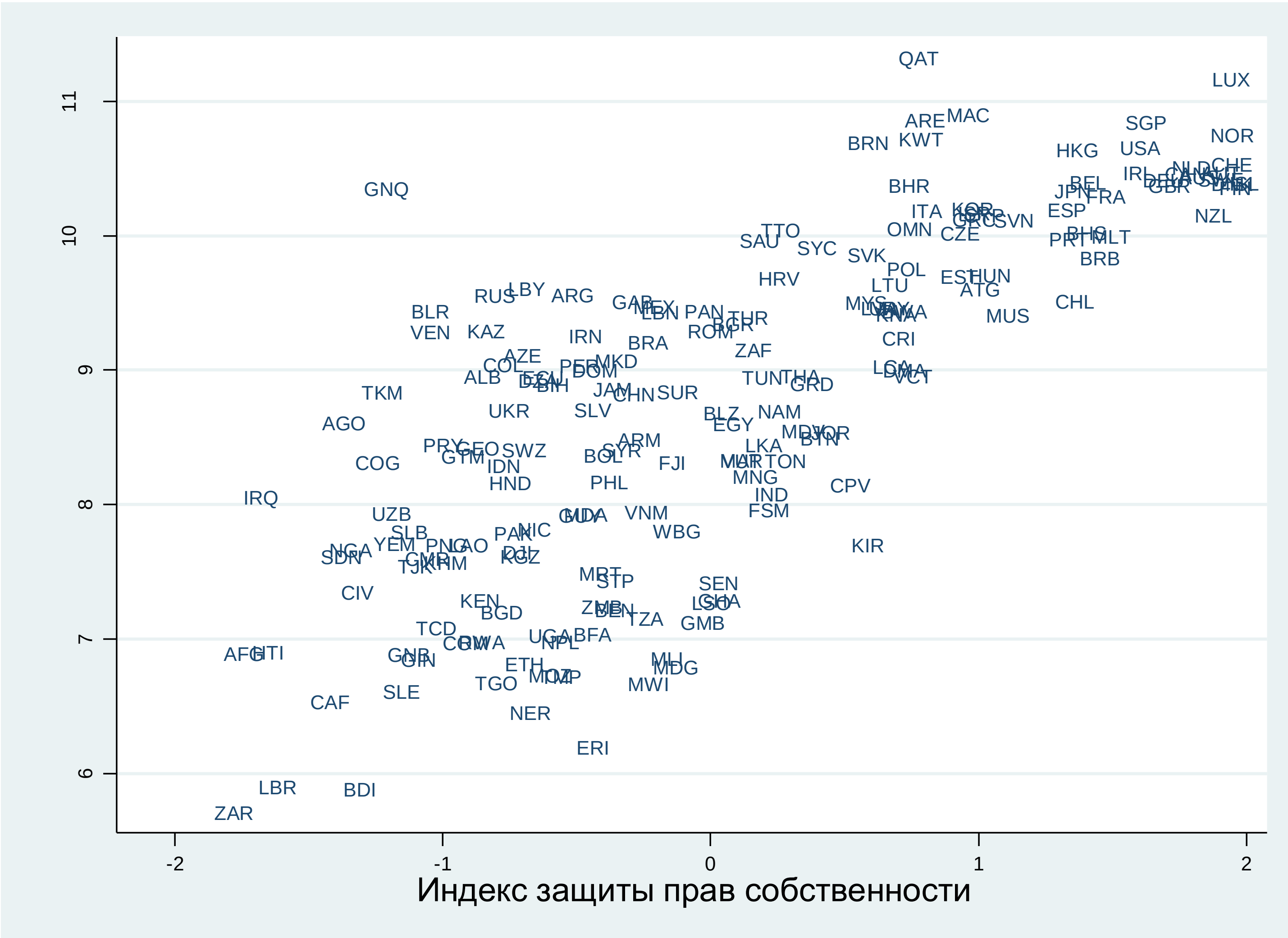
Institutions and Economic Growth

November 27 2018

Income and institution quality



Source: World Bank, 2010

Natural experiments

Separation into treatment and control group happens under impact of factors that do not depend on participants' actions or preferences

- **Example**: separation of Korea into South and North Korea – all other factors (such as geography, culture, language) – being equal

- **Another example**: European colonization of America, Africa and Asia
  - Since 1500 European countries (primarily, Spain, England, France and Holland) aquire new territories in America, South-East Asia and Africa

Colonial heritage: reversal of fortune

- Massive colonization of different parts of the world by Europeans (since 1500)
- Shock changes in existing institutions
- Establishing of different institutions in different countries (wide range – from democracy to slavery)
- Reversal of Fortune: the richest civilizations of the past (at the beginning of 1500-s) are now among poor ones

