

Econ 108: Principles of Macroeconomics _ Spring 2023

Review Questions - Chapter 21 and Chapter 22

Economic Growth, the Financial System, and Business Cycles

Long-Run Economic Growth: Sources and Policies

MULTIPLE CHOICE QUESTIONS

1. Business Cycles

Potential GDP is the

- a) the value of production with fully employed resources.
- b) current value of production in the economy.
- c) value of production when the economy is in a recession.
- d) value of production when the economy is at a peak.

2. LR Growth

Consider Solow's economic growth model. Which one of the following conclusions is **wrong**?

- a) A country's production capacity will decrease due to the decreasing marginal returns to capital it experiences as it increases capital.
- b) There are decreasing marginal returns to capital accumulation, all else being the same.
- c) Increasing growth rates also depends on technological advances.
- d) A country that has already adopted all the technology available will find it hard to increase growth just with capital accumulation.

3. Saving

Consider the following data for the economy:

Y = 11 billion YTL

C = 8 billion YTL

TR = 1 billion YTL

T = 4 billion YTL

G = 1 billion YTL

What is the amount of national savings?

- a) 1 billion YTL
- b) 2 billion YTL
- c) 3 billion YTL
- d) 4 billion YTL

4. Loanable Funds Market

If technological improvements increase the profitability of new investments, which of the following will occur?

- a) The supply of loanable funds will decrease.
- b) The demand for loanable funds will increase.
- c) The demand for loanable funds will decrease.
- d) The supply of loanable funds will increase.

SHORT ANSWER QUESTIONS

5. Growth in GDP per capita

Define GDP per capita. Explain if it is possible for real GDP per capita to decrease even if there is growth in real GDP. Why is the income of an average household decreasing even though there is an increase in the level of real GDP?

6. Long-Term Growth and Short-run Fluctuations in GDP

- a. What determines potential GDP? What economic policies can the government use to affect potential GDP?
- b. Distinguish between short-run fluctuations in GDP and increases in Potential GDP.

PROBLEMS**7. Solow's Growth Model and Convergence Hypothesis-Long-run Economic Growth**

Problems [21] 1.5, [22] 2.1, 2.2

In theory the income gap between the countries should be narrowing. Empirically this is not what we observe.

- Using the per worker production function graph, show the effect on real GDP per hour worked of an increase in capital per hour worked, holding technology constant. Now again using the per-worker production function graph, show the effect on real GDP per hour worked of an increase in technology, holding constant the quantity of capital per hour worked.
- What are the consequences of diminishing returns to capital for growth? How are some economies able to maintain high growth rates despite diminishing returns to capital?
- Why does the economic growth model predict that poor countries should catch up to rich countries in income per capita? What are the obstacles facing them in trying to increase growth?

8. National Savings and Investment

Consider the following data for a **closed** economy:

$Y = 12$ trillion TL $S_{\text{public}} = -0.5$ trillion TL

$C = 8$ trillion TL $T = 2$ trillion TL

$G = 2$ trillion TL

Use the data to calculate the following:

- Private savings.
- Investment spending.
- Transfer payments.
- The government budget surplus or deficit.
- National saving.

9. Loanable Funds Market and Crowding out of Private Investment

Explain the affects of increased government spending on the investment level and long-run growing prospects of the economy by answering the following questions:

- Show the effects of increased government spending on private investment levels by using well labeled graphs. Clearly indicate the changes in demand and/or supply of loanable funds and the changes in the equilibrium level of interest rate and investment.
- What are the likely consequences of this change in the amount of investment in the long-run growth prospects of the economy?
- Would your answers to question change if government finances its spending increase with an increase in tax?

10. Calculations with National Income Accounts

Suppose you are given the following information about the **closed economy** of Republic of Bilkentistan for the year 2001:

Item	TL
Consumption (C)	700
Income Taxes (T)	400
Transfer payments (TR)	100
Government purchases (G)	250
Business Fixed Investment	250
Residential Investment	200
Business inventories at the end of 2000	150
Business inventories at the end of 2001	50
Labor income before income tax	500
Capital income before income tax	200
Profits before income tax	600

- Solve GDP for the year 2001, using the income approach.
- Find gross private investment (I) for the year 2001.
- Calculate the GDP of the Republic of Bilkentistan using the spending approach.
- Find government savings S_{public} , private savings $S_{private}$ and national savings S .

11. Knowledge Capital as a Public Good

Problem 22.2.3

Why are firms likely to underinvest in research and development, which slows the accumulation of knowledge capital, slowing economic growth? Briefly discuss the ways government policy can increase the accumulation of knowledge capital.