NANYANG TECHNOLOGICAL UNIVERSITY
SCHOOL OF SOCIAL SCIENCES
SEMESTER 1 AY25-26

HE1002 MACROECONOMICS I

PROBLEM SET 6

6-1

Is there a negative, positive, or no relationship between the price level and the following components of aggregate demand?

a. Consumption.

b. Investment.

c. Government spending.

d. Net exports.

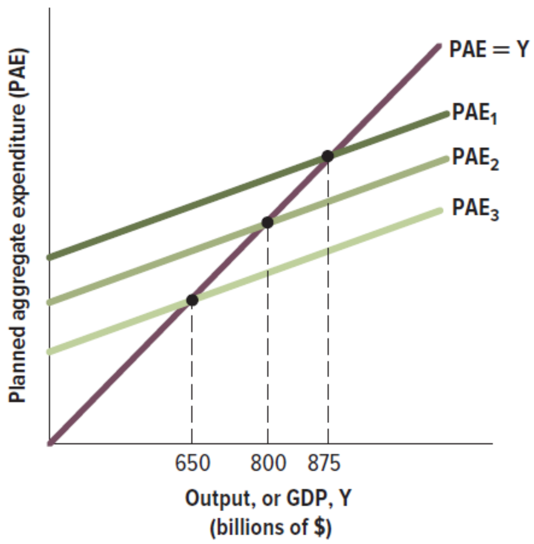
6-2

If the government cuts taxes, what components of aggregate demand are affected?

6-3

Consider the planned aggregate expenditure lines in Figure 12P-1.

Figure 12P-1



a. Suppose that the planned aggregate expenditure lines correspond to price levels of 100, 110, and 120. Which line corresponds to which price level?

b. Use the information in the expenditure diagram to trace out the aggregate demand curve for this economy.

6-4

For each of the following shocks, say whether it is a demand-side shock or a supply-side shock.

a. Consumer confidence falls.

b. Government spending increases.

c. The price of foreign goods increases.

d. The price of oil increases.

e. A cyclone destroys manufacturing plants.

6-5

In the late 1990s, the U.S. experienced a technology boom. In part the boom was due to a revolution in communication technology that resulted in a massive expansion of the Internet; in part the boom was due to households and firms purchasing new computer equipment in anticipation of Y2K. What two curves of the model would be affected by these events?

6-6

Suppose the marginal propensity to consume (MPC) is either 0.55, 0.95, or 0.75.

a. For each value of the MPC, calculate the expenditure multiplier, or the impact of a one-dollar increase in government spending on GDP.

b. For each value of the MPC, calculate the impact on GDP of a $250 million increase in government spending.

c. Explain the relationship between the MPC and the impact of a change in government spending on GDP.

6-7

Suppose the marginal propensity to consume (MPC) is either 0.75, 0.80, or 0.90.

a. For each value of the MPC, calculate the impact of a one-dollar decrease in taxes on GDP.

b. For each value of the MPC, calculate the impact on GDP of a $250 million decrease in taxes.

c. Explain the relationship between the MPC and the impact of a change in taxes on GDP.

6-8

Say whether the following statements are true or false.

a. In the long run, prices don’t affect output.

b. In the short run, prices may affect output.

6-9

Say whether the following statements are true or false.

a. If the prices of all final goods and services are sticky, then the short-run aggregate supply (SRAS) curve is horizontal at the given price level.

b. If the prices of inputs and wages are not fixed by contracts, and instead adjust more quickly to demand and supply shocks, then the SRAS curve is more vertical.

6-10

"Fracking" is a relatively new technology that allows drillers to extract significantly larger quantities of natural gas from existing deposits than was previously possible. How is this discovery likely to affect the economy? (*Hint:* Think about whether this will have a short-run or long-run effect.)

6-11

Throughout the nineteenth and twentieth centuries, the U.S. economy experienced frequent ups and downs, but over the past 200 years, the real GDP in the United States rose from roughly $8.2 billion to over $16.1 *trillion*, an increase by a factor of nearly 2,000 times. This growth represents a change in which curve?

