

Will Colombia Catch up with the Industrial Leaders in the 21st Century?

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Need Theory of Evolution of Income Levels

Theory must be consistent with a number of facts.

Relative TFPs are the prime determinant of relative income levels of countries. (See Parente and Prescott for the unified theory of the evolution of international income levels.)

But, tax rates are also important and even have consequences for TFP.

Labor Market Distortions Important for G-7 Countries

Countries	GDP	Hours	GDP/H	Welfare
Germany	100	100	100	100
France	100	100	100	100
Japan	100	140	70	80
U.S.	140	140	100	120

Reason for Lower Income in Western Europe

High effective tax rates on labor income. Other labor market distortions can reduce labor supplied to the formal **taxed market sector**

Colombia has very low labor supply to taxed market sector.

Technology can be transferred only to formal sector, so bigger formal sector necessary for high TFP.

Modern Economic Growth

Modern economic growth is characterized by the well know growth facts. K/Y , C/Y , H/N , r , and a growth rate of per capita income of about 2 percent.

Some of the differences in living standard is due to labor supply , H/N .

But, the big factor is the residual TFP.

Modern Economic Growth Model _____

Stand-in household's willingness to substitute

$$\sum b^t N_{it} ((1-a) \log c_{it} + a \log(1-h_{it}))$$

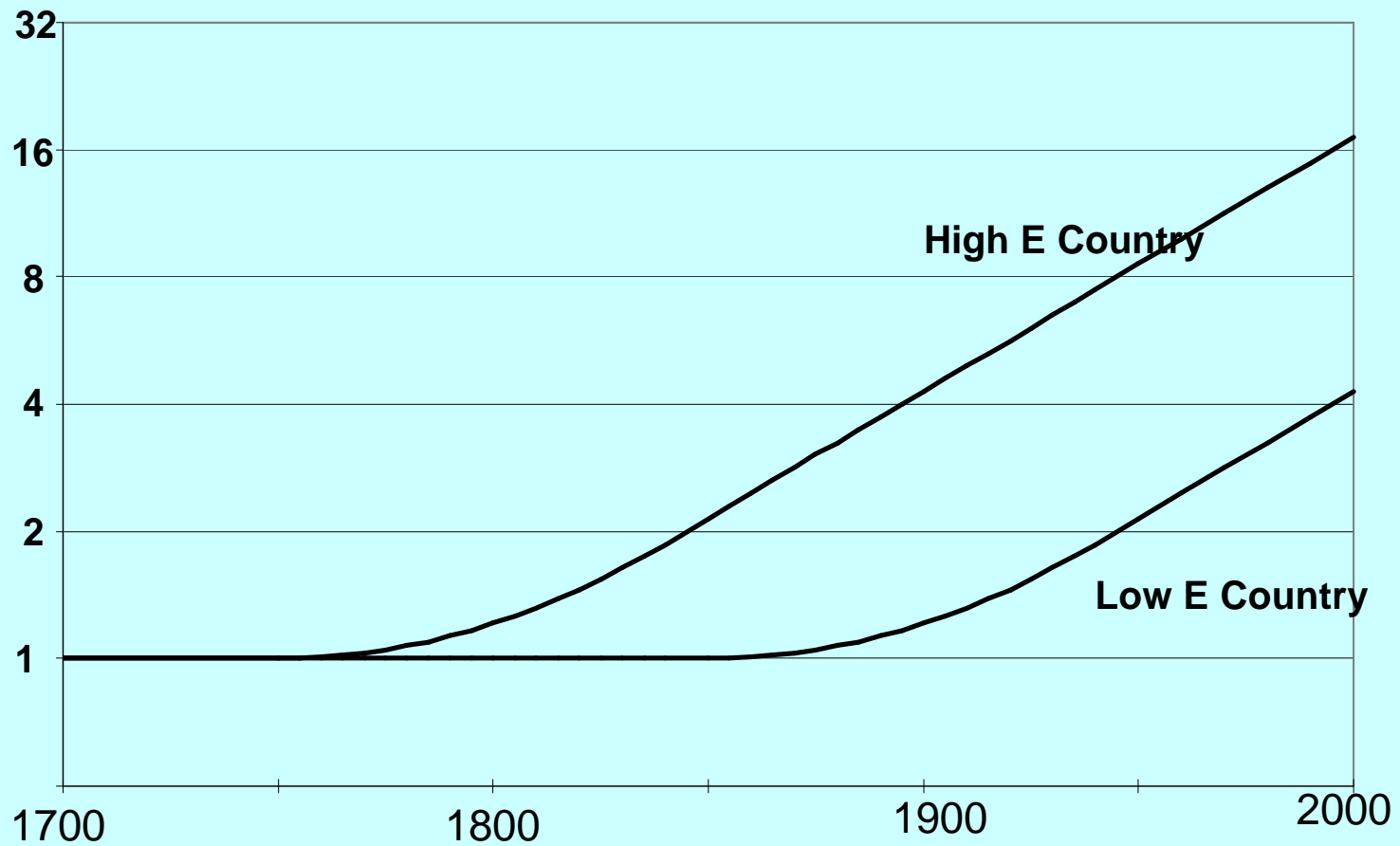
Stand-in firm's ability to substitute

$$y_{it} = A_t E_{it} k_{it}^q h_{it}^{1-q}$$

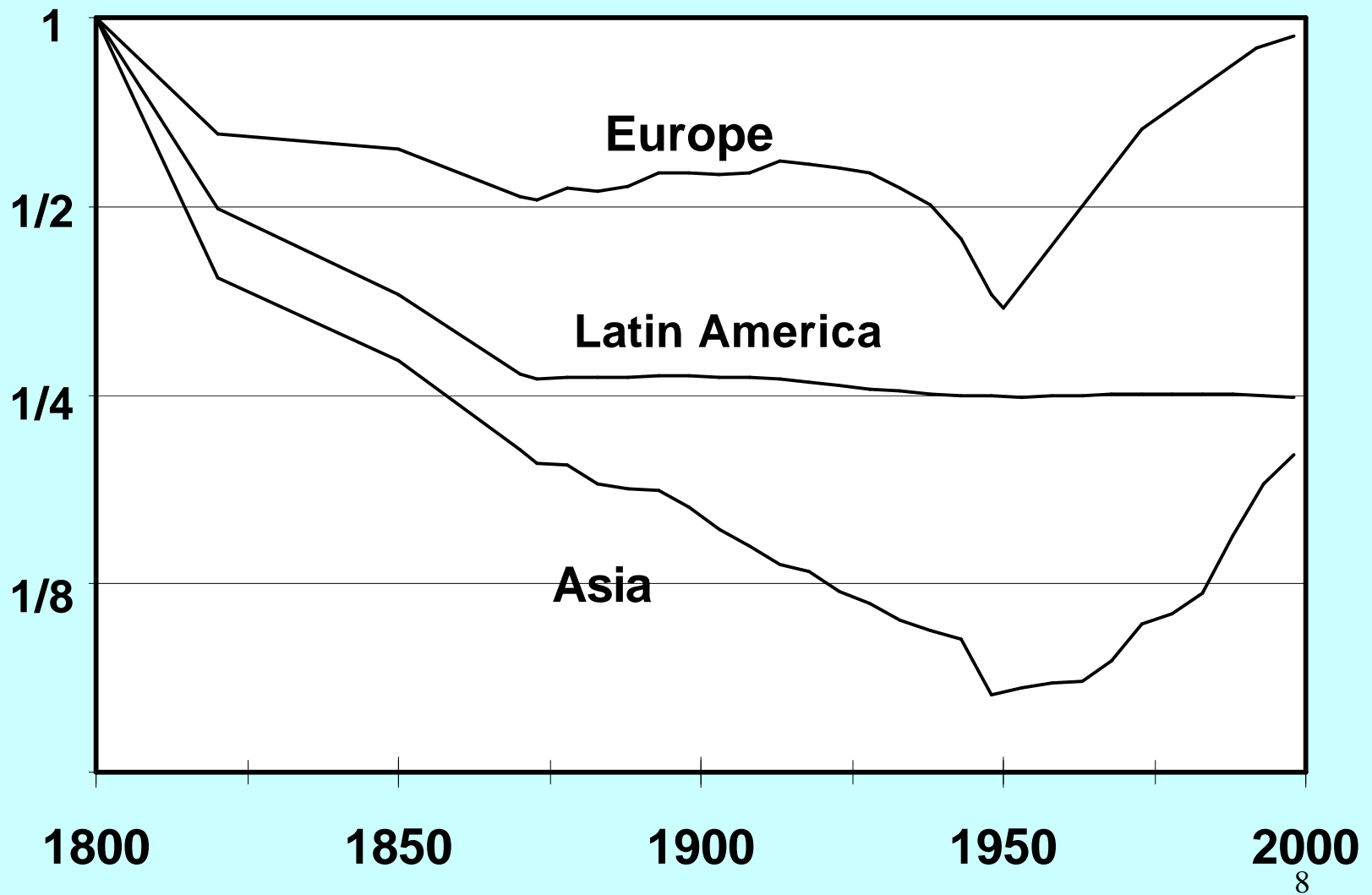
Total Factor Productivity

$$A_t E_{it}$$

