INTRODUCTION TO MACROECONOMICS

STUDY GUIDE

The purpose of this chapter is to introduce you to **macroeconomics,** which studies the entire economy or its major aspects such as consumption and investment. Macroeconomics is concerned with short-run fluctuations that create conditions giving rise to an up-and-down **business cycle**. For example, a **recession** is a major downturn in the business cycle that leads to a loss in output, jobs, and income. Macroeconomics also studies long-run trends for economic growth that bring rising living standards.

The monitoring of the macro economy requires measures of performance. Three such measures are briefly described in this chapter; more will be explained about them in later chapters. Real gross domestic product or **real GDP** provides an overall indicator of output or production in the economy. **Unemployment** measures the degree to which labor resources are being fully used in the economy. **Inflation** tracks the overall increase in the level of prices in the economy. Each measure is important for tracking the short-run and long-run health of the economy and for creating macroeconomic models to address important policy questions.

Since the late 1770s we have witnessed the miracle of **modern economic growth.** Before that time economic output per person had remained relatively constant, but since that time economic output per person has risen substantially and along with it the standard of living in those nations that have experienced such growth. In fact, much of the difference between rich and poor nations today can be attributed to their historical participation in this modern economic growth, as you will learn in a later chapter in this section of the textbook. To achieve such economic growth requires saving and investment and a banking and financial system to allocate resources to economic investment in newly created capital goods.

The **expectations** that people hold are important for macroeconomics because they influence economic behavior. When business firms expect economic conditions to be bad, they are less likely to invest in new plant and equipment and not taking these actions can reduce future economic growth. And when expectations go unmet, they can be experienced as **economic shocks** to the economy that can change economic decisions. Although there are both demand shocks and supply shocks in a macro economy, the focus of the attention in the chapter is on *demand* shocks because they result in the short-run fluctuations that can significantly change output and employment.

To understand what happens when there is a demand shock to the economy, the chapter makes a distinction between situations in which there are flexible prices and those in which there are inflexible prices (or "sticky prices"). If prices are perfectly flexible in an economy, then a change or shock from demand results in a change in the overall level of prices. If, however, prices are inflexible or sticky, as they often are in the short run, then a change in demand results in a change in output and employment in the economy. As you will learn from this introductory chapter, the macroeconomic models that will be presented in more

detail in later chapters can be categorized based on whether prices are considered to be flexible or inflexible and whether there is a short-run or long-run time horizon.

■ CHECKLIST

When you have studied this chapter you should be able to

- Explain what macroeconomics studies.
- Define real gross domestic product or real GDP.
- Distinguish between real GDP and nominal GDP.
- Explain why unemployment is a loss to the economy.
- Describe the problem that inflation presents to the economy.
- Give examples of the types of policy questions that are investigated with the use of macroeconomic models.
- Compare economic growth in ancient and preindustrial times with modern economic growth.
- Explain how participating or not participating in modern economic growth accounts for differences in the standards of living of nations.
- Offer some comparisons of GDP per person across rich and poor nations.
- Define saving and investment.
- Distinguish between economic investment and financial investment.
- Explain why saving and investment are so important for economic growth.
- Discuss the role of banks and other financial institutions as related to saving and investment in the economy.
- Explain why macroeconomics must take into account expectations and shocks.
- Distinguish between demand shocks and supply shocks.
- Discuss why demand shocks present a major problem for the macro economy.
- Illustrate graphically what happens for a firm when there is a demand shock and prices are flexible.
- Illustrate graphically what happens for a firm when there is a demand shock and prices are inflexible or sticky.
- Explain how firms use inventories to adjust to demand shocks.
- Describe the effects of demand shocks on output, employment, and inventories in an economy when prices are inflexible.
- Cite economic evidence on the stickiness of prices.
- Present two reasons why prices are often inflexible in the short run.
- Categorize macroeconomic models on the basis of price flexibility and time perspective.
- Explain two possible causes of and two possible solutions to the Great Recession (*Last Word*).

