Institutions and Growth: Macro Studies

Institutional Economics Lecture 6

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Outline

Institutions as the Fundamental Cause of Growth

Acemoglu, Johnson, Robinson (2005), *Handbook of Econ Growth*

Why are institutions fundamental to growth? Economic institutions influence economic incentives. Without property rights institutions and without contractual institutions individuals will not have the incentive to:

- invest in physical or human capital,
- adopt more efficient technologies.

$\Rightarrow$ Institutions help to:

- allocate resources to their most efficient uses
- determine who gets profits, revenues and residual rights of control

$\Rightarrow$ When markets are missing or ignored (as they were in the Soviet Union, for example):

- gains from trade go unexploited and
- resources are misallocated

AJR (2005): Institutions: Fundamental Cause of Growth

A "natural" experiment: South V North Korea

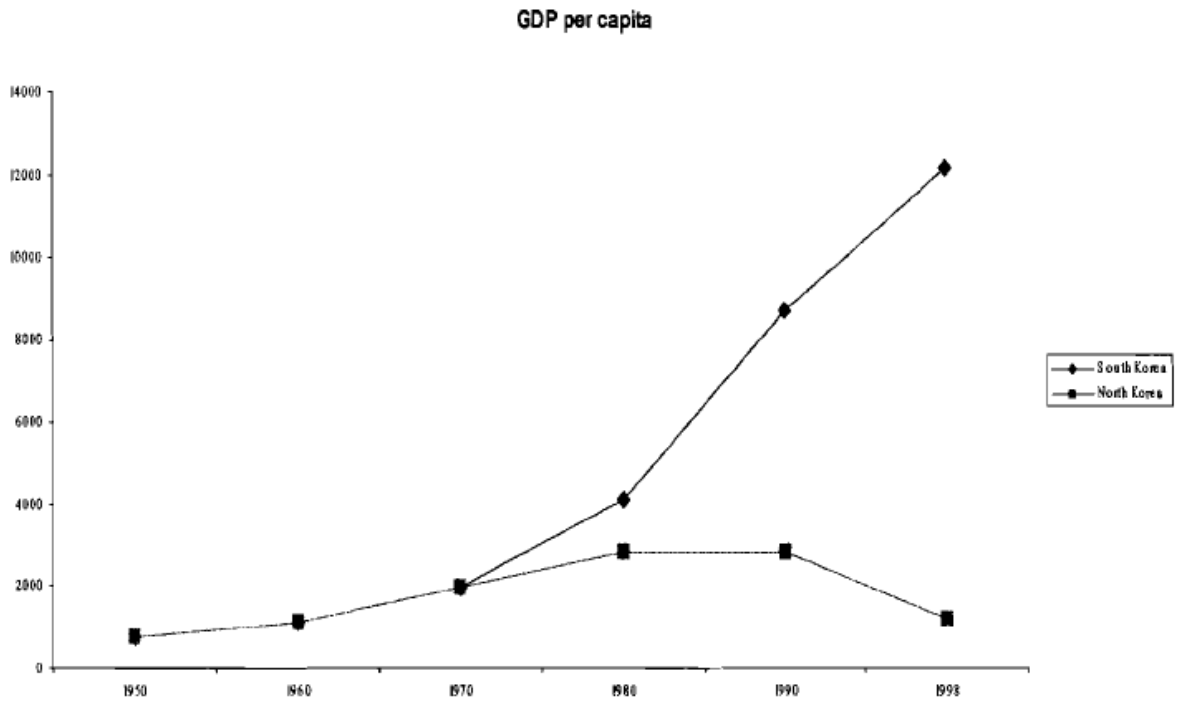


Figure 3. GDP per capita in North and South Korea, 1950–98.

