

Keynes and the Classical Economists: The Early Debate on Policy Activism

LEARNING OBJECTIVES

1. Discuss why the classical economists believed that a market economy would automatically tend toward full employment.
2. Explain why Keynes rejected the views of the classical economists.
3. Compare the views of Keynes and the classical economists with regard to the proper role of government.

As you discovered in Chapter 10, unemployment and inflation impose costs on our society. Today, many Americans assume that it is the federal government's responsibility to reduce those costs by combating unemployment and inflation when they occur. But the issue of government intervention to combat macroeconomic problems provokes sharp disagreement among economists. Economists known as "activists" support a significant role for government. "Nonactivists" are economists who believe that government intervention should be avoided. This controversy originated more than 50 years ago with a debate between John Maynard Keynes and the then-dominant classical economists. The historical debate provides an important backdrop for understanding the ongoing controversy about policy activism.

THE CLASSICAL MODEL: THE CASE FOR LAISSEZ-FAIRE

We will begin our exploration of the activist-nonactivist debate by considering the views of the classical economists. The term classical economist describes the mainstream economists who wrote from about 1776 through the early 1930s. For our purposes the most important element of classical economic

thought was the belief that a market economy would automatically tend toward full employment. Virtually all the major classical economists held that belief, and apparently people were satisfied with this description of the real world until the Great Depression caused them to question its validity.

Say's Law

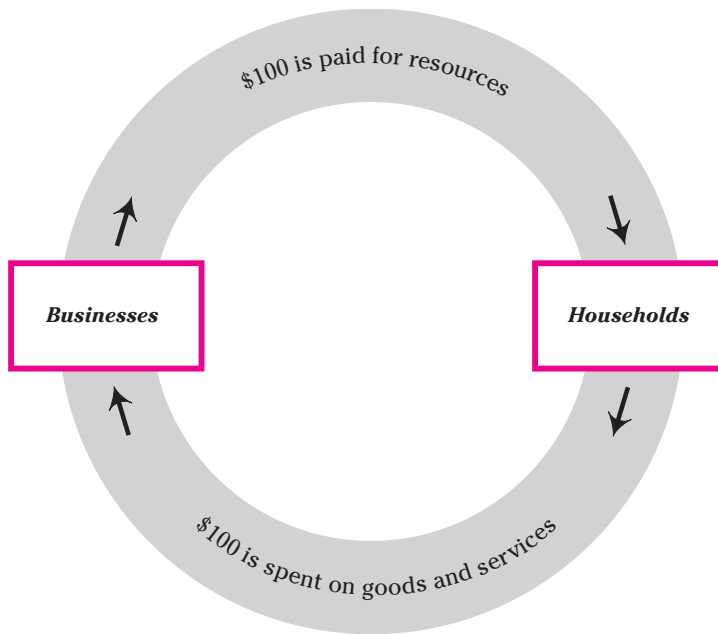
The classical economists based their predictions about full employment on a principle known as **Say's Law**, the creation of French economist J. B. Say (1776–1832). According to Say's Law, "Supply creates its own demand." In other words, in the process of producing output, businesses also create enough income to ensure that all the output will be sold. Because this theory occupies such an important place in classical economics, we will examine it in more detail, beginning with a simple circular-flow diagram, Exh. 1.

Exhibit 1 shows that when businesses produce output, they create *income*, payments that must be made to the providers of the various economic resources. Assume, for example, that businesses want to produce \$100 worth of output to sell to households. To do that, businesses must first acquire the economic resources necessary to produce those goods and services. The owners of the economic resources are households, and they expect to be paid—in wages, rent, interest, and profits (remember, profits are the *payment* for entrepreneurship). Therefore, \$100 in income payments flows to the household sector. If households spend all the income they receive, everything that was produced will be sold. Supply will have created its own demand.

Because the classical economists accepted Say's Law, they believed that there was nothing to prevent the economy from expanding to full employment. As long as job seekers were willing to work for a wage that was no more than their productivity (their contribution to the output of the firm), profit-seeking businesses would desire to hire everyone who wanted a job. There would always be adequate demand for the output of these additional workers, because "supply creates its own demand."

Many students will immediately recognize that saving could disrupt that simple process. If households decided to save a portion of their earnings, not all of the income created by businesses would return in the form of spending. Thus, the demand for goods and services would be too small for the supply, and some output would remain unsold. Businesses would then react by cutting back on production and laying off workers, thus causing unemployment.

