DEMOCRACY

Current Global Macro Perspectives

Spring 2020 – Greg Siourounis

Why Democracy Matters? Theory Check:

$$Y_t = H_t^{\alpha}(A_t X)^{1-\alpha}$$

- $H_t \equiv$ efficiency units of labor
- $A_t \equiv$ technological level
- $X \equiv$ land

So output is a function of education, technological progress and resources

$$z_t \equiv y_t = h_t^{\alpha} x_t^{1-\alpha} = h(e_t, g_t)^{\alpha} x_t^{1-\alpha} = z(e_t, g_t, x_t)$$

However exogenous factors affect the Technology path let alone the INOVATION activity

$$g^i_{t+1} = g(e^i_t, L^i_t, \Omega^i_t)$$

$\Omega^i_t \equiv$ characteristics affecting tech progress in country i:

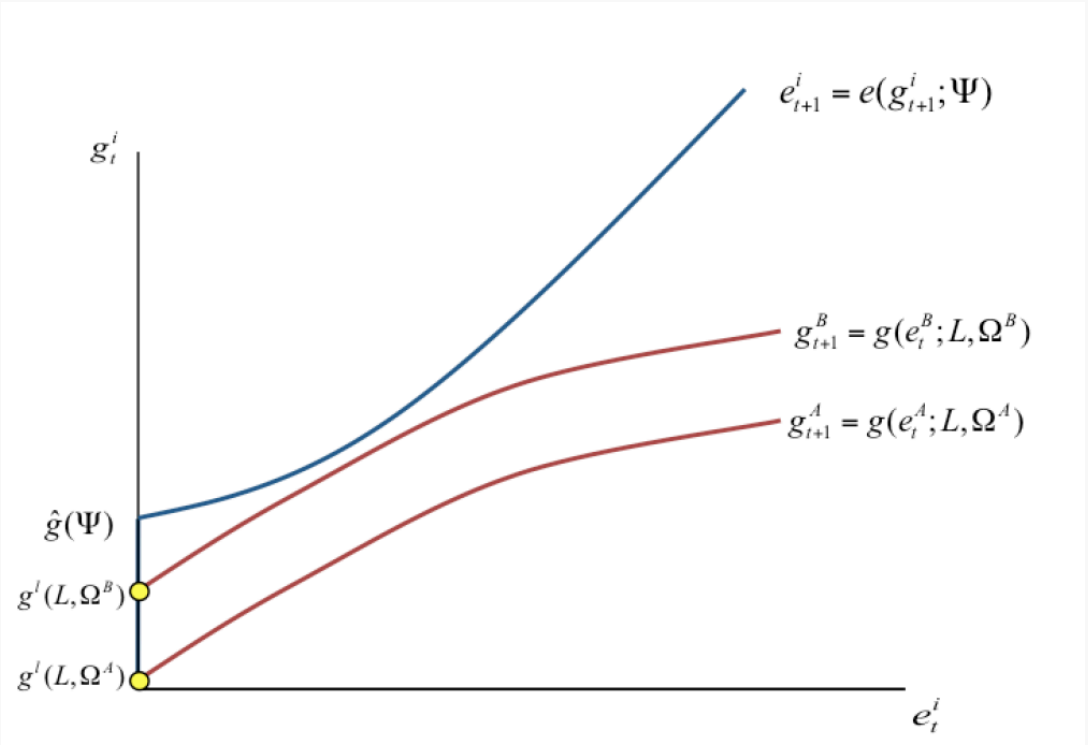
So what goes to Ω ?

- Protection of intellectual property rights (policy)
- The stock of knowledge within a society
- The propensity of a country to trade (geography & policy)
  - Technological diffusion
  - Specialization and technological progress via learning by doing

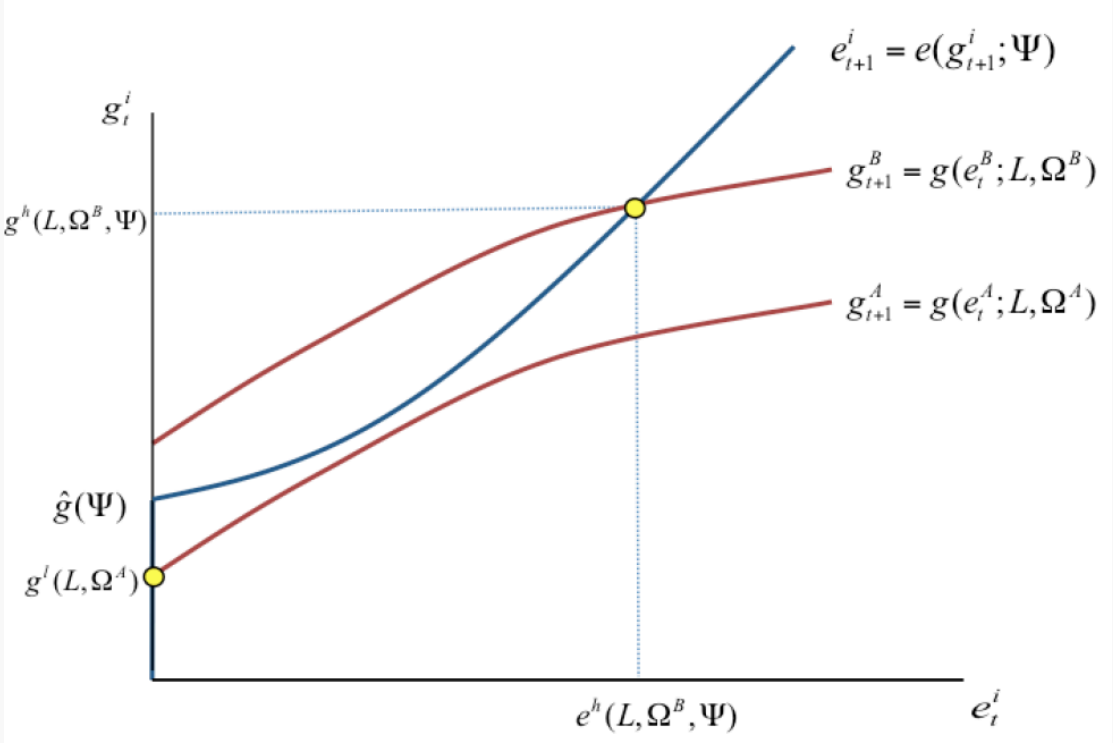
And more...

- The composition of interest groups in society
  - Incentives to block or promote technological innovation (e.g., Luddites; landowners)
- Cultural and genetic diversity
  - Wider spectrum of traits are more likely to contain the ones complementary to the adoption or implementation of new technologies
- Abundance of natural resources
  - complementary for industrialization (e.g., Coal & Steam engine)

So Again the Goals is to Move from no impact



To Impact…


$e^i_{t+1} = e(g^i_{t+1};\Psi)$
g^i_t
$g^B_{t+1} = g(e^B_t;L,\Omega^B)$
$g^h(L,\Omega^B,\Psi)$
$g^A_{t+1} = g(e^A_t;L,\Omega^A)$
$\hat{g}(\Psi)$
$g^l(L,\Omega^A)$
$e^h(L,\Omega^B,\Psi)$
e^i_t

What is democracy?

- Democracy (Greek: δημοκρατία demokratía, "rule by [the] people") is:
- A form of government in which the people exercise the authority of government.
- Who people are and how authority is shared among them are core issues for democratic development and constitution.
- Some cornerstones of these issues are freedom of assembly and speech, inclusiveness and equality, membership, concent, voting, right to life and minority rights.

Public Misconception

- There is never a single formula for democracy.
- The processes in associations with peace, social stability and rapid socioeconomic development are not yet fully understood, which may be the reason for a widespread opinion and many hypothesis.
- What economists have to say about this?
- Papaioannou and Siourounis (2008, 2008), Economic Journal and Journal of Comparative Economics. First paper that finds solid empirical evidence that democracy boosts growth.
- **https://ourworldindata.org/democracy**

When it was first introduced? Ancient Athens 5th century b.c.

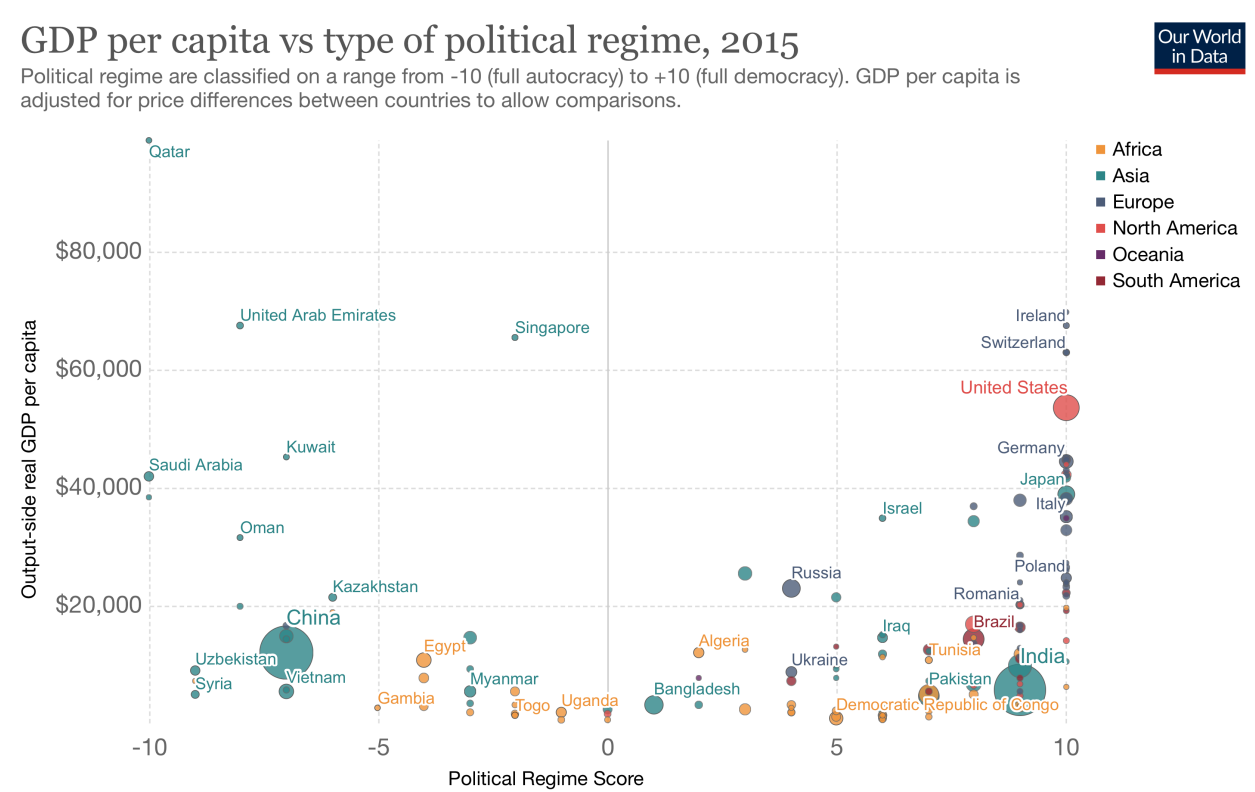
What does the word ”democracy” mean?

- The term "democracy" first appeared in ancient Greek political and philosophical thought in the city-state of Athens during classical antiquity.
- The word comes from **demos**, **"common people"** and kratos, **"strength".**
- Led by Cleisthenes, Athenians established what is generally held as the first democracy in 508–507 BC. Cleisthenes is referred to as "the father of Athenian democracy."

Modernization hypothesis (Lipset (1959))

- "All the various aspects of economic development — industrialization, urbanization, wealth and education—are so closely interrelated as to form one major factor which has the political correlate of democracy"

Many think that rich countries are all democracies!



Source: Feenstra et al. (2015) Penn World Tables version 9.1, Political Regime (OWID based on Polity IV and Wimmer & Min), Population (Gapminder, HYDE(2016) & UN (2019))
OurWorldInData.org/democracy/ • CC BY

Is democracy correlated with growth? History

- The first showings in Ancient Greece in the city of Athens show a highly positive correlation with respect to economic growth and democracy. With the introduction of markets, specialization and reforms like having trial by jury, civil liberties as well as free speech, they were able to sustain a self-sufficient city at the public expense.

