

Name _____

Date _____

UNIT
3

Macroeconomics

LESSON 1 ■ ACTIVITY 19

Session 15

Keynesian Equilibrium

This activity is designed to give you practice with manipulations of the aggregate expenditure model. It shows you how the expenditure schedule is derived and how it helps to determine the equilibrium level of income. This activity assumes that the price level is constant with the consumer price index or price level having a value of 100. All numbers in Figure 19.1 are in billions of constant dollars.



Figure 19.1

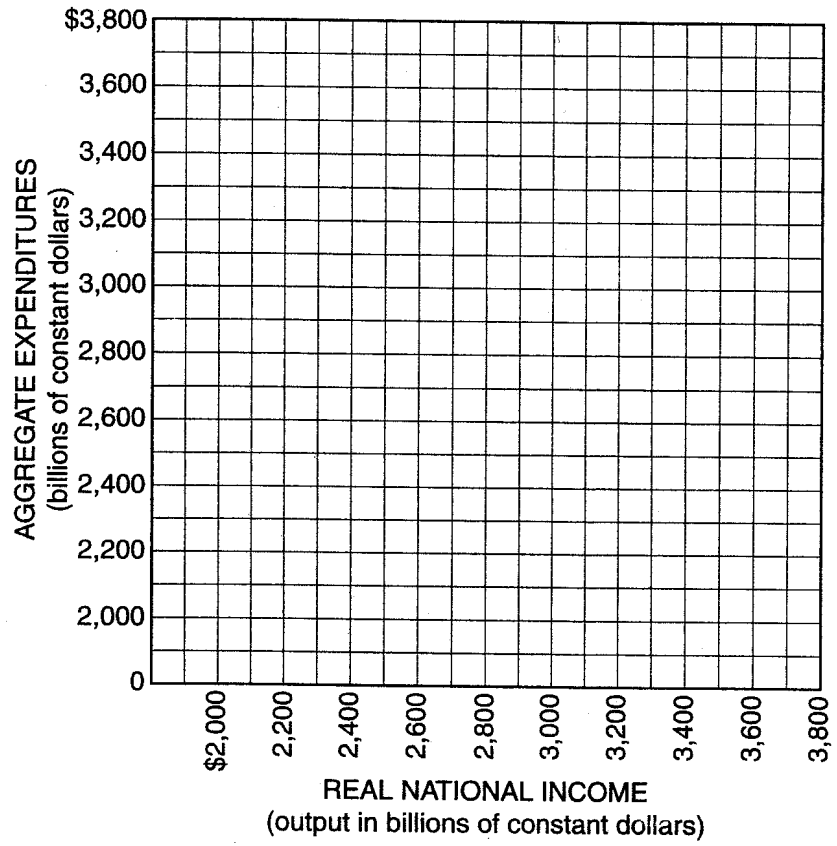
Income-Expenditure Schedule

Income (Output)	Consumption Spending	Investment Spending	Government Spending	Total Spending (Aggregate Expenditure)
\$2,400	\$2,500	\$300	\$100	
2,600	2,600	300	100	
2,800	2,700	300	100	
3,000	2,800	300	100	
3,200	2,900	300	100	
3,400	3,000	300	100	
3,600	3,100	300	100	
3,800	3,200	300	100	

- Use the data on consumption spending and income to draw the consumption function on the graph in Figure 19.2. Label the function C.
- Using the consumption function you have just drawn and the data on investment and government spending, draw the aggregate expenditure schedule on the same graph. Label it AE ($C + I + G$). What is the difference between the aggregate expenditure schedule and the consumption function?
- Now draw a line representing all the points at which total spending and income could be equal. Label this the 45° line.
- The 45° line represents all the points that *could be* the equilibrium level of total spending. Now circle the one point that *is* the equilibrium level of total spending. What is the equilibrium level of total spending on your graph? _____

Adapted from William J. Baumol and Alan S. Blinder, *Economics, Principles and Policy*, 3rd ed. (New York: Harcourt Brace & Company, 1985), p. 55. James Chasey, Homewood-Flossmoor High School, Flossmoor, Ill., contributed to this activity.

Figure 19.2
Aggregate Expenditure Model



5. Based on the data in Figure 19.1, and assuming that the full-employment level of total spending is \$3,600 billion, what conclusions can you draw about the equilibrium level of total spending?

6. Based on the data in Figure 19.1, and assuming that the full-employment level of total spending is \$3,200 billion, what conclusions can you draw about the equilibrium level of total spending?

7. If government spending increased by \$100 billion, what would be the new equilibrium level of total spending? _____ For the increase of \$100 billion in government spending, total spending increased by _____. Explain why this occurs.

Practice with APC, APS, MPC and MPS

Part A

Average Propensities

The *average propensity to consume* (APC) is the ratio of consumption expenditures (C) to disposable income (DI), or $APC = C / DI$.

The *average propensity to save* (APS) is the ratio of savings (S) to disposable income, or $APS = S / DI$.

- Using the data in Figure 20.1, calculate the APC and APS at each level of disposable income given. The first calculation is completed as an example.



Figure 20.1

Average Propensities to Consume and to Save

Disposable Income	Consumption	Saving	APC	APS
\$0	\$2,000	-\$2,000	—	—
2,000	3,600	-1,600	1.8	-0.8
4,000	5,200	-1,200		
6,000	6,800	-800		
8,000	8,400	-400		
10,000	10,000	0		
12,000	11,600	400		

- How can savings be negative? Explain.

Part B

Marginal Propensities

The *marginal propensity to consume* (MPC) is the change in consumption divided by the change in disposable income. It is a fraction of any change in DI that is spent on consumer goods: $MPC = \Delta C / \Delta DI$.

The *marginal propensity to save* (MPS) is the fraction saved of any change in disposable income. The MPS is equal to the change in saving divided by the change in DI: $MPS = \Delta S / \Delta DI$.

- Using the data in Figure 20.2, calculate the MPC and MPS at each level of disposable income. The first calculation is completed as an example. (This is not a typical consumption function. Its purpose is to provide practice in calculating MPC and MPS.)

Activity written by John Morton, National Council on Economic Education, New York, N.Y., and James Spellicy, Lowell High School, San Francisco, Calif.



Figure 20.2

Marginal Propensities to Consume and to Save

Disposable Income	Consumption	Saving	MPC	MPS
\$12,000	\$12,100	-\$100	—	—
13,000	13,000	0	0.90	0.10
14,000	13,800	200		
15,000	14,500	500		
16,000	15,100	900		
17,000	15,600	1,400		

4. Why must the sum of MPC and MPS always equal 1?

Part C



Figure 20.3

Changes in APC and MPC as DI Increases

Disposable Income	Consumption	Savings	APC	APS	MPC	MPS
\$10,000	\$12,000	-\$2,000			—	—
20,000	21,000	-1,000				
30,000	30,000	0				
40,000	39,000	1,000				
50,000	48,000	2,000				
60,000	57,000	3,000				
70,000	66,000					

5. Complete Figure 20.3, and answer the questions based on the completed table.
6. What is the APC at a DI level of \$10,000? _____ At \$20,000? _____
7. What happens to the APC as DI rises? _____
8. What is the MPC as DI goes from \$50,000 to \$60,000? _____ From \$60,000 to \$70,000? _____
9. What happens to MPC as income rises? _____ What happens to MPS as income rises? _____
10. What is the conceptual difference between APC and MPC?