

Luck, Geography, Culture, Institutions and the Poverty of Nations

Kaynaklar:

1. Acemoglu et.al. (2001) Chapter 2 in *Understanding Poverty* (edited by Banerjee, Benabou, Mookherjee) (Available at Ebrary),
2. Acemoglu et.al. (2001) “The Colonial Origins of Comparative Development: An Empirical Investigation”, *American Economic Review*, Vol 91, No 5, December.
3. Acemoglu, (2009) “Introduction to Modern Economic Growth”, Chapter 4.

Luck, Geography, Culture, Institutions and the Poverty of Nations

- There are huge differences in the standard of living between the rich and the poor countries.
- The poor countries have non-functioning markets, poorly educated populations, outdated technology. But these are not the real cause of poverty.
- What is the fundamental cause of cross-country differences in prosperity?
- There are four candidates:
 1. Luck, 2. Geography, 3. Culture, 4. Institutions.

1. The Luck Hypothesis:

Here we refer to the set of fundamental causes that explain the divergent paths of economic performance among countries that are otherwise identical.

Either some small uncertainty or heterogeneity between them has led to different choices with far-ranging consequences (stochastic models), or these countries have selected different equilibria that arose for the same underlying economic environment (models with multiple equilibria).

Both models are attractive as descriptions of certain aspects of the development process. But they are weak at informing us about the fundamental causes of economic growth. It is hard to believe that the divergence between a rich and a poor country today is due to some small stochastic event or due to the choice of the bad equilibrium many years ago (200-300 years ago).

2. The Geography Hypothesis:

The geography, climate and ecology of a country shape both its technology and the incentives of its inhabitants. How? What are the mechanisms?

- Geography may determine the technology that a society develops, especially in agriculture. Geographical differences have determined the timing and nature of settled agriculture and has shaped whether societies have been able to develop complex organizations and advanced civilian and military technologies. (*“Guns, Germs and Steel”* by Jared Diamond)

- Climate may be a determinant of work effort, incentives, and even productivity.

“The heat of the climate can be so excessive that the body there will be absolutely without strength. So, prostration will pass even to the spirit; no curiosity, no noble enterprise, no generous sentiment; inclination will all be passive there; laziness there will be happiness.” (Montesquieu)

- The “disease burden”: “The burden of infectious disease is ... higher in the tropics than in the temperate zones” (Sachs 2000, p. 32).

3. The Culture Hypothesis:

Culture refers to beliefs, values, and preferences that influence individual economic behavior. Different societies have distinct cultures because of different shared experiences or different religions. Ex: How important is wealth in determining status? How patient individuals should be?

Culture can influence occupational choices, market structure, saving rates, individuals' willingness to accumulate physical/human capital, and the degree of trust and cooperation in a society.

- Culture may influence which equilibrium will be chosen in a multiple equilibria setup.
- The origins of industrialization in Western Europe could be traced to a cultural factor, i.e. the Protestant reformation. (Max Weber) Weber argued that English piety, in particular Protestantism, was an important driver of capitalist development as it emphasized hard work, thrift and saving.

Two problems: 1) measurement, 2) explaining growth miracles such as those of S.Korea or Singapore (why not before, why not in N.Korea?, is a change in culture possible?)

4. The Institutions Hypothesis:

Institutions are rules, regulations, laws and policies that affect economic incentives .

“Institutions are the rules of the game in a society, or more formally, are the humanly devised constraints that shape human interaction. ... In consequence, [institutions] structure incentives in human exchange, whether political, social or economic.”
(Douglass North)

Three elements:

- 1) Humanly devised,
- 2) Place constraints on behavior,
- 3) Shape human interaction and affect incentives.

Some societies have developed “good institutions”.

What are “good institutions?”

