

ECON10003
Introductory Macroeconomics
Semester 1, 2021

Review Session 4

Questions to be discussed

1. In the Solow-Swan model discussed in lectures, an increase in the rate of depreciation of capital stock leads, in equilibrium, to
 - a) an increase in capital per worker and output per worker.
 - b) a decrease in capital per worker and output per worker.
 - c) an increase in capital per worker but no change in output per worker.
 - d) no change in capital per worker but an increase in output per worker.

2. Which of the following production functions does not feature constant returns to scale?
 - a)
 - b)
 - c)
 - d)

3. Suppose two countries have the same production function and identical rates of population growth and depreciation and share the same technology. However, Country B has a relatively higher rate of saving than Country A. According to the Solow-Swan model,
 - a) Country B will have a lower long run level of per capita income than Country A.
 - b) Country B will have the same long run level of per capita income as Country A.
 - c) Country B will have a higher long run level of per capita income than Country A.
 - d) whether or not Country B has a higher level of per capita income than Country A depends on whether the long run rate of economic growth is higher in Country B than in Country A.

4. In the context of the Solow-Swan model studied in this subject, which of the following statements is correct?
 - a) An increase in the proportion of income saved has negative effect on the growth in per capita income in the long run.
 - b) A fall in the rate of population growth raises the steady-state capital-labour ratio.

- c) An improvement in technology has no implications for the economy's steady-state capital labour ratio.
 - d) An increase in per capita income is only possible if there is an increase in the economy's total factor productivity.
5. (a) Imagine two countries both of which are in 'steady state' equilibrium growth and both of which have the same (constant) values of A , d and n but different levels of θ .
- (i) Will one country have a higher level of Y/L than the other? Explain your answer.
 - (ii) Will one country have a higher rate of growth of Y/L than the other? If so, explain how this occurs (be sure to identify what economic processes or 'mechanisms' are involved). If not, explain why not.
- (b) Imagine an economy initially in 'steady state' equilibrium and that (ceteris paribus) the level of A changes so that it is now higher than it was before. Will this lead to a rise in the equilibrium level of Y/L ? If so, explain how this occurs (be sure to identify what economic processes or 'mechanisms' are involved). If not, explain why not.
- (c) Can higher savings rate guarantee sustained higher economic growth for ever? Using Solow-Swan growth model explain your answer.
6. Use the information below to answer the following questions:
"Starting on January 1, 2016, all Chinese couples are allowed to have two children. This marks the end of China's one-child policy, ... By the year 2050, commission projections expect the universal two-child policy to result in an extra 30 million working-age people..."
- a) Using the Solow-Swan model describe the steady state level of per capita output in China before the full effect of 'allowance to have two children' takes place.
 - b) What would happen to the steady state level of per capita output in China in 2050? Explain your answer using the same model.
 - c) Depending on your answer in part (b) what other measure would you suggest to accompany the 'two children policy' for next three decades to ensure maintaining Chinese economic growth?