- The first document describing such a structure was written by Xenophon (5^{th} century B.C.)

Why should Democracy correlate with Growth

- Democratization of a country from a non-democratic regime is usually preceded by a fall in GDP,
- Volatile but expected growth in **the long run**.
- **Why?**
- Protection of property rights
- Entrepreneurial activity from freedom of will
- Equality

What is autocracy?

- An **autocracy** is a system of government in which an autocrat, defined as a single person or party, possesses supreme and absolute power. The decisions of this autocrat are subject to neither external legal restraints nor regularized mechanisms of popular control

Why should Autocracy correlate Growth?

- Authoritarian regimes experience significant growth at the beginning and **decline in the long run**.
- Why?
- More effective at implementing decisive policies and choices
- Better in solving ethnic and sub-national conflicts
- BUT are unsustainable in the long run as there is more incentive to extract money from society which in turn leads to less prosperity

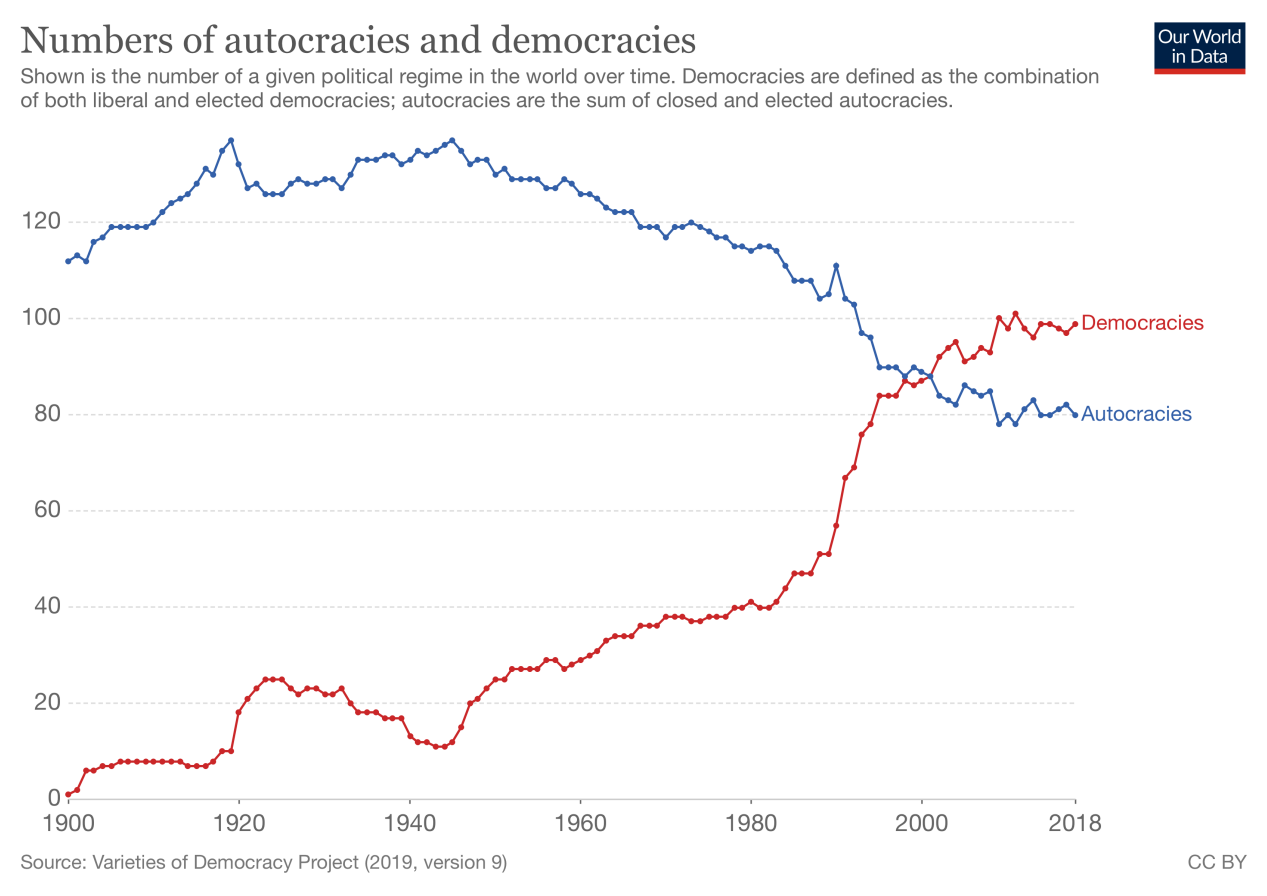
Which one dominates?

- The positive changes of democracy to economic growth such as delegation of authority and regulations of social conflicts heavily outweigh the negative and restrictive effects, especially when compared to autocracy.
- Main reasons are:
- Voters are able to support difficult trade offs and changes when there is no perceived alternative.
- True in countries with a higher level of education.
- Countries that embark in democratization at higher levels of education are more likely than not to continue their development under democracy

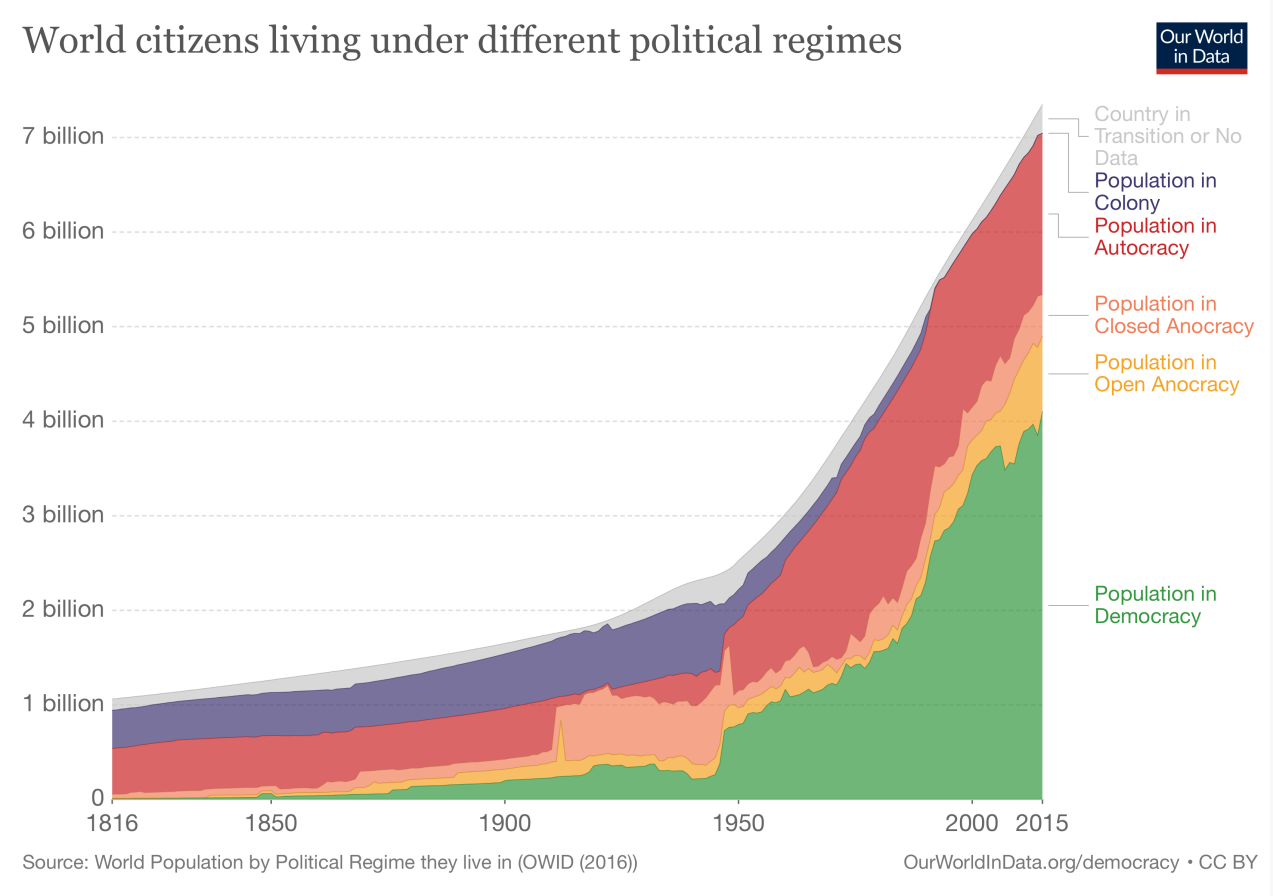
Theories on the determinants of democracy

1. **Modernization hypothesis:** Education and income (Aristotle; Lipset, 1959, 1994; Glaeser, Ponzetto, and Shleifer, 2007; Bourguignon and Verdier, 2000)
2. **Social structure theories:** Religion, culture, fractionalization (Weber, 1930; Huntington, 1968, 1993; Aghion, Alesina, and Trebbi, 2004).
3. **Natural resource "curse":** dependence on easy-to-extract wealth, such as oil, gold, and diamonds (Ross, 2001; Acemoglu, Robinson and Verdier, 2003)
4. **Liberal hypothesis:** economic and political freedom mutually reinforcing (Friedman, 1962; Landes, 2000)
5. **"Early" institutions and history**
   a. **Identity of colonizer:** British heritage (Lipset, 1959)
   b. **Type of colonization:** "Extractive" colonial institutions (Acemoglu, *et al.* 2006, 2007)

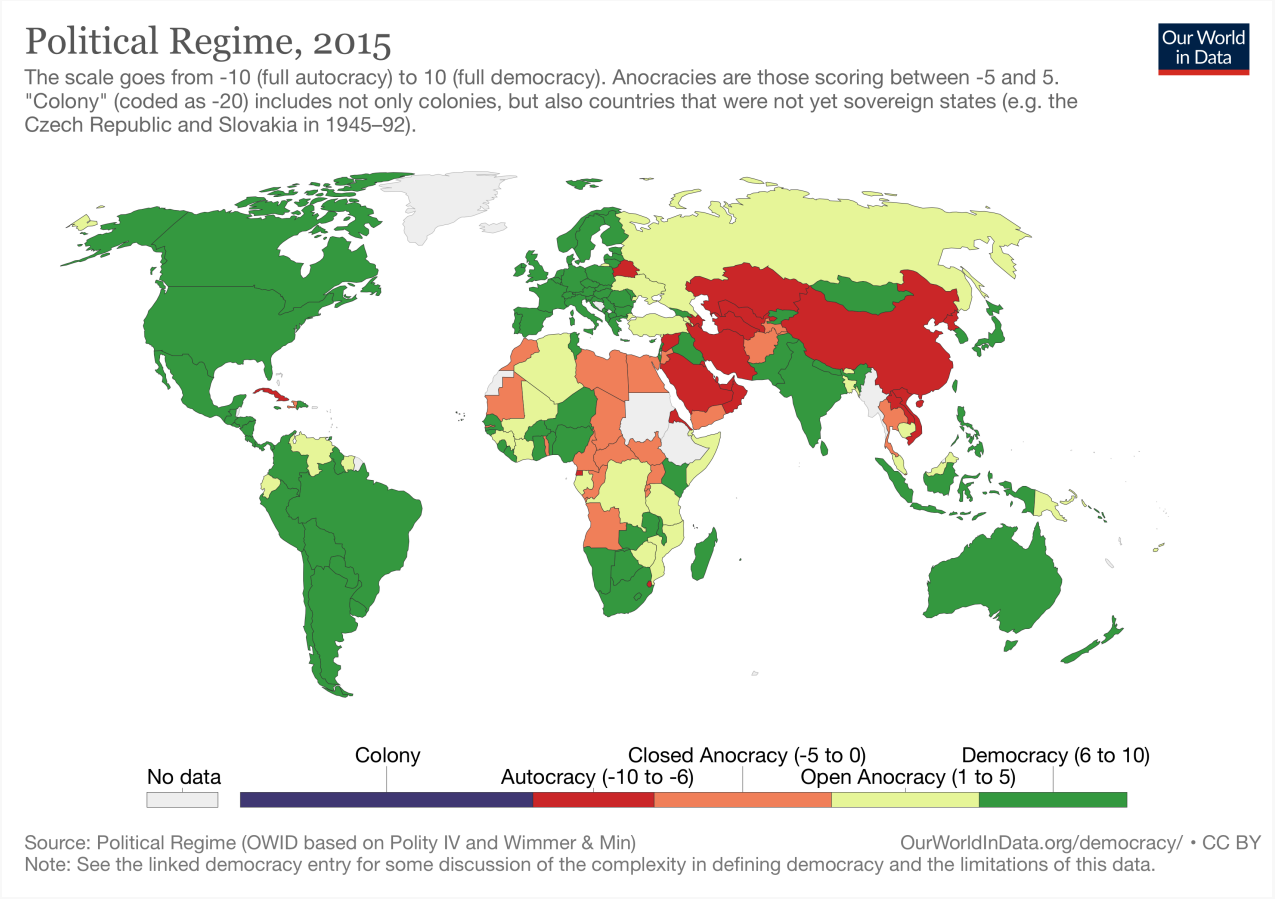
Let’s see the state of the word today before we jump on empirical evidence!