Output per Hour Relative to Malthusian Level

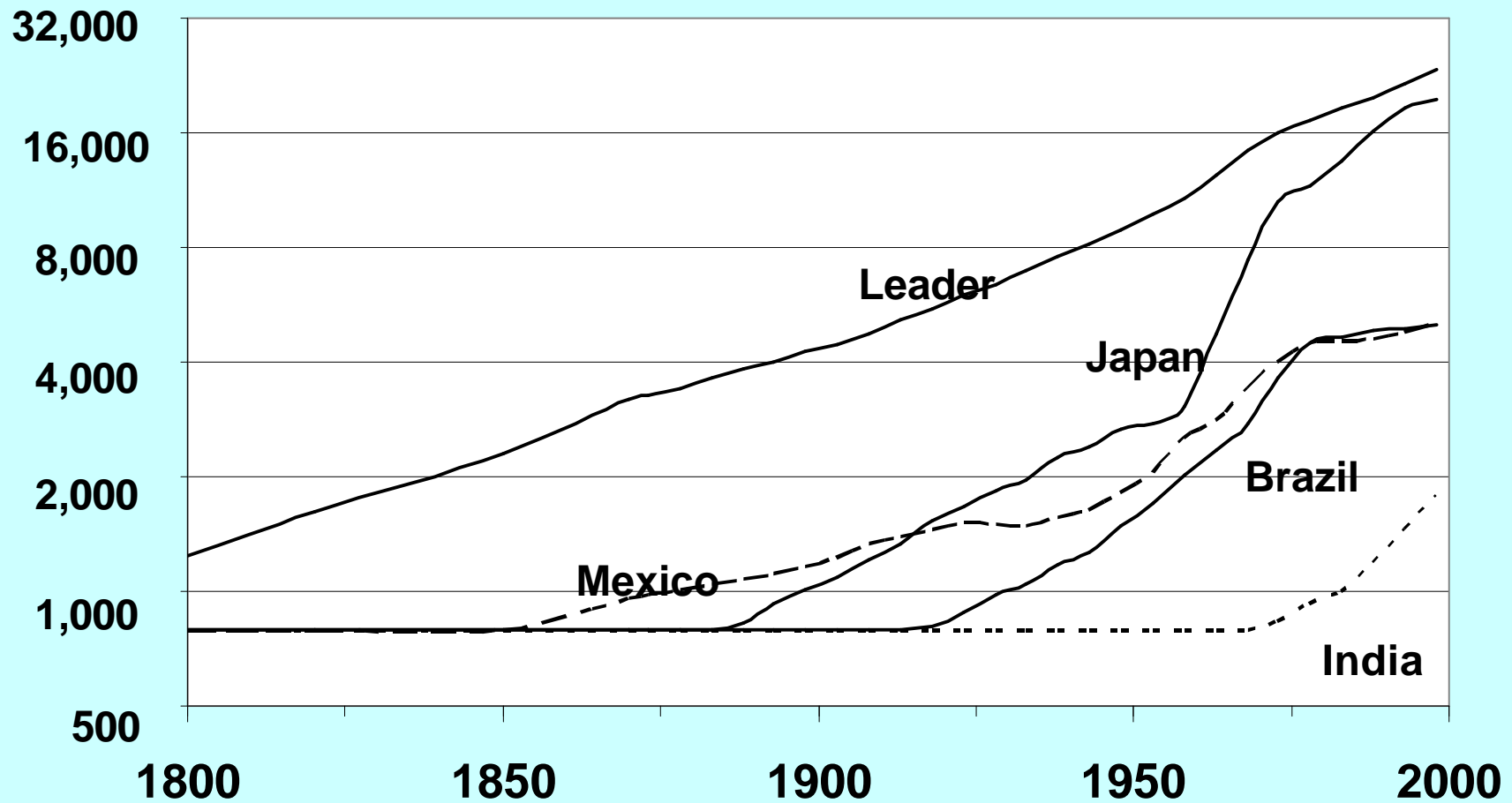


Income: Fraction of the Leader, 1800-1998



Different Countries Start at Different Times

Per Capita GDP Trends (1990 U.S. \$)



There is a Tested Theory

Stand-in household and stand-in firms the same whether country is Japan, the United States, France, Mexico, Chile, Germany, and almost surely Colombia. (See Kehoe and Prescott volume on “Great Depressions of the Twentieth Century, *RED* January 2000)

Differences in tax and labor market policies have large effects. U.S. tax rates and labor market policies would increase Colombia’s GDP per capita by 50 percent.

Differences in E are even more important and if Colombia became as efficient as Western European countries it would be as rich as these countries, 70 percent of the U.S. level.