■ CHAPTER OUTLINE

1. This chapter is an introduction to **macroeconomics,** which studies the behavior of the whole economy, or its major aggregates such as consumption and investment. It focuses on two topics: long-run economic growth and short-run changes in output and employment (the ***business cycle***). The long-term growth trend leads to higher output and standards of living for an economy, but along the way there can be short-run variability that produces a decline in output (***recession***). The purpose of the chapter is to give an overview of the major performance measures for the economy and then preview the short-run and long-run macro models that will be described in more detail in later chapters.

2. Several performance measures are used to track the macro economy and to develop policies to address short-run or long-run conditions or problems.
    a. ***Real gross domestic product,*** or ***real GDP,*** is a measure of the value of final goods and services produced by the domestic economy during a time period, typically a year. The term *real* refers to the fact that in comparing the value of GDP (prices times quantities) from one year to the next, prices are held constant so only quantities of goods and services produced by the economy (or real output) change. Output also can be measured by ***nominal GDP.*** There is a problem with this method for measuring output changes because both prices and quantities change from one year to the next.
    b. ***Unemployment*** is a condition that arises when a person who is willing to work seeks a job but does not find one. High rates of unemployment mean that an economy is not fully employing its labor resources, which reduces potential production and leads to other social problems.
    c. ***Inflation*** is an increase in the general level of prices. Prices for individual products can rise or fall, but if there is a rise in prices overall, then an economy is experiencing inflation. Inflation erodes the purchasing power of incomes and reduces the value of savings.
    d. Policymakers seek to maximize economic growth and at the same time minimize the adverse effects of unemployment and inflation. To do so, they construct macroeconomic models to assess the short-run and long-run performance of the economy. Such models can be useful for addressing important macroeconomic questions such as what can be done by government policies to control information or foster long-run economic growth.

3. In ancient times and in the preindustrial periods of human history, the characteristic of economic growth was that output would increase, but so would the population. As a consequence, output per person remained fairly constant and living standards

stayed about the same. With the Industrial Revolution of the late 1700s, however, economies experienced ***modern economic growth*** in which output per person and standards of living increased. Such growth explains the large differences in living standards today among nations. Richer nations have a longer history of modern economic growth than poorer nations.

4. Economic growth depends on devoting some current output to increase future output. This process involves the use of ***saving*** (when current spending is less than current income) and ***investment*** (when resources are devoted to the production of future output). The amount of economic investment is limited by the amount of saving available for such investment.
    a. *Consider This* (Economic versus Financial Investment). There often is confusion about the term *investment.* ***Economic investment*** refers to the purchase of newly created capital goods such as new tools, new machinery, or new buildings that are bought with the purpose of expanding a business. ***Financial investment*** refers to the purchase of an asset such as a stock, bond, or real estate that is made for the purpose of financial gain. Financial investment simply transfers ownership of an asset from one party to another.
    b. The primary source of savings is households and the primary economic investors are businesses. Savings get transferred to economic investors through banks and other financial institutions such as insurance companies and mutual funds. For these reasons, the condition of the banking and financial sector is important for economic growth and macroeconomic policy.

5. Uncertainty, expectations, and shocks all affect macroeconomic behavior.
    a. The future is uncertain, so the consumer and business participants in the economy have to act from ***expectations*** of what will happen. Their expectations about the future will shape their economic decisions.
    b. When expectations differ significantly from reality, that is, the unexpected happens, then the participants in the economy experience economic ***shocks.***
    c. ***Demand shocks*** occur with unexpected changes in the demand for products. ***Supply shocks*** occur with unexpected changes in the supply of products. Such shocks can be positive or negative depending on whether the surprising changes are beneficial or costly for a person or group. In the view of many economists, most short-run fluctuations in the economy come from demand shocks, so demand shocks will be given the primary focus in this chapter and subsequent chapters.
    d. For an individual firm, if the price for the product is flexible, a change in the demand for the product will result in a change in price to achieve equilibrium at the set quantity of output (vertical supply curve). Such a change in demand would not change the output for a firm, but only the price of a product.

