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**MORE FUNDAMENTAL
DETERMINANTS OF GROWTH:
INSTITUTIONS VERSUS
GEOGRAPHY**

MORE FUNDAMENTAL DETERMINANTS OF GROWTH

- Sierra Leone: per capita GDP = \$490; Luxembourg: \$50,000
- Traditional growth theory: physical and human capital accumulation, innovation
- But why do some countries accumulate and innovate more than others?
- More fundamental, deeper causes, of growth: geography, culture, institutions

GEOGRAPHY (1)

- The role of « nature »: the physical and geographical environment
- The geography hypothesis emphasizes differences in geography, climate and ecology that determine both the preferences and the opportunity set of individual economic agents in different societies.
- Three main versions of this approach, each emphasizing a different mechanism for why geography affects prosperity

GEOGRAPHY (2)

- First version: climate may be an important determinant of work effort, incentives, or even productivity.
- Second: geography may determine the technology available to a society, especially in agriculture. The economist Sachs has been a recent and forceful proponent of the importance of geography in agricultural productivity
- The third variant of the geography hypothesis, especially popular over the past decade, links poverty in many areas of the world to their "disease burden", emphasizing that: "The burden of infectious disease is similarly higher in the tropics than in the temperate zones"

GEOGRAPHY (3)

Geography and economic development: Gallup, Sachs, and Mellinger (1999)

- Let's look at one of the models presented. Idea: introduce transport costs in a Harrod Domar type model of growth.
- First result: Economic growth depends on: savings rate (+), the level of productivity (+), the relative price of capital goods (-) and the rate of capital depreciation (-)
- In many developing countries, virtually all equipment is imported: transport costs may affect the price of capital goods.

GEOGRAPHY (4)

- So the authors assume that a country's total investment depends on investment expenditure on domestic goods and on imported investment goods
- Furthermore, assume that there are gains from international trade.
- Denote the price of the world imported good P^* , so its price in the home economy is $P=tP^*$, where $t>1$ is the transport cost, reflecting cost, insurance and freight
- Result: transport costs reduce growth by raising the cost of the imported capital good
- Note that the assumption that trade is beneficial is key here.

GEOGRAPHY (5)

Implications in practice:

- Coastal economies will generally have much lower **transport costs** than hinterland economies.
- Countries near core economies (the main providers of capital goods) will generally have lower **transport costs** than distant countries, so growth is likely to diminish in direct proportion to distance from the core.
- Note that in this model, geography may also affect growth through the **level of productivity**: it may differ across countries because of fundamental geographic reasons (such as differences in productivity between temperate and tropical agriculture and differences in endemic health conditions)

GEOGRAPHY (6)

- We have seen that geography may influence growth directly through the level of productivity and transport costs.
- However, geography can have another effect through its influence on the choice of economic policies. Countries that are close to markets, for example, may choose more open trade policies than countries that are far from markets.
- Note here the difficulty of empirical work: the distinction between the growth effect of geography and institutions is hard to establish; indeed, geography may influence the institutions adopted by different countries...

CULTURE (1)

(very briefly)

- The cultural explanation for growth emphasizes the idea that different societies (or perhaps different races or ethnic groups) have different cultures, because of different shared experiences or different religions.
- According to this view, culture shapes values, preferences and beliefs of individuals and societies, and these factors play a key role for economic performance.
- Max Weber (1930) argued that the origins of industrialization in western Europe could be traced to the Protestant reformation.

