

The State and Economic Growth

Jacob R. Hall

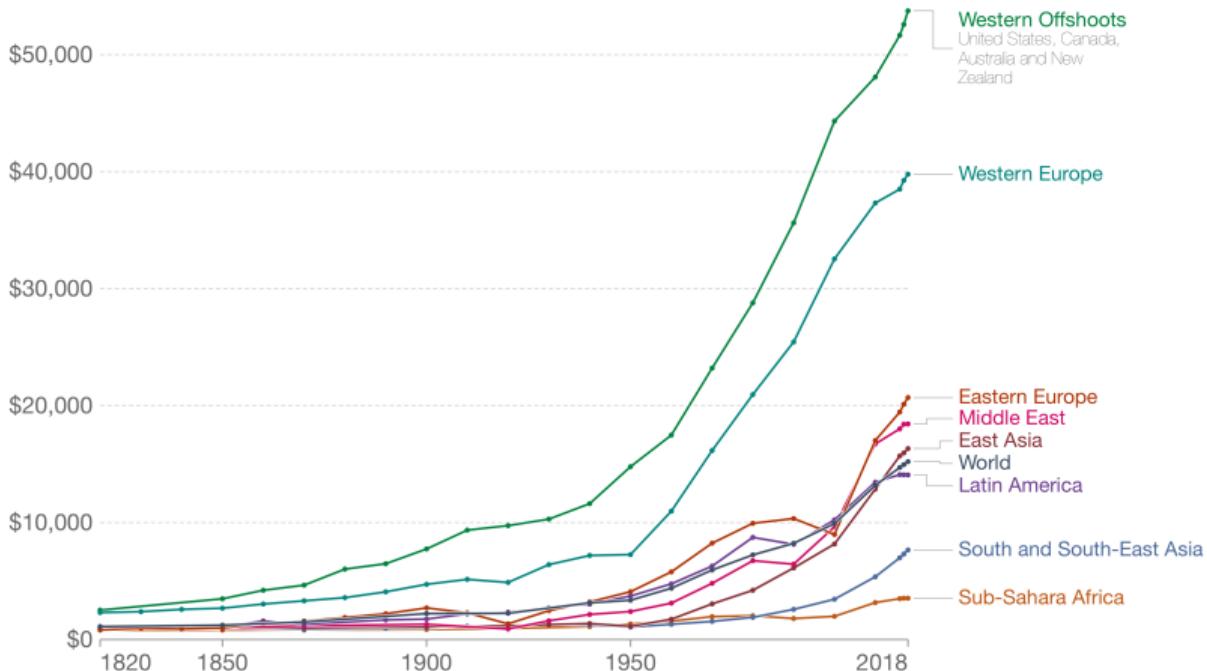
University of Pennsylvania

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University of Richmond

GDP per capita, 1820 to 2018

GDP per capita, 1820 to 2018

GDP per capita adjusted for price changes over time (inflation) and price differences between countries – it is measured in international-\$ in 2011 prices.



Source: Maddison Project Database 2020 (Bolt and van Zanden (2020))

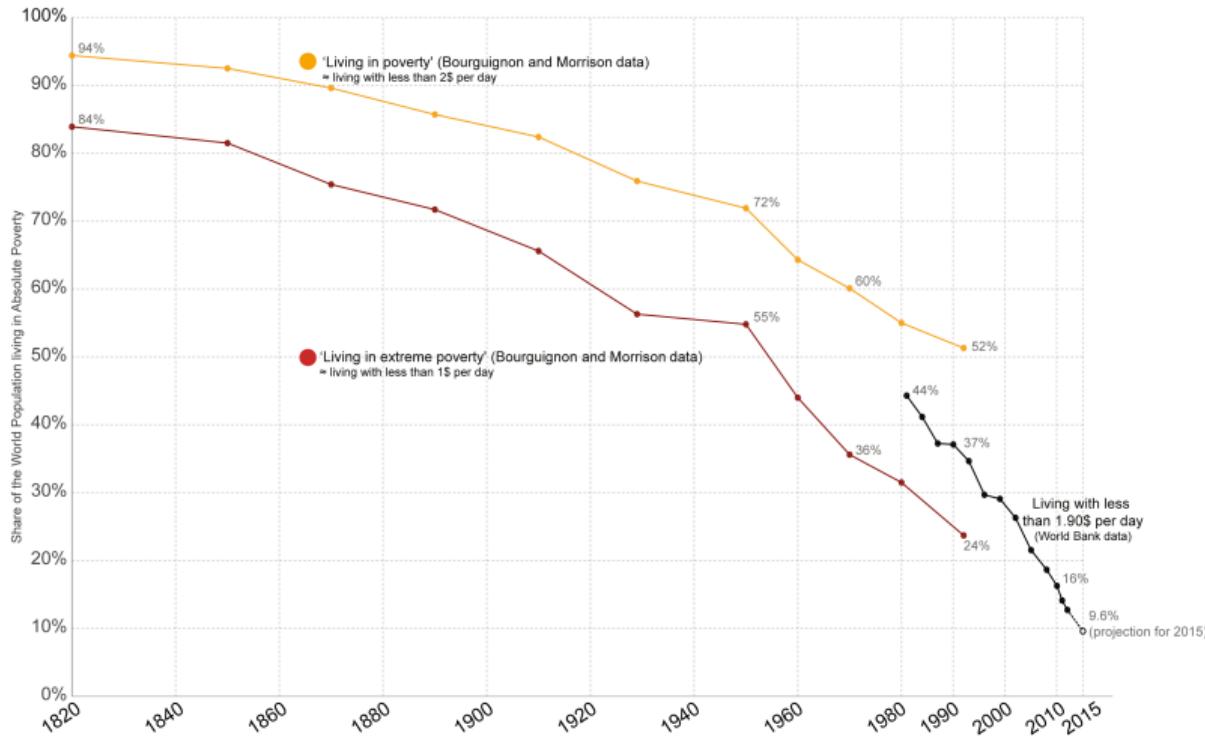
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World Poverty since 1820



Share of the World Population living in Absolute Poverty, 1820-2015

All data are adjusted for inflation over time and for price differences between countries (PPP adjustment).



