Political Performance and Economic Growth

Jacek Kugler
Claremont Graduate University

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THE PERFORMANCE OF NATIONS

EDITED BY JACEK KUGLER AND RONALD L. TAMMEN
1. EXTRACTION

Establishes the degree to which the government extracts public revenues given levels of productivity.

2. REACH

Establishes the degree to which the government penetrates into the daily lives of individuals.

3. ALLOCATION

Establishes the degree to which the government chooses fiscal allocation policies that maximize the prospects for economic development?

Political Performance is a GDP-like indicator that compares governance over time, space, across economic development & regime types.
**Extraction** establishes the degree to which the government acquires public revenues given levels of productivity.
Extraction is based on resources that require public acquiescence.

Estimates Control for:

- Oil/resources
- GDP/capita
- Taxation of imports_exports
- Subsistence farming
Relative Political Extraction = \frac{Actual Extraction}{Predicted Extraction}

**General Model:**

\[ y_{it} = \alpha + x_{it} \beta + \varepsilon_{it} \]

where \( y_{it} \) is adjusted tax revenue for country \( i \) at time \( t \),
\( x_{it} \) is a vector of variables that determine potential tax collection, and
\( \varepsilon_{it} \) is the white noise disturbance.

**Most and Less Developed Societies (Model 2):**

\[ \frac{\text{Tax}}{\text{GDP}} = \alpha + \beta_1(\text{time}) + \beta_2\left(\frac{\text{Mining}}{\text{GDP}}\right) + \beta_3\left(\frac{\text{Exports}}{\text{GDP}}\right) + \beta_4\left(\frac{\text{Crude Oil Production}}{\text{GDP}}\right) + \beta_5(\text{GDP per capita}) + \beta_6(\text{OECD dummy}) + \varepsilon \]

**Least Developed Societies (Model 1):**

\[ \frac{\text{Tax}}{\text{GDP}} = \alpha + \beta_1(\text{time}) + \beta_2\left(\frac{\text{Mining}}{\text{GDP}}\right) + \beta_3\left(\frac{\text{Agriculture}}{\text{GDP}}\right) + \beta_4\left(\frac{\text{Exports}}{\text{GDP}}\right) + \beta_5\left(\frac{\text{Crude Oil Exports}}{\text{Total Exports}}\right) + \varepsilon \]
Reach establishes the degree to which the government influences and penetrates into the daily lives of individuals.
Reach is based on the ability of the government to mobilize populations under their control.

Estimates Control for:

- Economic Active Rate
- Unemployed & Educated
- Bureaucracy
Relative Political Reach = \frac{Actual Activity Rate}{Predicted Activity Rate}

y_{it} = \alpha + x_{it} \beta + \varepsilon_{it}

Where:

\( y_{it} \) is active population ratio to total population for country i at time t,
\( x_{it} \) is a vector of variables that determine potential reach capacity, and
\( \varepsilon_{it} \) is the white noise disturbance.

\[
\frac{Activity Rate}{Population} = \alpha + \beta_1(time) + \beta_2(bureaucracy) + \beta_3(Education) + \beta_4(Pop Age) \\
+ \beta_5(Social Security) + \beta_6(Urbanization) + \beta_7(GDP percap) \\
+ \beta_8(Unemployment) + \varepsilon
\]

**Where:**

- **Activity rate** = (Active Population - Unemployment - Part time workers) or economically active population adjusted by unemployment
- **Bureaucracy** = expenditures in government wages/total expenditures (+)
- **Education** = Secondary Education Attainment (+)
- **Pop Age** = < 16 years old (-)
- **Social Security** = (Social Security Taxes) / G (+)
- **Urbanization** = % Urban (+)
- **Unemployment** = % Unemployed (if using EAP as dependent)
- **GDP percap** = GDP per capita in constant US$
Allocation establishes if governments choose fiscal allocation policies that maximize the prospects for economic development.
**Allocation** is a composite indicator to measure how public expenditures are prioritized in the government budget.

Estimates Control for spending:

- Defense/Public Order Spending
- Education/Environment Spending
- Health/Housing Spending
Calculate the allocated “inefficiency” score:

By comparing Actual budgetary allocations TO

The optimal or “Best” allocation given all other equivalent governments’ performance

\[
\text{Income per capita} = \text{Technology} \cdot \left( \frac{\text{Capital}}{\text{GDP}} \right)^\alpha \cdot \left( \frac{\text{GeneralPublic / cap}}{\text{cap}} \right)^\beta_1 \cdot \left( \frac{\text{Defense / cap}}{\text{cap}} \right)^\beta_2 \\
\cdot \left( \frac{\text{PublicOrder / cap}}{\text{cap}} \right)^\beta_3 \cdot \left( \frac{\text{EconAffair / cap}}{\text{cap}} \right)^\beta_4 \cdot \left( \frac{\text{Housing/cap}}{\text{cap}} \right)^\beta_5 \\
\cdot \left( \frac{\text{Health/cap}}{\text{cap}} \right)^\beta_6 \cdot \left( \frac{\text{Education/cap}}{\text{cap}} \right)^\beta_7 \cdot \left( \frac{\text{SocialSecurity/cap}}{\text{cap}} \right)^\beta_8
\]

\[
RPA = 2 \times \left( 1 - \left| \frac{\text{Country i' s Ineff.} - \text{Lowest Ineff. in the sample}}{\text{Country i' s Ineff.} + \text{Lowest Ineff. in the sample}} \right| \right)
\]