AJR (2005): Institutions: Fundamental Cause of Growth

The bottomline

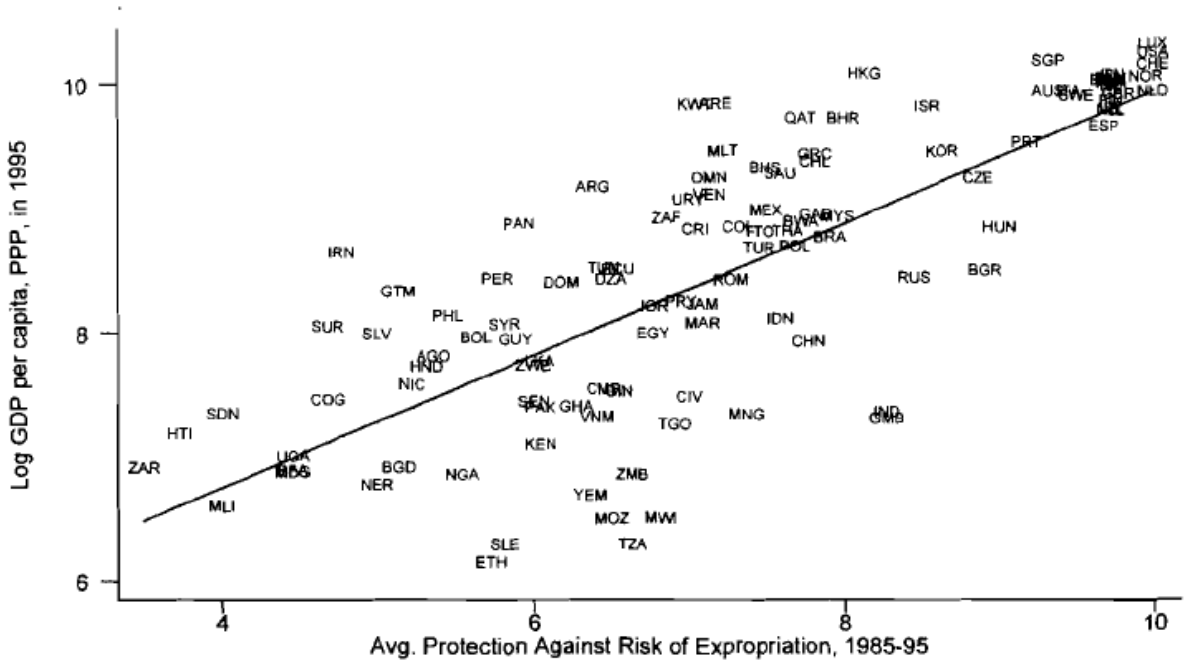


Figure 1. Average protection against risk of expropriation 1985–95 and log GDP per capita 1995.

Societies with economic institutions that facilitate and encourage factor accumulation, innovation and the efficient allocation of resources will prosper.

AJR (2005): Institutions: Fundamental Cause of Growth

An alternative view: Is geography important?

