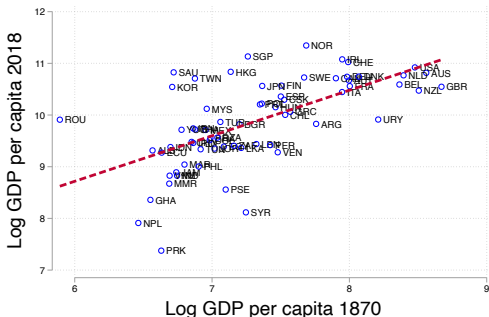


“The factors we have listed (innovation, economies of scale, education, capital accumulation, etc.) are not causes of growth: they *are* growth”

(North and Thomas, 1973, p.2)

## Persistence in GDP per capita

- ▶ most countries that are rich today were rich in 1870.
- ▶ hard to explain based on the growth models we studied.
- ▶ are there deeper fundamental forces?



## Fundamental causes: the main candidates

- ▶ Historical events at critical junctures
- ▶ Geography
- ▶ Culture
- ▶ Institutions
- ▶ Their historical interactions.

# Institutions

*“Institutions are the rules of the game in a society (...)  
the humanly devised constraints that shape human  
interaction”* [North 1990]



## Institutions

*Laws, organizations, social norms, conventions.*

- ▶ determine the organization of production, the distribution of wealth & power, and the structure of incentives for investment

## Institutions

*Laws, organizations, social norms, conventions.*

- ▶ determine the organization of production, the distribution of wealth & power, and the structure of incentives for investment
- ▶ 'old-school' Marxian view: institutions=relations of production
- ▶ today's standard view: property rights and contracting institutions
- ▶ both too narrow!

## Institutions

Technical (game-theoretical) definition:

- ▶ Institutions determine payoff-matrix & strategy set in a game
- ▶ but at the same time are equilibrium outcomes of a (prior) game.

## How do we know if institutions matter?

- ▶ Institutions are endogenous and evolve slowly
- ▶ randomized experiments are usually impossible



## How do we know if institutions matter?

- ▶ Institutions are endogenous and evolve slowly
- ▶ randomized experiments are usually impossible
- ▶ evidence from *natural experiments*
  - Accidents of history/policy that create arbitrary differences in institutions.
  - ▶ A few examples...

# The Korean War as a natural experiment

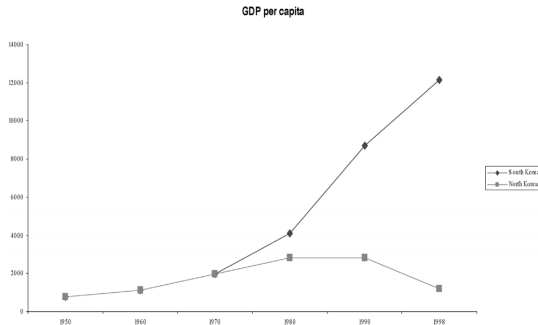
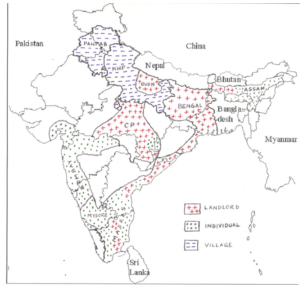


Figure 3. GDP per capita in North and South Korea, 1950–98.

- ▶ Similar economy, same culture and common government until 1950
- ▶ Then North 'treated' with authoritarian communist central planning and South with export-oriented capitalism.

# Development legacy of colonialism in India

- ▶ 1750-1860: British colonization of India.
- ▶ *Zamindari system*: local elite given land ownership.
- ▶ *Ryotwari system*: peasants given land ownership.

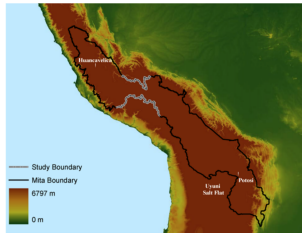


## Development legacy of colonialism in India

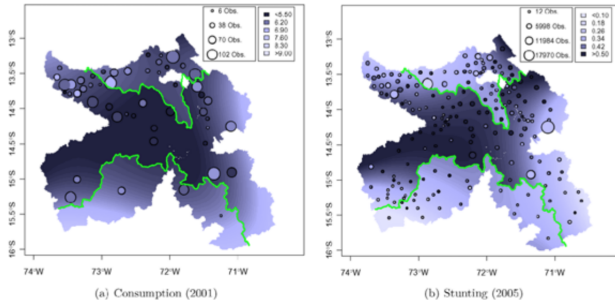
- ▶ *Zamindari system* ⇒ worse agricultural productivity, health and education
  - Still display worse social and economic indicators today
- ▶ Main channel seem to be investment in public goods
- ▶ The authors attribute this to less willingness of peasants to support development expenditure because of mistrust of landlords.
- ▶ Banerjee and Iyer (2004)

## Colonialism and forced labor in Peru

- ▶ 1573-1812 *Mita* system
  - forced labor in Potosi silver/mercury mines
- ▶ *Mita* area delineated by Spanish in 1573
- ▶ Melissa Dell (2010) compared people living today on different sides of the Mita border.



