

Economic Growth: *Fundamentals*

Monday; October 3, 2005

Announcements

- No Homework due on Thursday
 - No Conferences this Thursday, unless...
 - Homework will be posted on Wednesday
 - Solutions will be posted right away
 - Office Hours: 3pm to 5pm Robinson Coffee Room
 - Outline: The fundamentals of growth
 - Government/Institutions
 - Inequality
 - Culture
 - Geography
 - Midterm Details & Review
-

Consider this...

- ❑ Wife Kills Husband with a Shotgun
 - ❑ Proximate Effects: bullet, fatal injuries, internal bleeding, etc...
 - ❑ Fundamental Effects: husband was cheating, wife is psychotic, let your imagination run wild
 - ❑ Capital, labor, technology and efficiency are proximate determinants of output
 - ❑ Fundamental determinants of output are those that influence output through the proximate effects
-

Fundamentals

- There are many fundamental determinants of income that one can think of. We will speak of only a few broad categories today.
 - Fundamentals are subject to reverse causation with ***each other*** and with ***income***: $X \rightarrow Y$ and $Y \rightarrow X$
 - Example of reverse causation:
I like someone, but not vice versa
 - Does the person dislike me because I like them?
 - Do I like the person because they dislike me?
-

I. Institutions

MOTIVATION THINKING POINTS...

Korea (North & South)

- Prior to 1953, a united country
- In 2000, income differs by a factor of 16

Germany (East & West)

- BMW & Mercedes vs the Trabant???
 - INSTITUTIONS: “a set of rules, compliance procedures, and moral and ethical norms designed to *constrain* the behavior of individuals in the interest of maximizing the wealth or utility of principals”
-North 1981
-

Basics for Analysis

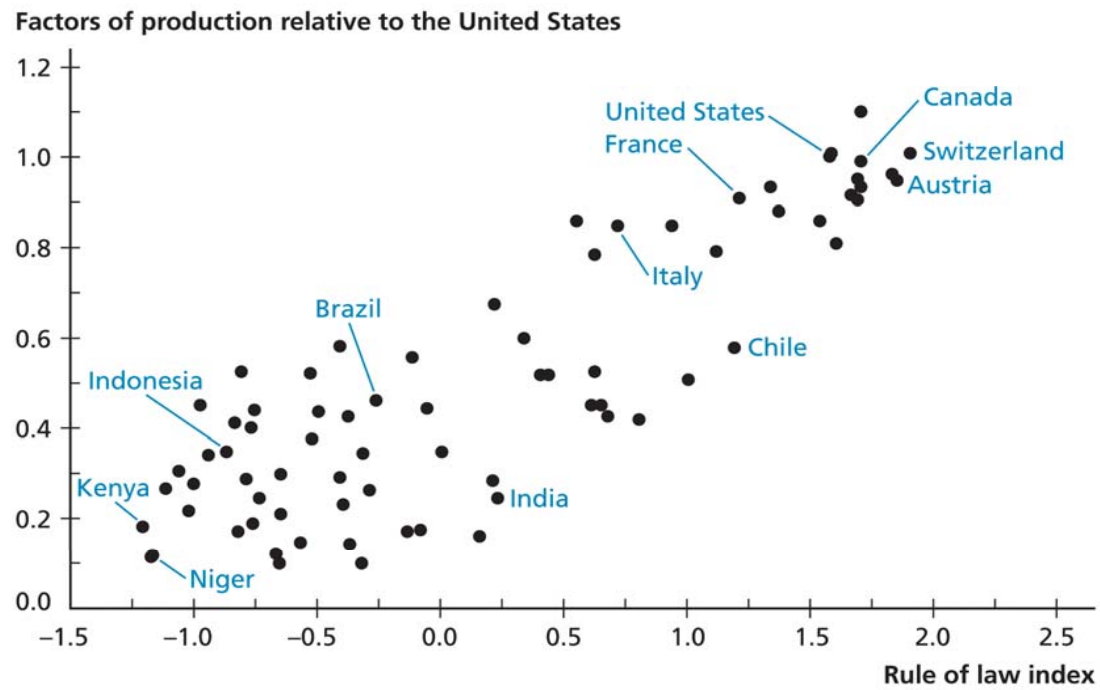
- Normative Analysis: How should the government act? (recommended actions and roles the government should play)
 - Positive Analysis: Why does the government act as such? (describe the rationale behind actions taken by the government—explaining)
 - Government is generally all of the political institutions that operate in the economy (Fed, Supreme Court, INS/Homeland Security, Constitution, and so forth)
-

Why are Institutions Important?