But the classical economists did not see saving as a problem. Saving would *not* cause a reduction in spending because businesses would borrow all

EXHIBIT 1**Say's Law: Supply Creates Its Own Demand**

If all the income created in the act of producing output is spent by households, supply will have created its own demand, and all the output will be sold.

the saved money for investment—the purchase of capital goods, such as factories and machinery. Why were the classical economists so sure that the amount households wished to save would equal the amount businesses wanted to invest? Because of interest rates. In the classical model the interest rate is determined by the demand for and supply of loanable funds, money available to be borrowed. If households desired to save more than investors wanted to borrow, the surplus of funds would drive down the interest rate. Because the interest rate is both the reward households receive for saving *and* the price businesses pay to finance investment, a declining interest rate would both discourage saving and encourage investment. The interest rate would continue to fall until the amount that households wanted to save once again equaled the amount businesses desired to invest. At this equilibrium interest rate there would be no uninvested savings. Businesses would be able to sell all their output either to consumers or to investors, and full employment would prevail.

The Role of Flexible Wages and Prices

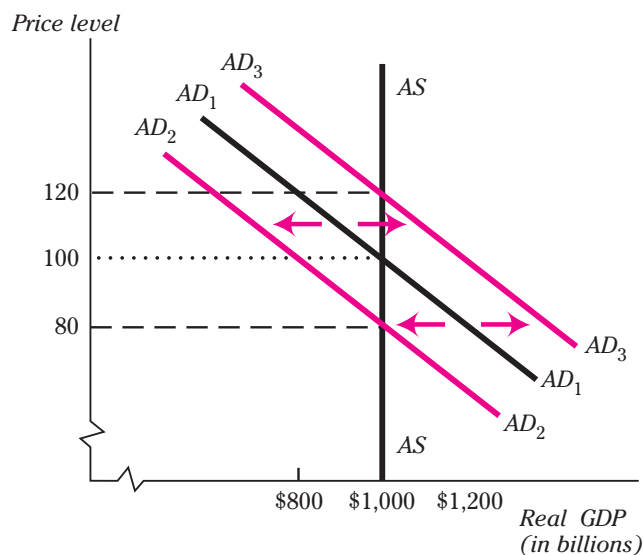
The classical economists believed that Say's Law and the flexibility of interest rates would ensure that spending would be adequate to maintain full employment. But some critics were unconvinced. Suppose that households chose to "hoard" some of their income. (Hoarding money is the act of hiding it or storing it.) When people are concerned about the future, they may choose to hide money in a mattress or in a cookie jar so that they will have something to tide them over during hard times. (Households may prefer this form of saving if they lack confidence in the banking system—a situation that existed in the 1920s, when there were numerous bank failures.) This method of saving creates problems for Say's Law because it removes money from circulation. If households choose to hoard money in cookie jars, that money can't be borrowed by businesses and invested. As a consequence, spending may decline and unemployment may appear.

Although the classical economists admitted that hoarding could cause spending to decline, they did not believe that it would lead to unemployment. Full employment would be maintained because wage and price adjustments would compensate for any deficiency in total spending.

The existence of flexible wages and prices implies an *AS* curve that is vertical, not upward-sloping as in the initial section of this chapter. Recall that the upward slope of the earlier *AS* curve resulted from the assumption that wage rates and some other input prices remain fixed in the short run. Given these rigidities, an increase in the price level would allow businesses to profit by expanding output, thus producing the upward-sloping *AS* curve. But the classical economists believed that *all* prices—including wage rates (the price of labor) and other input prices—were highly flexible. An increase in product prices would therefore be quickly matched by higher costs, which would eliminate any incentive to expand output.

Thus, the existence of highly flexible wages and prices implies an *AS* curve that is vertical at the full-employment level of output (potential GDP), as represented in Exh. 2.

To illustrate how flexible wages and prices guarantee full employment, let us assume that the economy is operating at a price level of 100 and a real GDP of \$1,000 billion, the intersection of *AS* and AD_1 . Now, suppose that consumers become pessimistic about the future and hide some of their income in cookie jars rather than spend it. What will happen? Aggregate demand will fall—the *AD* curve will shift from AD_1 to AD_2 —because households are spending less and thus demanding less real output at any given price level. Reasoning from the assumptions of the classical economists, a reduction in aggregate demand leads quickly to falling prices. In our example the price level will not be maintained at 100; it will fall to 80. If that occurs, businesses will be able to sell the same amount of real output as before but at lower

EXHIBIT 2**The Classical Aggregate Supply Curve**

In the classical model a reduction in aggregate demand would immediately lead to falling prices and wages, so that real GDP would be maintained and employment would not fall. Higher aggregate demand would lead to inflation, with no change in output.

prices. Wages will also decline because reductions in the demand for goods and services will be accompanied by falling demand for labor, which will lead to labor surpluses and wage reductions. Thus, employers will still be able to make a profit at the lower price level.