What policies results in a high E ?

What policy results in a high E ?

In sovereign states, policy is a dynamic game. Good policy is policy with good outcomes.

There is the game by which the game is set up, which leads to an infinite regress. (See Laganoff)

I turn to the empirical evidence.

U.S. and U.K 1865-1928

**U.S. per capita GDP 70 percent of U.K. in 1865.
Positions reversed in 1928**

Question: Why?

Hypothesis: The U.S. was a set of economically sovereign states. Once transportation prices fell as the result of the development of a highly competitive rail system with multiple routes between cities, these competing states became highly economically integrated. No shortage of corruption in U.S. in 19th century.

Reasons why this Arrangement Fosters Higher E

1. Export industries in a state face elastic demand; implies employment increases when efficiency increases; thus no vested interests in inefficiency.
2. There is no centralized mechanism to block the adoption of more efficient production processes in **all** the member states. Exception is agriculture in U.S. and E.U.
3. Localities which protect vested interests of untraded goods, i.e. new houses, lose out to other localities where housing prices are lower.

Another Reason for Lower Barriers

States without groups that will be adversely affected by the introduction of some technology and with groups that will benefit want the better technology adopted there.

Example: Toyota in 1985 located an auto plant in Tennessee introducing just-in-time-production in the U.S. A powerful construction industry there wanted the construction project. Politicians wanted more jobs. The same thing happened in Wales in 1990.

Still Another Reason for Lower Barriers

Foreign competitor makes long-term investment to get a toe hold. Then its suppliers and employees have a vested interest in that firm succeeding and the firm has the needed political support.

Example: Wal-Mart in Mexico. Long time before the big investment is profitable. Need confidence that investment will not be expropriated. NAFTA important here.

Wal-Mart has the organization capital and it will take a long time for Mexican competitors to catch up, but they will.

Takes a Long Time to Realize Benefits of Openness

Mexico just beginning to realize the benefits of NAFTA.

Country must be locked into the arrangement with big losses if it violates the rules of the game.

Can get foreign technology for almost nothing, but foreigners must be confident that their investment will not be expropriated.

Still Another Reason for Lower Barriers

If policies result in less production in formal economy and more in the shadow and home economy, efficiency will be lower.

It is difficult to use the best technologies in the untaxed shadow economy.

Big shadow economy adversely affects productivity.

Cutting explicit and implicit taxes on activities increases the size of the formal sector and increases TFP.

Catching up: When and Where?

Why did Original EU Countries Catch Up ?

(Belgium, France, Germany, Italy, Netherlands)

The measure is productivity, that is output per hour?

Answer: Like U.S. these countries became an economically integrated competitive association of sovereign states where property rights of other members are protected within a country's borders.

Fact: Labor Productivities ---

Year	Original EU
1870	62
1913	53
1929	52
1959	53
1973	78
1983	84
1993	102
2002	101

**What about other Western European Countries ?
(Austria, Finland & Sweden who joined EU in 1995;
Switzerland)**

Year	Others Relative to Original
1900	103
1913	99
1938	103
1957	106
1973	96
1983	85
1993	81

What about Asia Catching up?

Hong Kong had a system with economic freedom imposed by the British.

Singapore had an authoritative government that imposed economic freedom.

S. Korea and Taiwan had to accept economic freedom given defense consideration.

McArthur imposed a system on Japan. The system worked well and was continued.

What about Asia Catching up? (Cont.)

People in Malaysia and Thailand seeing neighbors doing well blocked their politicians from granting protection to industry insiders with vested interest in inefficiency.

A set of economically integrated sovereign states is developing in Eastern Asia.

China established a system with provinces having some economic sovereignty in 1978. Industries were not concentrated in provinces. The Chinese economy experienced rapid growth after 1978.

Why didn't Latin America Catch Up?

Latin America not economically integrated set of sovereign states with protected property rights for foreigners with the technologies.

If it became one, it would catch up.

Latin American states will do a lot of catching up, if they become integrated with either NAFTA or the EU.

Brazil could if its member states enjoyed greater economic sovereignty.

Colombia can cut tax rates and reform labor market institutions. Some important reforms have been made, This would increase labor supply to formal taxed sector and probably increase tax revenue.

A system with forced saving for retirement would not distort the work incentive. It also results in people having an equity position in their country. It is important to have individual accounts with independent management. They must be regulated to insure financial soundness.

Colombia needs to be open and to protect property rights. If a sustainable policy arrangement is set up with these properties, efficient production units will develop in Colombia and Colombia's efficiency factor E will increase to a level near that of the leaders. Only then will Colombia be one of the advanced industrial states.