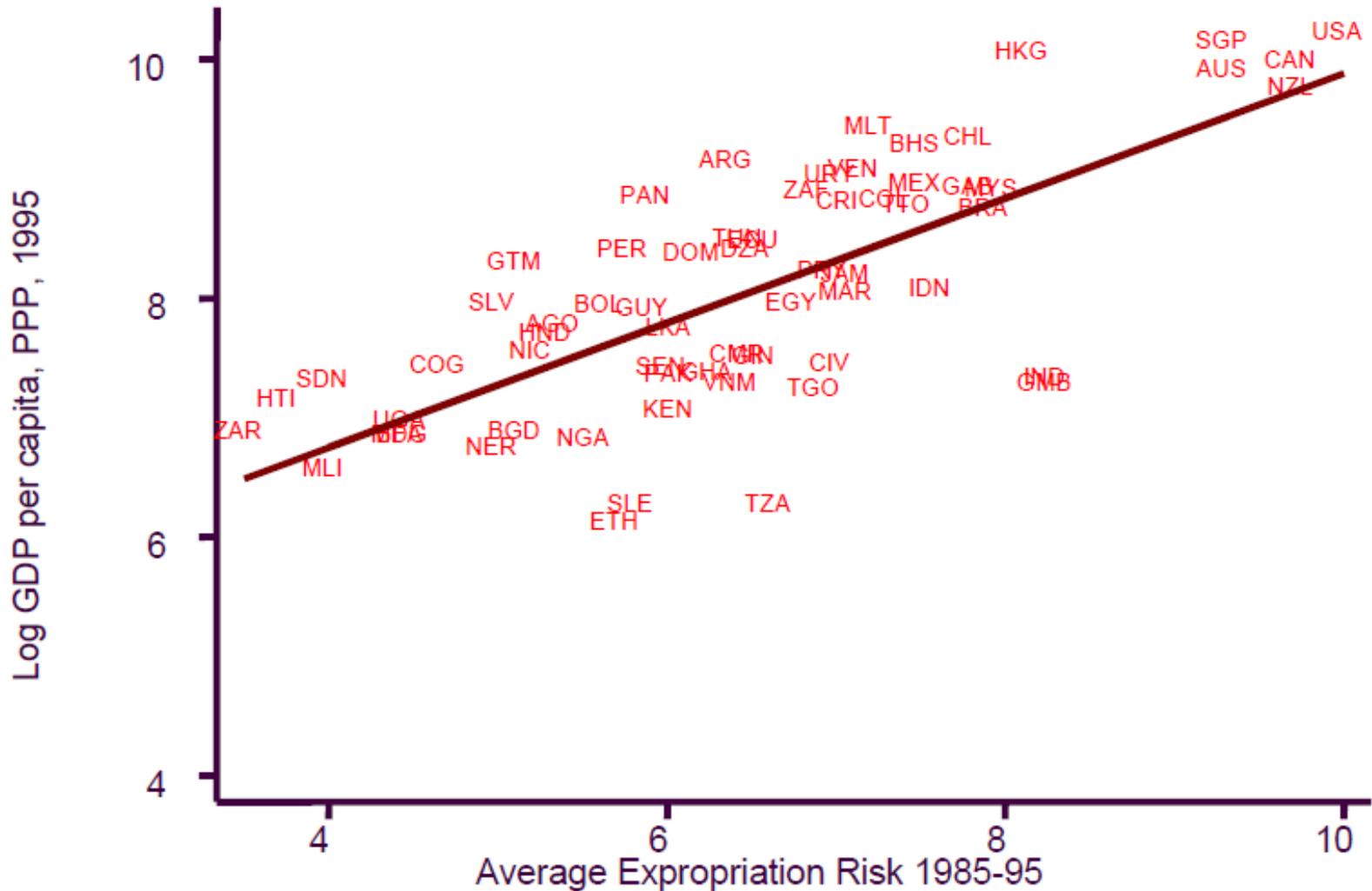
- Enforcement of property rights for a broad cross section of society, so that a variety of individuals have incentives to invest and take part in economic life;
- The existence of constraints on the actions of elites, politicians, and other powerful groups so these people cannot expropriate the incomes and investments of others or create a highly uneven playing field;
- The existence of some degree of equal opportunity for broad segments of the society, so that they can make investments, especially in human capital, and participate in productive economic activities.

