

L6: History, Geography and Institutions

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More Predictions of the Solow Theory: History Does Not Matter in the Long Run

- In the Solow model, history/initial conditions matters in the short run, but not in the long-run
- Countries end up eventually at steady states corresponding to their *fundamentals*: savings, demographics, TFP
- Living standards in the long run depend on these fundamentals
- Hence disparities in long-run living standards are explained by disparities in fundamentals, not historical conditions (such as colonial history)

Does Geography Matter in the Solow Theory?

- Yes, through possible dependence of TFP on geography, e.g., climate which affects labor productivity
- Alternatively, unfriendly terrain (high altitude) or landlocked regions may have higher investment costs, which translates into low TFP
- Alternatively, if there is some natural resource constraint (such as energy source)
- Hence geography is included in fundamentals (via TFP)

Why Does History Not Matter in the Solow Theory?

- One reason: Solow assumptions regarding the technology/production function:
 - Absence of increasing returns (in the long run)
 - Absence of externalities in investment
- Other reason: it ignores the role of *institutions* such as nature of governance, property rights
- Alternative, recent theories stress these factors, argue these imply that history does matter, and provide supporting evidence

Why Does History Not Matter in the Solow Theory? contd.

- One way to view these theories in relation to Solow, which treats savings/investment rates as an exogenous 'fundamental':
 - savings/investment rates are **not** exogenous
 - history helps explain persistent differences in investment rates across countries with the same 'true' fundamentals (culture, geography, policies)
 - Countries can fall into low level development traps owing to adverse historical conditions

Theories Based on Increasing Returns and Externalities

- One set of theories focus on the role of *complementarities* in investment
- QWERTY keyboard example
- Returns to adoption of new technology depend on how many others are adopting it
- Complementarity (technology standards) versus substitutability (traffic congestion)

Rosenstein-Rodan's Theory of Underdevelopment Traps

- Demand-Side Complementarities: the parable of the shoe factory
- Supply-Side Complementarities:
 - Linkages across Different Intermediate Goods
 - Complementarities Between Skilled Labor and Capital Investment
- Arguments for 'Big Push'

More Contemporary Examples of Complementarities

- R&D and Technology Spillovers e.g., semiconductor industry, Silicon Valley
- Green Revolution: adoption of HYV seeds: experimentation and social learning
- Social norms:
 - trust and honesty in business relationships
 - corruption among govt officials
 - fertility, schooling norms

Alternative Approach Stressing Role of History: Persistence of Institutions

- Acemoglu-Johnson-Robinson and Engerman-Sokoloff use historical examples to stress the role of *institutions*: governance, inequality
- Argue institutions exhibit high degree of historical persistence and strongly affect investment rates and technical progress
- Provide historical evidence of *reversal of fortunes* across countries, which cannot be explained by geography but can be explained by evolution of historical institutions

What Do 'Institutions' Mean?

- Broadly speaking, 'rules of the game' governing politics and economics
- governance: which impacts infrastructure, regulations, public schooling and health
- rule of law: property rights, corruption which impacts private investment incentives

What Do 'Institutions' Mean?, contd.

- I wouldn't include democracy versus autocracy in the definition, because many autocracies perform equally well as democracies in these respects
- However, AJR include in their definition:
 - constraints on elites to prevent expropriation
 - broad measure of equal opportunity for acquiring human capital and making investments

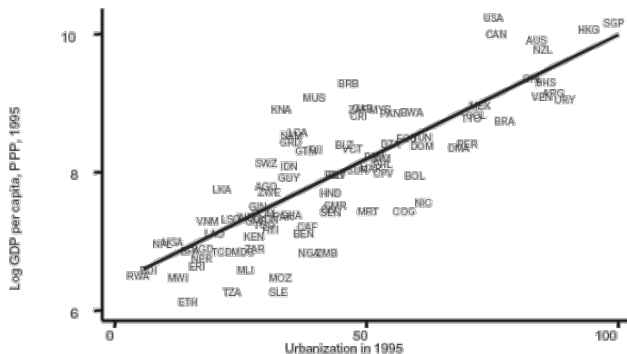
Recent Examples Which Show Institutions Matter