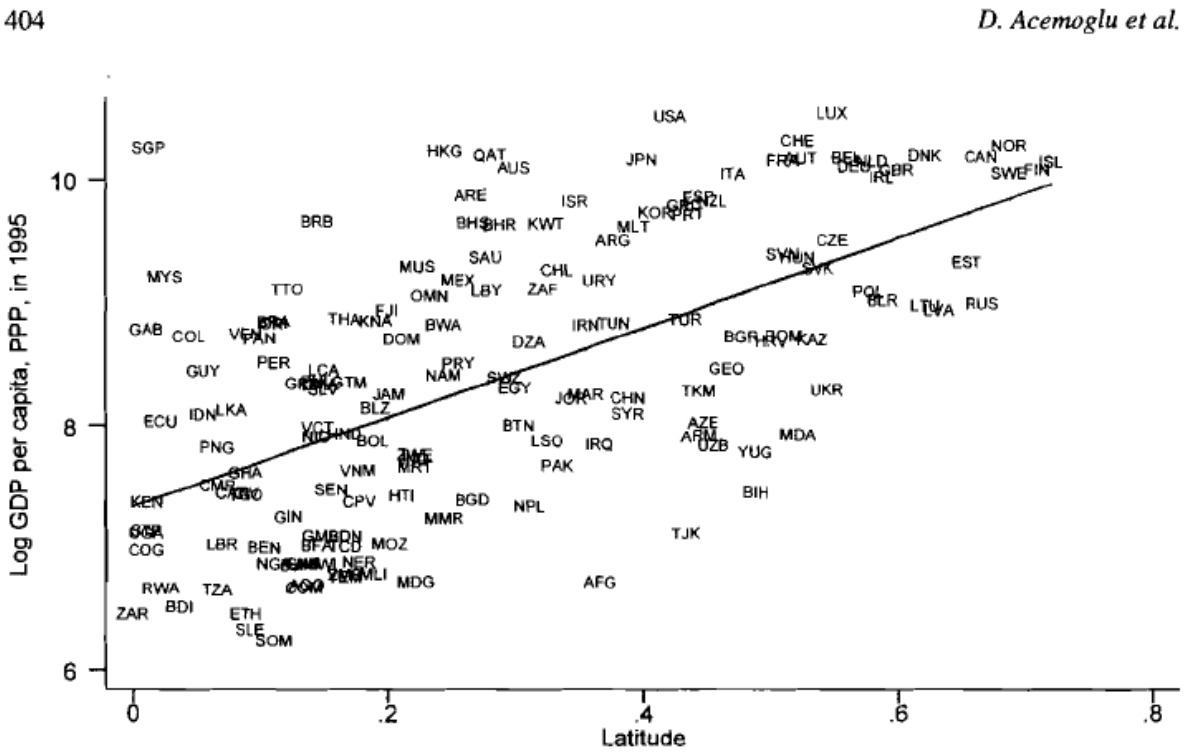


Figure 2. Latitude and log GDP per capita 1995.

Geography could affect outcomes but is of secondary importance.

AJR (2005): Institutions: Fundamental Cause of Growth

An additional perspective

Consequently, the question of why some societies are much poorer than others is closely related to the question of *why* some societies have much "worse economic institutions" than others.
We are far from a useful framework for thinking about:

- *how* economic institutions are determined and
- *why* they vary across countries, why equilibrium economic institutions differ.

Theory implications:

- Growth theory: part of the reason why much of the economics literature has focused on the *proximate causes* of economic growth, largely neglecting fundamental institutional causes.
- Political economy of institutions

AJR (2005): Building blocks of their argument

Block 1: Institutions matter for outcomes

Economic institutions affect economic outcomes but they also affect the distribution of resources:

$$\text{economic institutions}_t \Longrightarrow \begin{cases} \text{economic performance}_t \\ \text{distribution of resources}_{t+1} \end{cases}$$

AJR (2005): Building blocks of their argument

Block 2: Institutions are endogenous

Conflicting groups of individuals or elites determine the set of economic institutions. Who gets to determine the economic institutions is given by the political power:

$$\text{political power}_t \Longrightarrow \text{economic institutions}_t$$

AJR (2005): Building blocks of their argument

Block 3: Political institutions are also endogenous

Examples of political institutions: form of government: democracy VS dictatorship; presidential VS parliamentary republic; constraints on their actions.
Political institutions$_t$ $\Rightarrow$ *de jure* political power$_t$

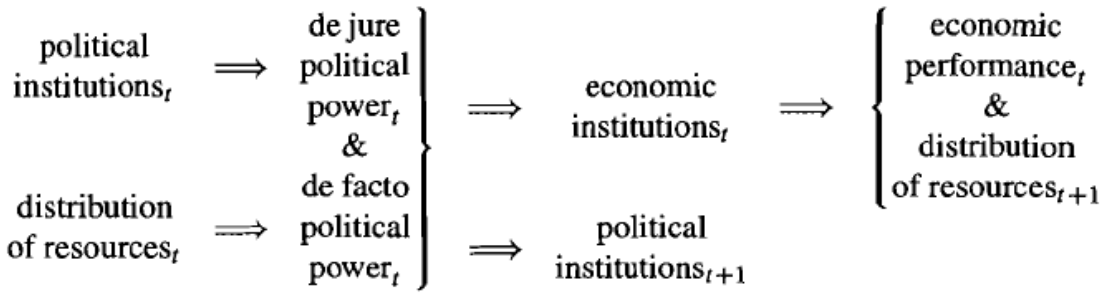
HOWEVER: Agents without *de jure* political power may have *de facto* political power: organize protests, influence political decision of the majority; set the political agenda.