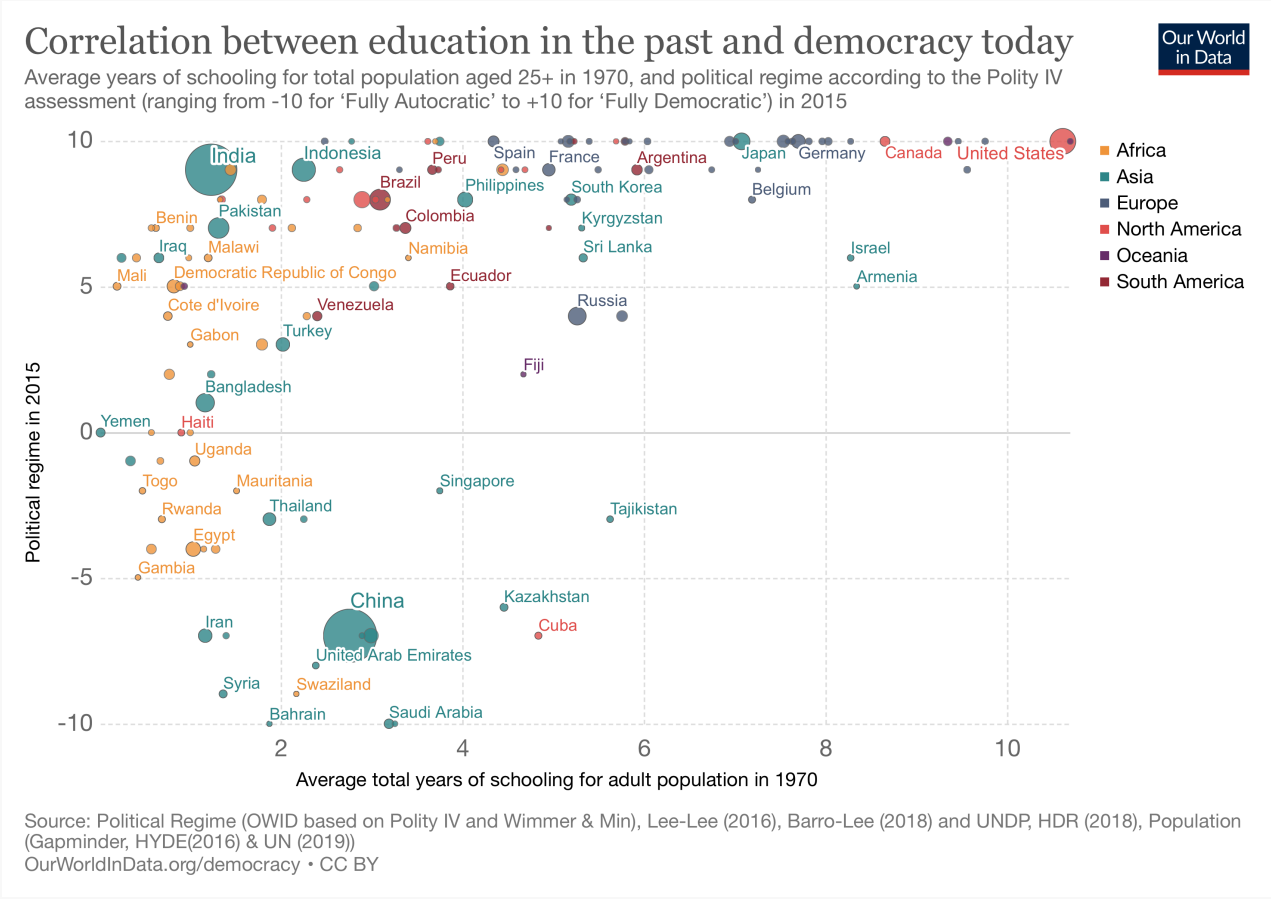
World in Greens



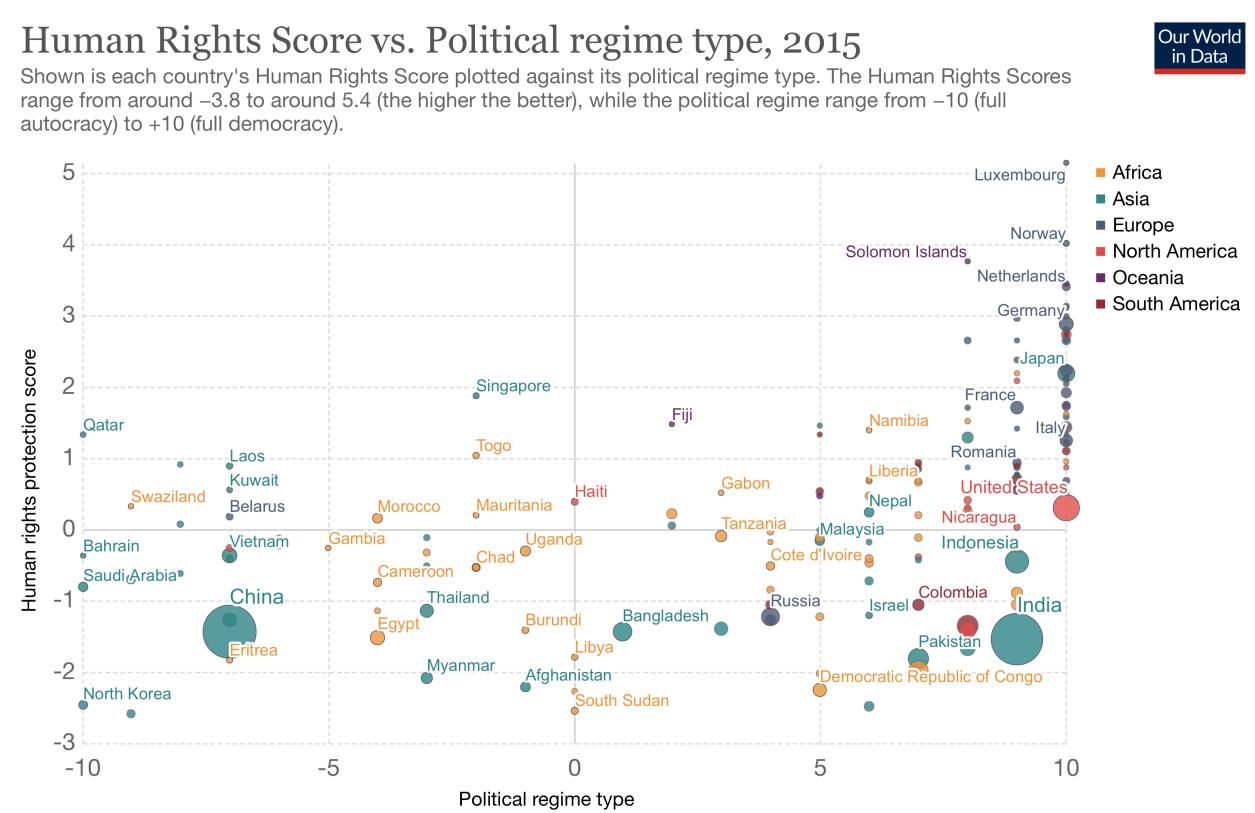
Polity IV Index: most widely used measure of democracy – University of Maryland



