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Introduction to Macroeconomics

Chapter objectives:

1. Describe the three main concerns of macroeconomics and provide simple definitions of inflation and unemployment.
2. Describe the behavior of the business cycle.
3. List the four economic sectors and describe how they interact through the three market arenas.
4. Explain how macroeconomic issues relate to the government's policy decisions. List three policies that the government may use to influence the economy. Indicate the principal tools of each policy.
5. Briefly describe the development of Keynesian macroeconomic theory and place it within the context of then-current economic events.

The material skimmed over in this introductory chapter will be explored more completely in subsequent chapters. Think of this chapter as a road map showing major points of interest.

»» LEARNING TIP: Different economists support different interpretations of how the economy fits together. If you're grade oriented (or even if you're not), it might be a good idea to identify the preferences of your own instructor, even if it's for no other reason than that it will help you to identify the areas of controversy.◀



OBJECTIVE 1:

Describe the three main concerns of macroeconomics and provide simple definitions of inflation and unemployment.

Major topics of concern in macroeconomics are: growth in aggregate output (and the business cycle); the unemployment rate (the percentage of labor force that is unemployed); and the inflation rate (a general increase in the aggregate price level). In the sputtering economy of the early 2000s, deflation (a general decrease in the aggregate price level) became a plausible threat. (page 98 [410])

Whereas microeconomics concerns itself with the functioning of individual industries, households and firms and particular prices, macroeconomics focuses on the determinants of national income, the overall price level, and aggregate employment. Macroeconomists attempt to measure aggregate output and to detect business cycles, which feature recessions (when aggregate output is shrinking) and expansions.

The unemployment rate is a key and widely-reported measure of the economy's health. The persistence of unemployment seems to imply that the labor market is not in equilibrium. Macroeconomics examines why this might be so.

Macroeconomics are also concerned with how the overall price level is changing. If the level increases, there is inflation; if it decreases, there is deflation.

Macroeconomics, then, is concerned with aggregate measures whereas microeconomics is concerned with individual measures.

◆◆◆ LEARNING TIP: Refer to Chapter 1 to refresh your memory on the distinction between microeconomics and macroeconomics.■

Practice

1. _____ is when there are extremely rapid increases in the overall price level.
- Inflation
 - Stagflation
 - Hyperinflation
 - Superflation

ANSWER: (c) Refer to p. 92 [404] for the definition.

2. Aggregation refers to
- the behavior of all individuals in a group taken together.
 - the calculation of average values by adding together and dividing.
 - forecasting future values, based on past data.
 - the development of the microeconomic foundations of macroeconomics.

ANSWER: (a) Refer to p. 96 [408] for more on this.

3. A recession occurs when aggregate output declines for _____ consecutive _____.
- two; months
 - two; quarters
 - three; months
 - three; quarters

ANSWER: (b) Refer to p. 90 [402] for the definition of recession.

4. At the beginning of 2009, the Lifeguards' Union negotiates a wage contract of \$8 per hour for lifeguards. The summer of 2009 is especially bleak, with little beach activity. Although the demand for lifeguards decreases, their hourly wage rate does not. This is an example of a
- macroeconomic price.
 - price control.
 - sticky price.
 - price ceiling.

ANSWER: (c) If the price of lifeguard services were influenced by changes in market conditions, the price (wage) should have fallen. The contractual agreement made the price "sticky."■



OBJECTIVE 2:

Describe the behavior of the business cycle.

The U.S. economic record since 1900 has shown a long-term underlying expansion (growth trend), but with fluctuations around this trend. Economists call these fluctuations “business cycles”—the Great Depression being the most grave example. Each cycle consists of four phases—peak, recession, trough, and expansion. One goal of government economic policy has been to smooth out business cycles and have the economy stay on a more even keel. (page 90 [402])

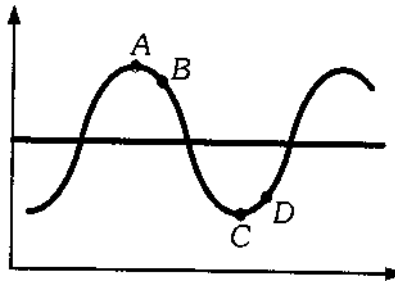
◆◆◆ LEARNING TIP: Do a little simple macroeconomic research. Find out the inflation rate and the unemployment rate. The numbers are reported monthly. How is your state doing, in terms of unemployment, relative to the national economy? Why?◆

Practice

5. In a recession we expect to see unemployment _____ and output _____ .
- increasing; increasing
 - increasing; decreasing
 - decreasing; increasing
 - decreasing; decreasing

ANSWER: (b) In Question 3 we defined a recession as a period of decreasing output. As output decreases (usually because of falling aggregate demand), the unemployment lines lengthen

Use the following diagram of a business cycle to answer the next two questions.