- Institutional Quality to Income
 - Institutions are the reasons why countries are rich and poor
 - Good institutions are required to sustain growth
 - Factor Accumulation
 - Physical Capital Investment
 - Buildings, infrastructure, public savings
 - Human Capital Investment
 - Provision of Schools, Loans & Aid
 - Population Growth
 - Neuter People, Propoganda
 - Productivity
 - Technology
 - Patents, NSF Grants, Funding
 - Efficiency
 - Sets the Stage and Environment for efficient activity
 - Central Banks, Court Systems, Rule of Law, Coordination Failures, Externalities, Liscenses, Immigration Policies, Income Redistributions, Wars, Corruption, etc...
-

Rule of Law

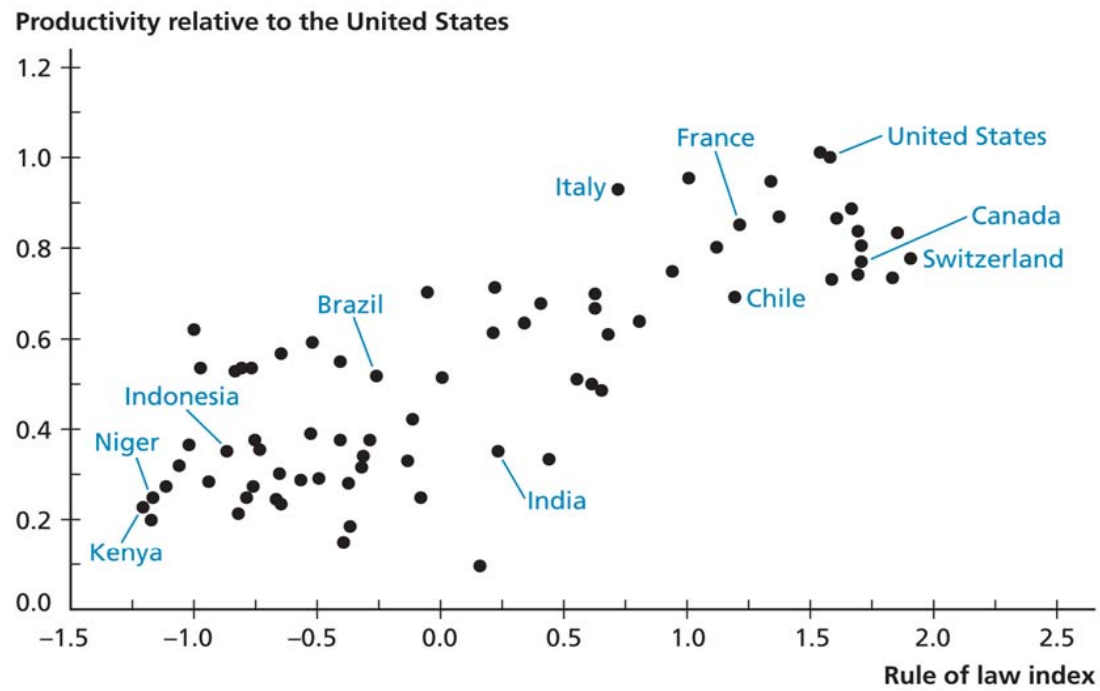
FIGURE 12.1
Rule of Law and Factor Accumulation



Source: Kaufmann, Kray, and Zoido-Lobaton (2002). Data are scaled to have a standard deviation of 1.

Rule of Law

FIGURE 12.2
Rule of Law and Productivity



Source: Kaufmann, Kray, and Zoido-Lobaton (2002). Data are scaled to have a standard deviation of 1.

More Economic Rationales...

