Econ 108: Principles of Macroeconomics _ Spring 2023

Review Questions - Chapter 23

Ch 23: Aggregate Expenditure and Output in the Short-Run

Part I: Multiple Choice Questions

1. Aggregate Expenditure Model

The key idea of the aggregate expenditure model is that in any particular year, the level of _____ is determined mainly by the level of aggregate expenditure.

a) price
b) export spending
c) government spending
d) GDP

2. AE Model – Unplanned Changes in Inventories

Consumption is 5 million TL, planned investment spending is 8 million TL, government purchases are 10 million TL, and net exports are equal to 2 million TL. If GDP during that same time period is equal to 23 million TL, what unplanned changes in inventories occurred?

a) There was an unplanned increase in inventories equal to 2 million TL.
b) There was no unplanned change in inventories.
c) There was an unplanned decrease in inventories equal to 2 million TL.
d) There was an unplanned decrease in inventories equal to 19 million TL.

3. Marginal Propensity to Save

If the marginal propensity to save is 0.1, then a 10 million decrease in disposable income will

a) increase consumption by 9 million.
b) increase consumption by 1 million.
c) decrease consumption by 9 million.
d) decrease consumption by 1 million.

4. Crowding Out and the Fiscal Stimulus [Ch 27]

If policy makers implement an expansionary fiscal policy to restore economy to its potential level but do not take into account the possibility of crowding out, the new equilibrium level of GDP is likely to

a) be at potential GDP.
b) be above potential GDP.
c) be below potential GDP.
d) insufficient information.

5. Crowding Out [Ch 27 and Loanable Funds Market]

Crowding out will be bigger and hence multiplier smaller

a) the more sensitive consumption spending is to changes in the interest rate.
b) the lower the confidence of the firms about future profitability.
c) the more sensitive investment spending is to changes in the interest rate.
d) the closer the interest rates to zero.

Part II: Short Answer Questions and Problems

6. Consumption Function

Answer the following questions about the consumption function:

a. Use a well labeled figure to graph the consumption function with an autonomous spending of 100 TL and a marginal propensity to consume of 0.8. Explain.
b. List a few things that would influence the household consumption behavior.

7. Aggregate Expenditure Curve – Shifts versus Movements Along

Define AE. Differentiate between movement along the AE curve and Shifts of the AE curve.

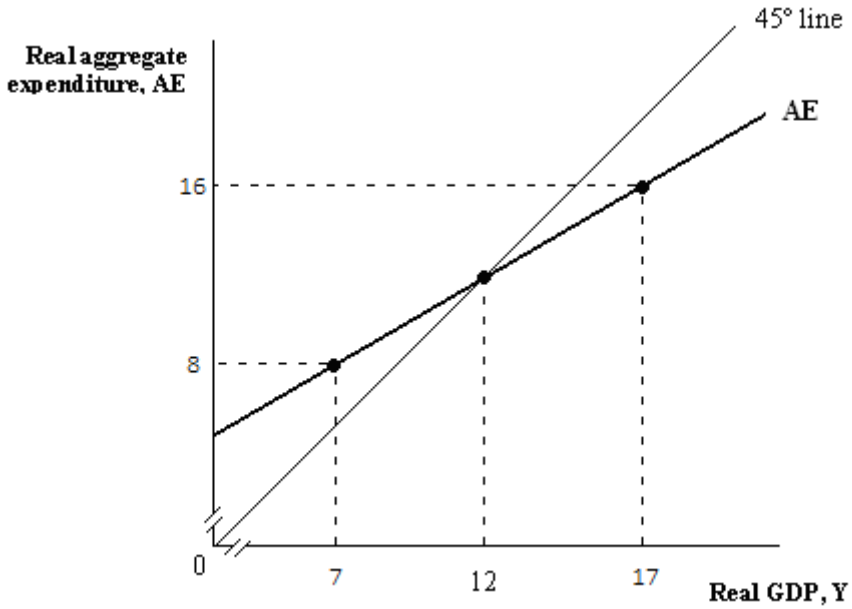
8. Changes in Aggregate Expenditure

How would the aggregate expenditures be affected by each of the following? At each step be sure to state (i) which component/or components of AE is affected [C, I, G or NX], (ii) the direction of change in these components [an increase or a decrease], (iii) the change in AE [an increase or a decrease].

a. A decrease in consumer credit availability in the economy.
b. An increase in real interest rates.
c. An increase in planned investment spending in the economy.
d. A decrease in p-level
e. An increase in national income

9. Reading Information from the Aggregate Expenditure Curve

Use the graph to answer the questions:



a. What is the value of equilibrium real GDP?
b. What is the value of MPC?
c. What is the value of the autonomous spending multiplier?
d. What is the value of unplanned changes in inventories when real GDP has each of the following values?
   - 7 TL
   - 12 TL
   - 17 TL
e. If the planned investment is 3 TL, what is the actual level of investment at the income level of 17 TL
f. If domestic income is 22 TL what would be the level of AE at this income level?
g. What is the level of aggregate expenditures at the income level of 0? Or equivalently what is the level of autonomous spending?