Proxies for prosperity in early centuries

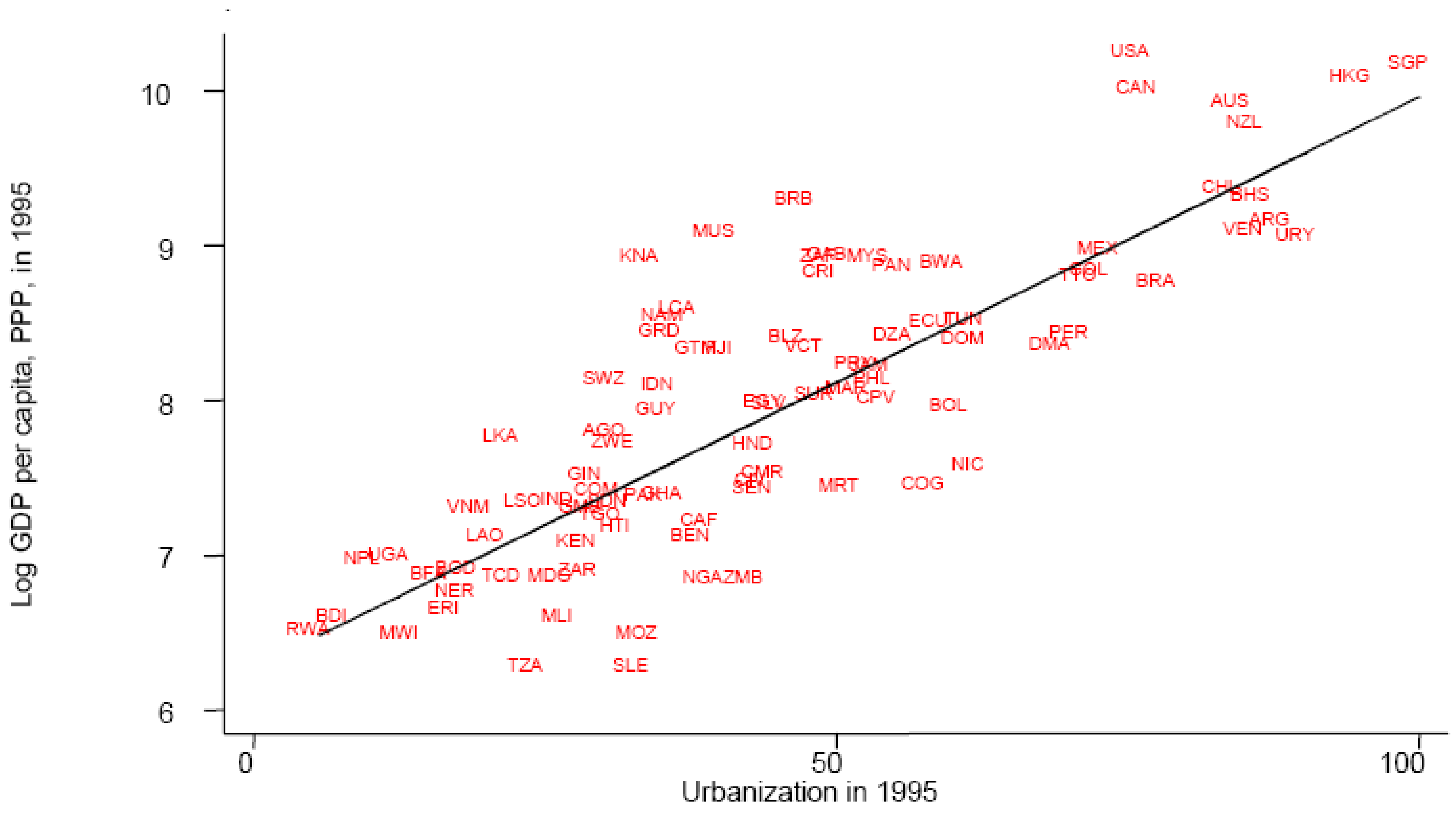
Urbanization

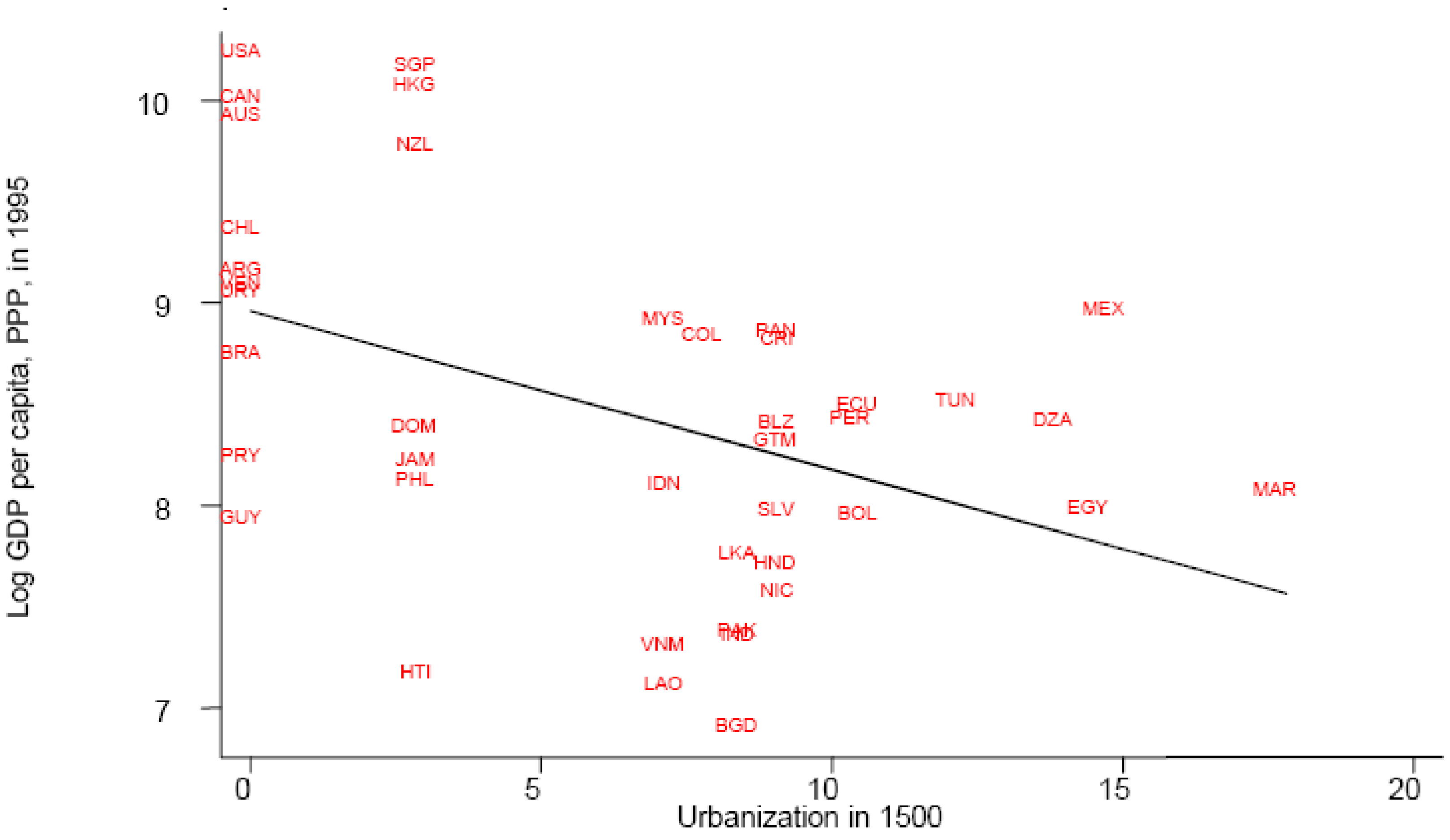
- Only areas with high agricultural productivity and developed transportation network can support large urban populations

Population density

- During preindustrial periods only relatively prosperous areas could support dense populations