If AD were to increase (due to dishoarding—spending the money that had been hoarded—for example), this entire process would work in reverse. An increase in aggregate demand from AD_1 to AD_3 would quickly push up product prices. On the surface this would seem to make it attractive for businesses to increase output; if product prices rise while input prices remain stable, producers can make a profit by expanding output to satisfy the higher level of demand. But in the classical model, wage rates and other input prices are also highly flexible, and they would tend to rise because increases in the demand for goods and services would be accompanied by rising demand for labor and other inputs. Thus, businesses would have no incentive to expand output. The higher level of aggregate demand would lead to inflation, leaving output and employment unchanged.

In summary, the classical economists did not believe that changes in aggregate demand would have any impact on real GDP or employment; they maintained that only the price level would be affected.

Full Employment and Laissez-Faire

As a consequence of their faith in Say's Law and the flexibility of wages and prices, the classical economists viewed full employment as the normal situation. They held this belief in spite of recurring periods of observed unemployment. By the mid-1800s, economists recognized that capitalist economies tend to expand over time but not at a steady rate. Instead, output and employment fluctuate up and down, growing rapidly in some periods and more slowly, or even declining, in others. Today we call these recurring ups and downs in the level of economic activity the business cycle. A period of rising output and employment is called an *expansion*; a period of declining output and employment is called a *recession*.

The occasional bouts of unemployment that accompanied the recession stage of the business cycle were not, however, viewed with alarm or seen as contradicting the classical model. Instead, such unemployment was attributed to external shocks (wars and natural disasters, for example) or to changes in consumer preferences.¹ Because the economy required time to adjust to these events, there might be some unemployment in the interim. But such unemployment would be very short-term; it could not persist. Prolonged unemployment would result only if workers' unreasonable wage demands made it unprofitable for firms to hire them. Such unemployment was considered "voluntary"; that is, at the prevailing wage, the people preferred leisure to work. Because prolonged unemployment was regarded as an impossibility and short-term unemployment not deemed a significant social problem, the classical economists focused their energies elsewhere, on studying microeconomic issues and attempting to understand the forces underlying an economy's long-term rate of economic growth (the growth rate of potential GDP).

The classical theorists' belief in the economy's ability to maintain full employment through its own internal mechanisms caused them to favor a policy of laissez-faire, or government by nonintervention. Society was advised to rely on the market mechanism to take care of the economy and to limit the role of government to the areas where it could make a positive contribution—maintaining law and order and providing for the national defense, for example.

¹ Because the classical economists believed that supply created its own demand, they did not believe that it was possible to have a *general* surplus of goods and services throughout the economy. They recognized, however, that there could be an oversupply of individual products. For example, automobile manufacturers might miscalculate and produce too many automobiles for the prevailing market. In the short run this would result in unsold inventories and unemployment: The current number of workers could no longer be profitably employed by the automobile industry. In the long run, however, both problems would be eliminated. The surplus of automobiles would cause their prices to fall, which would shift labor and other economic resources out of the automobile industry and into some other industry, one characterized by shortages and rising prices.

THE KEYNESIAN REVOLUTION: THE CASE FOR POLICY ACTIVISM

The classical doctrine and its laissez-faire policy prescriptions were almost universally accepted by economists and policymakers until the time of the Great Depression. Then the massive and prolonged unemployment that characterized the industrialized world challenged the predictions of the classical model.

The term “depression” was coined to describe a severe recession. The Great Depression lived up to its name. In 1929, when it began, unemployment stood at 3.2 percent. By 1933, when the economy hit bottom, the unemployment rate had risen to almost 25 percent. During the same period, the economy’s output of goods and services (real GDP) fell by more than 25 percent. Moreover, in 1939, ten years after the depression began, unemployment still exceeded 17 percent, and GDP had barely edged back to the levels achieved a decade earlier. Clearly, the classical belief that any unemployment would be moderate and short-lived seemed in direct conflict with reality.