Two factors determine the *de facto* political power:

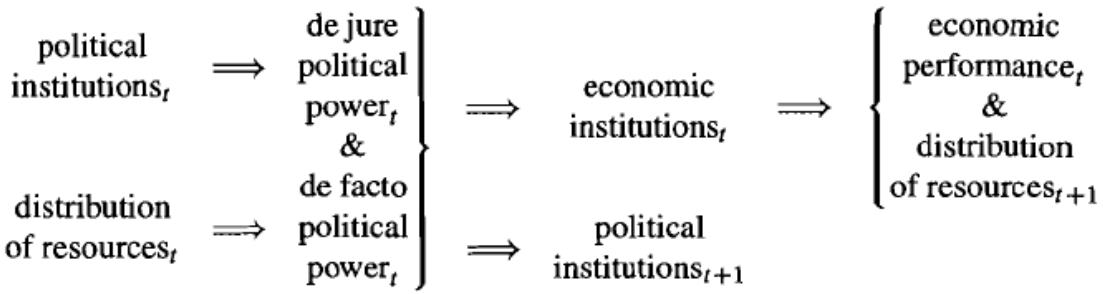
1. can these agents get organized (solve their collective action problem)?
2. do they have economic resources powerful enough to
   - set agendas for the entire society?
   - use them against opposition?

Distribution of resources$_t$ $\Rightarrow$ de facto political power$_t$

AJR (2005): A Summary of Arguments

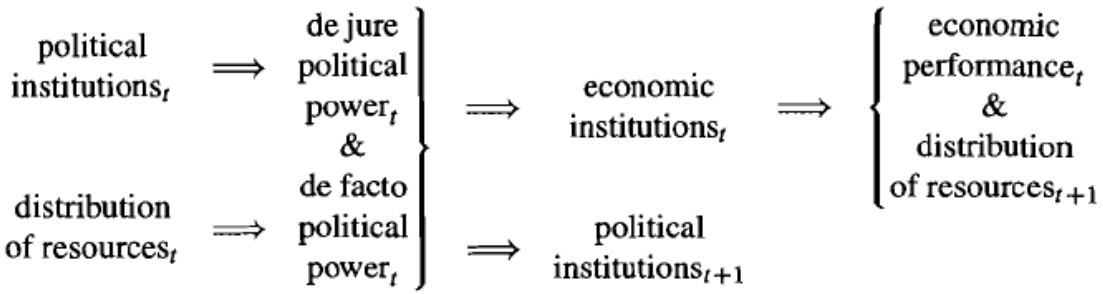


AJR (2005): A Summary of Arguments



Discussion: Think about the economic transition in Bulgaria and across the region. Can BG fit it in this framework for explanation of economic results? Why did the transition experience differ across CEE?

AJR (2005): A Summary of Arguments



Discussion: Think about the economic transition in Bulgaria and across the region. Can BG fit it in this framework for explanation of economic results? Why did the transition experience differ across CEE?

How can the vicious circle be broken?

- new technologies -> new distribution of resources -> new richer middle class -> new demands for political agenda
- external shocks to the international environment

Glaeser, La Porta, Lopez-de-Silanes, Shleifer (2004)

Do Institutions Cause Growth?, *J Econ Growth*

Main question: Do political institutions cause growth, or it is growth that improves institutions?

Main findings:

- Institutional quality indicators are unsuitable for empirical analysis
- Some IV techniques used in the literature are flawed
- Human capital more important for growth than institutions
- Poor countries can get out of poverty by good policies, even though they are pursued by dictators
- After reaching a certain level of income, political institutions are also improved

Two debates in the literature:

1. the institutional view: growth can be ignited by good institutions and then human capital and other factors will follow $\rightarrow$ limited government causes growth: US and other western democracies
2. the development view: human capital and other factors can be developed before good institutions and then institutions would be the consequence, not the factors of, higher GDP: South Korea, Taiwan, Singapore, China. SKorea and Taiwan turned into democracies only after achieving certain human capital and income levels. Their institutions improved *only after* they became rich.

Main purpose: to check the empirical validity of those two views
How they do it?: a few stages of analysis

Do Institutions Cause Growth?

Stage 1: Check how indices of institutions are constructed

Some indices

1. do not measure constraints on government: subjectively collected measures which are highly volatile, are uncorrelated with constitutional constraints on government.
2. measure election outcomes (Haiti, Argentina in the case of Polity IV) -> they do not measure institutions but policies and they are not permanent.

Education is shown to be much more persistent over time than any measures of institutions.

Is Education more Persistent than Institutions?