Urbanization as a proxy





Log GDP per capita, PPP, in 1995
Urbanization in 1500
10
9
8
7
0
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10
15
20
USA
SGP
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CAN
AUS
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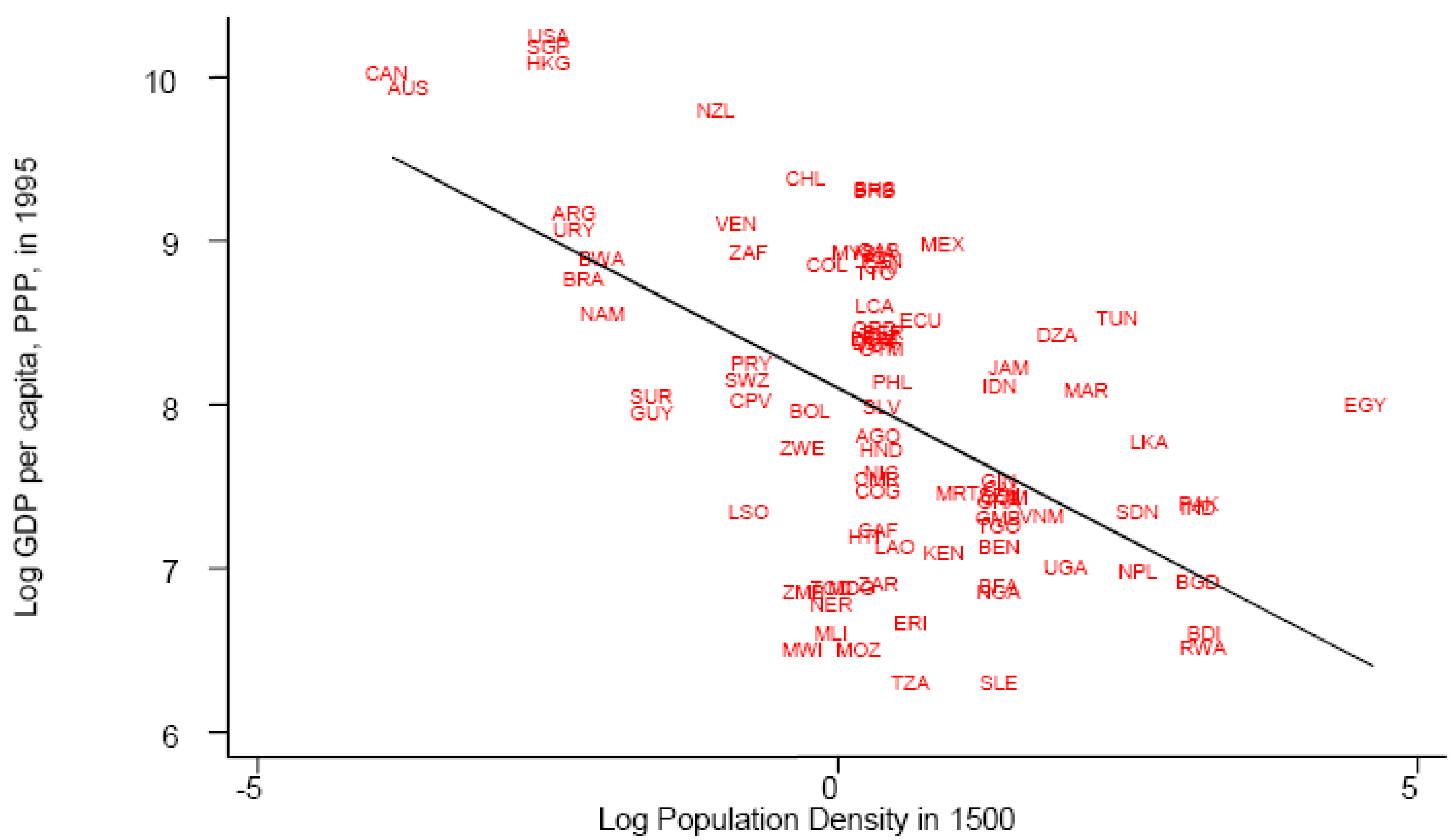

Log GDP per capita, PPP, in 1995
10
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Log Population Density in 1500
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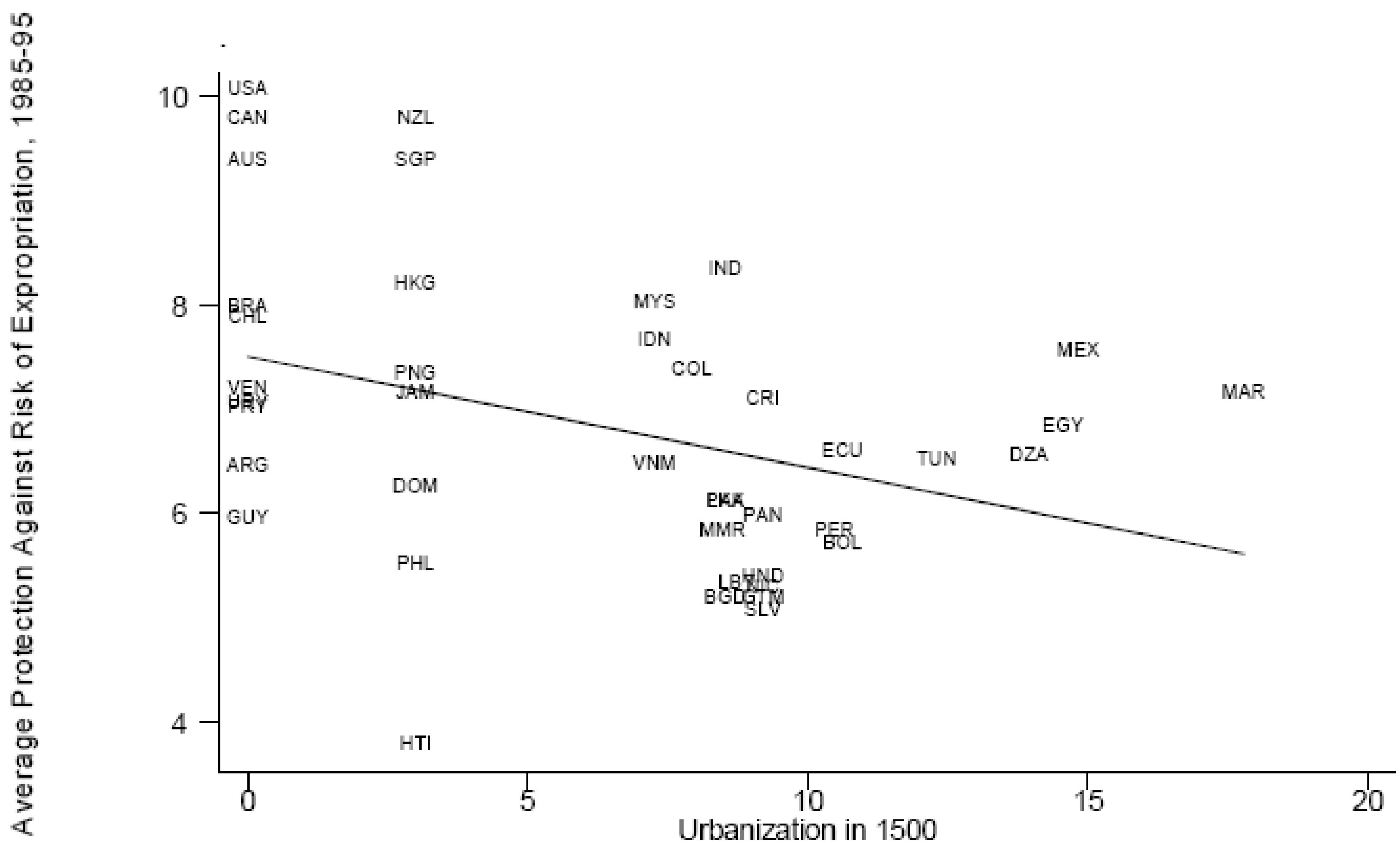