Data sources: 1820-1992 Bourguignon and Morrison (2002) - Inequality among World Citizens, In The American Economic Review; 1981-2015 World Bank (PovcalNet)

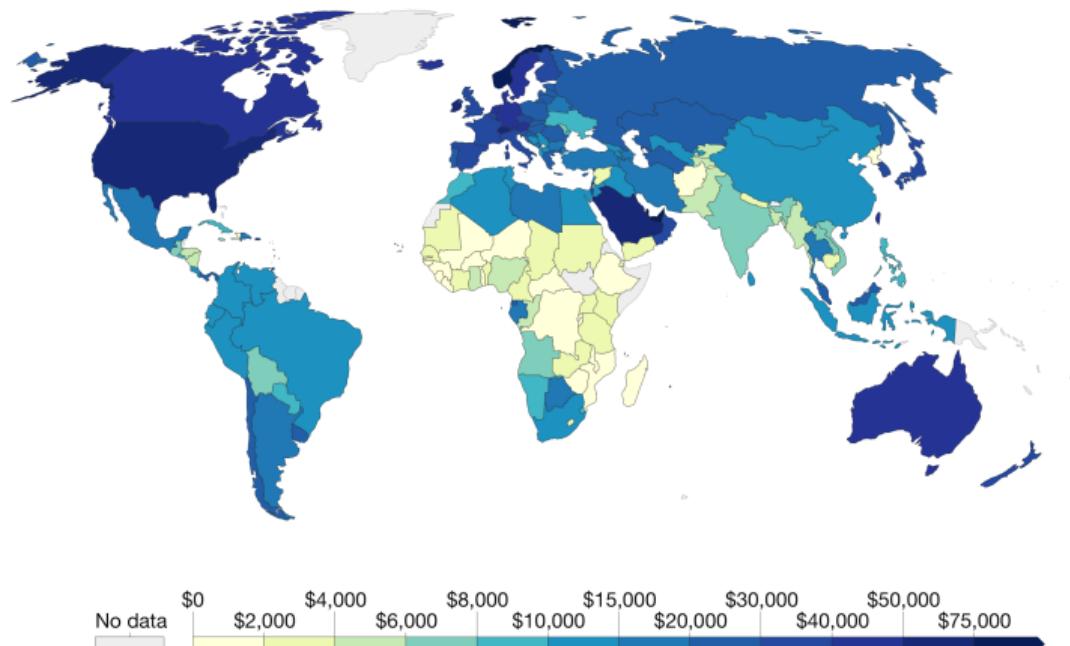
The interactive data visualisation is available at OurWorldInData.org. There you find the raw data and more visualisations on this topic.

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GDP per capita, 2018

GDP per capita, 2018

GDP per capita adjusted for price changes over time (inflation) and price differences between countries – it is measured in international-\$ in 2011 prices.



Lights at Night, 2018



Thinking about Growth

- Much of the world in 1945 was extremely poor. Even in Western Europe, people were starving in the Netherlands and in Germany.
- Before World War II, most of the poor countries in the world were ruled by European empires. Economic policy was set in London or Paris, often in the interests of the colonizers rather than the colonized.
- After 1945, agencies like the World Bank were established to generate rapid growth in what became known as the 'Third World'. This was now seen as urgent because of the threat of communism.

Successes and Failures

- **East Asia:** Unqualified success stories such as South Korea, Taiwan, and Singapore. Other relative successes: Malaysia, Indonesia. Less successful: Philippines.
- **Africa:** Mostly a story of growth failure (at least until recently). Exceptions include Botswana.
- **Latin America:** Slow growth since 1980. Success stories are Chile and (less so recently) Brazil since the late 1990s. Failures include Argentina and Bolivia.
- **China and India:** Slow growth until policy reforms (1978 and 1991). Very rapid growth subsequently but much faster in China than in India.

Unsuccessful Policies

- After 1945, development economists argued that high savings rates, investment, and a big-push strategy were necessary for development.
- Economists advocated for import substitution and industrial policy.
- These strategies were not as successful as policymakers anticipated. Nevertheless, Latin America and Africa grew in the 1950s and 1960s because initial levels of capital were low and catch-up growth was possible.
- In the 1970s, a global slowdown in growth occurred. Growth rates plummeted (except in East Asia).
- In the 1980s, economists reevaluated which policies were necessary for growth, rejecting import substitution in favor of pro-trade policies—known as the Washington Consensus.

What Explains Successful and Unsuccessful Policies?

- Douglass North pointed out that the factors emphasized by growth models, such as innovation, economies of scale, education, capital accumulation, are not **causes of growth** ... **they are growth.**
- Successful long-run economic performance requires appropriate incentives for economic and political actors. This requires looking at institutions.
- Institutions are the ‘rules of the game,’ formal and informal that shape individual behavior: i.e. law, political institutions, economic institutions, social norms etc.