Table 2. Persistence of political institutions and human capital.

	Dependent Variables			
	Years of Schooling (2000)	Executive Constraints (2000)	Autocracy–Polity IV (2000)	Democracy (2000)
Years of schooling (1960)	1.1773[a]			
	(0.0885)			
Executive constraints (1960)		0.2719[b]		
		(0.1246)		
Autocracy–Polity IV (1960)			0.1810[c]	
			(0.0926)	
Democracy (1960)				0.3065[b]
				(0.1341)
Observations	50	50	50	50
R^2	0.73	0.09	0.07	0.10

Notes: The table shows OLS regressions for the cross-section of countries. The specifications include a constant but we do not report the estimates in the table. Robust standard errors are shown in parentheses. All variables are defined in the appendix.

[a]Significant at 1 percent.

Do Institutions Cause Growth?

Stage 2: Discuss OLS evidence between institutions, human capital and growth

Initial levels of Human capital and the average of institutions predict well the GDP growth over that same period. However, *some specifications* inconclusive of the impact of institutions: institutional constraints do not matter while human capital does. -> human capital more basic factor for growth than institutions.

Which specifications are conclusive?

Subjective measures of institutions do correlate with growth, while objective measures do not:

Table 4. Economic growth, political institutions and human capital.

	Dependent Variable is Growth of GDP per capita 1960–2000							
Log GDP per capita (1960)	−0.0114[a]	−0.0136[a]	−0.0112[a]	−0.0122[a]	−0.0141[a]	−0.0130[a]	−0.0090[a]	−0.0105[a]
	(0.0033)	(0.0033)	(0.0033)	(0.0033)	(0.0037)	(0.0037)	(0.0034)	(0.0036)
Log years of schooling (1960)	0.0060[b]	0.0076[a]	0.0063[b]	0.0060[b]	0.0077[b]	0.0073[b]	0.0073[a]	0.0080[a]
	(0.0025)	(0.0024)	(0.0024)	(0.0023)	(0.0032)	(0.0031)	(0.0025)	(0.0026)
Share of population living in temperate zone (1995)	0.0175[a]	0.0132[a]	0.0179[a]	0.0104[c]	0.0242[a]	0.0231[a]	0.0175[a]	0.0184[a]
	(0.0049)	(0.0041)	(0.0046)	(0.0055)	(0.0049)	(0.0047)	(0.0050)	(0.0052)
Executive constraints (1960–2000)	0.0021[b]							
	(0.0008)							
Expropriation risk (1982–1997)		0.0040[a]						
		(0.0014)						
Autocracy–Alvarez (1960–1990)			−0.0060[c]					
			(0.0032)					
Government effectiveness (1998–2000)				0.0075[a]				
				(0.0024)				
Judicial independence (1995)					−0.0041			
					(0.0057)			
Constitutional review (1995)						0.0047		
						(0.0064)		
Plurality (1975–2000)							0.0010	
							(0.0027)	
Proportional representation (1975–2000)								0.0019
								(0.0031)
Observations	71	69	71	71	54	54	71	70
R^2	0.44	0.56	0.44	0.48	0.45	0.45	0.41	0.44

Is human capital more important than institutions?

For each decade, human capital more robust than institutions in predicting growth:

Table 5. Economic growth, initial constraints on the executive and initial human capital.