Average Protection Against Risk of Expropriation, 1985-95
Urbanization in 1500
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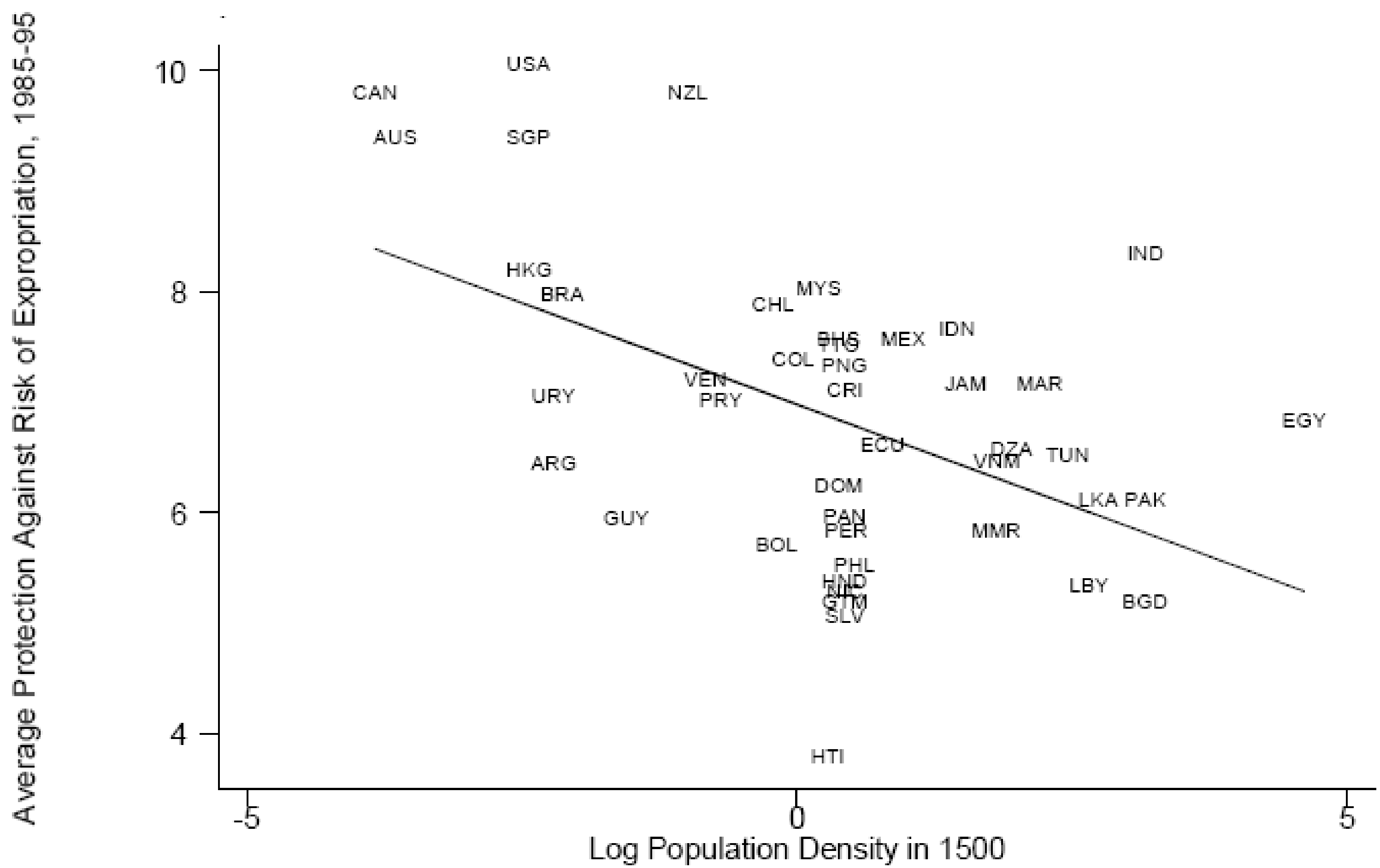