Similarly, for the entire economy, if prices of products are completely flexible, then output would remain the same in both the short run and the long run and only the level of prices for products would change.

1. Demand shocks, however, present a major macroeconomic problem for the economy because the prices of most products are inflexible or slow to change in the short run ("sticky").
2. For an individual firm, when a price is inflexible, then the response to a demand shock is a change in output and employment. Similarly, for the entire economy, if most prices are fixed or "sticky," a demand shock will cause short-term fluctuations in output and employment. For example, if the demand for most products falls, firms will cut production, causing output and economic growth to decrease and unemployment to increase.
3. Firms attempt to address the problem of fluctuating demand by maintaining an ***inventory,*** which is a store of output that has been produced but not sold. When demand is low, the inventory stock would rise as unsold products are added. When demand is high, the inventory would fall as previously produced products are sold from the inventory stock.
4. But such a practice of using inventories to meet unexpected changes in demand helps only for a short period of time. If inventories become large and remain so for a long period of time, they are costly to maintain and end up hurting business profits. As a result, firms will cut production and employment to reduce the inventory buildup. These changes in turn will reduce GDP and increase unemployment.

e. *Consider This* (The Great Recession). The steep economic downturn in the U.S. economy from 2007 to 2009 has been dubbed the "Great Recession." A contributing factor was the sharp decline in housing prices and problems with mortgage loans. These events also reduced consumer and business lending and led to the bankruptcy of some key financial institutions. Unemployment rose substantially and output declined. Since prices for autos and other consumer durables were relatively fixed or sticky, most of the decline in consumer demand for these products during the recession was experienced as a loss of output, employment, and income.

6. The economic data indicate that there are many ***inflexible prices*** or ***"sticky prices"*** for goods and services in the economy. In fact, for many final goods and services there is a 4.3-month time lag before prices change. There are several reasons for sticky prices. First, consumers prefer stable and predictable prices, so there is pressure on businesses to keep prices stable and not upset consumers. Second, businesses may not want to cut prices because that may result in a price war with competing firms.

7. Macroeconomic models can be categorized based on price stickiness. In the very short run, prices are almost totally inflexible, so that any change in demand will result in a change in output and employment. As time passes, however, prices become more flexible and a change in demand produces little change in output or employment. The price flexibility/inflexibility distinction is important for categorizing macroeconomic models. Short-run macroeconomic models assume that prices are inflexible or sticky, and thus demand shocks change output and employment. Long-run macroeconomic models assume ***flexible prices,*** and thus demand shocks have an effect only on prices and not on output or employment.

8. *Last Word* (Debating the Great Recession). Economists disagree about the causes of and best responses to the Great Recession. As for causes, one view is that it was the result of a euphoric bubble in a major asset (housing) in the economy that eventually burst and reduced consumer demand. Another view is that it was produced by poor government policies that kept interest rates low for too long and led to excessive speculation in housing and consumption that could not be sustained. As for solutions, most economists called for government stimulus to offset the reduced consumer demand. A solution called for by other economists was a structural one that would let inefficient and unprofitable firms go bankrupt and then let the market reallocate those resources to better uses.

■ HINTS AND TIPS

1. Read this chapter for a conceptual understanding of what is to come in later chapters. A key idea is that *the flexibility of prices determines the degree to which demand shocks influence output and employment in an economy.* The distinction between flexible and inflexible prices is useful for categorizing the macroeconomic models and for understanding economic growth as discussed in later chapters.

2. One important definitional distinction the chapter makes is between *economic* investment and *financial* investment. Economic investment involves the purchase of *newly created* capital goods to be used for production of goods or services by a business. Financial investment typically means purchasing ownership of a paper asset such as a stock or bond, or in other cases a used asset, such as an antique car, in the expectation that the price will appreciate and there will be financial gain when the asset is sold.

■ IMPORTANT TERMS

business cycle
recession
real GDP (gross domestic product)
nominal GDP
unemployment
inflation
modern economic growth
saving
investment
economic investment
financial investment
expectations
shocks
demand shocks
supply shocks
inventory
inflexible prices ("sticky prices")
flexible prices