## Effect of the *Mita* institution in Peru



Today households inside the *Mita* have  $\approx 25\%$  lower consumption, worse health outcomes, participate less in markets

## What accounts for the Mita effects?

Dell (2010) proposed explanation:

- ▶ To minimize competition in exploiting labor, the Spanish restricted the formation of haciendas in Mita districts
- ▶ No well-defined property rights over land for long time
- ▶ Outside the Mita, many powerful haciendas formed a lobby that was able to get roads built, improving market access
- ▶ As a result areas inside the Mita have fewer public goods and infrastructure, and worse access to road networks

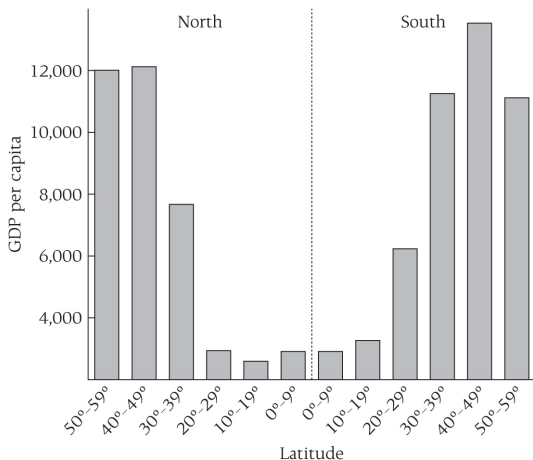
## ...OK, but what causes institutions?

*“While we have good reason to believe that economic institutions matter for economic growth, we lack the crucial comparative static results which will allow us to explain why equilibrium economic institutions differ.”* (Acemoglu, 2005, p.389)

- ▶ Why Europe (and not Africa or America) first developed the complex capitalist institutions that lead to the industrial revolution?
- ▶ Can geography help answer these questions?



## Latitude and income



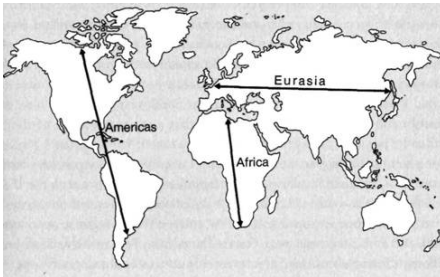
- ▶ suggests that geography must somehow *be part of* the story
- ▶ *directly*: land, labor productivity, natural resources... [Bloom & Sachs, 1998]
- ▶ *indirectly*: influence on the historical evolution of institutions [J. Diamond, 1997]

## Diamond (1997): Guns, Germs and Steel

- ▶ Why was it Europeans that colonised the rest of the world and first experienced economic growth?
- ▶ Eurasia had a head start (1000s of years) in agriculture
- ▶ Agriculture → Sedentary societies w/ storable food surpluses → complex States & markets → technology and military power

## Diamond (1997): Guns, Germs and Steel

- ▶ Why Eurasia?
- ▶ Eurasia was better endowed with wild plants and animals suitable for domestication...
- ▶ ..and its east/west axis facilitated the spread of these domesticates throughout the continent.



# The Fertile Crescent

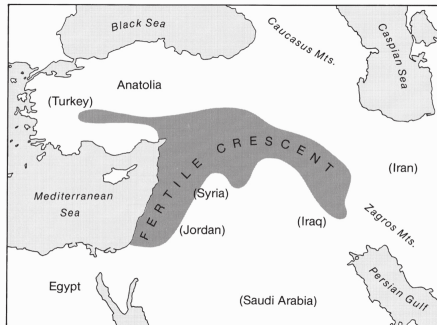


Figure 8.1. The Fertile Crescent, encompassing sites of food production before 7000 B.C.

- ▶ The earliest 'cradle of civilization'
- ▶ Other cradles of civilization in the rest of the world?
- ▶ Yes, but: much later, with less productive species available, and with less margin for east-west spread.

# A formalization of the J.Diamond hypothesis

- ▶ Olsson & Hibbes (2005)

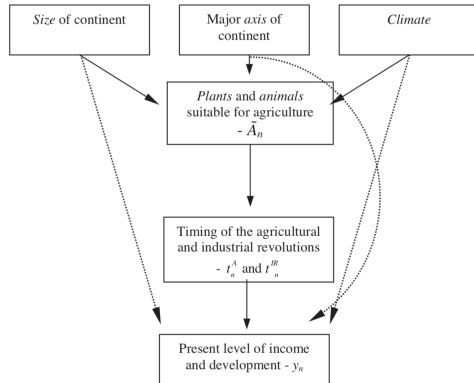


Fig. 1. Biography and long-run economic development.

## Geography & Institutions

- ▶ Both 'fundamental causes' of growth
- ▶ But only geography is exogenous
- ▶ The most important determinant of institutions might be 'length of exposure to sedentary agriculture'
- ▶ Historical exposure to agriculture → historical evolution of institutions → institutions today
- ▶ Of course, institutions also differ for reasons unrelated to geography.
- ▶ Geography does not seem to explain why the industrial revolution happened in Britain rather than some other part of Eurasia.