- Public Goods
 - National Defense, Roads, Buildings, Standardization of Weights and Measures, Stable Currency, Rule of Law
 - Externalities
 - Positive: Education, incentivize tech progress
 - Negative: Pollution, Drinking and Driving
 - Coordination Failures
 - Monopolies
-

The Reverse Channel of Causation

□ Income to Institutional Quality

- As countries tend to get richer, institutional quality seems to get better (can pay better wages, less need to be corrupt, luxury good argument)
 - Many countries prospered under bad institutions
 - Benevolent Dictatorship => Securing Property Rights => Investment in Capital => Growth => Good Institutions (Democracy and Checks on Government)
 - ?????
-

II. Inequality

- There is latent variation in the characteristics of individuals in any given population that translates into different incomes
 - Education, Health, Geographical Regions, Bequests, Lack of Mobility, Persistence, Energy, Ambition, Racial Discrimination, Idiosyncratic Factors, etc...
 - The most commonly cited measure of Income Inequality is the Gini Coefficient
 - A measure from 0 to 1; higher values refer to greater levels of income inequality
-

Kuznets Hypothesis (1)

FIGURE 13.3
The Kuznets Curve

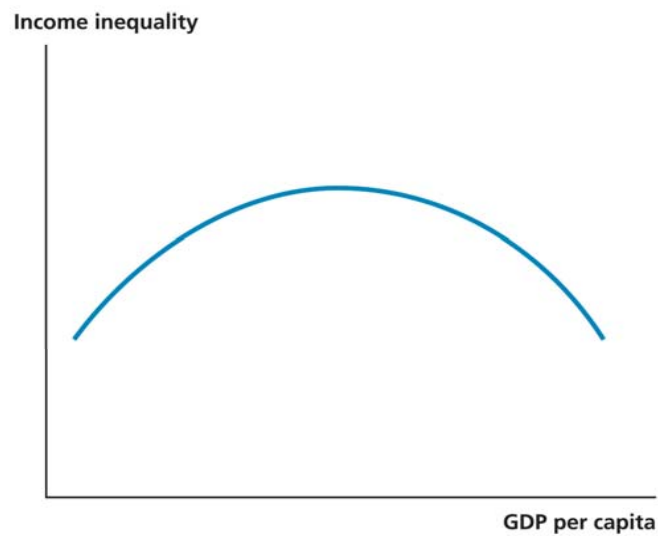
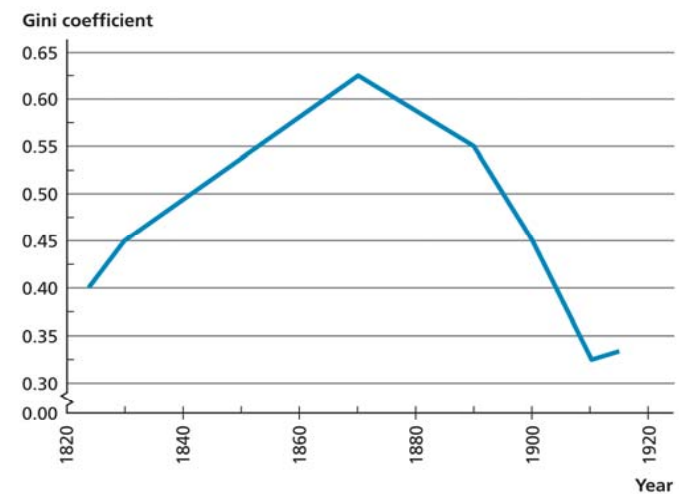