10. Aggregate Expenditures Model and Macroeconomic Equilibrium

Consider the small closed economy of KeynesLand in which prices are constant, taxes and transfer payments are autonomous (does not depend on the level of income) and marginal propensity to consume (mpc) does not change as GDP changes.

	Real GDP (Y)	Consumption (C)	Planned Investment (I)	Government Purchases (G)	Aggregate Expenditure (AE)	Unplanned Change in Inventories
A	3000	2900	125	175	_____	_____
B	4000	_____	125	175	_____	_____
C	5000	4500	125	175	_____	_____

Macroeconomic equilibrium:

a. Solve for the value of marginal propensity to consume (mpc).

b. Complete the missing values for consumption, aggregate expenditure at each income level and unplanned changes in inventories.

c. Indicate the equilibrium GDP.

d. Draw a 45-degree line diagram to depict AE function as given by the data above. Mark the equilibrium GDP, levels of AE and levels of unplanned inventories for all income levels.

e. Explain why 3000 level of GDP is not equilibrium. Do not give a mechanical answer, explain the economic mechanism involved.

Autonomous spending multiplier:

f. Solve for the (simple) autonomous spending multiplier. Suppose that the full employment level of GDP is 5000. What increase in government spending is required to close the recessionary output gap?

11. Understanding the Multiplier Process

Calculate the first **three rounds** of the multiplier effect for a 100 TL increase in investment (I) in the following two cases. Indicate the change in national income (ΔY), disposable income (ΔY_D) and change in consumption (ΔC) at each step.

a. A closed economy with a marginal propensity to consume of 0.9 and an autonomous tax (T).

b. An open economy with autonomous taxes (T) and marginal propensity to consume of 0.9, and yet 30% of every additional consumption is on imports.

c. Explain the multiplier effect briefly, and without solving for the value of the multiplier explain for which of the two cases given above the value of the multiplier will be larger.

12. National Income Identity and Keynesian Cross

National income identity suggests that expenditures and income are always equal. But in Keynesian cross analysis AE and total production (national income) can be different. Is there an inconsistency here? Explain.

13. Multiplier Process

Explain the multiplier process intuitively. Why say an increase in planned government spending of 100 TL raises equilibrium output (and income) by more than 100 TL? Why it is important to know about the size of the multiplier?

14. Value of Multiplier

Answer the following questions to understand how our spending multiplier differs from the real-world spending multiplier.

a. What is the formula for the autonomous spending multiplier? Explain why this formula is too simple.

b. Explain whether each of the following would cause the value of the multiplier to be larger or smaller:

- Imports are not constant but increases with real GDP.
- Price level is not constant but increases with real GDP.
- Consumption is not very sensitive to current income but on average lifetime income.
- Income tax is not autonomous but dependent on income.
- Increase in one spending component leading to offsetting effects on another spending component.

15. Planned and Unplanned Changes in Inventories [23.3.8 and 23.3.9 modified]

A Federal Reserve Board publication makes the following observation: "the impact of inventory increases in the business cycle depends upon whether the increases are planned or unplanned." Suppose that businesses added 1000 billion to their inventories, but it is not known for now if that build up was voluntary on involuntary.

a. What would cause the build up to be voluntary?

b. What would cause the build up to be involuntary?

c. What difference would it make if the inventory build up was voluntary or involuntary? Use two separate AE diagrams to show the effects of a voluntary build up and an involuntary build up on the future level of GDP. Briefly explain.

16. Government Spending Multiplier & Tax Multiplier [Ch 27]

a. Define (government) autonomous spending multiplier.

b. Define the tax multiplier. Explain how it differs from the spending multiplier in sign and in magnitude.

c. Explain what the balanced budget multiplier is, and what would it mean that it is greater than 0.

17. Expansionary Fiscal Policy [Ch 27]

Suppose that there is a recessionary gap and government is trying to increase the real GDP by 150 TL.

a. **Using fiscal policy to stabilize the economy _G:** If the autonomous spending multiplier is 3, how much will government purchases have to be changed (and in which direction) to bring real GDP to its potential level?

b. **Using fiscal policy to stabilize the economy _tax:** If the tax multiplier is -2, how much taxes would have to be changed (and in which direction) to bring real GDP to its potential level?

c. **Using a balanced budget fiscal policy:** If authorities want to keep the budget balanced while trying to eliminate the recessionary gap, what policy would you suggest? To keep the budget balanced, taxes should increase by the same amount as the increase in government purchases. What kind of increase in government spending (and the same amount of increase in taxes) will be needed to increase GDP by 150 TL?

18. Government Spending Multiplier & Tax Multiplier [Ch 27]

Suppose that the government increases its spending by 10 billion but will not allow a deficit so at the same time it increases taxes by 10 billion. Will the equilibrium level of income rise, fall or stay the same? Explain your reasoning. Assume a mpc = 0.8 and **constant prices.**