6. In the diagram of a business cycle, _____ is on the vertical axis; _____ is on the horizontal axis.
- inflation; unemployment
 - unemployment; inflation
 - gross domestic product; time
 - time; gross domestic product

ANSWER: (c) The diagram plots output level over time. Add this information to the preceding diagram. Refer to the diagram on p. 91 [403].

7. In the preceding diagram, the expansion of the business cycle occurs at Point _____ and the recession occurs at Point _____.
- (a) A; B
 - (b) A; C
 - (c) B; C
 - (d) D; B

ANSWER: (d) The peak is at Point A, the recession at Point B, the trough at Point C, and the expansion at Point D. ■



OBJECTIVE 3:

List the four economic sectors and describe how they interact through the three market arenas.

The circular flow model (Figure 5.3 [20.3]) represents the linkages among the four different sectors of the economy—households, firms, the government, and the rest of the world. There are three major markets—goods-and-services, labor, and money—and the four sectors interact in each of these. (page 92 [404])

◆◆◆ LEARNING TIP: The circularity makes an important point—each dollar spent is also a dollar earned as income by producers. You will see this concept again in Chapter 6 (21).◆

There are numerous markets within each “market arena”—the goods-and-services market contains the market for cars, coffee, corn flakes, and cotton swabs, for example. Each “market arena” is a macroeconomic aggregation. (page 93 [405])

◆◆◆ LEARNING TIP: Learn the model! The macro model begun in this chapter will be built upon through successive chapters, but the logic within it will remain the same. You’ll find the going easier if you master each step as it is presented, rather than waiting and trying to make sense of it all at once in its completed form or before a test. The circular flow diagram (p. 93 [405]) is the place to start. Throughout the remainder of your macro course the fourfold division— consumers/businesses/government/international—will be present, and the three market arenas will be at, or close to, center stage.

◆◆◆ LEARNING TIP: As Case, Fair and Oster advise, you’ll find macroeconomics easier if you think in terms of the “typical” consumer or firm. Macroeconomists don’t claim that all individuals respond in the same way in each circumstance, but they do try to draw out the general tendency, and you should strive to do the same. Macroeconomics is interested in the forest, not the trees, so ignore exceptions. Inflation, for example, occurs when the general (aggregate) price level is rising. Some prices (DVDs, CDs, calculators) may be falling—but the general price trend is upward. Similarly, although you have a friend who has just found a job, the general unemployment rate can still be rising.◆

Practice

8. Households are
- (a) only demanders in the money market.
 - (b) only suppliers in the money market.
 - (c) both demanders and suppliers in the money market.
 - (d) neither demanders nor suppliers in the money market—banks are.

ANSWER: (c) Households deposit (supply) funds and borrow (demand) funds. Refer to p. 93 [405].

9. The main point to draw from the circular flow diagram is that

- (a) saving will always equal investment.
- (b) every dollar of expenditure is also a dollar of income.
- (c) exports equal imports.
- (d) wages equal income.

ANSWER: (b) Option (d) is incorrect—other payments (rent and dividends, for example) are part of income. Because we typically run a trade deficit in the United States, we know that exports and imports are not necessarily equal. Saving and investment are not mentioned explicitly in the diagram—more about them later.

10. In the money market, all of the following are true EXCEPT that
- (a) households supply funds and demand funds.
 - (b) the government borrows by issuing bonds.
 - (c) businesses borrow by issuing bonds.
 - (d) businesses borrow by issuing dividends.

ANSWER: (d) A dividend is a payment received from a firm by its shareholders.

11. In our model of the macroeconomy, each of the following is a market arena in which households, firms, the government, and the rest of the world interact EXCEPT
- (a) the goods-and-services market.
 - (b) the foreign trade market.
 - (c) the labor market.
 - (d) the money market.

ANSWER: (b) Modeling in economics, as in other sciences, involves selection. Our model chooses to exclude the foreign trade market as a separate arena. Refer to p. 93 [405]. ■



OBJECTIVE 4:

Explain how macroeconomic issues relate to the government's policy decisions. List two policies that the government may use to influence the economy. Indicate the principal tools of each policy.