RPA is bound between 0 and 2. The upper bound (2) indicates super-optimality, the mean (1) indicates normal performance, while the lower bound (0) indicates sub-optimal allocation.
Relative Political Allocation (RPA) reflects the differences between economically optimal allocations and political reality.
Political performance **does not** reflect the wealth or productivity of societies.
1. Developed societies have little room to maneuver under stress.

2. Developing societies have much “slack” and can mobilize under stress.
APPLICATIONS

Contributions of Political Performance to Economic Growth, Recovery & Strength of Nations
POFED Growth Dynamics

Balanced Growth

High Political Capacity Trajectory

Transitional Dynamics

Low Political Capacity Trajectory

Poverty Trap

GDP per Capita

0  h*  h**  t
GDP & Population Post-War Recovery by Level of Development

Developed Belligerents: Germany, Japan, US, UK, France
Developing Belligerents: Vietnam, Hungary, USSR
Least Developed Belligerents: Afghanistan, Angola, Cambodia, Liberia, Mozambique, Rwanda

Sample

Source: T. Kulger et. al. “Demographic and Economic Consequences of Conflict”, ISQ 2013
“TOTAL CONFLICT”: GDP vs. Relative Political Extraction (RPE)

World War I – (1914-1919)

\[
\text{GDP}_{\text{time}} = \text{GDP}_{\text{time}} \times \text{RPE}
\]

\[
\text{Power*}_{\text{time}} = \text{GDP}_{\text{time}} \times \text{RPE}
\]

*Power$_{i,k}$ = GDP$_{i,k}$ * RPE$_{i}$

GDP$_{i}$ = Gross Domestic Product Allocated to front k

RPE = Relative Political Extraction

i = Country

k = Proportional allocation to front k
World War II – (1939-1945)

GDP/time

Power*/time

\[ \text{Power}_{i,k} = \text{GDP}_{i,k} \times \text{RPE}_i \]

GDP\(_{i,k}\) = Gross Domestic Product Allocated to front \(k\)
RPE\(_i\) = Relative Political Extraction
\(i\) = Country
\(k\) = Proportional allocation to front \(k\)
GDP/time

Power*/time

\[ \text{Power}_{ij} = \text{GDP}_{ik} \times \text{RPE}_{ij} \]

\( \text{GDP}_{ik} = \text{Gross Domestic Product Allocated to front } k \)

\( \text{RPE} = \text{Relative Political Extraction} \)

\( i = \text{Country} \)

\( k = \text{Proportional allocation to front } k \)
Total Conflict: The Developing World

Iran/Iraq War – (1960 – 1990 time frame)

\[
\text{Power}_i^k = \text{GDP}_{i,k} \times \text{RPE}_i
\]

\(\text{GDP}_{i,k}\) = Gross Domestic Product Allocated to front \(k\)

\(\text{RPE}_i\) = Relative Political Extraction

\(i = \text{Country}\)

\(k = \text{Proportional allocation to front } k\)
Political Performance: Syria 1960-2010

Sharp RPE decline
Prior to civil war

Ba'ath Party
Haflz al-Assad
Bashar al-Assad
ISA PDG-COLLEGIUM CIVITAS JOINT EURASIA CONFERENCE, WARSAW

Eurasia – Defining and Crossing Barriers
June 17th - 18th
Collegium Civitas, Warsaw, Poland

Co-hosted by Collegium Civitas

CONFERENCE UPDATES

ISA-PDG Warsaw 2014: Proposal Submission Open!
The Political Demography and Geography section of ISA and Collegium Civitas would like to announce a call for papers and panels for our joint conference: Eurasia – Defining and Crossing Barriers to be held in Warsaw, Poland on June 17-18, 2014. Paper and/or panel proposals are due by November 15th, 2013. We hope to see you there!

Call for Papers: PDG Warsaw 2014
The Political Demography and Geography (PDG) section of ISA, in conjunction with the Collegium Civitas, will be hosting a summer 2014 conference in Warsaw, Poland.
Submissions open Fall 2013. Questions concerning the Eurasia 2014 Conference should be directed to the Program Chairs at Warsaw2014@isanet.org.

CONTACT

Jacek Kugler | Conference Director
Claremont Graduate University

Paulina Codogni | Collegium Civitas Chair
Collegium Civitas

Tadeusz Kugler | Program Chair
Roger Williams University

Emilia Justyna Powell | Program Chair
University of Notre Dame

Warsaw2014@isanet.org

UPCOMING DEADLINES

Proposal Submissions: November 15, 2013

Preregistration Deadline: April 15, 2014 (to remain on program)