Macroeconomics 1 - Seminar 2

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Production and Growth

- What is productivity?
- How is productivity determined? (factors of production)

- Explain constant returns to scale in production function
- List government policies that can raise productivity
- Explain diminishing returns and catch-up effect

Which of the following statements are true

1) Finding new natural resources is always a good new for long-term growth of the economy

   False – Dutch disease, resource curse

2) Price of the non-renewable resources has to rise in the long-term, because its quantity/supply is running out by consumption.

   False – substitution by other resources, technological progress

3) According to neoclassical growth model, higher saving rate leads to the growth only temporarily. In the long-run, only technological progress leads to economic growth.

   True

In order to accumulate more technological knowledge, a nation must:

a. teach more technological knowledge to its college students.
b. spend more on training programs for displaced workers.
c. focus more on training newly hired workers on the technology they will be using.
d. spend more money on research and development.

An economy that 'accumulates human capital' is:

a. hiring ever more workers.

b. increasing its population.

c. increasing the skills of its workers.

d. increasing the labor force participation rate.

In order for an economy to increase investment:

a. society must save more.

b. businesses must spend less.

c. the government must raise taxes.

d. exports must increase.

The concept of diminishing returns to investment refers to the fact that:

a. firms in rich countries invest less than firms in poorer countries.

b. any given increase in investment yields less economic growth in a rich country than in a poor country.

c. firms in poor countries invest less than firms in rich countries.

d. any given increase in investment yields less economic growth in a poor country than in a rich country.

One key factor promoting investment is:

a. willingness of households to spend their money.

b. a substantial increase in government spending.

c. high taxes.

d. clear and well enforced property rights.

All of the following promote outward oriented growth policies, EXCEPT:

a. avoiding tariffs and other trade restrictions.
b. reducing as much as possible the paperwork needed to export and import parts and finished goods.
c. allowing foreign money to be invested in our country with the least amount of restrictions.
d. requiring foreign companies to produce their goods in our country, if they want to sell here.

Suppose, country A has a production function

$Y=F(K,L)=K^{½} L^{½}$.

Does this production function have constant returns to scale? Explain.

Yes

Economy in country A and B started at the same GDP per person. After 50 years, the real GDP per person in the country A rose with average annual rate of growth 1% and in the country B 3%.

How many times did the real GDP per person rise in country A and in country B?

In country A, the real GDP rose 1.64 times and in country B 4.38 times.

How many times is the real GDP per person higher in the country B than in the country A?

The real GDP in country B is 2.67 times higher than in country A.

GDP in 2005 was 100 units and in 2008 it was 113 units. What was the average growth rate in the country between 2005 and 2008?

4.2%

The annual growth in the economy was in 2000 5%, in 2001 4% and in 2002 -1%.

What was the average annual growth rate during these three years?

2.6%

Nominal GDP increased by 3%. Prices measured by GDP deflator increased by 5%.

What was the change in the real GDP?

Decrease in the real GDP by 2%

The real GDP increased by 10%. Population growth was 3% in the same period.

What was the change in the real GDP per person?

6.8%