Average Protection Against Risk of Expropriation, 1985-95
Log Population Density in 1500
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4
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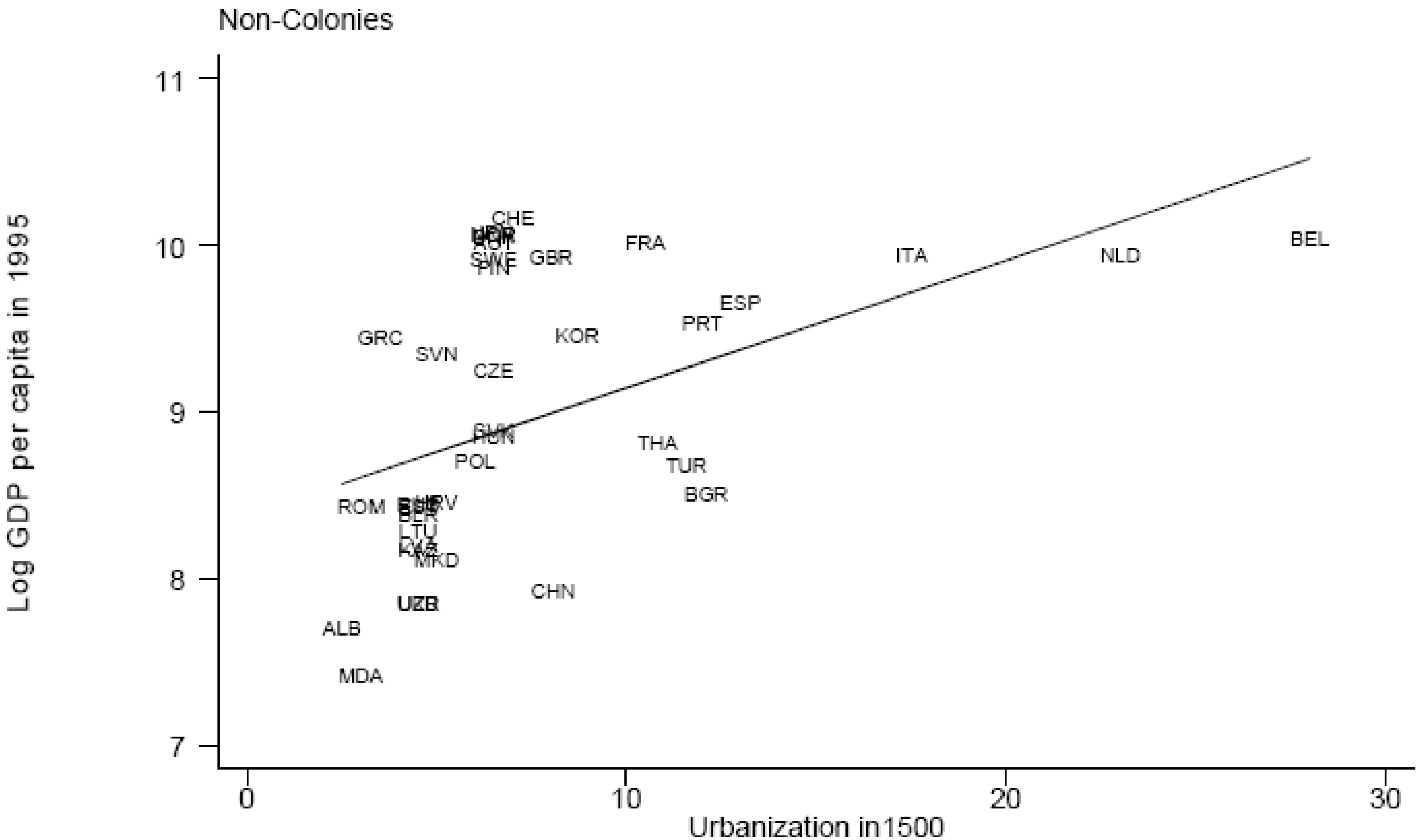
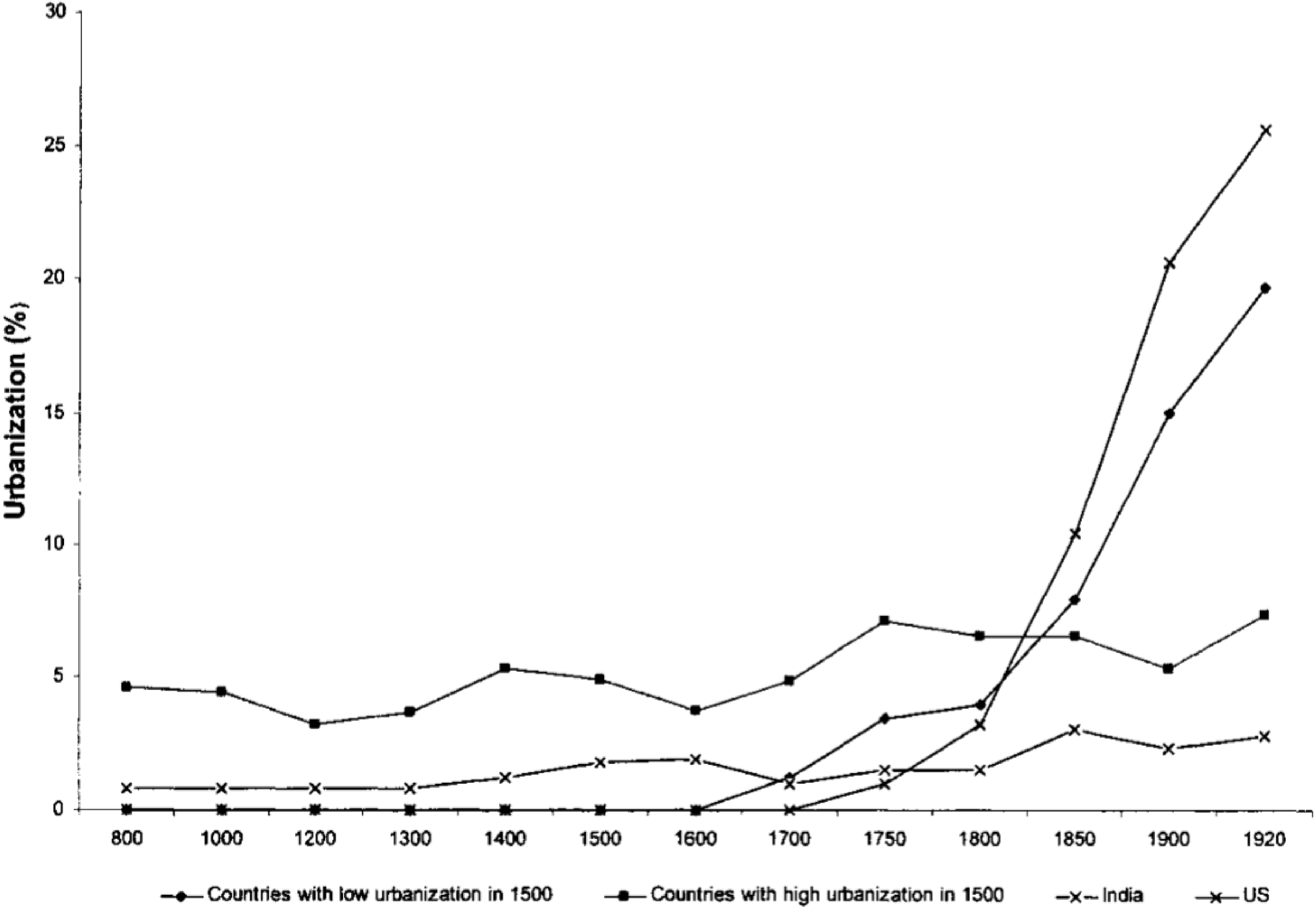
What is striking in this Reversal of Fortune?





30
25
20
15
10
5
0
Urbanization (%)
800
1000
1200
1300
1400
1500
1600
1700
1750
1800
1850
1900
1920
Countries with low urbanization in 1500
Countries with high urbanization in 1500
India
US