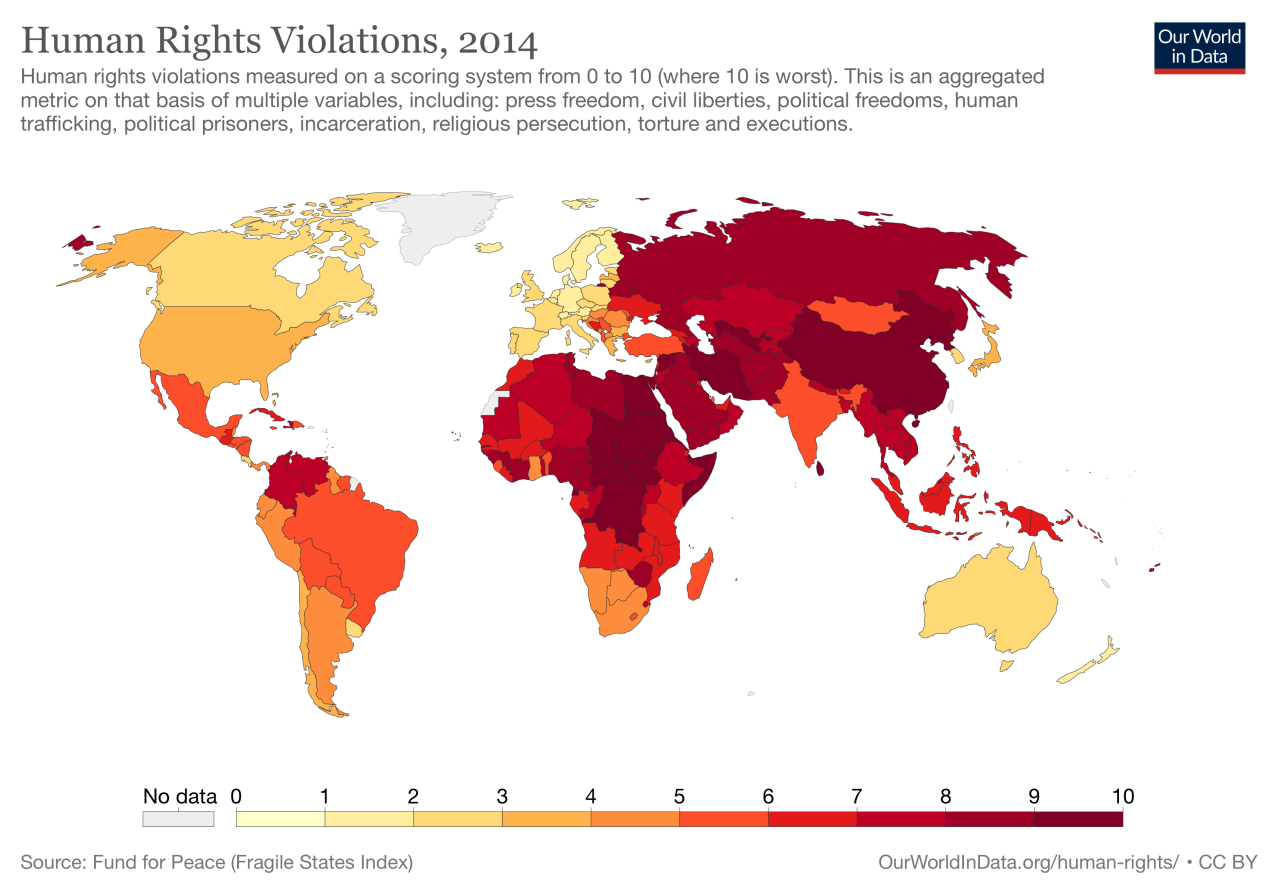
Modernization Hypothesis



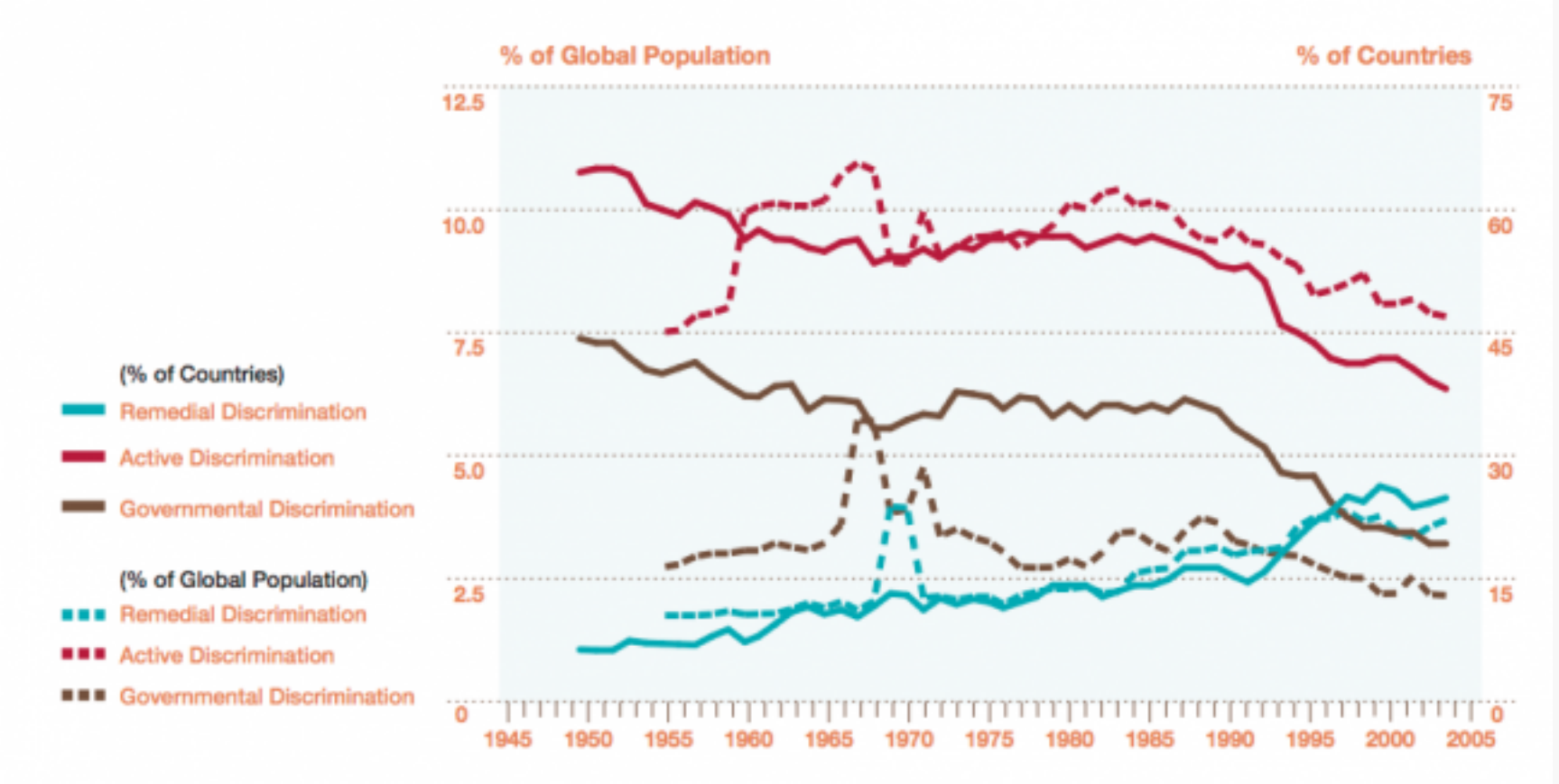
Social Structure Theories: Human Rights and Democracy