	1960–1970	1970–1980	1980–1990	1990–2000	1960–2000
Panel A: Dependent variables are the growth rates of GDP per capita for each decade between 1960 and 2000 and for the whole period					
Share of population living	0.0290[a]	0.0225[a]	0.0294[a]	0.0085	0.0253[a]
in temperate zone (1995)	(0.0076)	(0.0070)	(0.0084)	(0.0073)	(0.0039)
Log initial GDP per capita	−0.0059	−0.0032	−0.0079[b]	0.0021	−0.0079[a]
	(0.0045)	(0.0043)	(0.0036)	(0.0037)	(0.0025)
Initial executive constraints	0.0008	−0.0004	0.0027[b]	0.0006	0.0013
	(0.0013)	(0.0014)	(0.0012)	(0.0016)	(0.0009)
Observations	77	99	102	95	72
R^2	17%	6%	19%	6%	34%
Panel B: Dependent variables are the growth rates of GDP per capita for each decade between 1960 and 2000 and for the whole period					
Share of population living	0.0136[b]	0.0204[a]	0.0220[a]	0.0123[c]	0.0175[a]
in temperate zone (1995)	(0.0066)	(0.0068)	(0.0082)	(0.0073)	(0.0049)
Log initial GDP per capita	−0.0027	−0.0158[a]	−0.0103[b]	−0.0048	−0.0092[a]
	(0.0040)	(0.0044)	(0.0048)	(0.0048)	(0.0034)
Log initial years of schooling	0.0075[b]	0.0147[a]	0.0114[a]	0.0102[c]	0.0073[a]
	(0.0033)	(0.0035)	(0.0043)	(0.0060)	(0.0024)
Observations	79	86	90	82	71
R^2	22%	24%	16%	9%	38%
Panel C: Dependent variables are the growth rates of GDP per capita for each decade between 1960 and 2000 and for the whole period					
Share of population living	0.0270[a]	0.0191[a]	0.0218[a]	0.0135[c]	0.0255[a]
in temperate zone (1995)	(0.0085)	(0.0070)	(0.0082)	(0.0077)	(0.0048)
Log initial GDP per capita	−0.0141[a]	−0.0130[b]	−0.0146[a]	−0.0073	−0.0189[a]
	(0.0048)	(0.0057)	(0.0045)	(0.0055)	(0.0034)
Initial executive constraints	−0.0004	−0.0017	0.0031[b]	0.0014	0.0008
	(0.0012)	(0.0016)	(0.0013)	(0.0015)	(0.0008)
Log initial years of schooling	0.0116[a]	0.0140[a]	0.0105[b]	0.0104[c]	0.0096[a]
	(0.0035)	(0.0035)	(0.0043)	(0.0060)	(0.0028)
Observations	61	80	86	81	57
R^2	33%	20%	20%	9%	55%

Do Institutions Cause Growth?

Stage 3: Focus on Dictatorships

Dictatorships had a large dispersion of growth rates. -> it is *not the constraints* on the dictators *but policy choices by those dictators* that determined the growth outcomes.

Table 7. Political regimes and human capital.

Years of Schooling (1960)	Democracy = 10	10 > Democracy > 7	7 ≥ Democracy > 2	Democracy ≤ 2	All Countries
Low (years schooling < 2.6785)	0	6	8	28	42
Intermediate (2.6785 ≤ years schooling ≤ 5.0115)	2	5	14	3	24
High (years schooling > 5.0115)	17	3	3	0	23
Total	19	14	25	31	89

Notes: Distribution of countries by years of schooling in 1960 and political regimes. The classification of political regimes is based on the average democracy score for 1960–2000 from the Polity IV database. We divide the sample of countries into those with low human capital (years of schooling below the sample's median value of 2.6785), intermediate human capital (years of schooling between 2.6785 and 5.0115), and high human capital (years schooling above the sample's 75th percentile value of 5.0115 years). The table shows the number of countries that fall within each group. All variables are defined in the appendix.

The two stable democracies with intermediate schooling levels are Italy and Costa Rica. The three authoritarian countries with intermediate schooling levels are Singapore, Taiwan and Paraguay.

What Makes a Successful Dictatorship?

If a democracy is not an option, and dictatorship is the more likely political path, then it is crucial to understand what makes a successful dictatorship:

Table 8. Growth rates and political regimes.

Years of Schooling (1960)	Democracy = 10	10 > Democracy > 7	7 ≥ Democracy > 2	Democracy ≤ 2	All Countries
Panel A: Number of observations					
Low (years schooling < 2.6785)	6	17	22	87	132
Intermediate (2.6785 ≤ years schooling ≤ 5.0115)	9	21	26	35	91
High (years schooling > 5.0115)	67	10	3	7	87
Total	82	48	51	129	310
Panel B: Average within-country 10-year growth rate					
Low (years schooling < 2.6785)	0.0036	0.0292	0.0185	0.0076	0.0120
Intermediate (2.6785 ≤ years schooling ≤ 5.0115)	0.0225	0.0224	0.0271	0.0273	0.0256
High (years schooling > 5.0115)	0.0257	0.0212	0.0235	0.0204	0.0247
Total	0.0238	0.0246	0.0232	0.0136	0.0196
Panel C: Mean standard deviation of the 10-year growth rates across countries					
Low (years schooling < 2.6785)	0.0168	0.0298	0.0224	0.0303	0.0294
Intermediate (2.6785 ≤ years schooling ≤ 5.0115)	0.0161	0.0197	0.0206	0.0317	0.0247
High (years schooling > 5.0115)	0.0137	0.0122	0.0078	0.0250	0.0144
Total	0.0151	0.0225	0.0210	0.0315	0.0254

Note the dispersion of growth rates in dictatorships and the convergence of growth rates among democracies.