The most forceful critic of the classical model was John Maynard Keynes, a British economist. His major work, entitled *The General Theory of Employment, Interest, and Money*, was first published in 1936. In a sense, Keynes stood classical economics on its head. Whereas the classical economists believed that supply created its own demand, Keynes argued that causation ran the other way—from demand to supply. In Keynes’s view, businesses base their production decisions on the level of expected demand, or expected total spending. The more that consumers, investors, and others plan to spend, the more output businesses will expect to sell and the more they will produce. In other words, supply (or output) responds to demand—not the converse, as the classical economists suggested. Most important, Keynes argued that the level of total spending in the economy could be inadequate to provide full employment, that the classical economists were wrong in believing that interest rate adjustments and wage/price flexibility would prevent unemployment. According to Keynes, full employment is possible only when the level of total spending is adequate. If spending is inadequate, unemployment will result.

In summary, Keynes rejected the classical contention that market economies automatically tend toward full employment; he focused attention on the level of demand or total spending as the critical determinant of an economy’s health. We now turn to a more detailed look at his model and the errors he detected in the classical theory.

The Meaning of Equilibrium Output

To understand the Keynesian model, you need to become more familiar with the concept of **equilibrium output**. As you know, equilibrium means

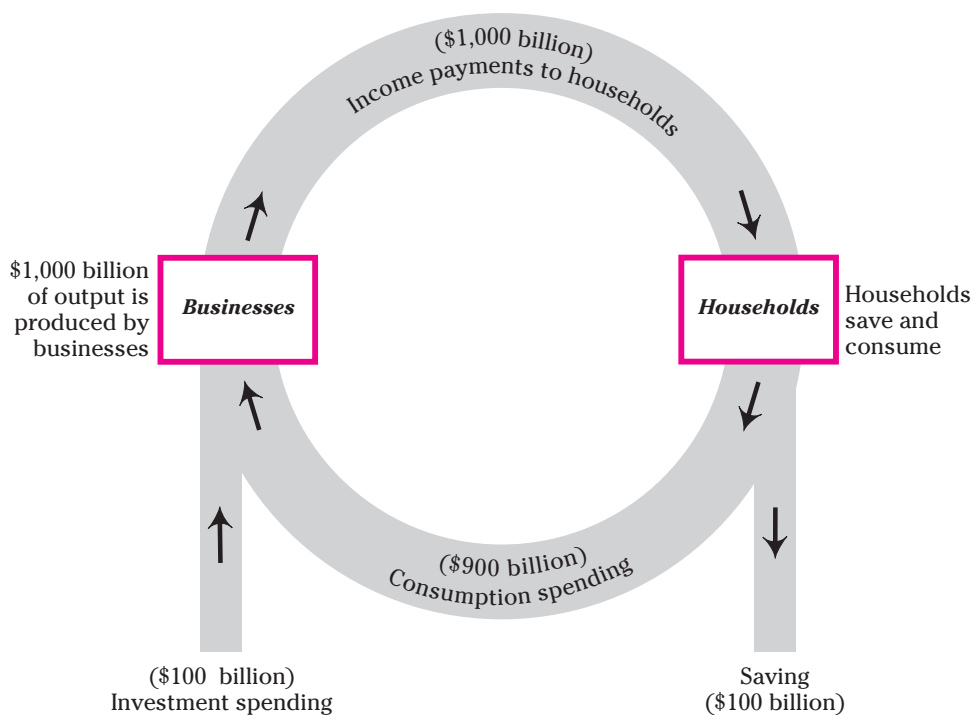
stability: a state of balance or rest. In microeconomics an equilibrium price is a stable price, one that won't change unless there are changes in the underlying supply and demand conditions. In macroeconomics an equilibrium output is a stable output, one that is neither expanding nor contracting.

We can illustrate the concept of equilibrium output with the circular-flow diagram in Exh. 3. This diagram depicts a very simplified economy; there is no government sector (hence, there will be no government spending and no taxation) and no foreign sector (so there will be no imports and exports). These simplifications will make it easier for us to grasp the concept of equilibrium.

We assume here that businesses expect to sell \$1,000 billion worth of output, and so they produce that amount. Of course, that sends to households \$1,000 billion in income, which they can either spend or save. In this example we imagine that they choose to save \$100 billion. Economists refer to saving as a **leakage**, a subtraction from the flow of spending. Leakages mean that less money returns to businesses, unless the economy can somehow compensate for the loss. In our example the \$100 billion leakage means that only \$900 billion will be spent on consumption goods. That \$900 billion is what we called *personal consumption expenditures* when we showed you how to calculate gross domestic product in Chapter 10.