Institutions Matter



Two Nobel Prizes for this work



Figure: 1993 Nobel Prize

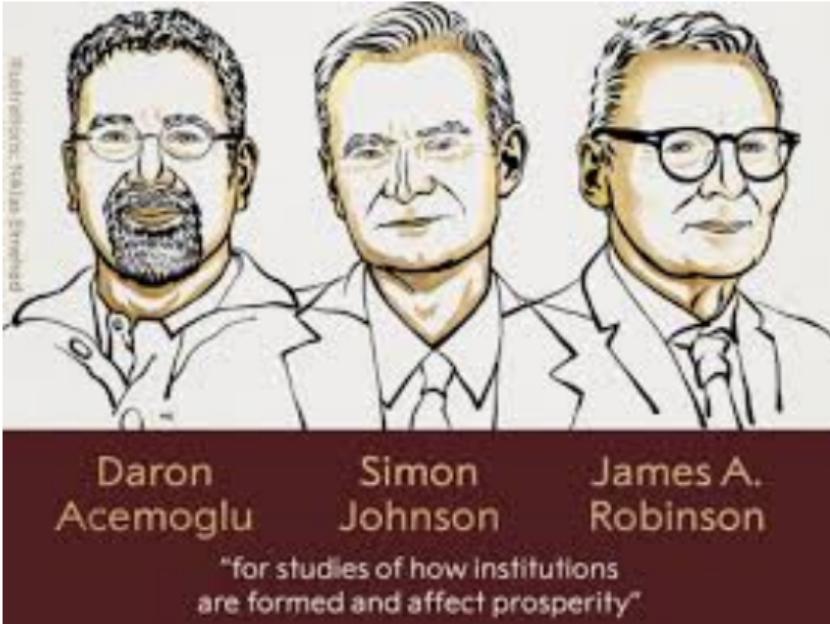


Figure: 2024 Nobel Prize

Sources of Productivity Change in Ocean Shipping, 1600-1850

Douglass C. North*

University of Washington

Massive Gains in Ocean Shipping Productivity in Early 19th Century

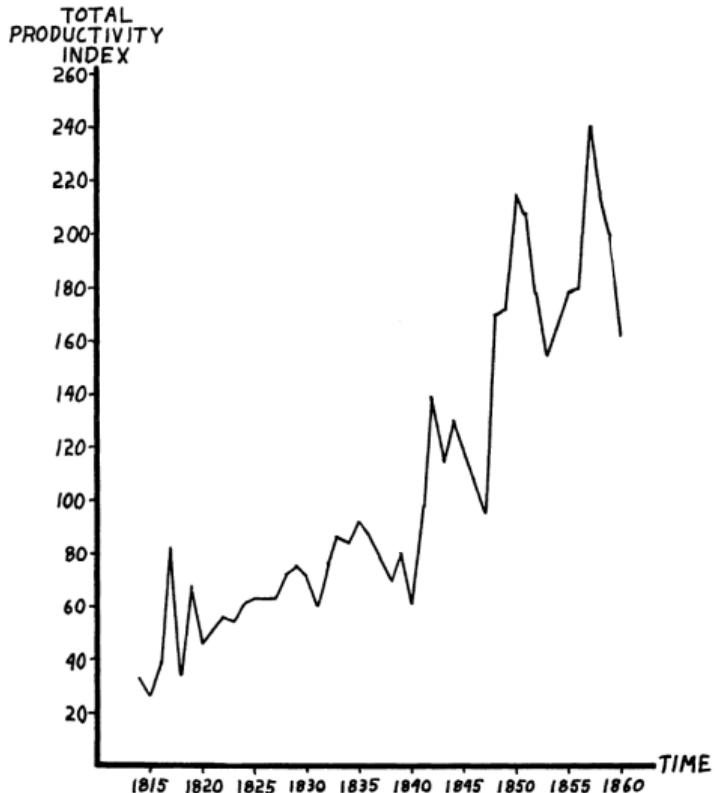


FIG. 1.—Total productivity index. Source: see Appendix.

Bigger Ships

TABLE 2
SIZE OF FULL-RIGGED SHIPS BUILT AT KENNEBUNKPORT AND PORTSMOUTH

YEARS	KENNEBUNKPORT		PORTSMOUTH	
	No.	Average Size (Tons)	No.	Average Size (Tons)
1825–1829 . .	3	300	19	361
1830–1834 . .	5	324	16	458
1835–1839 . .	7	372	24	572
1840–1844 . .	4	452	12	655
1845–1849 . .	22	575	23	833
1850–1854 . .	28	890	43	1,063
1855–1859 . .	21	905	31	1,087

Bigger Ships

TABLE 1
PERCENTAGE OF VESSELS IN EACH SIZE CLASS

Year	Under 40 Tons	40– 99 Tons	100– 419 Tons	420– 1,199 Tons	1,200– 1,999 Tons	2,000– 3,999 Tons	Over 3,999 Tons	Total
England:								
1572.	33.0	45.6	21.4	100
1582.	27.4	35.4	35.4	1.8	100
1788.	5.6	18.4	67.3	8.7	100

Smaller Crews

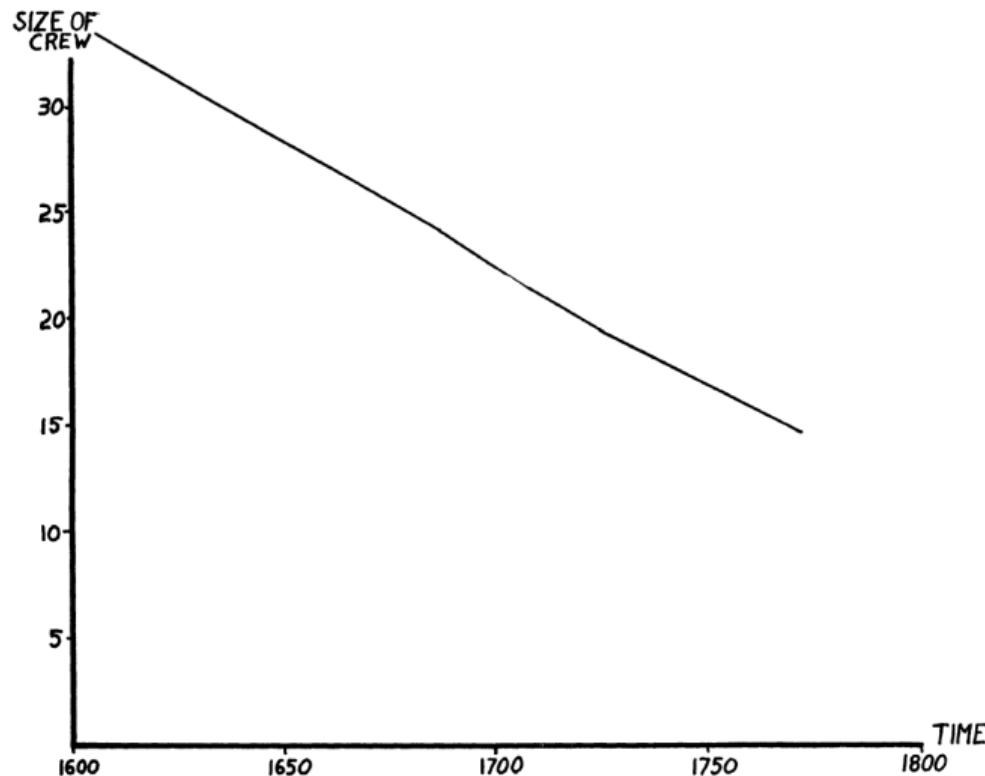
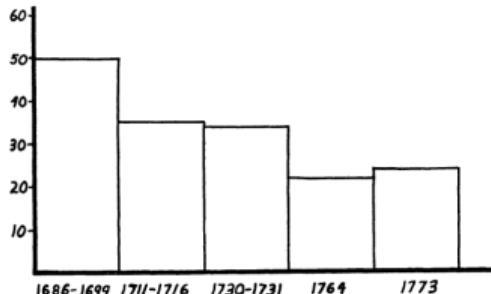
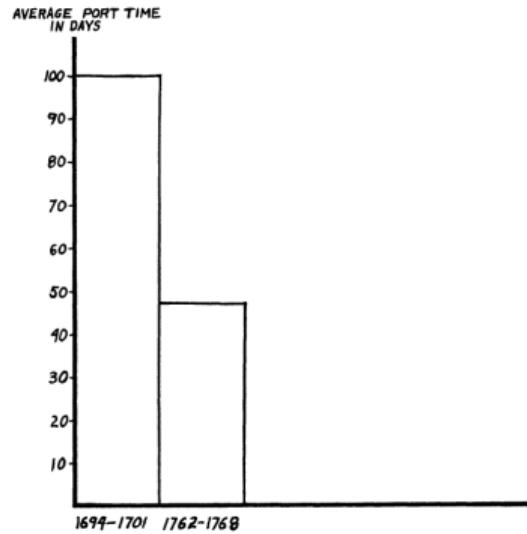


FIG. 4—Size of crew for a 250-ton ship on North Atlantic route, 1640–1775. Source: Davis (1962, p. 370).