6-12

Suppose that a statement by the chair of the Federal Reserve Board about the state of the economy causes a loss of consumer confidence. What will be the long-run impact on the economy if the government allows the economy to adjust without a policy response?

a. Output will fall below its initial level in the long run and the price level will decline.

b. Output will return to its initial level in the long run, but the price level will be lower.

c. Output will return to its initial level in the long run, but the price level will be higher.

d. Output will rise above its initial level in the long run and the price level will rise.

6-13

For each of the following situations, use an AD/AS model to describe what happens to price levels and output in the United States in the short run. In each case, assume the economy starts in long- and short-run equilibrium, and describe the appropriate shifts in the AS or AD curves.

a. A stock market crash reduces people's wealth.

b. The spread of democracy around the world increases consumer confidence in the United States.

c. The European economy crashes.

d. The United States enters into an arms race with China, resulting in a significant increase in military spending.

e. A revolution in Iran results in a significant reduction in the world's supply of oil.

f. Terrorist activities temporarily halt the ability of Americans to engage in certain productive activities such as transportation and finance.

g. Intel develops a new computer chip that is faster and cheaper than previous chips.

h. A summer of perfect weather in the Midwest leads to record harvests of corn, wheat, and soybeans.

6-14

For each of the following scenarios, say whether the shock was a demand-side shock, a supply-side shock, or a combination of both shocks.

a. The price level and GDP both fell. GDP then increased, but the price level fell even further.

b. In the long run, the economy had the same level of output but a higher price level.

c. In the short run, the price level increased, but GDP fell.

d. In the long run, GDP increased, and the price level fell.

e. In the long run, GDP increased, and the price level was constant.

6-15

In 2009, during the height of the U.S. financial crisis, real GDP fell 3.5 percent, and the Consumer Price Index fell from 215.3 to 214.9. Was this recession likely caused by a shift in aggregate demand or aggregate supply?

6-16

In 1974, GDP fell by 0.6 percent, and inflation increased from 6.2 percent to 11.0 percent. Was this recession likely caused by a shift in aggregate demand or aggregate supply?

For questions 17–20, use an AD/AS model to answer the following questions. In each case, assume the economy starts in long- and short-run equilibrium, and show the appropriate shifts in the AS or AD curves.

6-17

Suppose a stock market crash reduces people’s wealth.

a. Show what happens to price levels and output in the U.S. in the short run.

b. Suppose the government takes no action to help the economy. What happens to price levels and output in the long run?

c. Suppose, instead, the government decides to take action to help the economy. What action(s) would you recommend? Why?

d. If the U.S. government makes the appropriate policy response, what happens to price levels and output in the long run?

6-18

Suppose the spread of democracy around the world increases consumer confidence in the United States.

a. Show what happens to price levels and output in the United States in the short run.

b. Suppose the government takes no action to help the economy. What happens to price levels and output in the long run?

c. Suppose, instead, the government decides to take action to help the economy. What action(s) would you recommend? Why?

d. If the U.S. government makes the appropriate policy response, what happens to price levels and output in the long run?

6-19

Suppose a revolution in Iran results in a significant reduction in the world’s supply of oil.

a. Show what happens to price levels and out-put in the United States in the short run.

b. Suppose the government takes no action to help the economy. What happens to price levels and output in the long run?

c. Suppose, instead, the government decides to take action to help the economy. What action(s) would you recommend? Why?

d. If the U.S. government makes the appropriate policy response, what happens to price levels and output in the long run?

6-20

Suppose a summer of perfect weather in the Midwest leads to record harvests of corn, wheat, and soybeans.

a. What happens to price levels and output in the United States in the short run?

b. Suppose the government takes no action to help the economy. Show what happens to price levels and output in the long run.

c. If the U.S. government reacts to the record harvests by increasing taxes or decreasing spending, what happens to price levels and output in the long run?

d. What is the problem associated with the government reacting to the record harvests by increasing taxes or decreasing spending?