Consumption spending is not the only form of spending for goods and services, even in the simple private economy we are analyzing. Business investors also purchase a substantial amount of our economy's output (GDP). To keep it simple, let's assume that businesses coincidentally desire to purchase \$100 billion worth of output. That investment spending is described as an **injection** since it adds to the basic flow of consumption spending. Total spending for goods and services (consumption spending plus investment spending) amounts to \$1,000 billion. As you can see from Exh. 3, that is just enough to purchase everything that was produced—the entire \$1,000 billion. That means that the producers' expectations have been fulfilled; they expected to sell \$1,000 billion of output, and they have sold precisely that amount. Because producers are usually guided by their successes and failures, this would be an important finding. It would be a signal to produce the same amount next year, a response that would mean that the economy was in equilibrium.

As you can see from this example, the economy will be in equilibrium whenever the amount of total spending is exactly sufficient to purchase the economy's entire output (when total spending = total output). When that happens, producers can sell exactly what they've produced, and they have no incentive to alter the level of production.

EXHIBIT 3**Equilibrium Output with Saving and Investment**

In a simple private economy we can identify the equilibrium output in either of two ways: (1) total spending equals total output, or (2) investment equals saving. In our example, when \$1,000 billion worth of output is produced, it creates \$1,000 billion worth of spending (consumption of \$900 billion plus investment of \$100 billion). At the same time, the amount that households desire to save is equal to the amount that businesses want to invest. Hence, \$1,000 billion is equilibrium output.

Note that when the economy is in equilibrium, the amount that households want to save is equal to the amount that businesses desire to invest. The reason for that may be apparent to you. When the amount that is being injected into the spending flow in the form of investment is equal to the amount that is leaking out in the form of saving, the size of the flow is unchanged. The amount returning to businesses will be equal to the amount they paid out; therefore, they will be able to sell exactly what they produced, and the economy will be in equilibrium.

The Problem of an Unemployment Equilibrium

Keynes and the classical economists agreed that the economy would always tend toward equilibrium, but they disagreed about whether the level of output at which the economy stabilized would permit full employment. In the classical model the economy tends to stabilize at a full-employment equilibrium (at potential GDP). In the Keynesian model the economy tends toward equilibrium but not necessarily at full employment. When the economy is in equilibrium at less than full employment, an **unemployment equilibrium** exists.

We can illustrate why Keynes and the classical economists reached different conclusions about the likelihood of full employment by returning to the circular-flow diagram in Exh. 3. Recall that, in this example, households are saving \$100 billion, businesses are investing \$100 billion, and \$1,000 billion is the economy's equilibrium output. To facilitate our comparison between the classical and Keynesian models, let's assume that \$1,000 billion is the economy's potential GDP, and so the economy is operating at full employment.

Now, suppose that households decide to increase their saving from \$100 billion to \$200 billion. What will happen? Obviously, more money is leaking out of the circular flow, in the form of saving. But as we noted earlier, the classical economists did not believe saving would invalidate Say's Law. According to the classical model, this increased saving would simply increase the supply of loanable funds, which would drive down the interest rate and stimulate investment spending. Investment spending would rise from \$100 billion to \$200 billion, thus maintaining the equilibrium output at \$1,000 billion—full employment.

Keynes found fault with this optimistic scenario. According to Keynes, interest rate adjustments cannot be relied on to make saving equal to investment because the interest rate is not the major motivating force in either the saving or the investment decision. In his view the level of *income* is the primary factor influencing the amount that households plan to save; the higher the income, the greater the level of saving. Changes in interest rates have a relatively minor impact on saving decisions. Investment decisions, said Keynes, are governed by profit expectations. The interest rate is only one factor influencing the profitability of an investment, and not the most important factor. If sales are poor and the future looks bleak, businesses are unlikely to undertake new investment, even if the prevailing interest rate is low. Since the interest rate is not the major force guiding saving and investment decisions, it cannot "match up" the plans of savers and investors. As a consequence, when households want to save more than businesses desire to invest, the level of output and employment in the economy will tend to fall. In short, increased saving (reduced spending) can lead to unemployment.