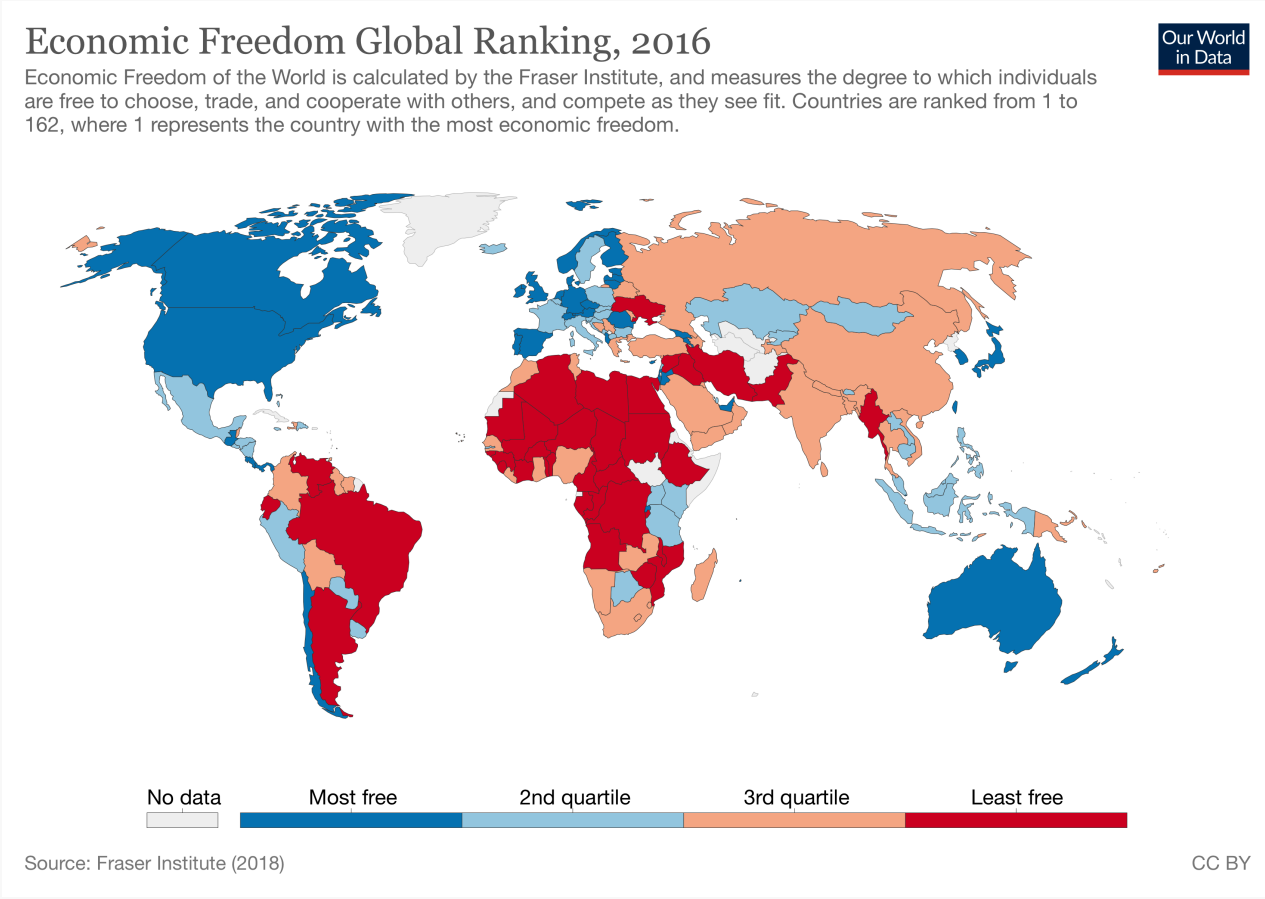
Global state of human rights



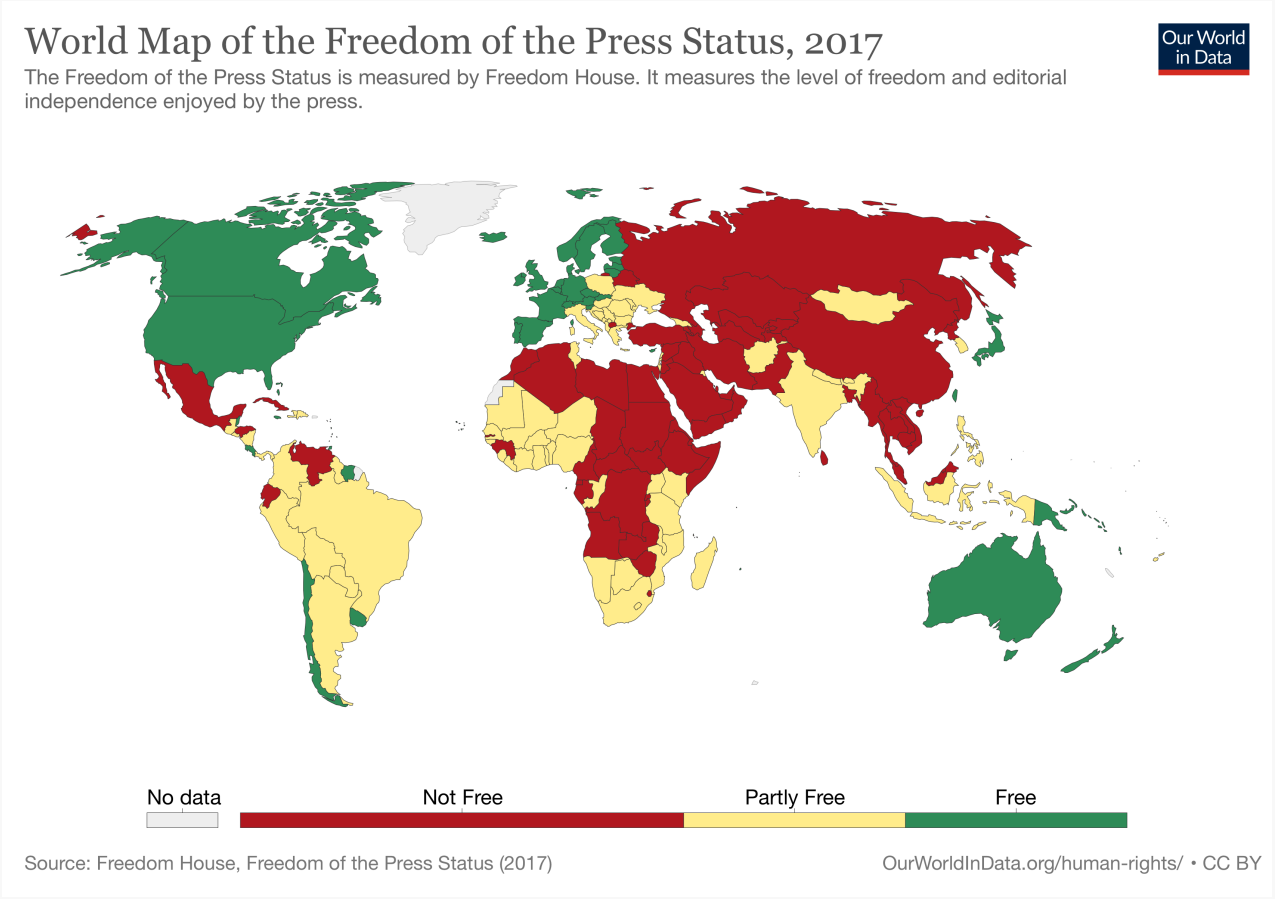
Discrimination



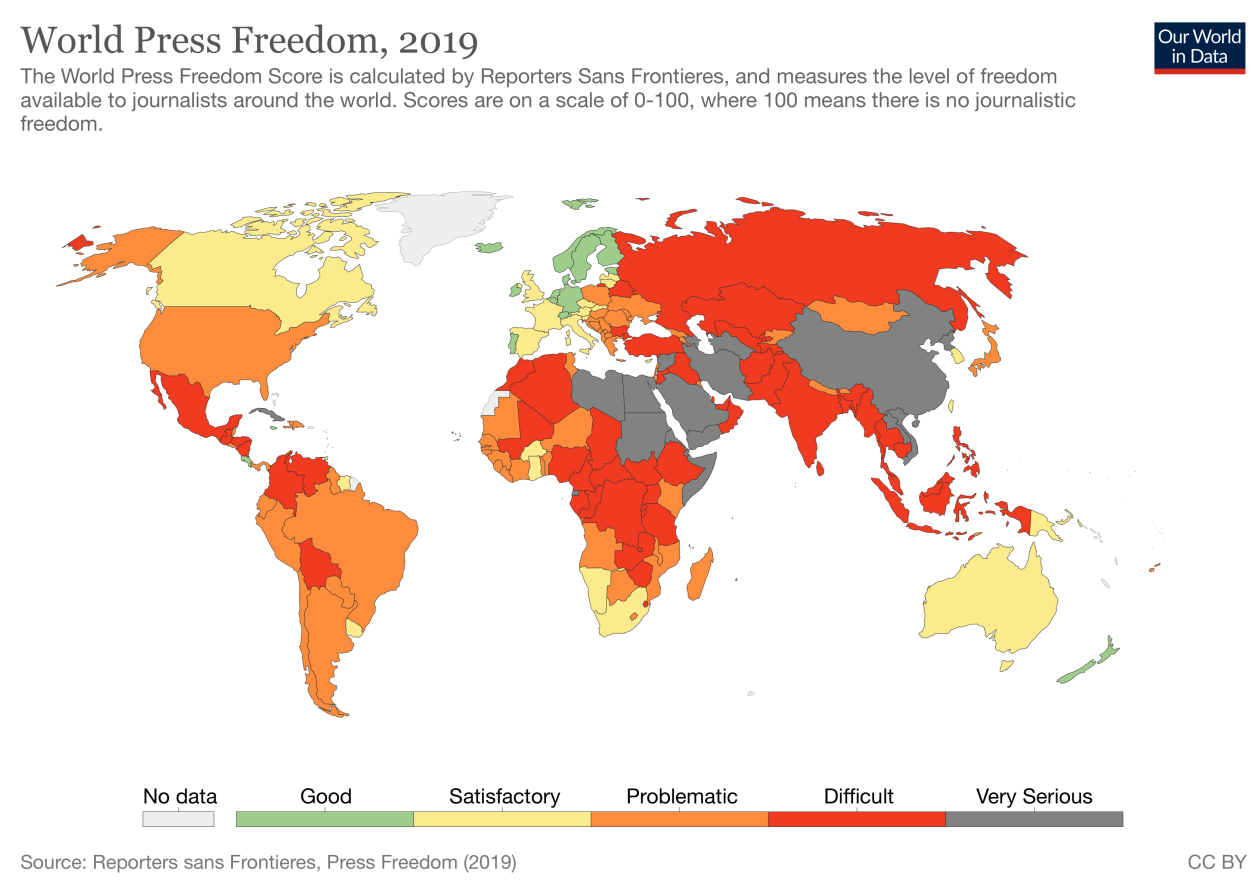
Liberal Hypothesis



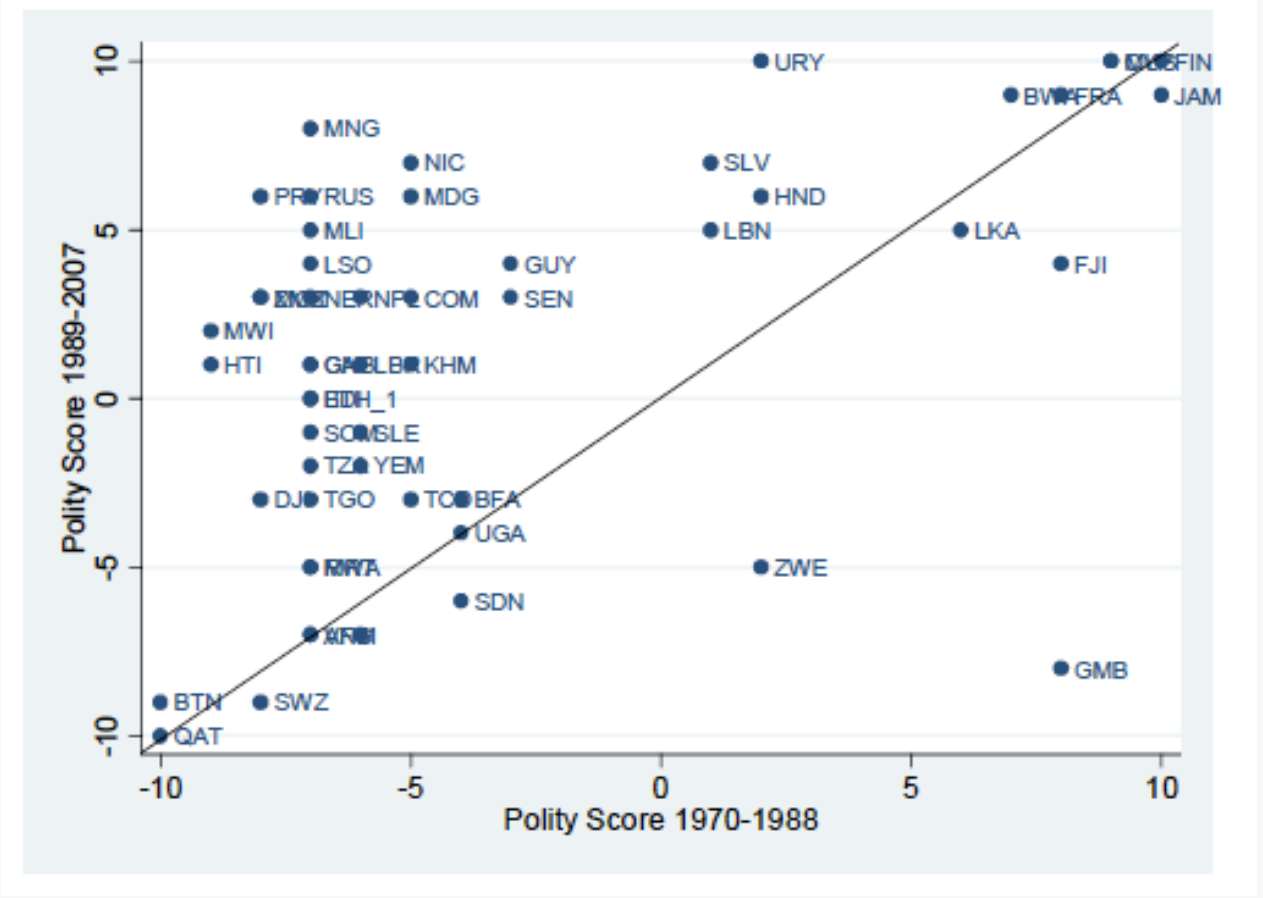
Press Freedom



Other sources on freedom of Press

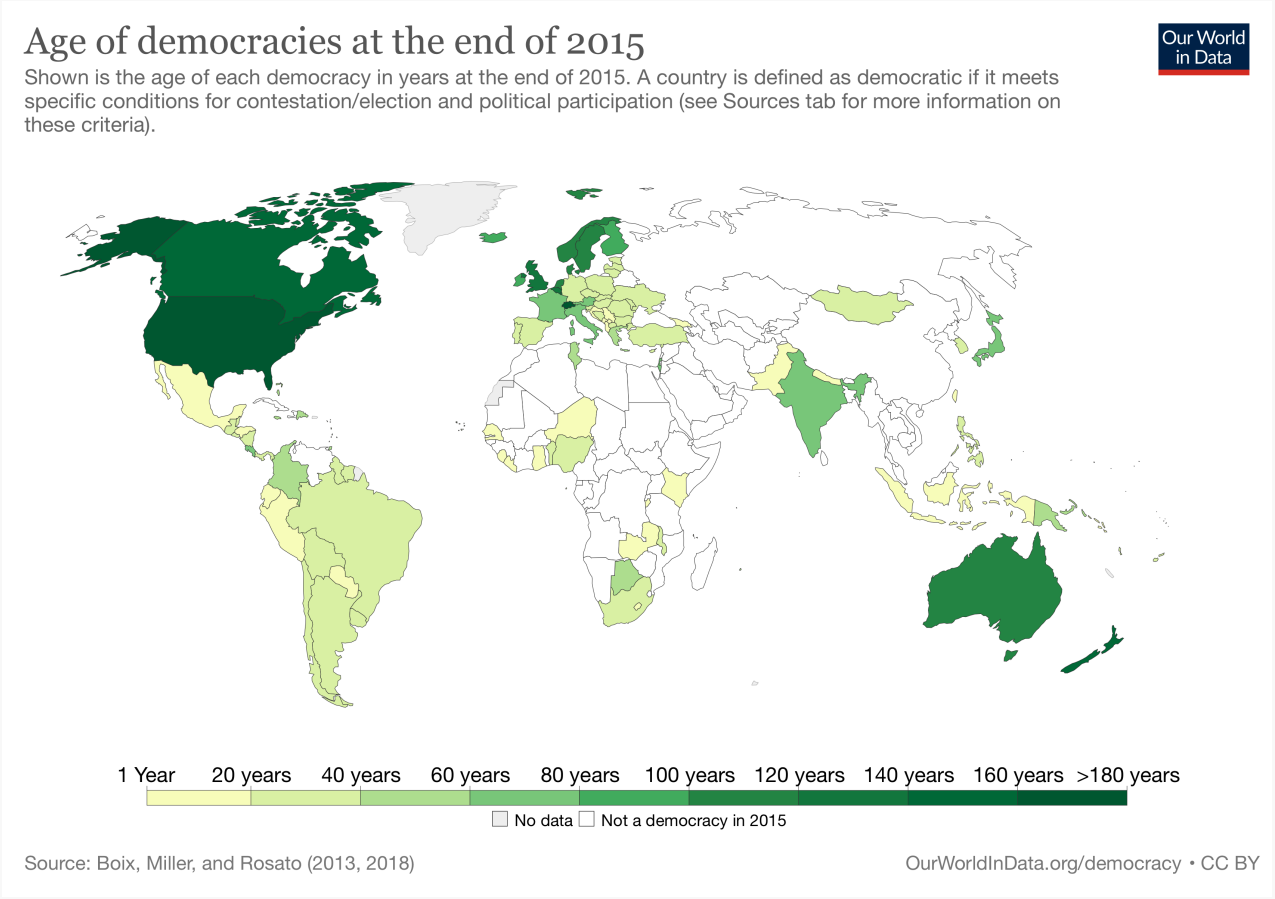


No Oil and Democracy : Polity IV Index



Oil and Democracy: Polity IV Index

History and democracy



The Three Waves of Democratization

Initial Factors behind the Third Wave of Democratization
Data Construction and Some Correlations

Elias Papaioannou and **Gregorios Siourounis**

London Business School *Brown University*

This version: January 2017

Presentation Overview

1. **Introduction**
   a. Theories on the determinants of democracy
   b. Previous empirical work
2. **New dataset**
   a. Discuss tricky issues in conceptualizing and measuring democracy
   b. Detail the algorithm in constructing a new dataset of successful democratic transitions during the Third Wave of democratisation
3. **Results**
4. **Conclusion**

Previous empirical work A

1. **Cross-sectional approaches:**
   - Regress the level of political freedom on income, education, religion, trade openness, oil, etc. (e.g. Barro, 1999; Bollen and Jackman, 1985, 1995)

Main Results

- Income and education are the most significant correlates of political freedom.
- Oil and some religion norms appear to be impediments to democratic rule.

Limitations

- Reverse causation (maybe democracy fosters economic development)
- Omitted variable (maybe both political and economic development are driven by a third, hard-to-quantify factor, such as geography, culture, history)

Previous empirical work B

2. **Panel approaches:**
   a. Dynamic panel studies, but with no country fixed-effects ("standard" in political science; e.g. Przeworski *et al*. 2000, Boix and Stokes, 2003).
   b. Panel studies (Glaeser, La Porta, Lopez-de-Silanes, and Shleifer, 2004; Acemoglu at al. 2006, 2007; Bobba and Coviello, 2006)

Main Results (mixed evidence)

— Correlation between income-education and democracy weakens.

Limitations

— Data quality – measurement issues (in "classical" error-in-variables cases attenuation can be large; also importance of time horizon, maybe it takes some time till improvements in education or growth bring democracy)

— Most of the variation is cross-sectional. Many theories emphasize the importance of (to a first approximation) time-invariant country characteristics (e.g. religion, natural resources)

This paper

1. **Emphasize important "measurement" issues in democracy and construct a new dataset of successful democratic transitions during the so-called Third Wave of Democratization and the nineties.**

2. **Present cross-sectional correlations, using initial (before the Third Wave began) conditions and focusing on countries that entered the Third Wave as non-democratic.**

   ➔ Enables to understand which factors explain why only (roughly) half of the countries that were non-democratically governed before the Third Wave (in mid-seventies) managed to transit and consolidate representative institutions.

   ➔ Also examine whether initial income, religion, oil, education, help predict the intensity of democratic reforms and the timing of successful transitions.