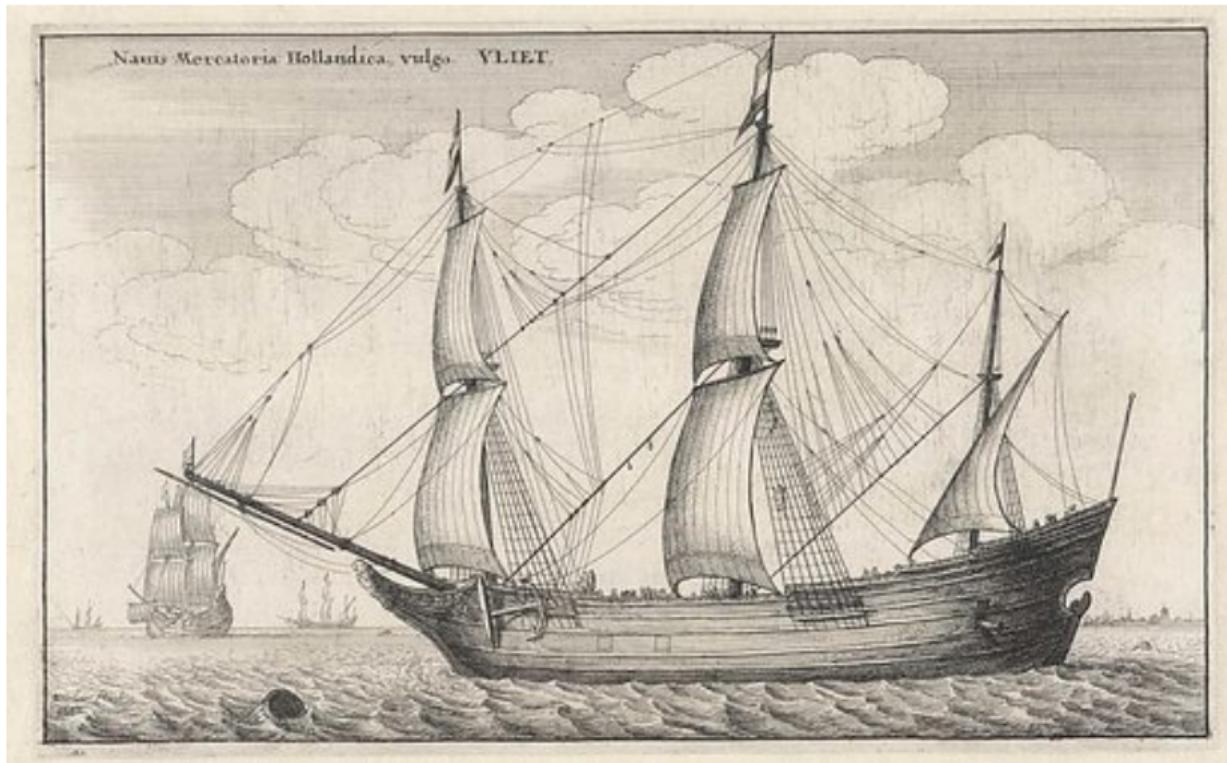
Less time spent in port (Chesapeake and Barbados)



So why?

- Most economists thought of increases in productivity as a product of technological change.
- In fact...that is what North was expecting.
- But the main technological innovation responsible for the increased productivity here was invented in the 16th Century!

The Dutch Fluyt - originated in the 16th Century



An-arrgh-chy on the High Seas



First and Second Barbary Wars - Mediterranean safe by 1815

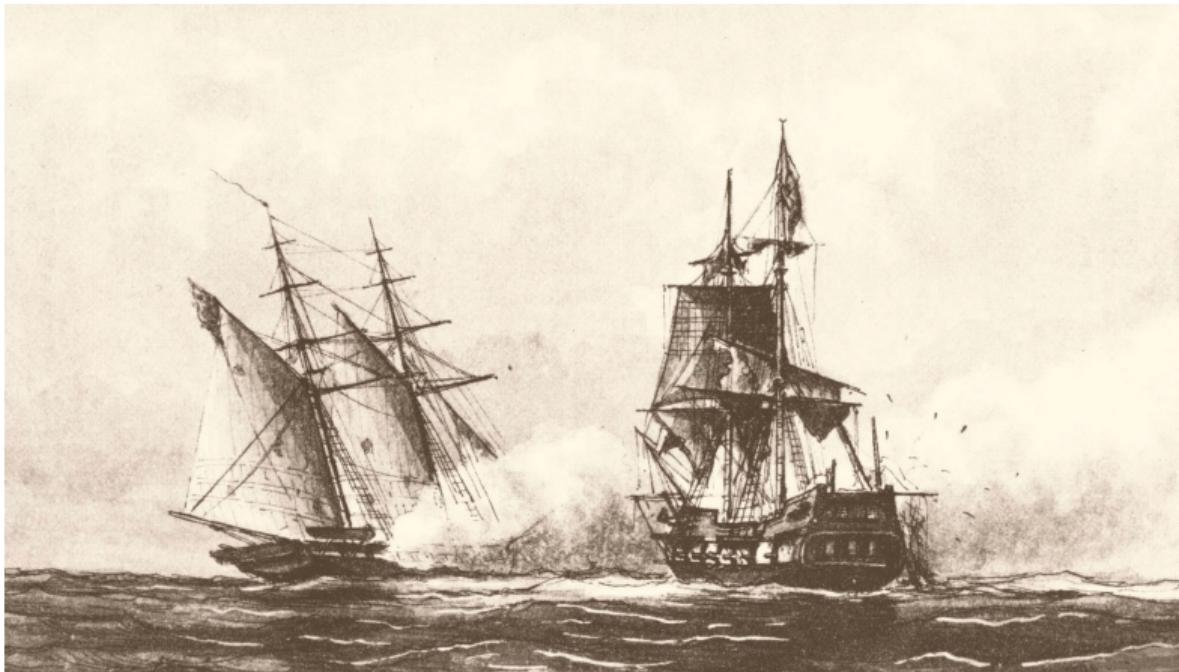


Figure: USS Enterprise captures the Tripoli, 1801

North and Weingast, Journal of Economic History, 1989

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*Constitutions and Commitment:
The Evolution of Institutions Governing
Public Choice in Seventeenth-Century
England*