Macro problems may be attacked through the use of fiscal policy actions or monetary policy actions. *Fiscal policy* involves manipulating the amount of taxation and government spending; *monetary policy* involves adjusting the quantity of money available. An expansionary policy is designed to encourage economic growth; a contractionary policy is designed to slow expansion. An expansionary fiscal policy might reduce taxes and/or increase government spending. An expansionary monetary policy will increase the money supply and reduce interest rates. (page 95 [407])

12. The economy is in a recession. Using fiscal policy tools, the government might _____ government spending and _____ taxes.
- (a) increase; increase
 - (b) increase; decrease
 - (c) decrease; increase
 - (d) decrease; decrease

ANSWER: (b) Raising government spending will increase overall spending (aggregate demand). Cutting taxes will also increase overall spending. This is an expansionary fiscal policy.

13. A contractionary fiscal policy is likely to be enacted during a(n) _____; a contractionary monetary policy is likely to be enacted during a(n) _____.
- (a) expansion; expansion
 - (b) expansion; contraction
 - (c) contraction; expansion
 - (d) contraction; contraction

ANSWER: (d) Contractionary policies are intended to stimulate a faltering economy.

14. In 2007, working-class parents received a child tax credit rebate of \$500 per child. This is best classified as a
- (a) fiscal policy because it used taxes to stabilize the economy.
 - (b) fiscal policy because taxes were used as incentives to work, save, and invest.
 - (c) monetary policy because it was designed to stabilize the economy.
 - (d) monetary policy because taxes were used as incentives to work, save, and invest.

ANSWER: (a) This payment had little impact on the decision to work, save, and invest. The check was meant to be spent while the economy was faltering. ■



OBJECTIVE 5:

Briefly describe the development of Keynesian macroeconomic theory and place it within the context of then-current economic events.

Macroeconomics was born out of the dark days of the Great Depression in the 1930s when the labor market didn't clear in the way that the classical model predicted it should—wages and prices were “sticky” and unemployment persisted for years. John Maynard Keynes performed a theoretical rethink and argued that employment is not determined by prices and wages but by the level of aggregate demand for goods and services. Macroeconomics remains a controversial area of study. (page 96 [408])

Evolution: Macroeconomics evolves in light of new information and phenomena. Keynes's economic theory was a product of, and response to, his own (unemployment-ridden) era. Existing theory couldn't analyze the conditions that he observed. Later developments have followed the same pattern—an orthodox view; some fresh, “awkward” real-world facts; a revision of the theory.

The 1960s had high levels of demand, a booming war-time economy, and a quest for the Great Society. It was believed that the government should act to stabilize the macroeconomy. Employment levels and job opportunities were high, but so was the inflation rate. This environment differed from the one that prompted Keynes to rethink economic analysis. Inflation, which became a serious issue in the 1970s, hadn't been a critical factor for him. A new controversy arose—between Keynesians and “monetarists.” More on this in Chapter 18 (33).

Next came the soaring oil prices in the 1970s and the phenomenon of stagflation—supply-side economics was born. Refer to Chapter 18 (33).

The long strong economy of the 1990s bred a feeling of consensus, but macroeconomics remains riddled with controversy and debate.

ECONOMICS IN PRACTICE: On page 97 [409], the textbook invites you to compare passages from two novels, “The Great Gatsby” and “The Grapes of Wrath.” The former was written and based on a time before the Great Depression, the latter during it. For a change of medium, visit Blockbuster and rent “Gold Diggers of 1933.” “Gold Diggers” opens with “We’re in the Money” (a Broadway production number that is interrupted as local deputies close the theater for nonpayment of bills) and climaxes with a harrowing staging of “Remember My Forgotten Man” (a song which features hundreds of extras and is about unemployed doughboys consigned to the breadline and the soup kitchen). Why did the Hollywood studios choose to make such extravagant movies during the depths of the Great Depression?

ANSWER: During the Depression, with high unemployment, labor was cheap, and studios were able to afford large casts in front of, and behind, the camera. On the demand side, with shrinking incomes, audiences discovered that movies were a cheap form of entertainment and, often, a temporary escape from one’s troubles. Movies were an inferior good—refer to Chapter 3. Movie theaters were warm in the winter and cool in the summer. Popcorn (a complement) was a luxury that families could afford—popcorn sales increased during the Depression.