Measurement of democracy

Quotes

— Dahl (2000) *"..democracy has meant different things to different people in different periods*"

— Przeworski *et al*. (1996): "*just too interesting to be resolved by a definitional fiat*."

Practice

— Use mechanically one of the available political freedom indicators (e.g. Polity, Freedom House, etc.) ignoring measurement issues.

But:

— Important drawbacks of existing measures (see Munck and Verkuillen, 2003; Glaeser *et al*., 2004; fast-growing literature in political science)

— Using mis-measured variables may yield biased estimates (when democracy is in the RHS) or weaken the significance of the model (when democracy is in the LHS).

— Systematic biases (e.g. Freedom House indicators appear to be biased against "left-wing" governments and protectionist economies)

— Existing indicators aim to measure the level of political freedom, not transitions.

Our aim

- Construct a new dataset of successful democratic (and autocratic) transitions in the 1960-2005 period.

- Cover a gap in existing work that mainly quantifies the level of civil liberties and political rights (and thus by construction does not aim to capture political transitions).

Our approach - Concepts

Main Rule: actual and lasting transfer of power resulting after free and fair elections (as recognized by international observers) after a prolonged period of autocratic rule that the majority of the population was eligible for suffrage.

4 specific criteria

1. "Free, competitive and fair" elections. (key ingredient of almost all democarcy definitions)
2. Actual transfer of power resulting from the elections. (since in many cases the military did not recognize the electoral outcome)
3. No sizable parts of the population excluded from the franchise. (as in South Africa)
4. Regime stability (exclude short-lived transitions, where after a couple of democratic years (1-3), autocracy was restored).

Data Sources

— **Existing political freedom (level) measures**

(1) Polity Project; (2) Freedom House; (3) Vanhaanen, 2000; (4) Mainwaring *et al*. 2000; (5) Przeworski *et al*., 2000.

— **Historical resources**

(1) The Freedom House and Polity Project country reports. (2) The Country Studies/Area Handbook Series of the Federal Research Division of the United States Library of Congress. (3) The Central Intelligence Agency World Factbook. (4) The U.S. Department of State "Background Country Notes". (4) Zarate's "Political Collection." (5) For some (mainly under-developed and small) we used other country-specific sources.

— **Electoral archives**

(1) Adam Carr's "Psephos" Election archive, (2) the "Elections around the World" dataset, (3) the "Election Results Archive" produced by the Center on Democratic Performance at Binghamton University, and (4) the "Database of Political Institutions", compiled by a World Bank team (Beck, Clarke, Groff, Keefer, and Walsh, 2001)

Algorithm - Step 1

1. **Identify sizable movements in the most-widely used freedom measures**

   (1) Polity Project: when the 21 scale index, ranging from -10 to +10, jumps from a negative to a positive range and remains there for three years.

   (*this measure does not cover some small countries*)

   (2) Freedom House: when there are changes in the trichotomous regime status classification ("not-free"; "partially-free"; "free") and remains there for three years. (*this index appears to be the most problematic, see Munck and Veruillen, 2003*)

   (3) Przeworski *et al*. (1996, 2000): when the index moves from autocratic to democratic status and remains at the new value for three years.

   (*this measure stops in 1990*)

   – Note: changing the stability requirement to four or five years makes no difference; what it matters is to exclude brief spikes that represent political instability to autocracies rather than a new political equilibrium (e.g. Nigeria (in the early eighties), Congo (in the early nineties), Burkina Faso (in 1978-1979))

   – Also go over some other indicators with narrower coverage (e.g. Mainwaring, *et al*. 2000 that though more complete only includes Latin America; and Vanhaanen's measure, 2003, that mainly focuses on electoral participation)

Algorithm - Step 2

2. **Go over historical resources and understand the political events, surrounding the years of the spike/fall in democracy measures. Also identify other important political changes, not necessarily captured by the democracy indexes.**

(1) The Freedom House and Polity Project country reports.

(2) The Country Studies/Area Handbook Series of the Federal Research Division of the United States Library of Congress.

(3) The Central Intelligence Agency World Factbook.

(4) The U.S. Department of State "Background Country Notes".

(4) Zarate's "Political Collection."

(5) For some (mainly under-developed and small nations) we used other country-specific sources.

Algorithm - Step 3

3. **Go over electoral datasets to identify the exact timing of legislative or presidential elections.**

(1) Adam Carr's "Psephos"
(2) the "Elections around the World" dataset
(3) the "Election Results Archive" produced by the Center on Democratic Performance at Binghamton University,
(4) the "Database of Political Institutions", compiled by a World Bank team (Beck, Clarke, Groff, Keefer, and Walsh, 2001)

Algorithm - Step 4

4. **Identify democratic transitions at the timing of presidential or legislative elections that follow a prolonged period (>5 years) of autocratic rule.**

Note (1): If there are sub-sequent elections (in the following 1-2 years), use latter date.

Note (2): In most cases jointly with the elections there is also a new democratic constitution that institutionalizes the change of power. The adoption of the new constitution and the elections usually coincide or differ by one (two) year (s). In this case we use the latter date. (e.g. South Korea, elections were held on December 1987. The new constitution that established a multi-party democracy came into effect the following year. We therefore use 1988 as the democratization year.)

Note (3): changing the time requirement to 3, 4, 6 or 7 years makes little difference. What it matters again is to exclude periods (one or two years) of instability.

Algorithm - Step 5

5. **Group transitions based on the intensity of reforms into "full" and "partial" democratizations.**

Criterion (to avoid self-selection)

To classify a country as experiencing a "full" democratization, we require that both the trichotomous Freedom House status designation is "free" and the Polity score (range from -10 to +10) is greater than +7. All other democratic transitions are thus classified as “partial” democartiztaions.

Note: Proponents of binary measures (e.g. Huntington, 1993; Epstein *et al*., 2006) explicitly advocate to also employ trichotomous measures.

New dataset of political transitions (174 countries)

1. **Democratic transitions (63 countries)**
   - — **"Full" democratization (39 countries):** successful political transition from autocracy to an almost perfect level of democracy

     [e.g. Spain (1978), Portugal (1976), Argentina (1983), South Korea (1987), Greece (1975)]
   - — **"Partial" democratization (24 countries):** Following a successful transition, representative institutions have been established, but the level of political liberties and civil rights (as measured by the Polity and Freedom House measures) has not reached a perfect level.

     [e.g. Albania (1992), Zambia (1991), Nigeria (1999)]

   - \+ **"Borderline" episodes of democratization (6 countries):** Some political change towards democracy has occurred, but still the level of civil rights protection and political liberties is quite low.

     [e.g. Central African Republic (1995), Niger (1999)]

New dataset of political transitions (174 countries)

2. **Autocratic (reverse) transitions (3-6 countries):** Political change from relatively stable democracy to autocracy.

   [(e.g. Zimbabwe (1987), Gambia (1994))

3. **"Always" non-democratic (autocratic) countries (59):** throughout the 1960-2005 period non-democratically governed.

   [e.g. Saudi Arabia, Iraq, Uganda, China.]

4. **"Always" democratic countries (41 countries):** throughout the 1960-2005 period democratically governed.

   [e.g. USA, Canada, Australia, United Kingdom, Sweden]

Note: recall that brief periods (less than three years) of democratic rule in non-democracies and brief periods (less than three years) of autocratic rule in democracies does not change the coding.

Empirical approach

Examine which initial (before the Third Wave began, mid-seventies) factors correlate with subsequent democratization path.

- Concentrate on countries that entered the Third Wave as non-democratic and examine whether education-income, religion, fragmentation, openness, and early institutions are significant determinants on subsequent democratization.
- Also examine whether these factors are important in determining how deep the reforms will be (using the ”full”-”partial” distinction) and how fast they occur (distinguishing between “early” transitions that occurred before 1990, when many democratizations occurred following the collapse of communism, and “late transitions” that occurred after 1990)

Note: Exclude from the analysis socialist countries (treat in a quasi-experimental setting in ongoing work).

Empirical results A.1 – Modernization Hypothesis

➔ **Strong support**

	Always non-democratic	**Democratization**		**Always Democratic**	
	Mean (st. dev) # obs.	Mean (st. dev) # obs.	Test of Means	Mean (st. dev) # obs.	Test of Means
Income (GDP p.c in 1975)	1,060.23 (1573,09) *28*	2,041.23 (2057.26) *39*	981.00 (443.74) ***(0.03)***	10,044.76 (7110.53) *37*	8,984.53 (1206.17) ***(0.00)***
Schooling (av. years in 1975)	1.72 (1.02) *25*	3.59 (1.92) *37*	1.87 (0.38) ***(0.00)***	6.41 (2.50) *34*	4.68 (0.47) ***(0.00)***
Literacy rate (in 1975)	48.87 (25.09) *41*	69.30 (27.13) *50*	20.43 (5.48) ***(0.00)***	77.80 (15.72) *17*	28.94 (5.47) ***(0.00)***

Empirical results A.2 – Modernization Hypothesis

➔ **Stronger support**

	Always non-democratic	**Full Democratization**		**Early Democratization**	
	Mean (st. dev) # obs.	Mean (st. dev) # obs.	Test of Means	Mean (st. dev) # obs.	Test of Means
Income (GDP p.c in 1975)	1,060.23 (1573,09) *28*	2,611.27 (2272,62) *26*	1,551.04 535.747 ***(0.01)***	3,337.36 (2627,88) *14*	2,277.13 (762.66) ***(0.01)***
Schooling (av. years in 1975)	1.72 (1.02) *25*	4.04 (1.94) *26*	2.31 (0.43) ***(0.00)***	4.13 (1.38) *14*	2.40 (0.42) ***(0.00)***
Literacy rate (in 1975)	48.87 (25.09) *41*	75.38 (25.59) *32*	26.52 (5.98) ***(0.00)***	77.70 (12.71) *13*	28.83 (5.27) ***(0.00)***

Empirical results A.3 – Modernization Hypothesis

Initial education and subsequent democratization path

Change in Democracy	Average Years of Schooling (in 1975)				
	< 1.0 years	< 2.0 years	< 3.0 years	< 4.0 years	>4.0 years
Always Authoritarian	Nepal[B], Niger[B], CAF, Sierra Leone, Togo, Afghanistan, Rwanda,Myanmar, Sudan	Haiti, Algeria, Iraq, Zaire, Liberia, Uganda, Tunisia, Egypt, Cameroon, Kenya, Congo, Iran[B], Pakistan[B]	Syria, Bahrain, UAE, Jordan	Swaziland, Kuwait, China	Singapore
Partial Democratization	Mozambique	Bangladesh, Guatemala	Zambia, Malawi Turkey, Indonesia, Nicaragua	Lesotho, Paraguay	
Full Democratization	Mali, Benin	Senegal	Ghana, Honduras, El Salvador, Brazil, Portugal	Dominican Republic, Mexico Thailand, Bolivia, Ecuador	Peru, South Africa, Guyana, Panama, Poland, Spain,, Philippines, Chile, Korea, Argentina, Uruguay, Greece, Hungary

Empirical results B.1 – Social Structure

	Always non-democratic	Democratization		Always Democratic	
	Mean (st. dev) # obs.	Mean (st. dev) # obs.	Test of Means	Mean (st. dev) # obs.	Test of Means
Etnic Polarization	53.33 (22.36) *39*	53.00 (25.35) *44*	-0.33 (5.24) ***(0.95)***	47.46 (26.20) *37*	-5.87 (5.60) ***(0.30)***
Religious Polarization	63.22 (33.27) *39*	49.64 (34.75) *44*	-13.58 (7.47) ***(0.07)***	26.69 (31.50) *37*	-36.52 (7.43) ***(0.00)***
Muslim Share	48.39 (41.51) *59*	15.10 (28.43) *63*	-33.29 (6.48) ***(0.00)***	2.51 (5.16) *41*	-45.87 (5.46) ***(0.00)***
Confucian Share	7.79 (22.72) *59*	3.42 (17.04) *63*	-4.37 (3.66) ***(0.23)***	4.05 (18.09) 41	-3.74 (4.09) ***(0.36)***

The polarization index measures the distance from a bimodal distribution of groups. The index reaches a maximum when there are two groups of equal size and equals zero when there is just one group in the country.