DOUGLASS C. NORTH AND BARRY R. WEINGAST

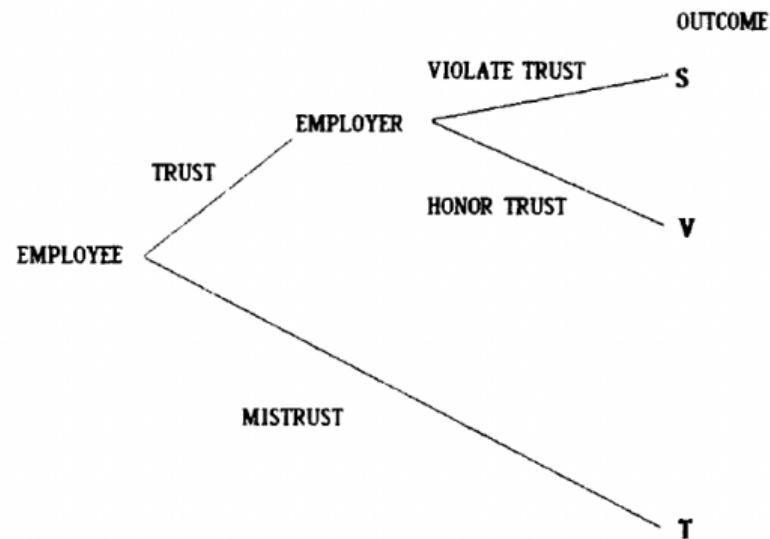
Commitment Problem





Frog put the cookies in a box. "There," he said. "Now we will not eat any more cookies."
"But we can open the box," said Toad.

The King's Commitment Problem



Ex Post Opportunism

Transactions that are subject to ex post opportunism will benefit if appropriate actions can be devised ex ante. Rather than reply to opportunism in kind, the wise [bargaining party] is one who seeks both to give and receive "credible commitments." Incentives may be realigned and/or superior governance structures within which to organize transactions may be devised. – Oliver Williamson

Two Options:

- Reputation and Repeated Games
 - Outside options are key here.
 - The ruler's discount rate is also important.
- Credible Commitments and Constraints

Some Key Dates for the Story

- Elizabeth I, Charles I (1558-1649)
- Civil War (1642-1651)
- The Interregnum (1649-1660)
- Charles II and James II (1660-1688)
- The Glorious Revolution (1688) - William and Mary invited to take the crown.

England under the Stuarts

- Following the war with Spain, the crown was in debt.
- Large portions of the Crown Lands were sold off in an attempt to get money.
- "Forced loans" and variable re-payments
- Sales of monopolies and political favoritism
- Heavy reliance on Purveyance

Institutional Basis of Stuart Policy-making

- The crown often dissolved Parliament when they would not cooperate
- Royal powers and institutions were central to the Crown's success:
 - ① The royal prerogative
 - ② The Star Chamber. On issues concerning prerogative, the Star Chamber had come to have final say, and could in certain circumstances reverse judgments against the Crown.
 - ③ The crown was personally responsible for day-to-day government operations, it paid the judges, who served at its pleasure. Increasingly the Stuarts used their power over judges to influence their judgments.

The English Civil War



Charles I loses his head.



Institutional Changes after the Civil War

- Abolition of the Star Chamber
- "Triennial legislation" called for regular standing of the Parliament.
- Some changes to land tenure law that favored the development of private rights and markets and reduced the Crown's political hold over this once-important part of its constituency.
- But eventually pressure to bring back the king reached a zenith, and the Stuart monarchy was restored.

The Stuart Monarchs, Round II

- With the Restoration of the monarchy in 1660, England was once again ruled by the Stuarts.
- England experience more of the same Stuart nonsense.
- The Exclusion Crisis
- In 1686 James II, having turned on his own supporters, causing them to join the opposition to remove him in the Glorious Revolution of 1688.

The Glorious Revolution



Institutional changes after the Glorious Revolution

- Initiated the era of Parliamentary supremacy
- Parliament also gained a central role in financial matters. Its exclusive authority to raise new taxes was firmly reestablished; at the same time the Crown's independent sources of revenue were also limited.
- Royal prerogative was curtailed.
- Why did these reforms stick?
 - The successful dethroning of Charles I and, later, James II served as credible threat to the Crown regarding future irresponsible behavior.
 - Although parliamentary supremacy meant that Parliament dictated the form of the new political institutions, it did not assume the sole position of power.

Fiscal Revolution: Govt Expenditures

Year	Governmental Expenditure ¹	Debt ²	Prices ³ (1701 = 100)
Stuart England			
1618 ⁴	£0.5	£0.8	
mid-1630s ⁵	1.0	1.0	
1680 ⁶	1.4		113
1688 ⁶	1.8	1.0 ⁷	99
Post Glorious Revolution			
1695	6.2	8.4	116
1697	7.9	16.7	122
1700	3.2	14.2	115
1710	9.8	21.4	122
1714	6.2	36.2	103
1720	6.0	54.0	102
1730	5.6	51.4	95
1740	6.2	47.4	100
1750	7.2	78.0	95

- Moreover, at a time when Holland was borrowing 5 million pounds long term at 4 percent per year, the English Crown could only borrow small amounts at short term, paying between 6 and 30 percent per year.

Fiscal Revolution: Interest Rates

Date ^a	Amount	Interest	How Funded
Jan 1693	£723,394	14.0%	Additional excise
Mar 1694	1,000,000	14.0	Duties on imports
Mar 1694	1,200,000	8.0	Additional customs and duties
Apr 1697	1,400,000	6.3	Excise and duties
Jul 1698	2,000,000	8.0	Additional excise duties
Mar 1707	1,155,000	6.25	Surplus from funds of five loans from 1690s; duties
Jul 1721	500,000	5.0	Hereditary revenue of Crown
Mar 1728	1,750,000	4.0	Coal duties
May 1731	800,000	3.0	Duties
Jun 1739	300,000	3.0	Sinking fund