CULTURE (2)

(very briefly)

- Protestantism led to a set of beliefs which emphasized hard work and saving, and where economic success was interpreted as consistent with being chosen by God.
- Weber contrasted these characteristics of Protestantism with those of other religions, such as Catholicism, which he argued did not promote capitalism.
- Several studies by economists (notably Barro and McCleary, 2003) on the influence of religious beliefs on growth. But results do not convincingly establish a causal relationship.
- Other studies looked for something special about particular cultural endowments, usually linked to particular nation states. (Anglo saxon heritage, etc.) But again, causal link not convincing

INSTITUTIONS

- One of the first things you learned: the way societies are organized, i.e. their « institutions », are important. (competitive markets, with well defined and enforced property rights)
- Note that in your basic model in microeconomics, you never assumed that one agent could steal another agent's income!
- Examples of discussions emphasizing importance of institutions: socialist vs capitalist economies; the tragedy of the commons;
- In many analyses, institutions often exogenous: democracy, dictatorship, type of elections, etc. But in fact, they are endogenous.

BUT WHAT ARE INSTITUTIONS?

- No right answer to this question
- Douglas North: the role of institutions is to reduce uncertainty by establishing a stable (but not necessarily efficient) structure to human interaction
- Or: the rules of the game that the agents are playing
- Very broad definitions. Social scientists still struggling on the issue.
- For the sake of clarity, empirical studies usually focus on particular types of institutions, such as the structure of property rights and the presence and structure of markets (how perfect are they?).

INSTITUTIONS AND ECONOMIC DEVELOPMENT

- Main idea: it is the way that humans themselves decide to organize their societies that determines whether or not they prosper.
- Some ways of organizing societies encourage people to innovate, to take risks, to save for the future, to find better ways of doing things, to learn and educate themselves, solve problems of collective action and provide public goods. Others do not.

« GOOD » ECONOMIC INSTITUTIONS?

- Not easy to define. There is always some kind of value judgement. Nevertheless, it is useful to think of these good economic institutions as consisting of an inter-related cluster of things:
- **enforcement of property rights** for a broad cross-section of society so that **all individuals** have an incentive to invest, innovate and take part in economic activity.
- There must also be **some degree of equality of opportunity** in society, including such things as equality before the law, so that those with good investment opportunities can take advantage of them.

OTHER TYPES OF INSTITUTIONS

- Economists have also studied how different kinds of institutions emerge endogenously. For example, what happens when there is a conflict over resources? Conflicts have important implications for growth.
- Another literature has emphasized the perfection and spread of markets, clearly a key economic institution.
- Problems of the imperfection or absence of markets can clearly have important ramifications for resource allocation, incentives and growth.

BACK TO MICROECONOMIC ROOTS OF THE PROBLEM

- Imperfect capital markets, and many other sources of market imperfections can impede development.
- In some contexts, people's individual decisions may result in multiple possibilities for equilibrium outcomes, some good, some bad with a poverty trap. Getting out of such a trap necessitates coordinated activities that the market cannot deliver.
- Remark: in a way, later lectures will also be about the impact of economic institutions on economic development. For example, see the chapter on credit markets.

BASIC CONCEPTS OF GAME THEORY

- Some basic game theory will prove to be extremely useful to analyze how the institutional setting can affect economic development.
- Suppose there is a set of individuals (« players » or « agents »)
- Each player has a set of strategies to choose from.
- Once everybody has chosen a strategy, each player's utility depends on her own chosen strategy as well as on OTHER players' chosen strategies.

WHAT DOES IT HAVE TO DO WITH INSTITUTIONS?

- A country's institutions (economic and political, current and past) may affect what its citizens expect of their future.
- **People's beliefs regarding their future** are likely to depend on political institutions (does the government steal from its people? Is it stable? Could there be a war? Is the rule of law gonna work for me if I my shop is robbed?)
- Also, a country's past institutions, i.e historical factors, establish a status quo, and the status quo often determines whether investments (or policies) can be undertaken.

COORDINATION FAILURES

- Complementarities are a form of externalities that reinforce some common action, such as the decision to adopt a new method of production, or a new technology
- Example: coordination game
- Let's look at the case of two firms that need to decide whether to invest or not, with two key ingredients in the story: 1) they make a profit only if BOTH invest (their investments are complementary, each one needs the other one to exist). 2) They have to go through government bureaucratic procedures (get permit to open business)