Do Institutions Cause Growth?

Stage 4: Confront the evidence in AJR (2001, 2002)

Criticize the settler mortality and population density IVs: European settlers did not bring their institutions but their human capital! This is shown by presenting evidence that the IVs are more highly correlated with human capital measures today (and in 1900) than with institutions today. As a result, human capital performs better than institutions in IV estimations.

Do Institutions Cause Growth?

Stage 5: Notice the timing of HC and Inst. development

Address the timing of human capital accumulation and improvements in institutions: which comes first? It runs out human capital improves before institutions, not the other way round.

Table 12. Changes in schooling and changes in institutions.

	Change Executive Constraints	Change Autocracy–Polity IV	Change Autocracy–Alvarez	Change Democracy
Panel A: Dependent variable is the 5-year change in years of schooling $(t+5, t)$				
Years of schooling (t)	−0.0721[a]	−0.0460	−0.0707[a]	−0.0691[a]
	(0.0237)	(0.0339)	(0.0250)	(0.0239)
Log GDP per capita (t)	0.2839[a]	0.3978[a]	0.2809[a]	0.2825[a]
	(0.0790)	(0.1055)	(0.0797)	(0.0793)
Executive constraints (t)	−0.0099			
	(0.0118)			
Autocracy–Polity IV (t)		0.0373		
		(0.0391)		
Autocracy–Alvarez (t)			0.0065	
			(0.0080)	
Democracy (t)				−0.0094
				(0.0074)
Observations	514	420	514	514
R^2	0.24	0.26	0.24	0.24
Panel B: Dependent variables are the 5-year changes in political institutions $(t=5, t)$				
Years of schooling (t)	0.4975[a]	−0.9092[a]	−0.0958	0.7004[a]
	(0.1191)	(0.1790)	(0.0707)	(0.1804)
Log GDP per capita (t)	0.0382	0.5075	−0.2675	0.2918
	(0.4035)	(0.6295)	(0.2022)	(0.6055)
Executive constraints (t)	−0.5724[a]			
	(0.0716)			
Autocracy—Polity IV (t)		−0.5471[a]		
		(0.0680)		
Autocracy—Alvarez (t)			−0.8642[a]	
			(0.1032)	
Democracy (t)				−0.5145[a]
				(0.0650)
Observations	499	499	349	499
R^2	0.33	0.32	0.47	0.30

Do Institutions Cause Growth?

Conclusions

1. Causal link from inst to growth proves difficult to establish
2. Conceptual problems in the indices remain
3. Limitations of IV strategies: $corr(X, Z) \neq 0$ but $corr(Z, \varepsilon) \neq 0$ as well...)
4. Evidence points to the primacy of human capital over institutions for both growth and democratization

Do Institutions Cause Growth?

Policy implications

1. Research should focus on actual rules, not subjective evaluations of the performance of institutions
2. It is not that institutions do not matter but that they should be measured in a better way
3. The economic miracles have been achieved by good-for-growth dictators and were not a consequence of rules constraining dictators
4. evidence suggests skepticism about the viability of democracy in countries with low level of human capital. Countries that emerge from poverty accumulate human and physical capital under dictatorships and once they become richer, are increasingly likely to improve their institutions

Discussion: Discuss the viability of this last growth strategy for BG

Revision

1.

Further reading

1. *** Acemoglu, Johnson, Robinson (2005). Institutions as the Fundamental Cause of Long-Run Growth. *Handbook of Economic Growth*, Volume IA, (pp. 386-421 only)
2. *** Glaeser, La Porta, Lopez-de-Silanes, Shleifer (2004). Do Institutions Cause Growth?, *JEG*