GROWTH OF THE STOCK MARKET: 1690-1750

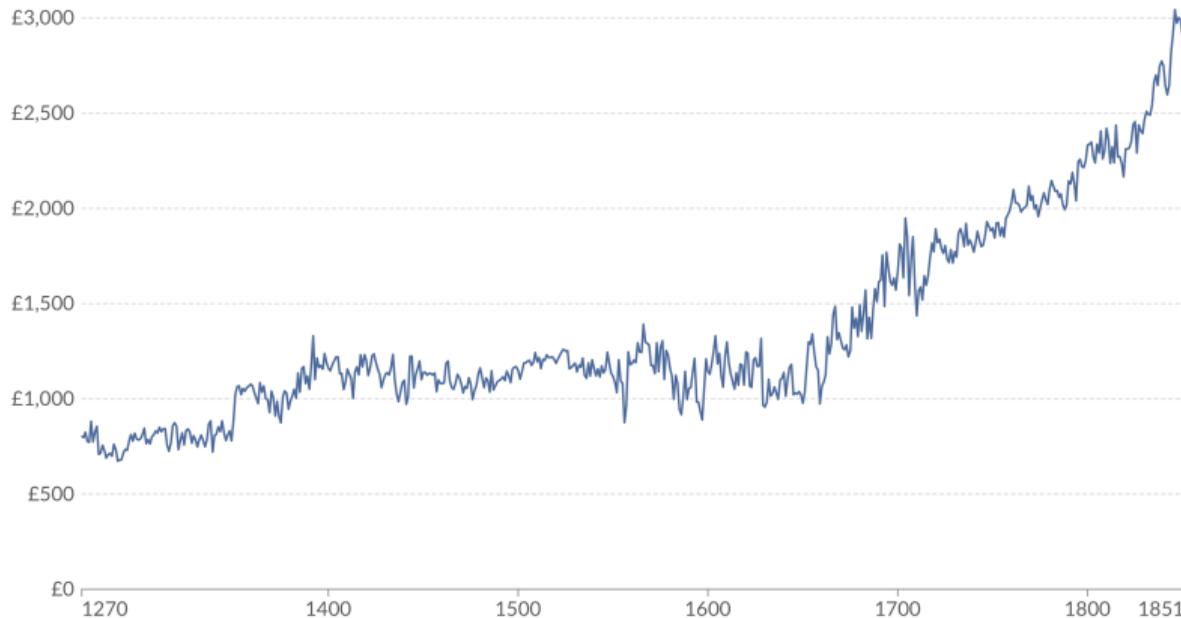


Economic Growth in England

GDP per capita in England

This data is expressed in British pounds, adjusted for inflation.

Our World
in Data



Data source: Broadberry, Campbell, Klein, Overton, and van Leeuwen (2015) via Bank of England (2020)

Note: This data is expressed in constant 2013 British pounds. Data refers to England until 1700 and the UK from then onwards.

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Acemoglu, Johnson, and Robinson, 2001

The Colonial Origins of Comparative Development:
An Empirical Investigation

*By DARON ACEMOGLU, SIMON JOHNSON, AND JAMES A. ROBINSON**

Correlation or Causation?

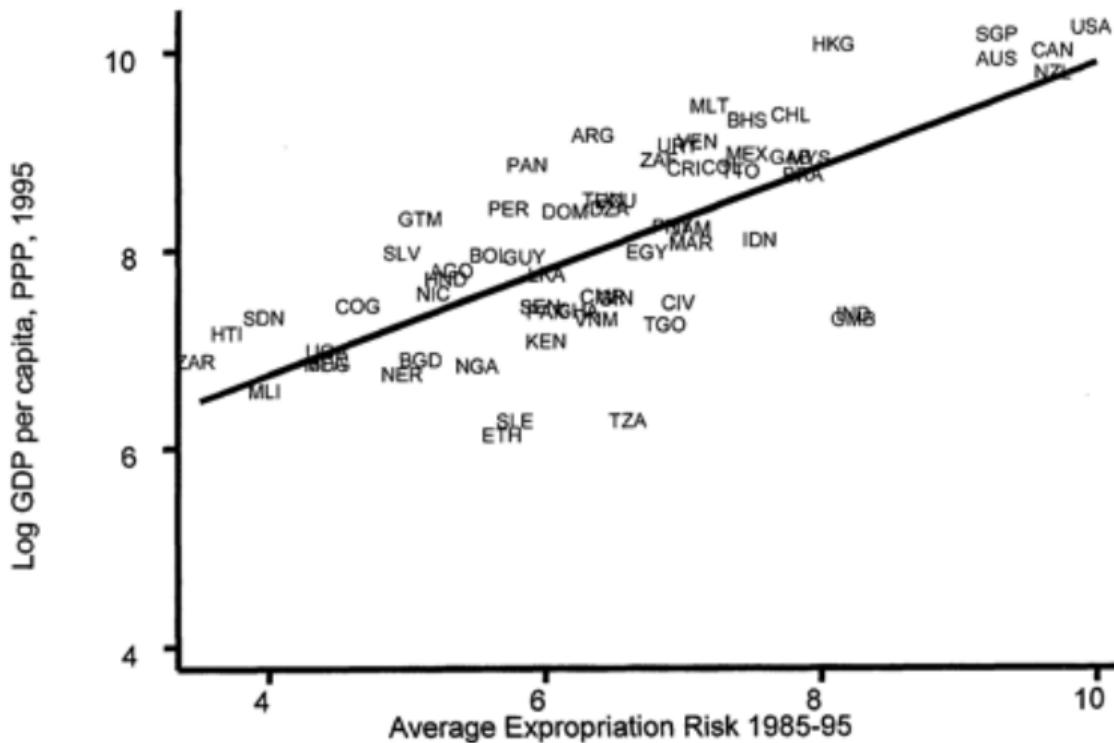
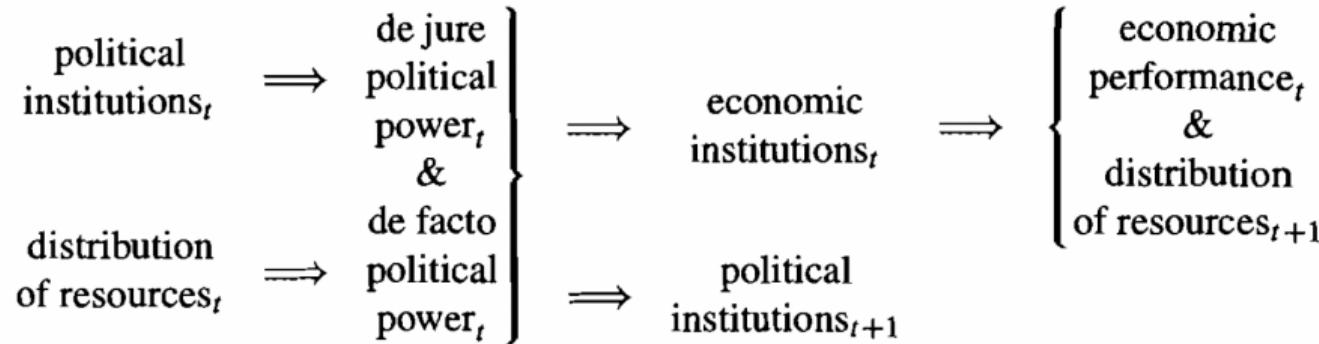


FIGURE 2. OLS RELATIONSHIP BETWEEN EXPROPRIATION RISK AND INCOME

The Puzzle of Bad Institutions

- If protection against property rights are important for economic development, why don't all countries protect property rights?
- Institutions are shaped by those in political power. It has to be in their self-interest to setup inclusive rather than extractive institutions.
- Institutions are persistent. The ability to setup inclusive institutions now depends on the institutions you had in the past.