ECONOMICS IN PRACTICE: On page 98 [410], the textbook offers a brief biography of John Maynard Keynes, the father of modern macroeconomics. Keynes began as a so-called “classical” economist and broke away during the Great Depression when orthodox theory seemed to be failing. His “General Theory” appeared in 1936. However, in 1930, between the Wall Street collapse of 1929 and the publication of his ground-breaking book, Keynes published a non-technical piece entitled “Economic Possibilities for our Grandchildren,” an article speculating on the economy of the future. It begins, “We are suffering just now from a bad attack of economic pessimism.” Read Keynes’s article (it’s available on the Internet or in collections of his writings) and compare his predictions with what has happened since 1930.

ANSWER: Some of Keynes’s predictions are remarkably accurate although some are not. Keynes clearly believed that the Great Depression was only a temporary setback. He argued that the subsistence needs of society would be satisfied and that future generations would be enjoying “an age of leisure and of abundance” and 15-hour workweeks. There is an old joke in economics that forecasters have correctly predicted nine of the last six recessions—even our best models have limitations! Your reading of this article by one of the most eminent of economists should convince you to take the predictions of present-day economic and political pundits with a generous grain of salt.

Practice

15. The notion that the government can stabilize the economy is known as
- classical macroeconomics.
 - growth economics.
 - proactive business cycle management.
 - fine-tuning.

ANSWER: (d) “Fine-tuning” suggests that the government can adjust macroeconomic variables (inflation and unemployment) very precisely through carefully selected policy actions.

16. Before the Great Depression, the “classical” economists assumed that wages were _____ upward and _____ downward.
- flexible; flexible

- (b) flexible; not flexible
- (c) not flexible; flexible
- (d) not flexible; not flexible

ANSWER: (a) The classical economists believed that the wage would respond to shifts in the demand for, and supply of, labor. Refer to p. 96 [408].

17. Before the Great Depression, the “classical” economists predicted that, if the demand for labor fell, then
- (a) the wage would increase, the supply of labor would increase, and unemployment would occur.
 - (b) the wage would decrease, the supply of labor would decrease, and unemployment would occur.
 - (c) the wage rate would fall to clear the market, resulting in higher unemployment.
 - (d) the wage rate would fall to clear the market, reducing the quantity of labor supplied and eliminating unemployment.

ANSWER: (d) Try drawing the labor market using demand and supply curves. The classical economists used microeconomic tools. Unfortunately, they failed to take into account contracts, minimum wages, and the possibility that the wage level could become stuck.

18. In general, over the past 25 years, the inflation rate has been _____ and the unemployment rate has been _____ .
- (a) increasing; increasing
 - (b) increasing; decreasing
 - (c) decreasing; increasing
 - (d) decreasing; decreasing

ANSWER: (d) Refer to Figures 5.5 (20.5) and 5.6 (20.6). While there has been some variability, there has been a general downward trend.

19. In 2008, there was some concern about “stagflation” in the economy. If stagflation was present, we should expect
- (a) high inflation and low stock market prices.
 - (b) high inflation and high unemployment.
 - (c) low interest rates and falling stock market prices.
 - (d) a declining overall price level and high unemployment.

ANSWER: (b) Stagflation means high inflation and high unemployment with negative growth.

20. Keynes believed that the level of employment is determined by
- (a) the wage level.
 - (b) the aggregate (overall) price level.
 - (c) aggregate demand.
 - (d) stock prices.

ANSWER: (c) Keynes’s macroeconomic model is driven by aggregate demand (refer to p. 96 [408]). When there is an increase in the demand for goods and services, there is an increase in employment. ■

PRACTICE TEST

I. MULTIPLE-CHOICE QUESTIONS

Select the option that provides the single best answer.

- _____ 1. Which of the following is not a macroeconomic variable?
(a) The interest rate
(b) The general price level
(c) The price of beer
(d) Gross domestic product
- _____ 2. Keynes argued that the primary determinant of the level of economic activity is
(a) the amount of money there is to spend.
(b) the aggregate demand for goods and services.
(c) the aggregate price level.
(d) the demand for labor.
- _____ 3. In the financial market, each of the following is traded EXCEPT
(a) Treasury notes.
(b) corporate bonds.
(c) capital gains.
(d) shares of stock.
- _____ 4. A Keynesian fiscal policy intended to pull the economy out of a recession might include cutting
(a) interest rates.
(b) taxes.
(c) government spending.
(d) the unemployment rate.
- _____ 5. Which of the following is not a phase of a typical business cycle?
(a) Recession
(b) Trough
(c) Peak
(d) Inflation
- _____ 6. One objective of expansionary policies is to increase aggregate _____ by _____ personal taxes.
(a) output; increasing
(b) output; decreasing
(c) price level; increasing
(d) price level; decreasing
- _____ 7. Employment typically rises during
(a) a period of stagflation.
(b) a period of inflation.
(c) a recession.
(d) the period from the peak to a trough in a business cycle.
- _____ 8. Each of the following is an example of a transfer payment EXCEPT
(a) a welfare check.
(b) Social Security benefits.
(c) interest on a Treasury bond.