Empirical results B.2 – Social Structure

	Always non-democratic	Full Democratization		Early Democratization	
	Mean (st. dev) # obs.	Mean (st. dev) # obs.	Test of Means	Mean (st. dev) # obs.	Test of Means
Etnic Polarization	53.33 (22.36) *39*	54.94 (25.60) *28*	1.61 (6.02) ***(0.79)***	53.77 (29.50) *15*	0.44 (8.42) ***(0.96)***
Religious Polarization	63.22 (33.27) *39*	40.61 (34.67) *28*	-22.61 (8.45) ***(0.01)***	37.97 (37.12) *15*	-25.25 (10.97) ***(0.03)***
Muslim Share	48.39 (41.51) *59*	6.38 (20.29) *39*	-42.01 (6.31) ***(0.00)***	7.22 (25.63) *15*	-41.17 (8.54) ***(0.00)***
Confucian Share	7.79 (22.72) 59	5.50 (21.50) *39*	-2.29 (4.54) ***(0.61)***	1.59 (6.15) *15*	-6.20 (2.36) ***(0.07)***

The polarization index measures the distance from a bimodal distribution of groups. The index reaches a maximum when there are two groups of equal size and equals zero when there is just one group in the country.

Empirical results C.1 – Natural Resource Curse

➔ **Support (with oil)**

	Always non-democratic	**Democratization**		**Always Democratic**	
	Mean (st. dev) # obs.	Mean (st. dev) # obs.	Test of Means	Mean (st. dev) # obs.	Test of Means
Oil Producer (0-1 index for major producers)	0.24 (0.43) *59*	0.03 (0.18) *63*	-0.21 (0.06) ***(0.00)***	0.05 (0.22) *41*	-0.19 (0.07) ***(0.00)***
Diamond (0-1 index for major producers)	0.10 (0.30) *59*	0.08 (0.27) 63	-0.02 (0.05) ***(0.67)***	0.12 (0.33) *41*	0.02 (0.07) ***(0.76)***

Empirical results C.2 – Natural Resource Curse

➔ **Stronger Support (with oil)**

	Always non-democratic	**Full Democratization**		**Early Democratization**	
	Mean (st. dev) # obs.	Mean (st. dev) # obs.	Test of Means	Mean (st. dev) # obs.	Test of Means
Oil Producer (0-1 index for major producers)	0.24 (0.43) *59*	0.00 (0.00) *39*	-0.24 (0.06) ***(0.00)***	0.00 (0.00) *15*	-0.24 (0.06) ***(0.00)***
Diamond (0-1 index for major producers)	0.10 (0.30) *59*	0.0769 (0.27) *39*	-0.0248 (0.06) ***(0.67)***	0.0667 (0.26) *15*	-0.0350 (0.08) ***(0.66)***

Empirical results D.1 – Liberal Hypothesis

➔ **Mixed results**

	Always non-democratic	**Democratization**		**Always Democratic**	
	Mean (st. dev) # obs.	Mean (st. dev) # obs.	Test of Means	Mean (st. dev) # obs.	Test of Means
Trade Openness (Sachs-Warner 0-1 index)	0.07 (0.27) *39*	0.10 (0.31) *58*	0.03 (0.06) ***(0.65)***	0.61 (0.49) *34*	0.54 (0.09) ***(0.00)***
Trade share (imports + exports) / GDP	62.57 (33.93) *33*	53.84 (31.44) *37*	-8.74 (7.85) ***(0.27)***	71.52 (39.07) *35*	8.94 (8.86) ***(0.32)***

Empirical results D.2 – Liberal Hypothesis

➔ **inconclusive results**

	Always non-democratic	**Full Democratization**		**Early**	
	Mean (st. dev) # obs.	Mean (st. dev) # obs.	Test of Means	Mean (st. dev) # obs.	Test of Means
Trade Openness (Sachs-Warner 0-1 index)	0.07 (0.27) *39*	0.14 (0.35) *36*	0.06 (0.07) ***(0.40)***	0.29 (0.47) *14*	0.21 (0.13) ***(0.13)***
Trade share (imports + exports) / GDP	62.57 (33.93) *33*	51.30 (27.83) *25*	-11.28 (8.12) ***(0.17)***	41.80 (18.44) *14*	-20.78 (7.69) ***(0.01)***

Empirical results E.1 – Early institution theories

	Always non-democratic	**Democratization**		**Always Democratic**	
	Mean (st. dev) # obs.	Mean (st. dev) # obs.	Test of Means	Mean (st. dev) # obs.	Test of Means
Settler Mortality	233.68 (171.48) *28*	295.11 (632.88) *29*	61.43 (121.91) ***(0.62)***	67.88 (51.22) *17*	-165.80 (34.71) ***(0.00)***
Population Density (circa 1500)	8.53 (17.64) *33*	2.33 (4.02) *35*	-6.20 (3.14) ***(0.06)***	3.14 (6.24) *18*	-5.39 (3.40) ***(0.12)***
Executive Constraints at Independence	0.26 (0.26) 49	0.28 (0.28) 45	0.02 (0.05) ***(0.78)***	0.66 (0.42) 32	0.40 (0.08) ***(0.00)***
Year since independence	0.24 (0.21) *59*	0.41 (0.36) *63*	0.18 (0.05) ***(0.00)***	0.53 (0.38) *41*	0.29 (0.07) ***(0.00)***

Significant differences between autocratic and democratic countries

Empirical results E.2 – Early institution theories

	Always non-democratic	**Full Democratization**		**Early Democratization**	
	Mean (st. dev) # obs.	Mean (st. dev) # obs.	Test of Means	Mean (st. dev) # obs.	Test of Means
Settler Mortality	233.68 (171.48) *28*	283.34 (679.09) *18*	49.66 (163.31) ***(0.76)***	79.00 (20.78) *8*	-154.68 (33.23) ***(0.00)***
Population Density (circa 1500)	8.53 (17.64) *33*	1.54 (1.32) *21*	-6.98 (3.08) ***(0.03)***	1.10 (0.76) *10*	-7.42 (3.08) ***(0.02)***
Executive Constraints at Independence	0.26 (0.26) 49	0.27 (0.27) 29	0.01 (0.06) ***(0.90)***	0.20 (0.18) 14	-0.07 (0.06) ***(0.28)***
Year since independence	0.24 (0.21) *59*	0.50 (0.36) *39*	0.26 (0.06) ***(0.00)***	0.75 (0.28) *15*	0.51 (0.08) ***(0.00)***

Significant differences between autocratic and early (to a lesser extent with full) democratization countries

Empirical results (multivariate models)

1. The strong correlation between education (and income or life expectancy) and successful democratic transitions during the Third Wave is robust to various controls.

   It is also present when one just examines countries that entered the Third Wave as non-democratic.
2. (Ethnic and mainly religious polarization) is negatively correlated with democratization in multivariate models, but significance depends on the measure used.
3. The effect of Muslim share weakens considerably (although retains significance in most models) once one accounts for oil production (which enter always with a negative and significant coefficient).
4. Trade is not correlated with democratic transitions.
5. Of the various proxy measures of history and early institutions years since independence and population density before colonization are the most significant correlates of democratization.

Summary

Contribute on the literature on what determines successful democratic transitions, focusing on the Third Wave of Democratization.

1. Construct a new dataset of political transitions in the 1960-2005 period, addressing many of the limitations of existing measures of democracy (that do not aim to identify transitions, but measure the level of political freedom).
2. Investigate the significant correlates of democratization during the Third Wave and understand which initial condition help predict the subsequent political path.
   - Also examine the impact of education-income, social fragmentation, religion, trade openness, and early institution proxy measures on how deep and how fast political reforms will occur.

- **Ongoing work [building on old working paper]:** Focus on socialist economies and new independent states that emerged after the fall of the Iron Curtin; explore which initial (end of eighties) conditions predict the democratization path.

Appendix Table A.: Democratization in former centrally planned economies – Binary democracy index (44 countries)

	Linear	Probit	Logit
	(1)	(2)	(3)
Ln GDP p.c. in 1990	0.1666	0.5318	0.9356
p-value	*(0.03)*	*(0.05)*	*(0.05)*
Fraction Protestant	-0.0002	0.0008	0.0011
p-value	*(0.94)*	*(0.96)*	*(0.97)*
Fraction Catholic	0.0014	0.0081	0.0136
p-value	*(0.37)*	*(0.25)*	*(0.26)*
Fraction Muslim	-0.0044	-0.0194	-0.0338
p-value	*(0.02)*	*(0.03)*	*(0.05)*
Natural Resources	-0.0159	-0.0481	-0.0705
p-value	*(0.30)*	*(0.37)*	*(0.45)*
Natural Trade Openess	0.2077	0.7533	1.3148
p-value	*(0.11)*	*(0.10)*	*(0.12)*
R-squared	0.465	0.413	0.412
Countries	44	44	44

Appendix Table B.: Democratization in former centrally planned economies – Ordered (0, 1, 2) Analysis (44 countries)

	Linear	Ord. Probit	Ord. Logit
	(1)	(2)	(3)
Ln GDP p.c. in 1990	0.2398	0.7281	1.2495
	(0.02)	*(0.04)*	*(0.06)*
Ethnic Fragmentation	0.0052	0.0214	0.0353
(probab. two individuals same group)	*(0.20)*	*(0.13)*	*(0.15)*
Religious Fragmentation	-0.0034	-0.0107	-0.0194
(probab. two individuals same group)	*(0.47)*	*(0.49)*	*(0.51)*
Fraction Protestant	-0.0017	-0.0050	-0.0069
	(0.66)	*(0.80)*	*(0.88)*
Fraction Catholic	0.0008	0.0047	0.0083
	(0.60)	*(0.47)*	*(0.45)*
Fraction Muslim	-0.0062	-0.0291	-0.0508
	(0.02)	*(0.02)*	*(0.03)*
Natural Resources	-0.0112	-0.0394	-0.0609
(Oil and Natural Gas)	*(0.50)*	*(0.47)*	*(0.53)*
Natural Trade Openess	0.2015	0.7797	1.2931
(geographical propensity to trade)	*(0.21)*	*(0.14)*	*(0.20)*
Former republics dummy	-0.0474	0.0040	0.1241
	(0.76)	*(1.00)*	*(0.91)*
R-squared	0.484	0.435	0.434
Countries	44	44	44

