

# **Mankiw Macro Chapter XII: Production and Growth - The Long Run**

## **Pg 235-250**

**Why are some countries rich, and some countries poor?**

**And why are some people within a country rich, or poor?**

**Why are/do some countries grow, and others don't.**

**Note, today's discussion is about LONG-RUN trends**

**Growth around the world (pg 237)**

**U.S., Japan, China, Thailand**

**Productivity**

**What is productivity?**

**How much you can produce in an hour (week, yr, whatever)**

**Simple Model: Crusoe on his Island, producing beer and wine**

**The more he can personally produce, the better**

**So what determines this, at a national scale?**

**Physical Capital per worker**

The more tools you have, the more productive you can be

Hammering with a rock

**Human Capital per Worker**

Knowledge and skills are also important

Education, training, experience, "learn by doing"

**Natural Resources per Worker**

Natural resources are inputs into production

Renewable (land, wood, fishstocks)

Non-Renewable (mines, oil)

Note – don't overestimate how important they are

**Technological Knowledge**

Understanding the best way to do things

Technology covers more than you think

0 vs. Roman Numerals, sails, etc.

NOT the same as human capital

If Julius Caesar was such a great general,

why didn't he use guns?

**How to increase these things, at a national scale?**

**Savings and Investment**

In order to increase physical capital, you need to save

Creating Tools today involves NOT CONSUMING

**Note that investment is subject to two important effects**

**Diminishing returns**

What tool will you buy first? Hammer or saw?

#### Catch-up Effect

Countries that start off poor can grow quicker  
Adding a new tool to a Thai worker, vs. an American worker  
Going from an F to a C, or a B to an A

#### Investment from abroad

Foreigners can invest from abroad, either  
Directly (they build a factory), or  
In-Directly (they buy stock in a foreign firm)  
In both cases, it is because they expect a rate of return

#### Education

This is one way to increase human capital  
Schooling does this, but other things can as well  
(foreign direct investment, for example)  
The problem of Brain-Drain....

#### Health and Nutrition

A healthier Population can do more  
Studies of height over time...

#### Property rights and Political Stability

Nobody invests if they can't keep the investment  
And this means society must be stable enough to be trusted..

#### Free Trade

Important in its own right, and a huge market  
Buying what you can't do well makes sense to all...  
This depends on governance, and geography  
China and ali-baba

#### Research and Development

#### Population Growth

Diluting capital stocks  
Increasing specialization

#### Promoting Technological progress

The role of Culture...