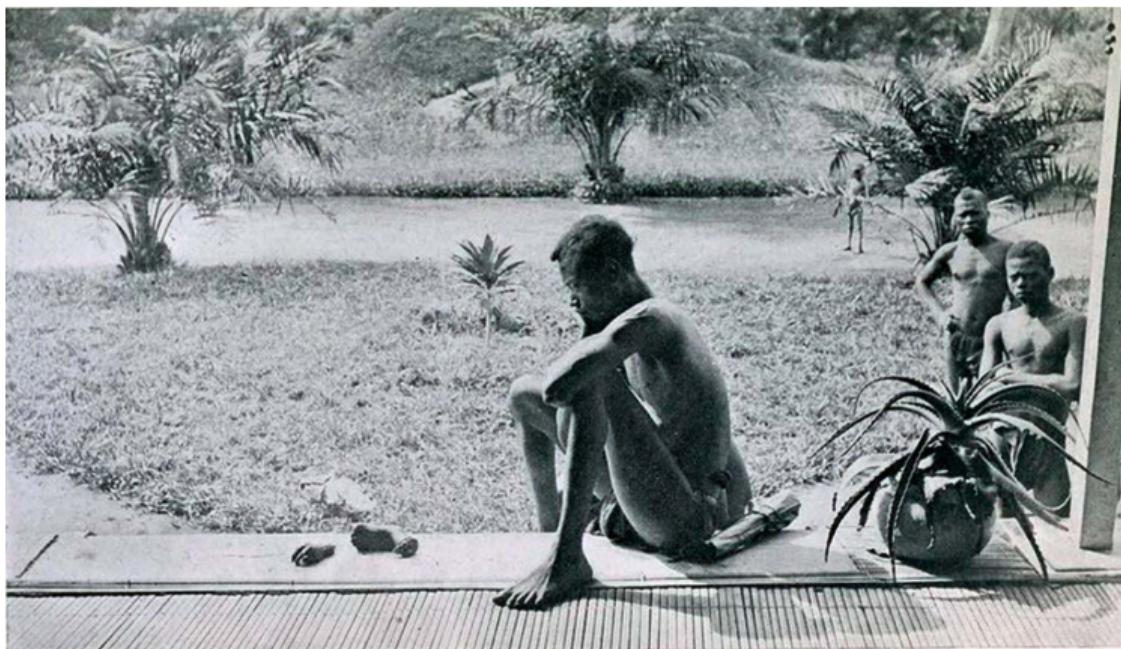
Institutional Persistence



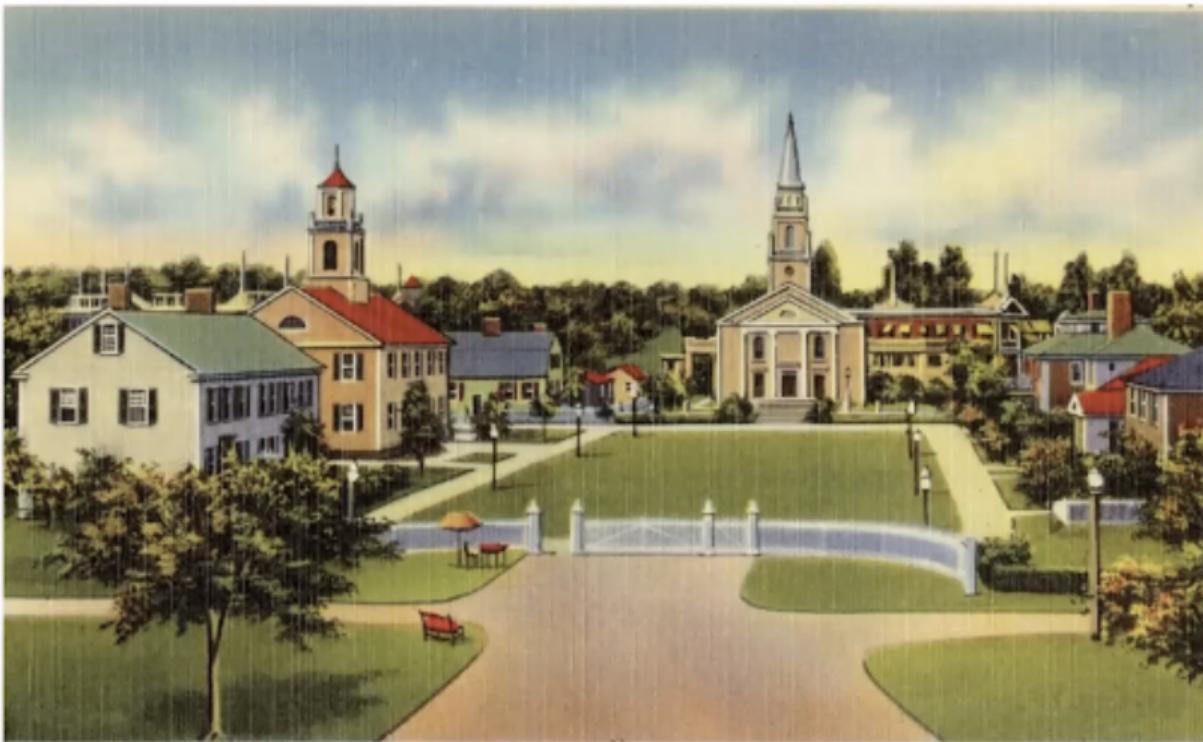
Colonial Origins of Modern Institutions

- Two types of Colonial institutions:
 - ① **Extractive:** Did not protect private property, and whose main purpose was to extract resources for the colonizer.
 - Ex. Belgian Congo, most of South America
 - ② **Inclusive:** Protect property rights, and whose main purpose was to replicate European institutions.
 - Ex. USA, Canada, New Zealand

Brutality and Extraction in the Belgian Congo



Permanent Settlement and Investment in the US Colonies



Settler Mortality

- According to AJR, the colonization strategy (extractive or inclusive) was determined by **feasibility of settlement**.
- Where the disease environment was unfavorable, there was more incentive to extract.
- Settler mortality works as an “instrument” if it affects current performance through its effect on early institutions.

(potential) settler mortality \Rightarrow settlements

\Rightarrow early institutions \Rightarrow current institutions

\Rightarrow current performance.