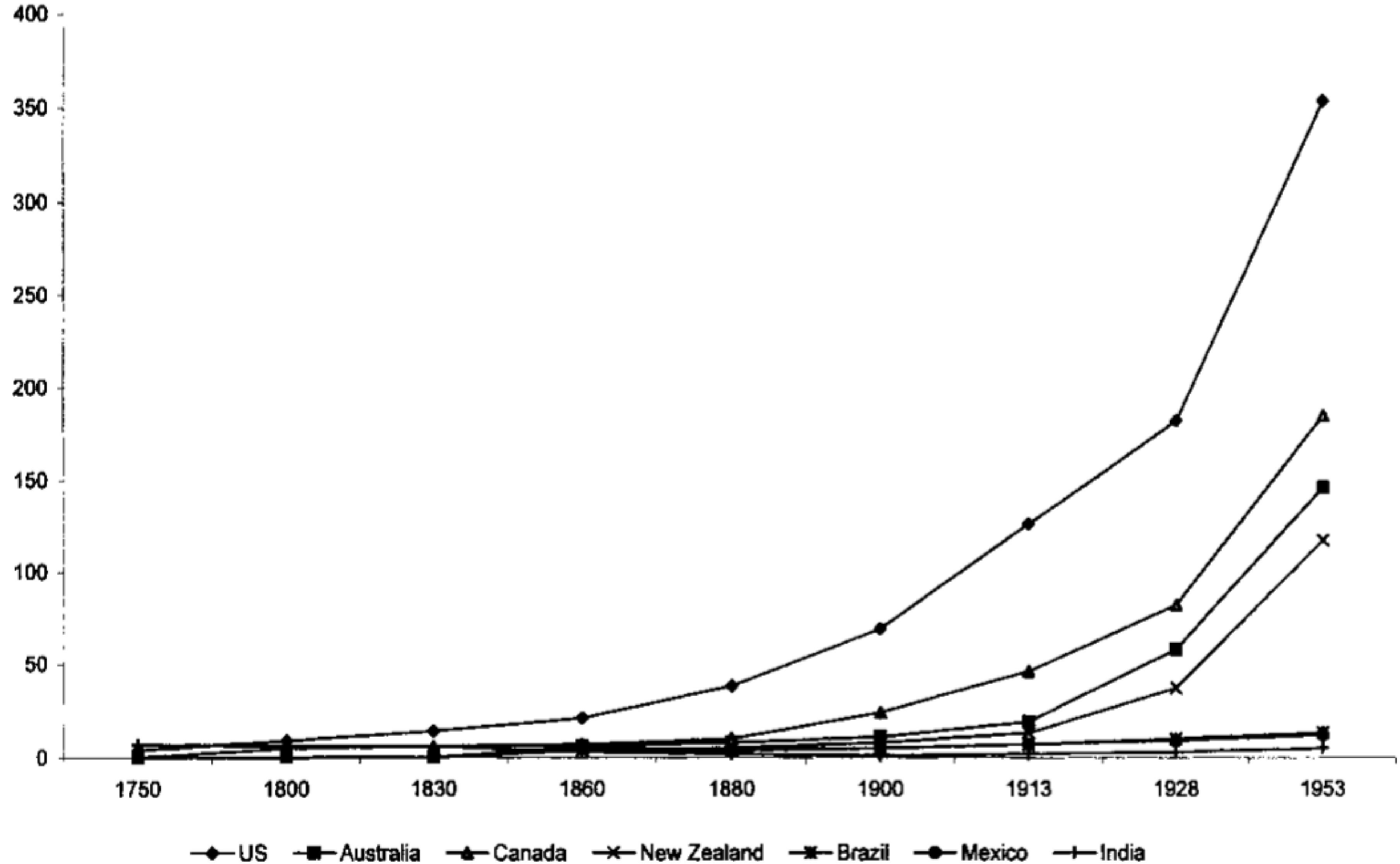


FIGURE IVb
Industrial Production per Capita, 1750–1953

Geography hypothesis

Differences in economic performance reflect differences in geographic, climatic, and ecological characteristics across countries

- Example: view that climate has a direct effect on imcome through its influence on work effort

- This **simplest version of the geography hypothesis** predicts persistence in economic outcomes, since geiographic factors that are the first-order determinants of prosperity are time-invariant

- Doesn't work: whatever factors are important in making former colonies rich today are very different from those contributing to prosperity in 1500

Sophisticated geography hypotheses

Certain geographic characteristics that were not useful, or that were even harmful, for successful economic performance in 1500 may turn out to be beneficial later on

- «Temperature drift hypohesis»: geography becomes important when it interacts with the presence of certain technologies
- Example: tropical areas provided the best environment for early civilizations. But with arrival of «appopriate» technologies, temperate areas became more productive
- Then reversal should be associated with the spread of European agricultural technologies (not the case!)

Institutional hypothesis

European colonialism not only disrupted existing social organizations, but led to the establishment of, or continuation of already existing, extracting institutions on previously prosperious areas and to the development of institutions of private property in previously poor areas

Colonization introduced relatively better institutions in previously sparsely settled and less prosperous areas: while in number of colonies (such as US, Canada, Australia, New Zealand, Hong Kong, and Singapore) Europeans established institutions of private property, in many others they set up or took over already existing extractive institutions in order to directly extract resources, to develop plantation and mining networks, of to collect taxes

Determinants of early institutional choice

What determines whether Europeans pursued an extractive strategy or introduced institutions of private property?

Factor 1: Economic profitability of alternative policies

- High population density – supply of labor – existing systems of tax administration or tribute

Factor 2: Whether Europeans could settle or not

- Population density is also important

Variety of incentives

- Different incentives – different institutions, created by European colonists
- Population density as an important factor

- What other factors may be important?
  - Infection deseases – malaria, yellow fever
  - Mortality rates among colonists as an instrumental variable: MR has an impact of current economic performance via institutions only (source of exogeneous variation!)

Acemoglu, Johnson, Robinson (2001): impact of mortality on economic performance

Different colonial policies were associated with emergence of different institutions

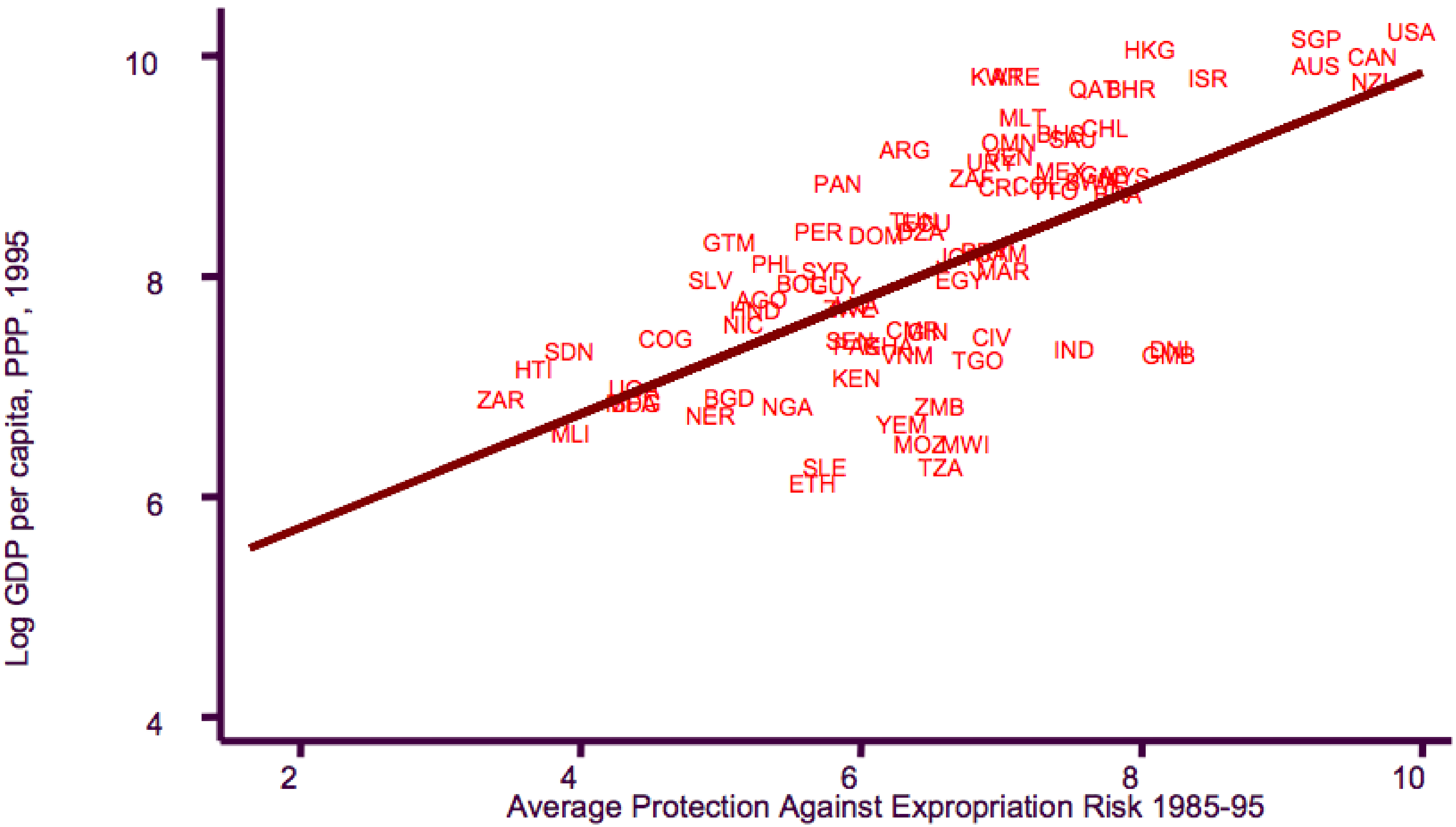
Captive strategy (Congo)