- Good institutions not only affect the economic prospects of nations (size of the pie), but also are central to the distribution of income among various individuals and groups in society (distribution of the pie).
- There is no reason why societies should gravitate towards good institutions.
- A potential change from bad institutions toward better ones (which will increase the size of the pie) may nonetheless be blocked when such a change *significantly reduces the size of the slice that powerful groups receive and when they cannot be credibly compensated for this loss after the change in institutions.*

- Powerful groups will often opt for institutions that do not provide any rights to the majority of the population so that they can extract resources or labor from them, or monopolize the most lucrative businesses.
 - Acemoglu et.al. (AER,2001) test the institutions hypothesis against the geography hypothesis.
- “The two hypotheses are complementary, not competing. Nevertheless, the authors argue that the role of geography is relatively limited in understanding the sources of prosperity and poverty today.”
- “We will call bad or dysfunctional institutions as ‘extractive institutions’.” (Acemoglu et.al.,AER(2001))

Estimation of the effect of institutions on economic development

Reference: Acemoglu, Johnson and Robinson (AER, 2001)



Estimation of the effect of institutions on economic development ?? (OLS results)

TABLE 2—OLS REGRESSIONS

	Whole world (1)	Base sample (2)	Whole world (3)	Whole world (4)	Base sample (5)	Base sample (6)	Whole world (7)	Base sample (8)
	Dependent variable is log GDP per capita in 1995						Dependent variable is log output per worker in 1988	
Average protection against expropriation risk, 1985–1995	0.54 (0.04)	0.52 (0.06)	0.47 (0.06)	0.43 (0.05)	0.47 (0.06)	0.41 (0.06)	0.45 (0.04)	0.46 (0.06)
Latitude			0.89 (0.49)	0.37 (0.51)	1.60 (0.70)	0.92 (0.63)		
Asia dummy				-0.62 (0.19)		-0.60 (0.23)		
Africa dummy				-1.00 (0.15)		-0.90 (0.17)		
“Other” continent dummy				-0.25 (0.20)		-0.04 (0.32)		
R^2	0.62	0.54	0.63	0.73	0.56	0.69	0.55	0.49
Number of observations	110	64	110	110	64	64	108	61

Findings:

1) Log GDP per capita: CHL: 9.34, NGA 6.81

Ave.expropriation risk: CHL: 7.82, NGA 5.55

There is 11-fold difference in GDP per capita in practice. In the base sample (col.2), we find that the gap in institutional quality bw CHL and NGA corresponds to an 2.25-fold difference in per capita GDP.

This implies a fairly large effect of institutions on economic performance, but still much less than the actual income gap bw the two countries.

2) In the base sample (col.6) Africa is about 146 % poorer, even after taking the effect of institutions into account.

Problem:

- There is a two-way causality relationship between institutional quality and economic performance.
Better institutions \leftrightarrow Richer economies
- OLS estimates are biased.
- We need a source of exogenous variation in institutions.
- Find an instrument: A variable that is important for (has high correlation with) the variable of interest (institutions), but has no direct effect on the dependent variable (income), i.e., uncorrelated with the error term.

Estimation:

- What variable is used in this study as an instrument for current institutions?

The mortality rates expected by the first European settlers in the colonies.

**(potential) settler mortality → settlements
→ early institutions → current institutions
→ current performance.**

$$(1) \quad \log y_i = \mu + \alpha R_i + \mathbf{X}_i' \boldsymbol{\gamma} + \varepsilon_i,$$

$$(2) \quad R_i = \lambda_R + \beta_R C_i + \mathbf{X}_i' \boldsymbol{\gamma}_R + \nu_{Ri},$$

$$(3) \quad C_i = \lambda_C + \beta_C S_i + \mathbf{X}_i' \boldsymbol{\gamma}_C + \nu_{Ci},$$

$$(4) \quad S_i = \lambda_S + \beta_S \log M_i + \mathbf{X}_i' \boldsymbol{\gamma}_S + \nu_{Si},$$

Reference: Acemoglu et.al. (2001), p.1383.