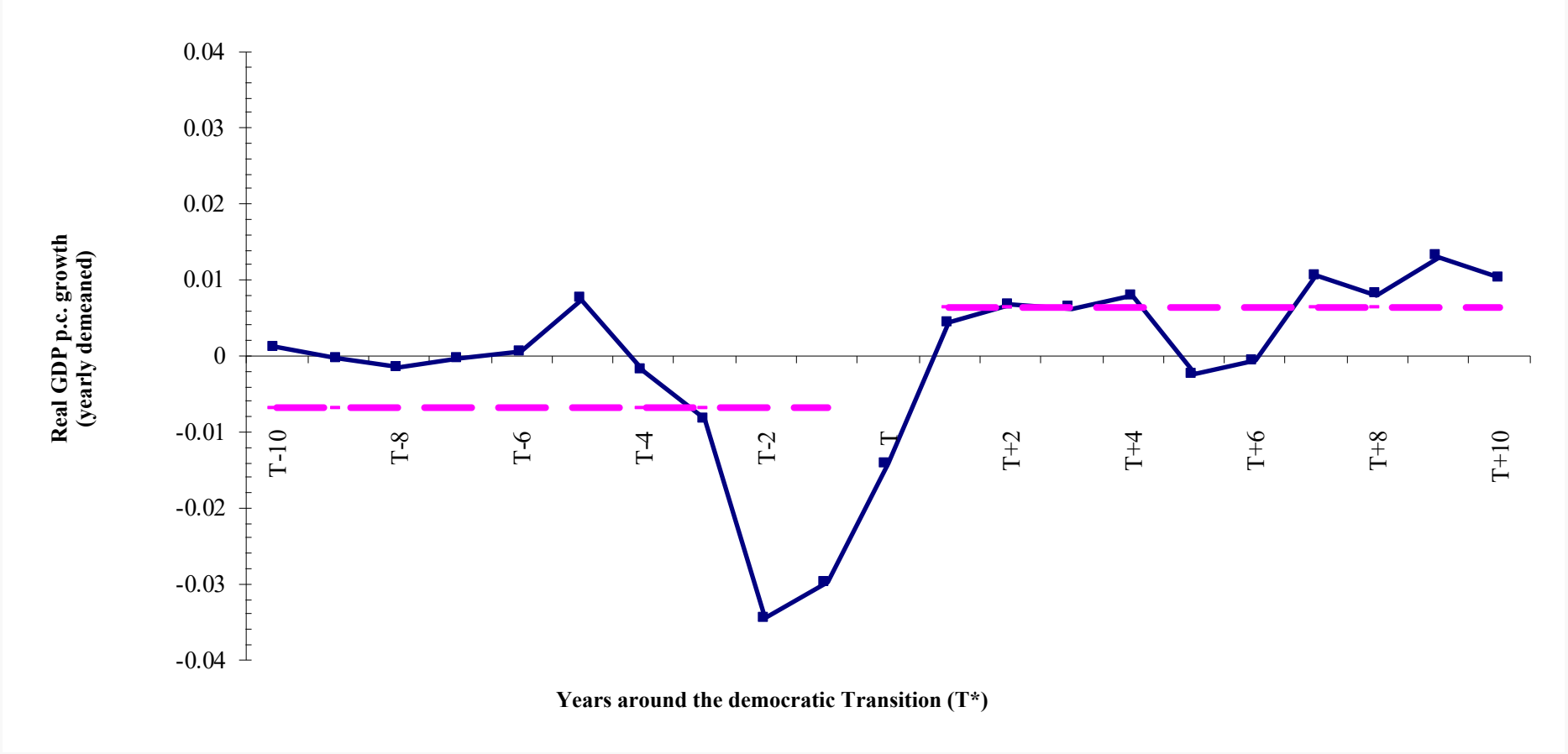
Democratization and Growth

Elias Papaioannou and **Gregorios Siourounis**

London Business School *Brown University*

This version: January 2017

Democratization and Growth

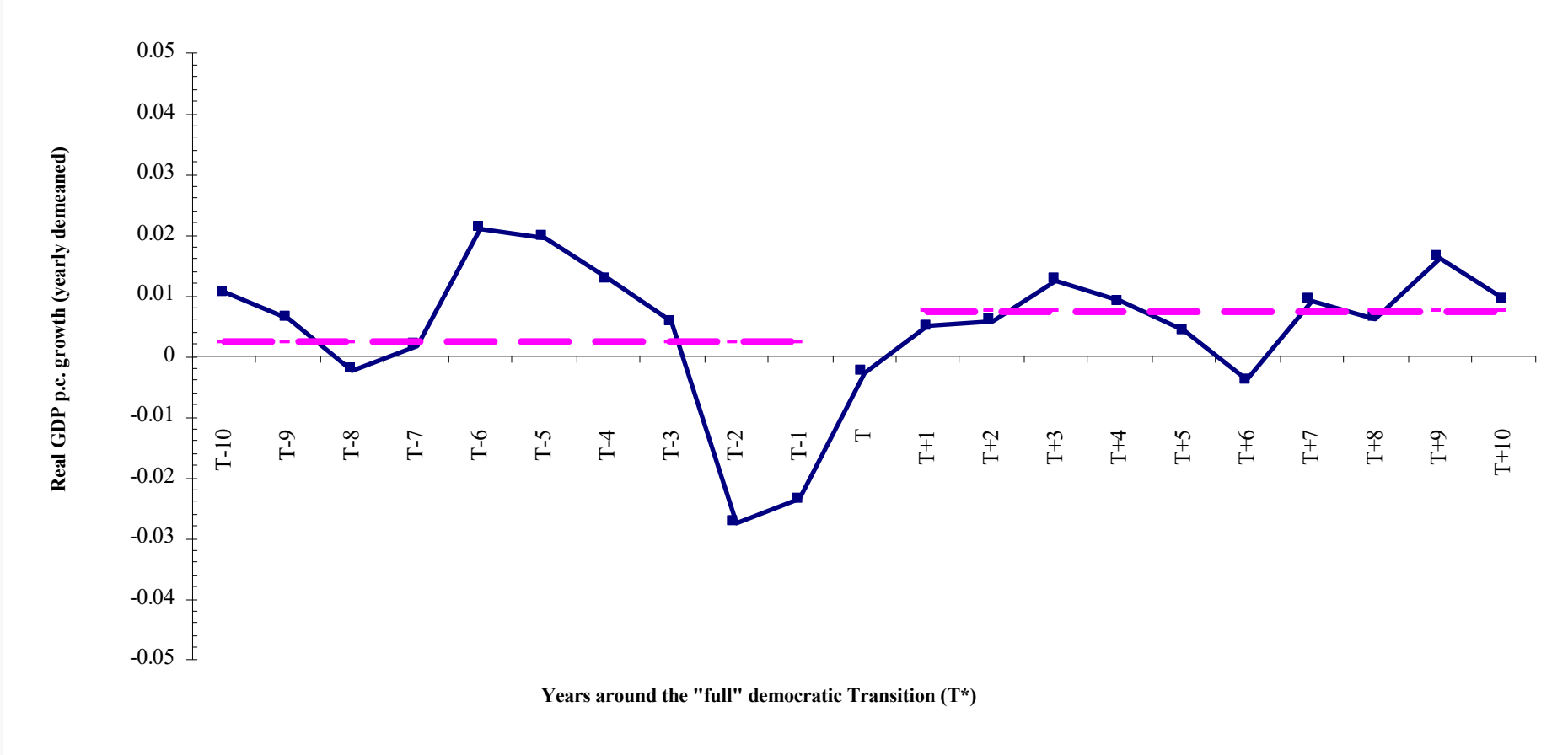


Lets see if we throw in some controls

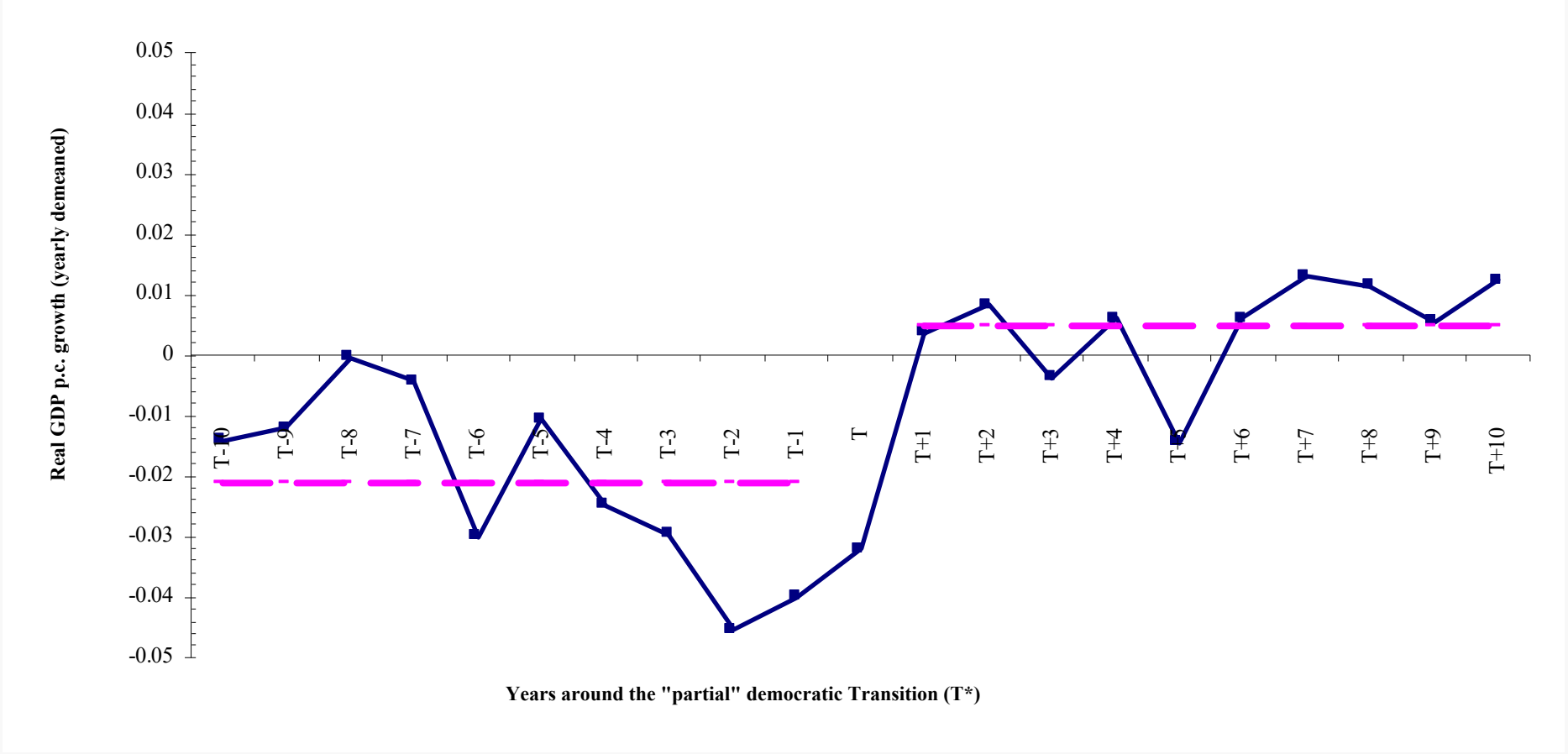
Table 3 - Conditional Effects of Democratization

	(1)	(2)	(3)	(4)	(5)	(6)
Democratization	0.7917	0.8397	1.0897	1.2573	0.7289	0.8329
p-value	(0.007)	(0.000)	(0.000)	(0.000)	(0.013)	(0.004)
p-value - AR(1) disturbances	(0.008)	(0.000)	(0.000)	(0.000)	(0.013)	(0.010)
Lag (1) Growth	0.0784	0.2259	0.1927	0.1059	0.1101	0.0632
p-value	(0.005)	(0.000)	(0.000)	(0.000)	(0.000)	(0.025)
p-value - AR(1) disturbances	(0.003)	(0.000)	(0.000)	(0.000)	(0.000)	(0.010)
Lag (2) Ln GDP p.c.	-4.2992	-3.1302	-4.0167	-3.7793	-4.5691	-4.1927
p-value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
p-value - AR(1) disturbances	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Investment	0.1464					0.1254
p-value	(0.000)					(0.000)
p-value - AR(1) disturbances	(0.000)					(0.000)
Schooling		0.1459				
p-value		(0.364)				
p-value - AR(1) disturbances		(0.400)				
Life Expectancy			0.0581			-0.0100
p-value			(0.219)			(0.813)
p-value - AR(1) disturbances			(0.240)			(0.809)
Government Consumption				-0.1288		-0.1107
p-value				(0.000)		(0.000)
p-value - AR(1) disturbances				(0.000)		(0.000)
Trade Share					0.0405	0.0231
p-value					(0.000)	(0.001)
p-value - AR(1) disturbances					(0.000)	(0.000)

Intensity matters: Full Democracies



Partial Democracies



Lets throw in some controls

Table 6: Democratization and Intensity of Reforms

	Intensity of Reforms			All Types of Transitions		
	(1)	(2)	(3)	(4)	(5)	(6)
Full Democratization	0.7188	1.1528	1.0774	0.7356	1.1737	1.0682
p-value	(0.038)	(0.000)	(0.001)	(0.035)	(0.000)	(0.001)
p-value - clustered s.e.	(0.107)	(0.001)	(0.006)	(0.102)	(0.001)	(0.007)
Partial Democratization	2.9232	0.5742	0.3874	2.9354	0.6058	0.3701
p-value	(0.000)	(0.310)	(0.450)	(0.000)	(0.280)	(0.471)
p-value - clustered s.e.	(0.008)	(0.260)	(0.531)	(0.008)	(0.241)	(0.553)
Borderline Democratization				0.6512	0.6321	0.0077
p-value				(0.283)	(0.317)	(0.990)
p-value - clustered s.e.				(0.341)	(0.469)	(0.989)
Reverse Transition				-1.3520	-0.3820	-1.1940
p-value				(0.107)	(0.652)	(0.195)
p-value - clustered s.e.				(0.008)	(0.508)	(0.086)
Other controls	No	Autoreg/Inc	Full	No	Autoreg/Inc	Full

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