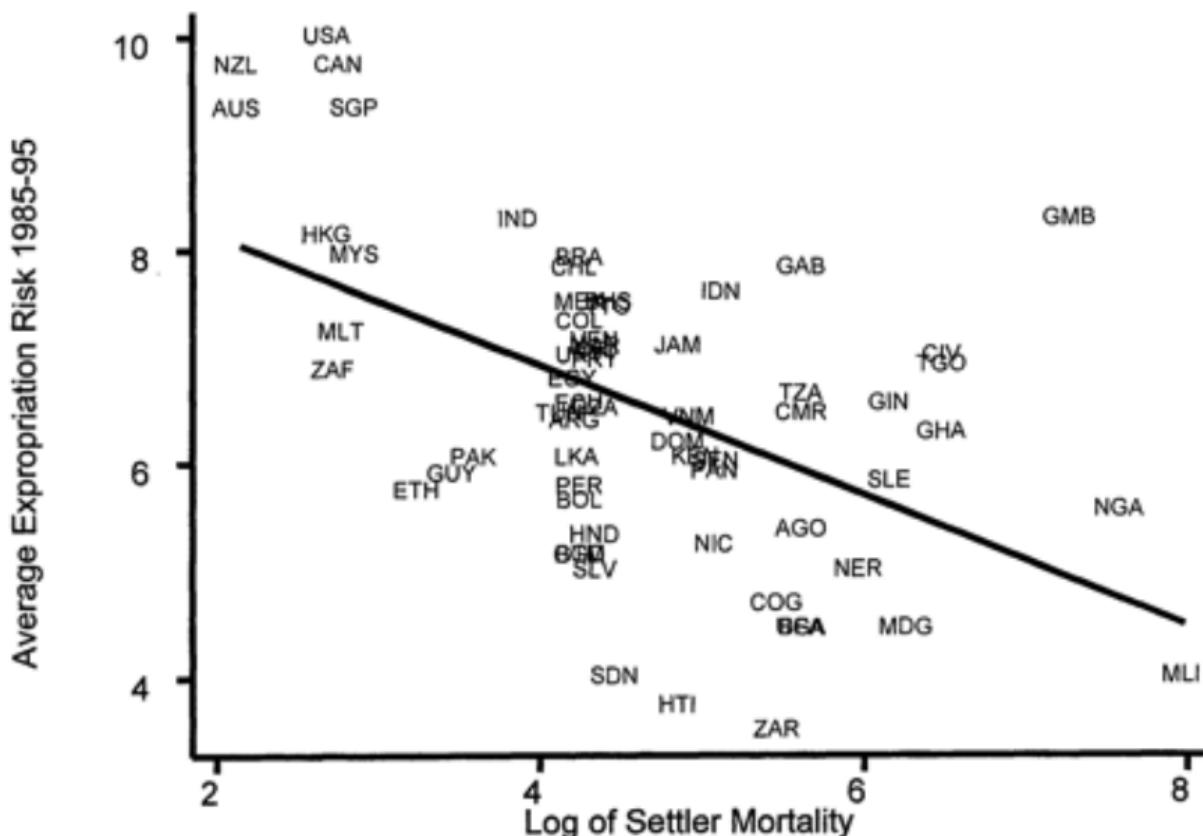
Settler Mortality

- In West Africa, settle mortality was very high.
 - Yellow fever and malaria were the major sources of death
 - 46% died in first year in Sierra Leone; 72% of Europeans died in 1792
 - 87% of Europeans died in expeditions in Gambia, Niger
- Also true in Asia and Latin America, though to a lesser extent.

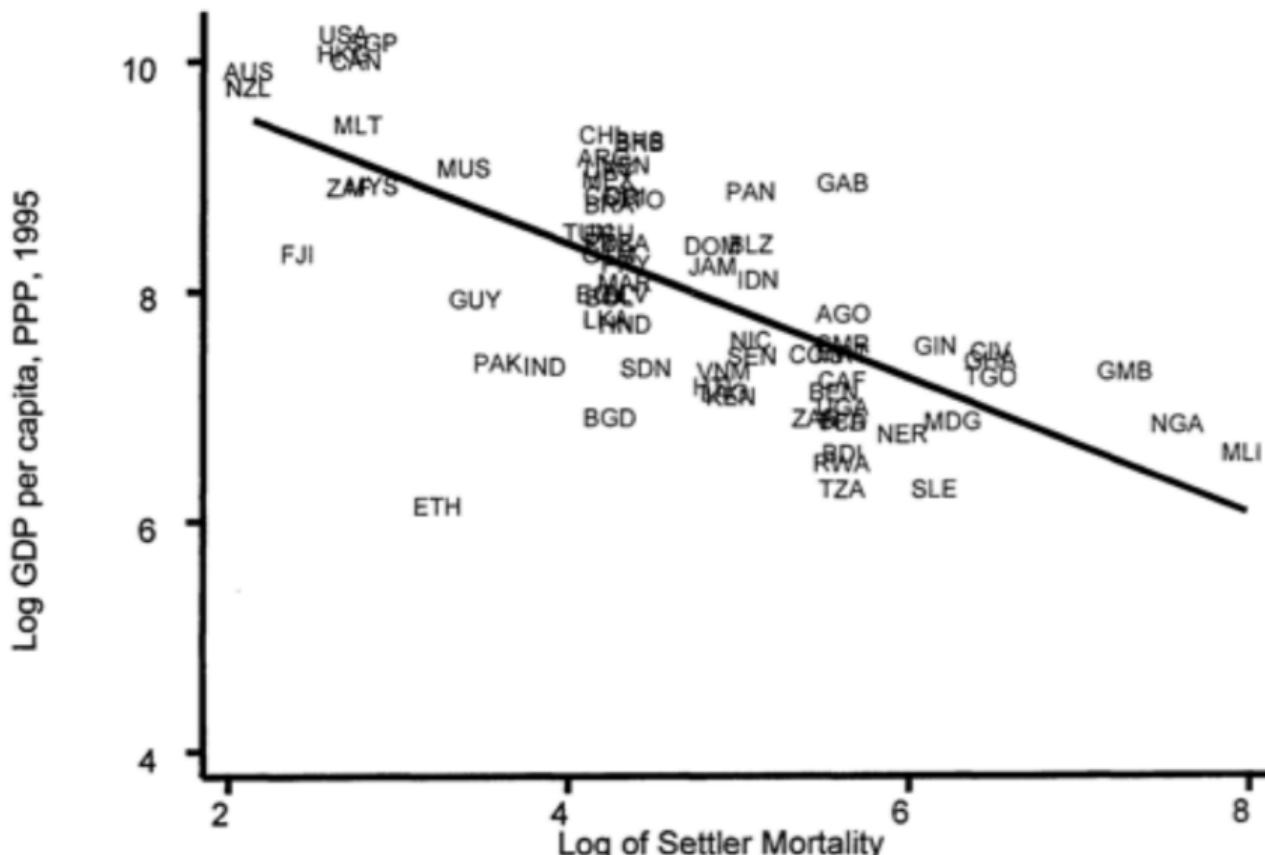
Colonial Institutions

- In colonies with low settler mortality rates, settlers brought - or fought for! - European style institutions.
 - Ex: trial by jury, elected legislatures, freedom from arbitrary arrest
- Latin America: The main goal of the Spanish and Portuguese was extracting gold and silver
- Africa: Colonists established the slave trade, trade in gold, absolutist governments

Settle Mortality and Institutions



Settle Mortality and Modern GDP



Takeaways

- Institutions matter for economic growth!
- Particularly the protection of property, but other aspects too.

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