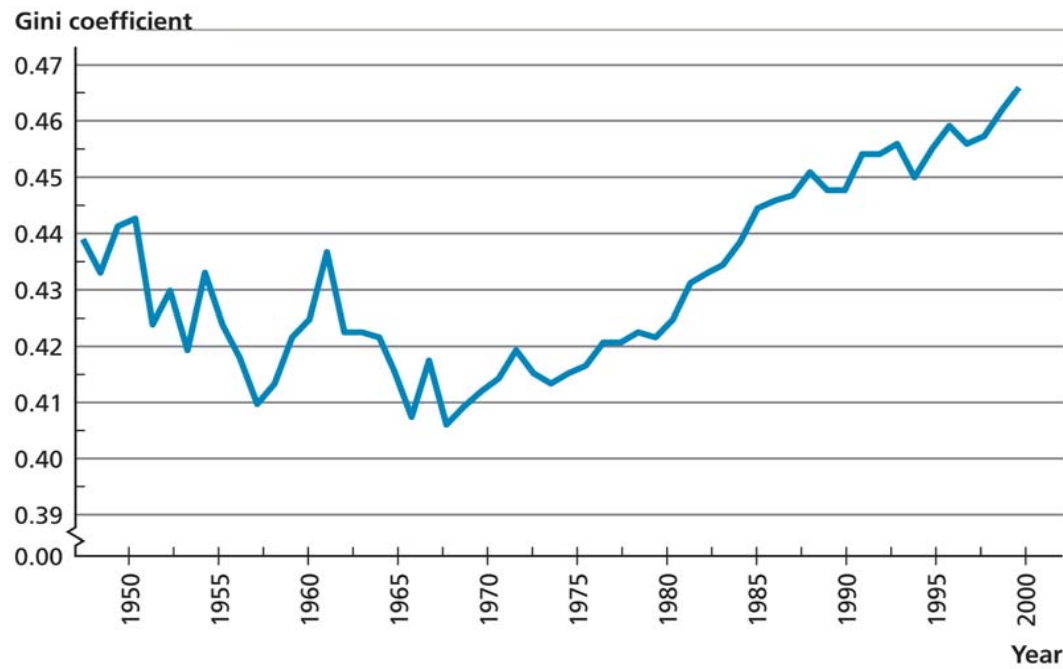
FIGURE 13.4
The Kuznets Curve in England and Wales, 1823–1915



Source: Williamson (1985).

Kuznets Hypothesis (2)

FIGURE 13.10
Income Inequality in the United States, 1947–2001



Sources: Weinberg (1996), Jones and Weinberg (2000), DeNavas-Walt and Cleveland (2002).

III. Culture

Roughly Speaking, Culture is the values, attitudes, and beliefs prevalent in a society

Best Way to Think About Culture and Growth:

Imagine imposing only that difference on the economy, ceteris paribus. How would things change for growth. Does that aspect of 'culture' become irrelevant; is that aspect of 'culture' only a reflection of being poor or rich, etc...

Culture's Importance (1)

Openness to New Ideas: implications for technological progress

- Leading explanation for divergence between Europe and China
 - 1500 China was better off than Europe
 - Europe caught up and took off to become the technological leader
 - The human capital was there for China to take advantage of technologies & technologies tend to be applicable in an east to west orientation, but the movement was only to the west
 - Openness to ideas blocked this
 - Korea as the Hermit Kingdom
 - Closed it's doors to most foreigners
 - Japan & Commodore Matthew Perry
 - After opening up, technology imitation
 - TV, walkman, computers, automobiles all invented elsewhere
 - Islamic World
 - Unwillingness to integrate into the world economy
-

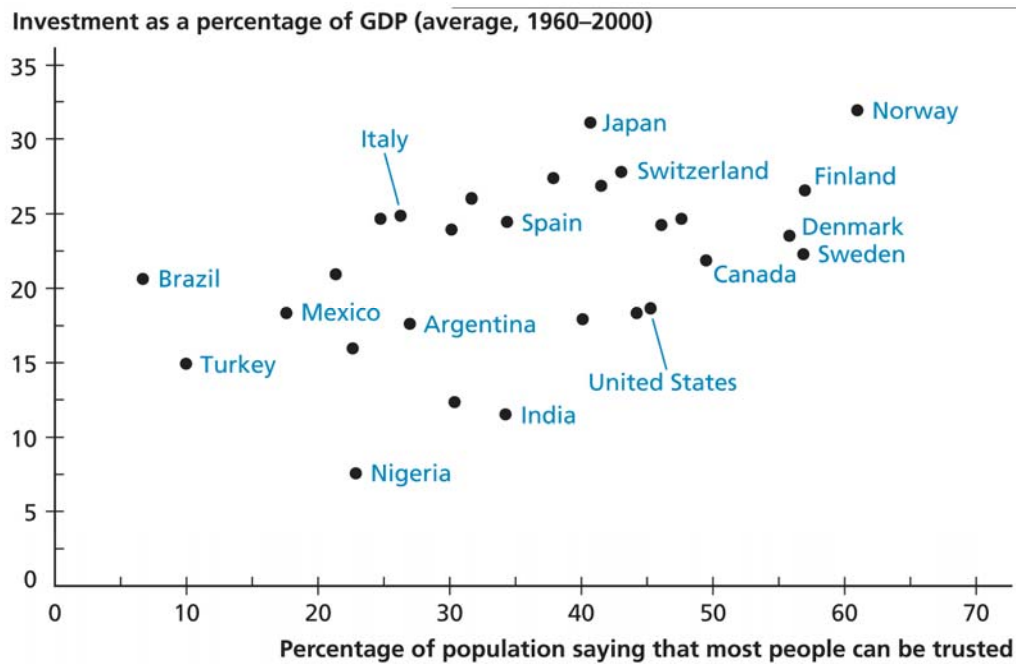
Culture's Importance (2)