- Countries with the same culture, geography, access to technology, but different institutions:
 - West versus East Germany
 - South versus North Korea

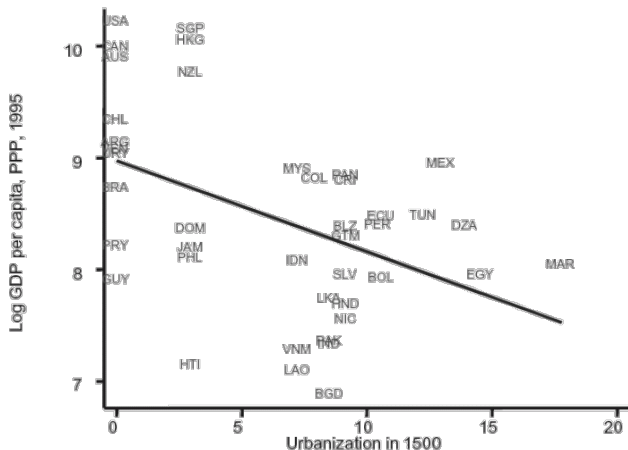
AJR Evidence on History versus Geography

- Reversal of Fortunes: South versus North America primary-product-abundant versus deficient regions
- Countries that were most urbanized and highest population densities in 1500, have (on average) low per capita income and urbanization in 1995

Cross-Country Regression: 1995 p.c.i. versus 1995 urbanization rates



Cross-Country Regression: 1995 p.c.i. versus 1500 urbanization rates



AJR Evidence on History versus Geography, contd.

- These were countries where European settlers set up *extractive* institutions: unequal property rights, absence of rule of law, prevented access of common people to land and education
- In 19th century with advent of Industrial Revolution, these institutions were ill-suited to promote needed investments in infrastructure and human capital, and fell behind

Geography Mattered Indirectly, by Affecting Colonial Institutions

- Colonial institutions differed markedly across colonies
- Even for same colonial power: e.g., British settlements in Central America vs elsewhere
- Extractive institutions more likely where:
 - colonial settlements were small relative to local population, owing to high settler mortality (malaria, yellow fever)
 - there were lucrative natural resources to exploit
 - there was a large captive population of native workers, or opportunity to import slaves

Geography Mattered Indirectly, by Affecting Colonial Institutions, contd.

- Cross-country regression in AJR shows that effect of these geography variables on present day living standards are not significant, if the regression includes the nature of institutions as controls
- Hence historical institutions are the more important determinant, rather than geography
- Why places close to the tropics in the Americas used to be wealthier on average in 16th-18th century, and fell behind thereafter

Role of Inequality in Persistence of Extractive Institutions

- Engerman-Sokoloff provide more details of the North-South America divide in nature of institutions, and why it persisted into 19th and 20th century
- Extractive institutions in the South created high inequality in distribution of political power and asset ownership between small colonial elite and the rest of society
- Elites deliberately prevented spread of democracy (Table 3.1), land (Table 3.4) and education (Table 3.2) to the masses in the South, compared with North

Similar Divide within N America

- See similar (but less intense) dichotomy within the US, between Northeastern/Midwestern states and Southern states
- What the US Civil War was about
- Echoes in current-day politics within the US: blue and red states

Summary

- Key qualification concerning Solow model: it didn't say anything about determinants of investment, population growth or technical progress
- Ignored possible coordination problems in investment, resulting in underdevelopment traps (Rosenstein-Rodan)
- Ignored role of 'institutions' such as rule of law, property rights, provision of key public goods and schooling, which also affect investment, demographics and technical progress

What Should 'Trapped' Underdeveloped Countries Do?

- If the problem is lack of coordination in investments, while the country's institutions are good, and inequality is relatively low (Japan, East Asia, China, Vietnam):
- governments can jumpstart the economy :
 - imparting a 'big push'
 - help coordinate private investments
 - provide infrastructure and schooling

What Should 'Trapped' Underdeveloped Countries Do? contd.

- If the problem is poor institutions and high inequality, problem is **very** difficult
- Need institutional reforms, which current elites will resist
- Serious problem in sub-Saharan Africa and Middle East
- Nevertheless, S America provides hope that these institutional problems can slowly and eventually be overcome