- (d) veterans' benefits.
- _____ 9. In the labor market, suppliers are
- (a) households.
 - (b) households and firms.
 - (c) firms and government.
 - (d) firms.
- _____ 10. In the circular flow model
- (a) households purchase resources.
 - (b) firms and the government purchase resources.
 - (c) government sells resources.
 - (d) households produce goods and services.
- _____ 11. As the economy moves into a recession, we typically see inflation _____ and unemployment _____.
- (a) increasing; increasing
 - (b) increasing; decreasing
 - (c) decreasing; increasing
 - (d) decreasing; decreasing
- _____ 12. In 2008, President Bush cut taxes for individuals by sending them a rebate. This is best described as an example of
- (a) fiscal policy.
 - (b) monetary policy.
 - (c) fine-tuning policy.
 - (d) cyclical policy.
- _____ 13. Stagflation is characterized by _____ unemployment and a _____ price level.
- (a) high; rising
 - (b) high; falling
 - (c) low; rising
 - (d) low; falling
- _____ 14. To know where the economy is in the business cycle, one must know
- (a) the unemployment rate.
 - (b) the rate of change in the level of economic activity.
 - (c) the rate of change in the price level.
 - (d) the rate of change in the unemployment rate.
- _____ 15. "Sticky" prices in a given market suggest that excess demand _____ be sustained and excess supply _____ be sustained.
- (a) can; can
 - (b) can; cannot
 - (c) cannot; can
 - (d) cannot; cannot
- _____ 16. Which of the following statements is true?
- (a) During a period of hyperinflation, we would expect an increase in the value of savings, because everyone needs to have more money.

- (b) During a period of high inflation, fine-tuning would call for an increase in the money supply.
 - (c) Stagflation is defined as a rapid increase in the overall price level.
 - (d) During a period of high inflation, fine-tuning would call for a decrease in the money supply.
- _____ 17. In sequence, the four phases of a business cycle are
- (a) the trough, the expansion, the peak, and the recession.
 - (b) the recession, the peak, the expansion, and the trough.
 - (c) the trough, the expansion, the recession, and the peak.
 - (d) the trough, the recession, the expansion, and the peak.
- _____ 18. Each of the following is one of the major concerns of macroeconomics EXCEPT
- (a) growth in aggregate output.
 - (b) the national debt.
 - (c) unemployment,
 - (d) inflation and deflation.
- _____ 19. Dissaving occurs when
- (a) households receive more income than they spend.
 - (b) households receive less income than they spend.
 - (c) businesses issue a share of stock or a corporate bond.
 - (d) the government issues a Treasury bond
- _____ 20. The circular flow diagram shows us that household income is allocated to each of the following EXCEPT
- (a) purchases of exports.
 - (b) purchases of imports.
 - (c) purchases of domestically produced goods and services.
 - (d) payment of taxes.

II. APPLICATION QUESTIONS

1. Devise a hypothesis about the link between household income and household spending. As one increases, does the other increase or decrease? Which variable is the “cause” and which the “effect”? Why is your theory an abstraction? Is your theory invalidated if one household behaves differently?
2. How do you personally participate in the markets for goods and services, labor, and finance?
3. Identify the following topics as either predominantly macroeconomic (MAC) or microeconomic (MIC).
 - (a) _____ gross domestic product
 - (b) _____ the demand for beer

- (c) _____ inflation
- (d) _____ the price of gold relative to the price of silver
- (e) _____ unemployment among economics professors
- (f) _____ wages in regulated public utilities
- (g) _____ economic growth
- (h) _____ stagflation
- (i) _____ price of medical care
- (j) _____ job discrimination
- (k) _____ recession
- (l) _____ apartment rents
- (m) _____ total employment
- (n) _____ a household's income
- (o) _____ national income
- (p) _____ business cycles
- (q) _____ the government budget deficit
- (r) _____ the money supply

4. A circular flow diagram is presented in the text. After going over the section in the text, draw it from your memory and understanding.
5. Our macroeconomic analysis is not yet theoretically rigorous, but use your existing knowledge of the business cycle to help you interpret current affairs. Suppose that our economy slips into a recession.
 - (a) What is happening to the overall level of production in the economy?
 - (b) Predict what is likely to be happening to the unemployment rate.
 - (c) Predict what is likely to be happening to household income.
 - (d) Predict what is likely to be happening to the level of household spending.
 - (e) What is likely to be happening to the inflation rate?
 - (f) Now suppose the government reduces income taxes on households. What effect is this likely to have on household spending, the overall output level, employment, unemployment, and the aggregate price level?