Trust: Implications for efficiency

- Trust is not necessarily the most rational behavior, in terms of self-interest
 - Halloween Candy (eating it and those leaving it)
 - Tipping (what if you're never going there again)
 - Drug dealing (minimal possibility of enforcement)
 - Almost any Transaction economic and non-economic requires trust
 - Possibly, many things are not accounted for
 - Personal Utility (morals); Reciprocation (game theoretic); Networks (banishment); Future Gains (continuation value);
 - Nevertheless, trust produces efficiency
-

A Graph...

FIGURE 14.2
Relationship Between Trust and Investment



Source: Knack and Keefer (1997), Heston et al. (2002).

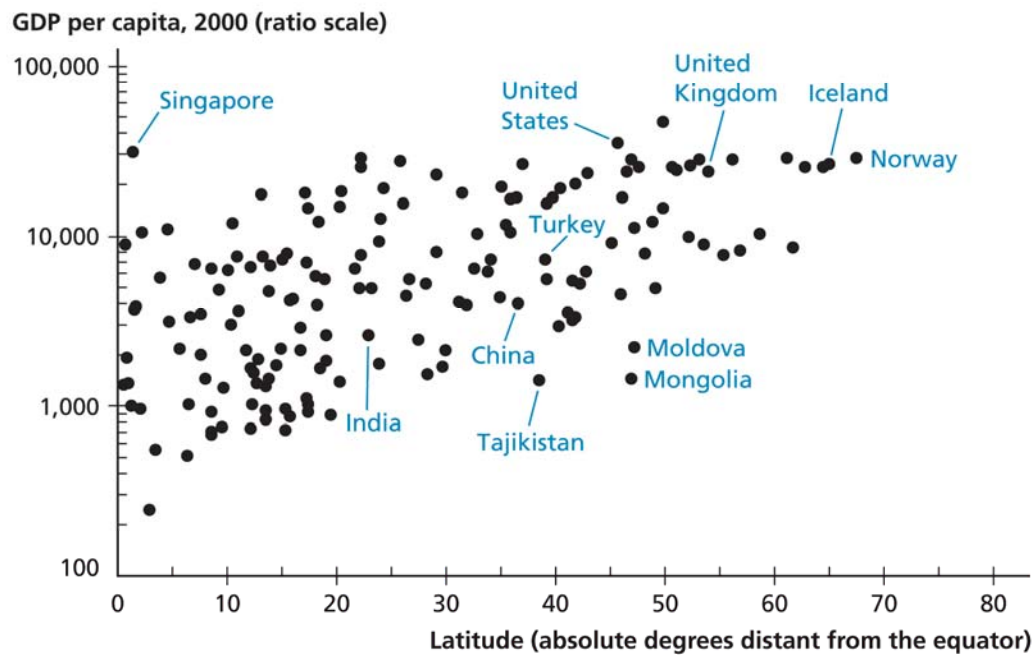
IV. Geography

Take in a historical path-dependence context—of course, technologies have ‘integrated’ markets, minimizing historical geographical limitations, but where you are today is very much a by-product of the advantages and disadvantages you had previously (race analogy)