A Natural Experiment: Colonization by Europeans

- Controlled experiments in natural sciences vs. in social sciences
- If geography is the key factor determining the economic potential of an area or a country, the places that were rich before the arrival of the Europeans should continue to be rich after colonization and today. (The key determinant of prosperity remains the same.)
- If, on the other hand, it is institutions that are central, then those places where good institutions were introduced or developed should get richer compared with those where Europeans introduced or maintained extractive institutions.

- Geography remains the same. Therefore, it *cannot* be the case that the climate, ecology or the disease environment of the tropical areas condemn these nations to poverty. These areas were richer than temperate areas in the 1500s.

A reversal of fortune after colonization:

Those that were among the richest civilizations in 1500s (those with high urbanization rate and population density) are among the poorest of today. For ex. Incas, Aztecs.

Those occupying the territories of less-developed civilizations are now among the richest of the world. For ex. North America, Australia.

Mortality of Early Settlers

- The great majority of European deaths in the colonies were due to malaria and yellow fever.
- Although these diseases were fatal to Europeans who had no immunity, they had limited effect on indigenous adults.
- Europeans settled where mortality rates were lower. (Neo-Europes were formed.)
- Where mortality rates were high, colonizers chose not to settle. They delegated the management of the state to a small domestic elite.

- *Different colonization strategies:*

- Africa, Latin America, the Caribbean:

In places where Europeans did not settle, and thus did not care much about aggregate output or welfare; in places where there was a large population to be coerced and employed cheaply in mines or in agriculture, or simply taxed; in places where there was a lot to be extracted, Europeans pursued the strategy of setting up ***extractive institutions***.

In these colonies, there were no constraints on the power of the elites (i.e., the Europeans and their allies), and no civil or property rights for the majority of the population; in fact, many of them were forced laborers or slaves.

- *Different colonization strategies:*

- Australia, New Zealand, Canada, the U.S.:

In places where Europeans settled in large numbers, they developed the laws and institutions of the society to ensure that they themselves were protected in both their political and their economic lives.

In these settler colonies, the institutions were therefore much more conducive to investment and economic growth.

- *Colonization strategy influenced by the feasibility of settlements:*

In places where the disease environment was not favorable to European settlements, extractive states were formed.

- *Colonial state and institutions persisted even after independence.*

TABLE 4—IV REGRESSIONS OF LOG GDP PER CAPITA

	Base sample (1)	Base sample (2)	Base sample without Neo-Europes (3)	Base sample without Neo-Europes (4)	Base sample without Africa (5)	Base sample without Africa (6)	Base sample with continent dummies (7)	Base sample with continent dummies (8)	Base sample, dependent variable is log output per worker (9)
Panel A: Two-Stage Least Squares									
Average protection against expropriation risk 1985–1995	0.94 (0.16)	1.00 (0.22)	1.28 (0.36)	1.21 (0.35)	0.58 (0.10)	0.58 (0.12)	0.98 (0.30)	1.10 (0.46)	0.98 (0.17)
Latitude		-0.65 (1.34)		0.94 (1.46)		0.04 (0.84)		-1.20 (1.8)	
Asia dummy							-0.92 (0.40)	-1.10 (0.52)	
Africa dummy							-0.46 (0.36)	-0.44 (0.42)	
“Other” continent dummy							-0.94 (0.85)	-0.99 (1.0)	
Panel B: First Stage for Average Protection Against Expropriation Risk in 1985–1995									
Log European settler mortality	-0.61 (0.13)	-0.51 (0.14)	-0.39 (0.13)	-0.39 (0.14)	-1.20 (0.22)	-1.10 (0.24)	-0.43 (0.17)	-0.34 (0.18)	-0.63 (0.13)
Latitude		2.00 (1.34)		-0.11 (1.50)		0.99 (1.43)		2.00 (1.40)	
Asia dummy							0.33 (0.49)	0.47 (0.50)	
Africa dummy							-0.27 (0.41)	-0.26 (0.41)	
“Other” continent dummy							1.24 (0.84)	1.1 (0.84)	
R^2	0.27	0.30	0.13	0.13	0.47	0.47	0.30	0.33	0.28