PRACTICE TEST SOLUTIONS

I. Solutions to Multiple-Choice Questions

1. (c) The price of a single good (like beer) is microeconomic in nature.
2. (b) Keynes believed that aggregate demand is the driving force in determining macroeconomic activity. Refer to p. 96 [408].
3. (c) Capital gains occur when an asset is sold at a higher price than its purchase price. Refer to p. 95 [407].
4. (b) To move the economy out of a slump, the government could cut taxes. This would give taxpayers more income to spend. Interest rates are connected to monetary policy.
5. (d) A business cycle reflects changes in production level. The missing phase is the expansion. Refer to the diagram on p. 91 [403].

6. (b) Expansionary policies are intended to stimulate production. A side effect of this might be an increase in the aggregate price level. A tax cut is an expansionary fiscal policy.
7. (b) Refer to the discussion of U.S. business cycles beginning on p. 90 [402]. Note that if aggregate supply decreases, the economy can experience both inflation and increasing unemployment—i.e., stagflation.
8. (c) Transfers are payments that require no good or service in return. Interest on a bond is a fee (reward) for lending the government money.
9. (a) Refer to the circular flow diagram on p. 93 [405].
10. (b) Refer to the circular flow diagram on p. 93 [405].
11. (c) When the economy is slowing down, it is harder to sell goods (harder to raise prices) and harder to find a job. Note that if a decrease in aggregate supply has caused the recession, inflation will increase—i.e., stagflation.
12. (a) Tax changes are elements of a fiscal policy.
13. (a) Stagflation combines stagnation (high unemployment) with inflation (rising aggregate price level). Refer to p. 96 [408].
14. (b) If the rate of change is positive, the economy is expanding; at the peak and at the trough, the rate of change is zero; in a recession, the rate of change is negative. Refer to p. 90 [402].
15. (a) When prices are sticky (not very responsive to demand or supply changes), a situation of excess demand or excess supply can persist because, in either case, price does not move to eliminate the market imbalance. Refer to p. 96 [408].
16. (d) Inflation, we shall see, has more than one cause, but increasing the money supply will aggravate the problem. Fine-tuning refers to the supposed ability of the government to make quite precise adjustments in inflation and unemployment. During hyperinflation, the value of currency is decreasing rapidly. The worst thing to do is hold money—it is better to spend it before it falls further in value. Stagflation is more than just inflation.
17. (a) Refer to the diagram on p. 91 [403].
18. (b) Refer to p. 90 [402].
19. (b) Dissaving occurs when households spend more than they receive as income. Refer to p. 93 [405].
20. (a) Exports are bought by foreigners.

II. *Solutions to Application Questions*

1. There is a positive relationship between household income (independent variable) and household spending (dependent variable). The theory is an abstraction because it excludes all other factors that might affect household spending. If, in general, households behave as predicted by the theory, it is supported, exceptions notwithstanding.
2. In the market for goods and services, you are probably a buyer (e.g., groceries), in the market for labor you are probably a seller, and in the money market you are a seller if you save and a buyer if you borrow (e.g., student loans).
3.

(a)	MAC	(b)	MIC	(c)	MAC	(d)	MIC
(e)	MIC	(f)	MIC	(g)	MAC	(h)	MAC
(i)	MIC	(j)	MIC	(k)	MAC	(l)	MIC
(m)	MAC	(n)	MIC	(o)	MAC	(p)	MAC
(q)	MAC	(r)	MAC				
4. Refer to the text for the solution to this exercise.
5.
 - (a) A recession means that the economy's overall output level is shrinking.
 - (b) With less production, employers will cut back on employment. (Usually this is not an immediate effect.)
 - (c) With fewer jobs, households will start to cut back on spending.
 - (d) With less income, households will spend less.
 - (e) Inflation is likely to lessen and, possibly, become deflation.
 - (f) If the government reduces income taxes on households, after-tax income would increase, and household spending would increase. Output level and employment would increase, unemployment would decrease, and the aggregate price level would increase.