- Trade
 - The location of a country determines various aspects of trade
 - Spillovers
 - The flow of ideas and information tends to be dependent on spacial dimensions
 - Government
 - The lay of the land and governing bodies
-

Location, Location, Location

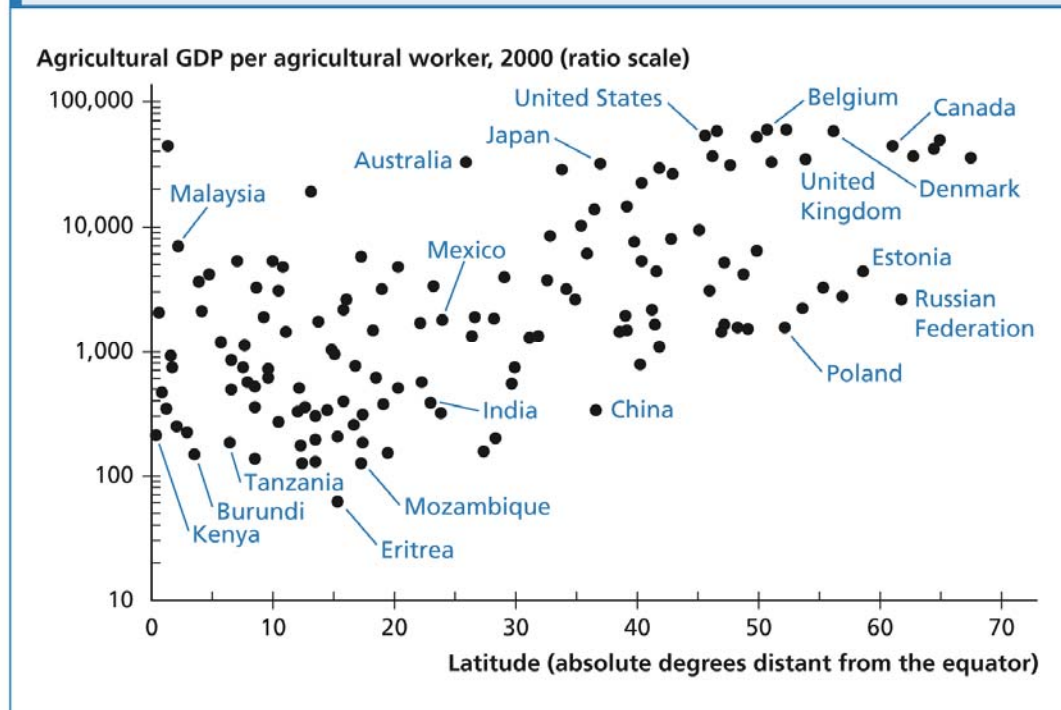
FIGURE 15.1
Relationship Between Latitude and Income per Capita



Source: Heston et al. (2002).

Agricultural Effects

FIGURE 15.5
Latitude Versus Agricultural GDP per Agricultural Worker



Source: United Nations Food and Agriculture Organization (2003).

Example: The Tropics

Consider countries in the tropics (**roughly** think of countries whose land mass falls primarily between the tropic of cancer and capricorn)

Common Issues with many of these countries:

- Endowments (3 of 4 are climatic)
 - Land quality (poor for agriculture)
 - Natural Resources (lack thereof)
 - Disease Ecology (many disease vectors...and bad ones)
 - Severe Climates (bad for labor input)
 - History of colonialization (leads to poor institutions, a late start, high levels of fractionalization)
 - Geographical Isolation (lack of spillovers, appropriate technologies, trade)
 - Overallocation in the agricultural industry (efficiency)
-

Conclusion

- The fundamentals are very important for economic growth as they determine ultimately all of the proximate determinants of growth
 - Institutional Quality, Inequality, Culture, and Geography are just some of the sources of fundamental differences that can affect growth paths of countries over long time horizons
-

Midterm Details

- List 110
 - 8:30 - 9:50AM
 - Format:
 - Short Answer
 - Problems
 - A little bit about my midterms
-