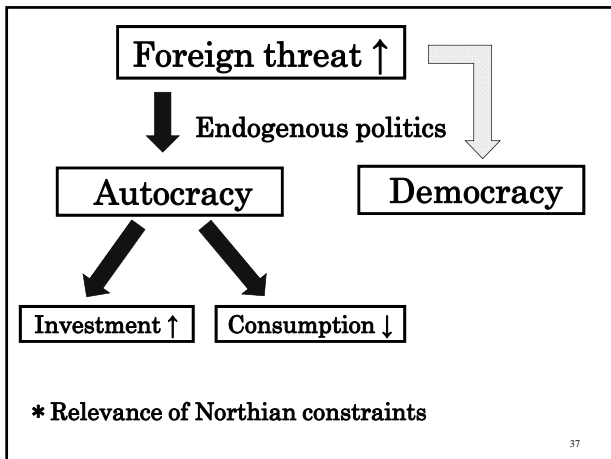
Conclusion (Theoretical prediction=Empirical evidence)

"A country's growth is not an economic event isolated from political events in the rest of the globe."

Geopolitics has significant and systematic

(theoretically interpretable) effects on growth:

•Foreign threat increases government "investment", decreases its "consumption", enhances factor accumulations, and promotes growth.

•This result is particularly true in autocracies, although neither growth rates nor policies are systematically different between autocracies and democracies.

Political Coase Theorem / Northian Political Constraints

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