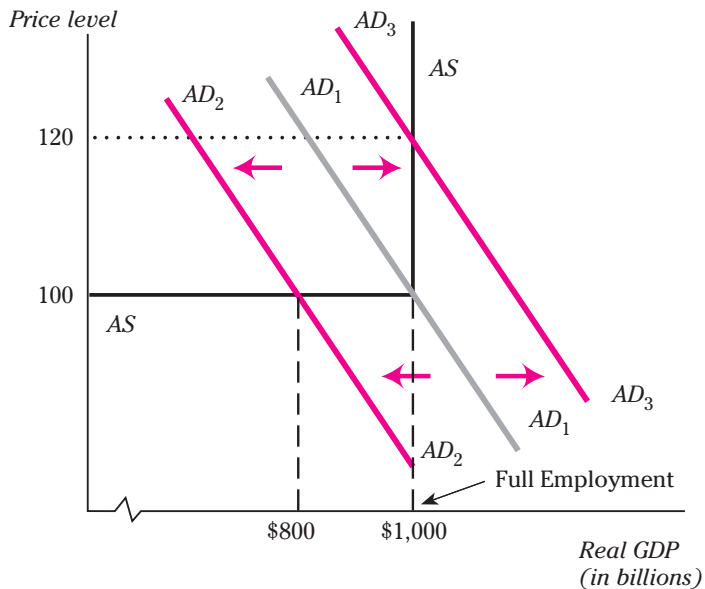
Rejecting the Wage Flexibility Argument

By itself, Keynes's discrediting of the link between saving and investment was not sufficient to refute the classical claim of a full-employment equilibrium. Remember, the classical economists described *two* forces that ensure full employment in a market economy: interest rate adjustments and wage/price flexibility. If interest rate adjustments fail to synchronize the plans of savers and investors and if this results in too little spending, wage and price flexibility can still ensure full employment. In competitive labor and product markets, inadequate demand would lead to falling wages and prices, which, in turn, would guarantee that all output was sold and would thus prevent involuntary unemployment.

Again Keynes disagreed. He argued that the classical assumption of highly flexible wages and prices was not consistent with the real world. According to Keynes, a variety of forces prevent prices and wages from adjusting quickly, particularly in a downward direction. First, markets are less competitive than the classical theory assumed. Keynes saw that many product markets were monopolistic or oligopolistic. When sellers in these markets noted that demand was declining, they often chose to reduce output rather than lower prices. And in labor markets, particularly those dominated by strong labor unions, workers tended to resist wage cuts. As a consequence, wages and prices did not adjust quickly; they tended to be rigid or "sticky."

The consequences of rigid prices can be seen in Exh. 4, which uses the aggregate demand–aggregate supply framework. Let's consider the same scenario outlined in our discussion of the classical model. Assume that consumers become pessimistic about the future and decide to hoard some of their income. Aggregate demand will fall—the *AD* curve will shift from AD_1 to AD_2 —because households demand fewer goods and services at any given price level. This time we will make the assumption that the price level remains stuck at 100 because labor and other contracts prohibit reductions in input costs, which means that firms cannot afford to reduce prices. The assumption of rigid prices and wages implies a flat, or horizontal, *AS* curve since any reduction in aggregate demand leads to a reduced level of real GDP but no change in the price level. In this example the level of equilibrium GDP would decline from \$1,000 billion to \$800 billion. Businesses still want to produce \$1,000 billion of output, but since they can sell only \$800 billion, they must cut production back to that level. Of course, employment would also decline; if employers produce less real output, they require fewer workers. This is essentially the manner in which Keynes explained the Great Depression—as a problem caused by too little aggregate demand, combined with wage and price rigidity.

Although Keynes was concerned primarily with the problem of unemployment, he agreed with the classical economists that inflation would result

EXHIBIT 4**The Keynesian Aggregate Supply Curve**

According to Keynes, prices and wages tend to be rigid in the face of falling demand. Thus, a reduction in aggregate demand is quickly translated into lower real GDP and reduced employment (greater unemployment). Attempts to purchase more than the full employment output will lead to inflation without increasing real GDP.

if consumers, investors, and others attempted to purchase more than the economy was capable of producing.² As you can see, the Keynesian AS curve becomes vertical at full employment. If aggregate demand was increased from AD_1 to AD_3 , the price level would be pushed up, without any increase in real output or employment.

The Case for Government Intervention

Because Keynes did not believe that a market economy could be relied on to automatically preserve full employment and avoid inflation, he argued that the central government must manage the level of aggregate demand to achieve those objectives. How could this be accomplished? One approach was through fiscal policy—the manipulation of government spending and taxation in order to guide the economy’s performance. When unemployment exists, the federal government should increase its spending on goods and

² Keynes viewed the economy’s full employment, or potential GDP, as the maximum output the economy was capable of producing rather than as the maximum *sustainable* level of production.

services (without increasing taxes). This will shift the aggregate demand curve to the right and increase the equilibrium level of real GDP and employment. A reduction in income taxes (without a reduction in government spending) will accomplish the same thing because it will cause households to spend more at any given price level. When inflation exists, government spending should be reduced or taxes increased. These policies will reduce aggregate demand and thus reduce inflationary pressures.