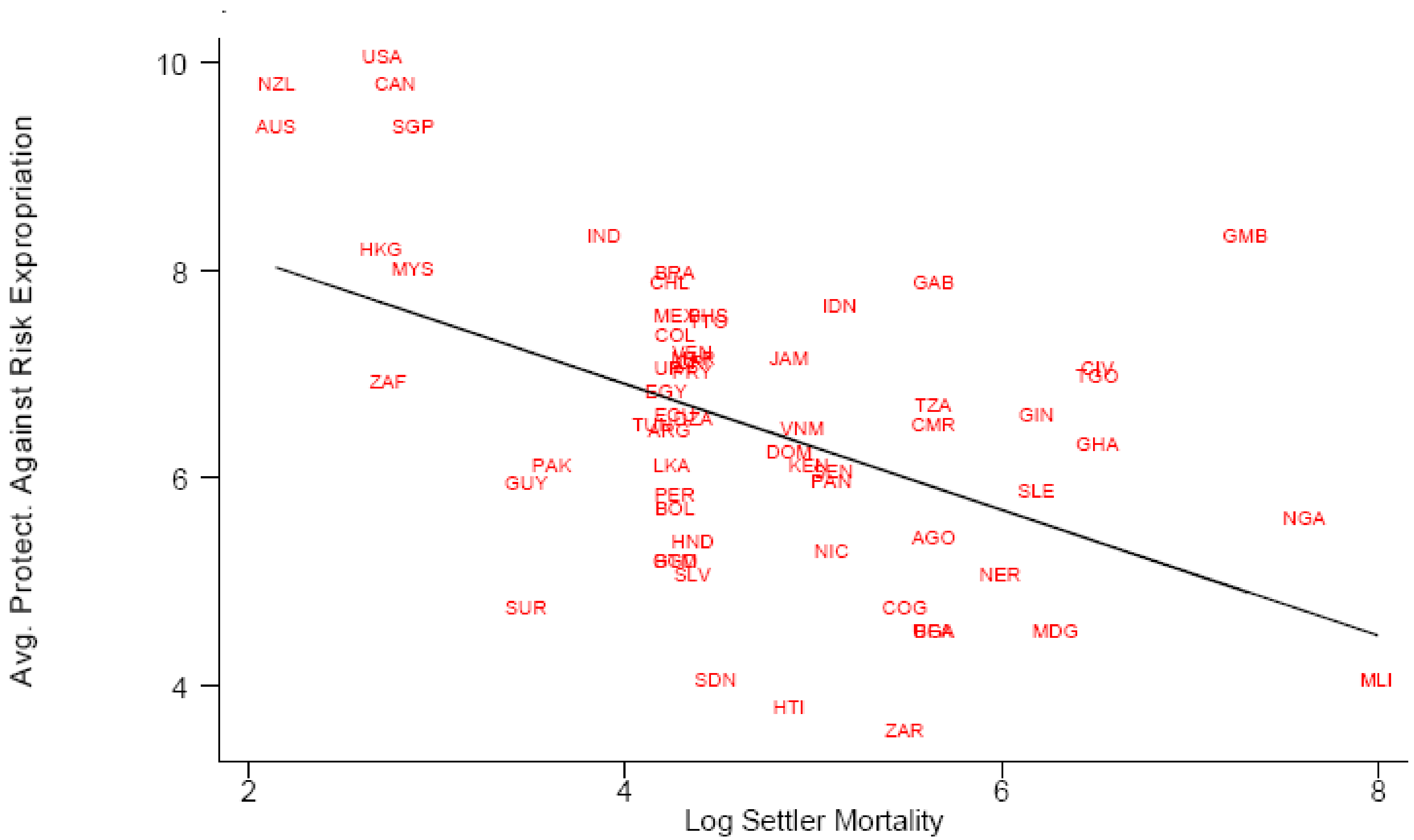
- “the colonies should be exploited, not by the operation of a market economy, but by state intervention and compulsory cultivation of cash crops to be sold to and distributed by the state at controlled prices.”

- Strategy of migration and settlement (Canada, New Zealand)
- Strategies of colonization depended on opportunities for settlement

$$\begin{array}{c} \text{(potential) settler} \\ \text{mortality} \end{array} \Rightarrow \text{settlements} \Rightarrow \begin{array}{c} \text{early} \\ \text{institutions} \end{array}$$

$$\begin{array}{c} \text{early} \\ \text{institutions} \end{array} \Rightarrow \begin{array}{c} \text{current} \\ \text{institutions} \end{array} \Rightarrow \begin{array}{c} \text{current} \\ \text{performance} \end{array}$$


Log GDP per capita, PPP, 1995
Average Protection Against Expropriation Risk 1985-95