Another approach would be to use monetary policy: policy intended to alter the supply of money in order to influence the level of economic activity. When unemployment exists, the Federal Reserve—the governmental agency that regulates the money supply—should increase the amount of money in circulation so that households and businesses will find it easier to borrow funds. This will tend to increase spending for goods and services, which will shift the *AD* curve to the right and raise the level of equilibrium output and employment. Inflation calls for a reduction in the money supply. By making it more difficult to borrow funds, the Federal Reserve can reduce spending and thereby combat inflation.

The 1990s: The Debate Continues

Keynesian theory held sway through the 1960s, and many economists remain Keynesians today. But Keynesian thinking began to lose influence in the 1970s, when the Keynesian model seemed unable to explain the stagflation—simultaneous unemployment and inflation—that characterized that period. Since then, Keynesians have been rethinking and modifying their views, and new schools of thought have emerged to challenge their position.

Interestingly, some of these challengers—monetarists and rational expectations theorists—bear a striking resemblance to the classical economists of old. In particular, they generally argue that the economy tends toward full employment and that government intervention is unnecessary and even counterproductive. Thus, the debate about economic policy has come full circle. Economists are once again arguing about the proper role of government in economic policy: Should government actively attempt to stabilize the economy to prevent unemployment or inflation, or should its position be hands off? We will consider the current activist-nonactivist debate in detail in Chapter 14.

SUMMARY

The activist-nonactivist controversy originated more than 50 years ago with a debate between John Maynard Keynes and the classical economists who dominated that period. The classical economists felt that a market economy allowed to function without artificial restrictions would provide members of

a society with the goods and services they desired while simultaneously maintaining full employment.

The foundation of the classical theory of employment was *Say's Law*: Supply creates its own demand. More precisely, the act of producing output creates the income that will take that output off the market. Because everything that businesses produce will be sold, there should be nothing to prevent the economy from expanding to full employment.

Even an increase in saving was not considered a problem. The increased availability of loanable funds would cause the interest rate to fall, thereby encouraging businesses to borrow those funds and invest them. If the interest rate somehow failed to equate the plans of savers and investors, wage and price adjustments would compensate for any deficiency in spending. Prolonged unemployment would result only if workers made unreasonable wage demands.

The massive and prolonged unemployment that accompanied the Great Depression cast doubt on the predictions of the classical economists and subjected their model to criticism. The most devastating attack came from John Maynard Keynes. Keynes argued that a market economy does not contain any internal mechanism to ensure full employment. In his view the primary determinant of an economy's health is the level of total spending, or total demand for goods and services. If spending is inadequate, unemployment will result; if it is excessive, inflation will occur.

Keynes believed that it was the responsibility of the federal government to combat unemployment or inflation. This could be accomplished through fiscal policy—the manipulation of government spending and taxation in order to guide the economy's performance—or through monetary policy—policy intended to alter the money supply as a method of influencing total spending and the economy's performance.

KEY TERMS

Equilibrium output. A stable output, one that is neither expanding nor contracting.

Injection. An addition to the circular flow of spending; e.g., investment spending.

Leakage. A subtraction from the circular flow of spending; e.g., saving.

Say's Law. The theory that supply creates its own demand. In the process of producing output, businesses create enough income to ensure that all the output will be sold.

Unemployment equilibrium. A stable level of output that is not large enough to permit full employment.

STUDY QUESTIONS

Fill in the Blanks

- The theory that supply creates its own demand is called _____.
- According to Keynes, the primary cause of unemployment is _____.
- The classical economists did not believe that saving would lead to too little spending because they felt that all saving would be _____.
- In the classical model any long-term unemployment must be _____.
- In terms of the circular-flow diagram, saving is often described as a _____, whereas investment is an _____.
- According to Keynes, the level of output and employment is determined primarily by the level of _____.
- In the classical model the flexibility of interest rates was not the only factor ensuring full employment; flexible _____ and _____ provided an additional safeguard.
- The classical economists argued that the proper role for government in the economy was a very _____ one.
- According to Keynes, one way to combat unemployment is for the federal government to increase its spending or reduce _____.
- If there is no tendency for the level of output to expand or contract, the economy must be producing the _____ level of output.
- Manipulating the level of government spending in order to guide the economy's performance is one form of _____ policy.
- Keynes believed that a reduction in aggregate demand would lead to lower output and employment rather than to lower _____, as the classical economists suggested.
- Altering the money supply in an attempt to influence the economy's performance is termed _____ policy.

Multiple Choice

- Keynesians are considered _____ economists, whereas the classical economists are considered _____ economists.
 - nonactivist, activist.
 - laissez-faire, activist.
 - activist, nonactivist.
 - nonactivist, laissez-faire.
- According to the classical economists,
 - unemployment is caused by too little spending.
 - the interest rate will ensure that the amount households plan to save will equal the amount businesses desire to invest.

- c) increasing government spending is the most reliable method of restoring full employment.
- d) the amount households plan to save is determined primarily by their income.
3. Keynes would suggest that during a period of unemployment, government should
- do nothing.
 - reduce its spending to stimulate the economy.
 - increase its spending to stimulate the economy.
 - take legal action against unions in order to make wages more flexible.
4. The aggregate supply curve implied by the classical model is _____ so that a reduction in aggregate demand will mean a lower overall level of _____ .
- vertical, prices
 - vertical, output
 - horizontal, prices
 - horizontal, output
5. In the Keynesian model, if leakages exceed injections,
- the economy is producing the equilibrium output.
 - the level of output will tend to fall.
 - the level of output will tend to rise.
 - the economy must be at full employment.
6. According to the classical model, even when all saving is not invested, full employment will be maintained because
- the government will step in and stimulate spending.
 - the equilibrium wage rate will rise to stimulate spending.
 - wages and prices will fall to permit businesses to continue hiring everyone who wants to work.
 - the government will establish special work programs.
7. According to Keynes, the amount that households desire to save is determined primarily by
- the rate of interest.
 - the investment plans of businesses.
 - the incomes of the households.
 - None of the above
8. In the Keynesian model the economy is producing the equilibrium output when
- total spending equals total output.
 - total income equals total output.
 - total saving exceeds total investment.
 - surplus inventories are maximized.
9. Perhaps the most important implication of Keynesian economics is that
- the economy automatically tends toward full employment.
 - government should not interfere in the operation of the economy.
 - the economy always tends toward the equilibrium output.
 - the economy can come to rest at an unemployment equilibrium.
10. According to the classical economists, prolonged unemployment could be caused only by
- too little spending.
 - workers making unreasonable wage demands.
 - external shocks.
 - changes in consumer preferences.
11. In the Keynesian model of a private economy, the equilibrium output exists when
- total spending equals total demand.
 - consumption plus investment equals total spending.
 - the amount that households want to save equals the amount that businesses want to invest.
 - All of the above
12. Which of the following is an example of the fiscal policy Keynes would find appropriate for a period of unemployment?
- Decrease government spending
 - Increase the money supply
 - Reduce personal income taxes
 - Reduce the money supply

Problems and Questions for Discussion

1. Why did the classical economists believe that any long-term unemployment had to be voluntary?
2. What flaws did Keynes find in the classical theory's wage-flexibility argument?
3. In what sense did Keynes "stand classical economics on its head"?
4. Explain the concept of equilibrium output, and describe how to identify equilibrium in the Keynesian model.
5. In the Keynesian model, why is a private economy in equilibrium when the amount that households plan to save is equal to the amount that businesses plan to invest?
6. Why did Keynes believe that the proper response to a period of unemployment was for government to increase its spending? How could this policy help to combat unemployment?
7. How did the classical economists explain the existence of short-term unemployment?
8. Explain the role of interest rates in the classical model.
9. Many economists argue that the Great Depression was brought to an end by World War II. In Keynesian terms, how could a war contribute to combating unemployment?

ANSWER KEY

Fill in the Blanks

- | | | |
|------------------------|-------------------|--------------|
| 1. Say's Law | 6. total spending | 11. fiscal |
| 2. too little spending | 7. wages, prices | 12. prices |
| 3. invested | 8. limited | 13. monetary |
| 4. voluntary | 9. taxes | |
| 5. leakage, injection | 10. equilibrium | |

Multiple Choice

- | | | | |
|------|------|------|-------|
| 1. c | 4. a | 7. c | 10. b |
| 2. b | 5. b | 8. a | 11. c |
| 3. c | 6. c | 9. d | 12. c |