Avg. Protect. Against Risk Expropriation
Log Settler Mortality
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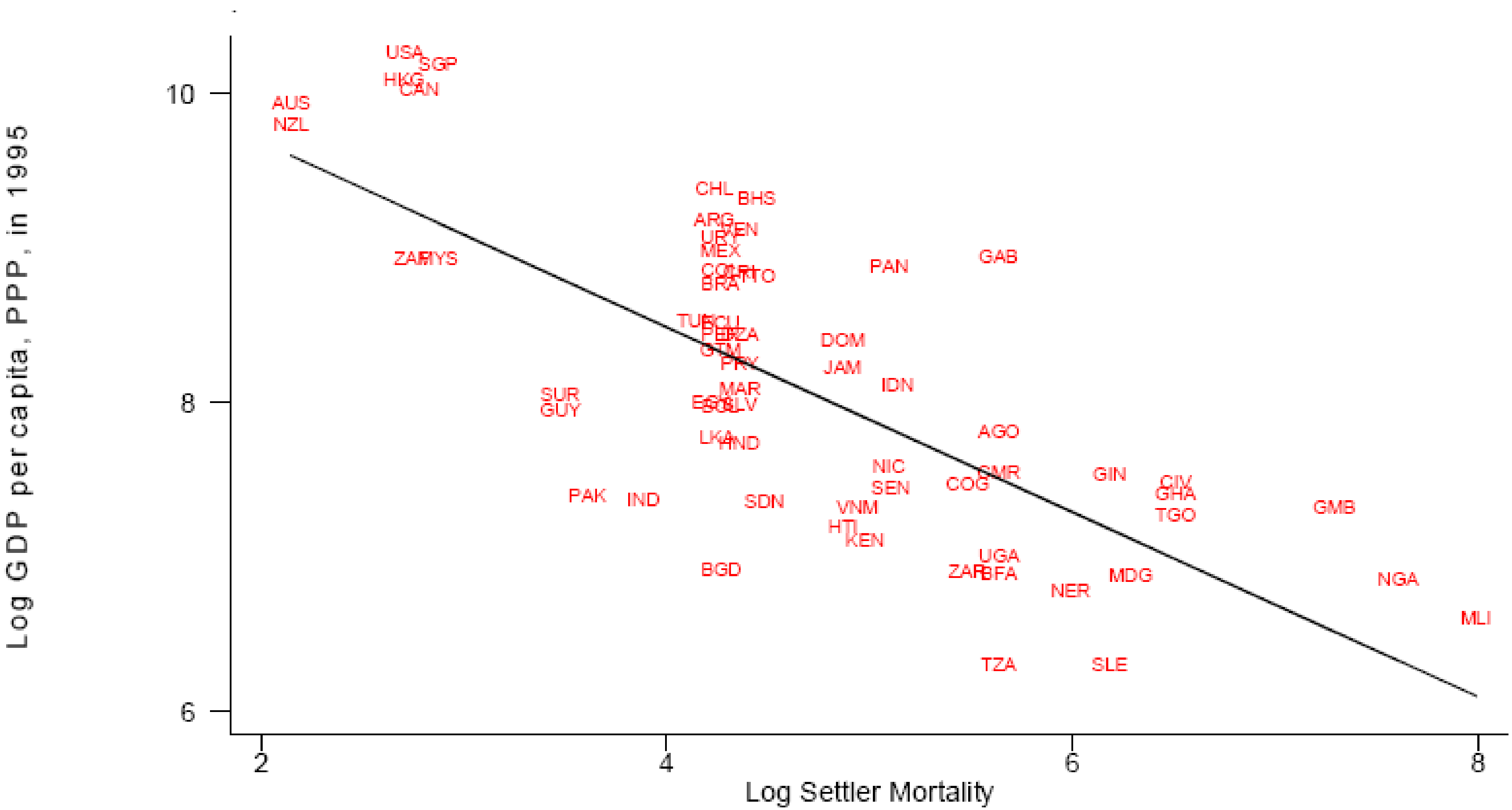
Log GDP per capita, PPP, in 1995
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Institutional persistence: from colonies to independent states

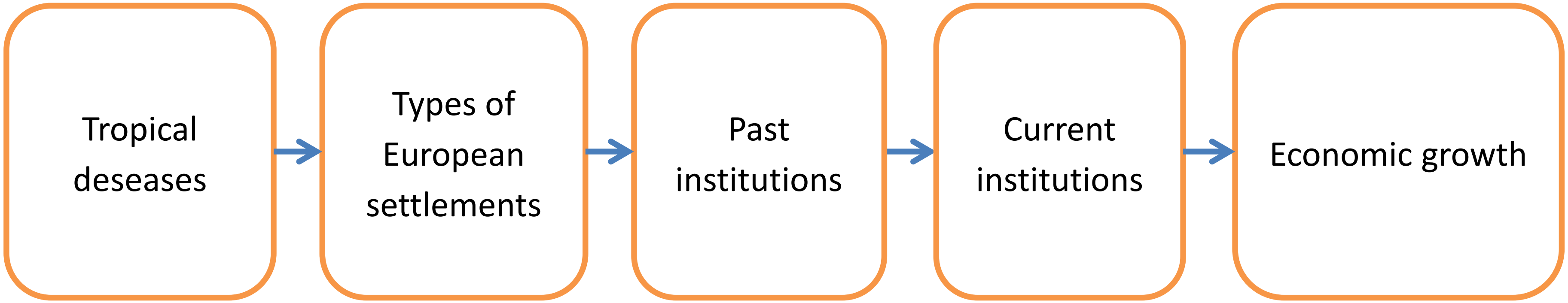
(1) Setting up functioning institutions, which place restrictions on government power and respect property rights, is **costly**

- If these costs have been sunk by the colonial powers, then it may not pay the elites at independence to switch from this set of institutions to extractive institutions. In contrast, when the new elites inherit extractive institutions, they may not want to incur the costs of introducing better institutions, and may instead prefer to exploit the existing extractive institutions for their own benefits.

(2) The gains to an extractive strategy may depend on the **size of the ruling elite**. When this elite is small, each member would have a larger share of the revenues, so the elite may have a greater incentive to be extractive (see Acemoglu and Robinson, 2000). In many cases where European powers set up authoritarian institutions, they delegated the day-to-day running of the state to a small domestic elite. This narrow group often was the one to control the state after independence and favored extractive institutions.

(3) If agents make **irreversible investments** that are complementary to a particular set of institutions, they will then be more willing to support them, making these institutions persist. For example, agents who have invested a lot in human and physical capital will be in favor of spending money to enforce property rights, while those who have less to lose may not be.

Natural experiment



Acemoglu, Daron, and James Robinson. *Why nations fail: the origins of power, prosperity, and poverty*. Random House Digital, Inc., 2012.

Acemoglu, Daron, Simon Johnson, and James A. Robinson. "Reversal of fortune: Geography and institutions in the making of the modern world income distribution."*The Quarterly Journal of Economics* 117.4 (2002): 1231-1294.

Acemoglu, Daron, Simon Johnson, and James A. Robinson. *The colonial origins of comparative development: an empirical investigation*. No. w7771. National Bureau of Economic Research, 2000.