## CHAPTER TEN: CLASSICAL ECONOMICS AND THE KEYNESIAN CHALLENGE

In 1894, with the United State mired in recession and unemployment at an historic high, groups of unemployed workers began converging in different cities with the goal of marching on Washington, DC. Many of these contingents were organized by a radical activist, James Coxey, so the movement was dubbed "Coxey's Army". Thousands of them descended on Washington on April 30, demanding that the government set up a public works program to create jobs, financed by increases in the money supply. The police were not impressed by Coxey's economics, and they arrested him and many of his followers. The movement was turned back.

To those in positions of power during the 1890s, the demands of Coxey and others like him had to be chalked up to ignorance. Anyone who had studied economics would know that a shortage of jobs could only be a temporary inconvenience, and that a market economy would quickly right itself again. Wages would go down, spurring more hiring. Interest rates would fall, encouraging more investment. Poorly run businesses would fail, opening up new opportunities in the markets they relinquished. It would be folly, most educated people thought, to interfere with the natural, automatic healing process of the free market.

In thinking this way, business and political leaders were relying on the views of the mainstream of the economics profession as it existed at the time. Most economists had a deep faith that, whatever the other potential problems with market economies, a prolonged shortfall of output and employment was not one of them. In their judgment, this question had been settled at the beginning of the nineteenth century with the work of pioneers in the discipline like David Ricardo and Jean-Baptiste Say.

Four decades later, during the 1930s, the US and the world were caught in the grip of another downturn, deeper and more persistent than any that had ever occurred. Rather than a few thousand protesters, governments faced mass movements measured in the millions, and some democracies fell to dictators who promised to restore order and prosperity. It was in the midst of this crisis that the most famous and influential economist of his day, John Maynard Keynes, devised a different theory of how market economies work, one that allowed for the possibility of costly and unnecessary recessions and depressions. In this chapter, we will look at both sets of arguments—the reasons why nineteenth century economists thought unemployment could not be a significant problem, and why Keynes thought it could.

### The Classical View of Output and Employment

In the early years of the nineteenth century, Thomas Malthus (1766–1834) carried on a fascinating debate with David Ricardo (1772-1823)—by mail. First one would write a letter laying out his views on how a market economy functions, then the other would reply, then a reply to the reply, and so on. The question was, could there be a "glut of goods", production over and above demand, that would lead to unemployment and economic hardship? On one side was Malthus, a minister, a close follower of the economic thinking of his time, and author of the celebrated *Essay on Population*, which developed the position we now call "Malthusian"—that population growth must come into conflict with a fixed supply of natural resources. On the other side was Ricardo, who made a fortune speculating in Amsterdam's financial markets and retired to an estate in England to write several essays that revolutionized economic theory. (He was the first to develop models that could be expressed mathematically, setting forth the principles of marginal cost pricing, comparative advantage in international trade, and other topics.)

Malthus argued that, while the poor could be counted on to spend all they earn, the rich might simply accumulate their wealth. Thus the demand for goods would not keep up with the supply, and the entire economy might be wrecked. Malthus thought it a good thing that the rich had fox hunts and banquets to boost demand; this would keep more of the poor employed and thereby serve a useful function. Ricardo tried to demonstrate that Malthus' logic was faulty: the income of rich and poor alike came from their share of the goods that are *sold* in each period; thus supply and demand must be equal. Moreover, when those who have a surplus of income put some money aside, this money does not simply disappear. Normally, it is placed in a bank, where it can be lent to someone else who is eager to make an investment. There is no need for each individual to spend every penny on consumption in an economy with a credit market.

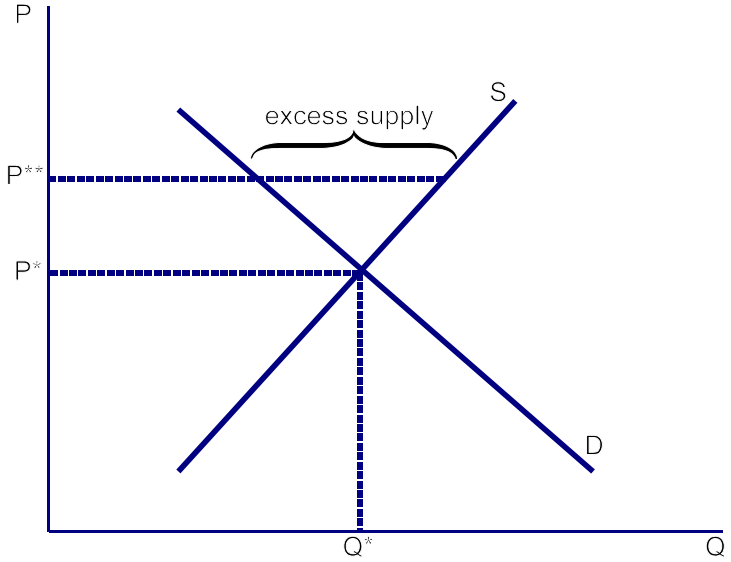
Ricardo was seen as carrying the day, reinforcing the doctrine simultaneously enunciated by the French

economist, Jean-Baptiste Say (1767-1832). Writing in 1803, Say asserted that it was a "law" of economics that demand and supply for goods as a whole must always be equal. His thinking went like this: businesses pay workers, lenders and others to produce goods for the market. Those who have received this money go out and spend it, or they lend it to others to spend, since money has no value in itself. In this way, the total money spent on output returns to purchase it. This has been summarized in the years since his death as "supply creates its own demand", which we call **Say's Law.** The law goes perhaps half a step beyond Say himself, since it claims that supply initiates the process; Say was not quite so forthright. (In fact, Say had proto-Keynesian ideas about the causes of economic slumps, but this aspect of his work was ignored by later generations.) Make a note of this "law"; it will play a crucial role in our future discussions of macroeconomic concepts.

The simply equality of demand and supply at an economy-wide level—in fact, their *identity* as we saw in Chapter 4---is not enough to ensure a high level of employment, however. After all, this could be true when much of the economy is shut down and millions are out of work. In that case too the meager amounts of money spent on production also constitute the income of the population, many of them unemployed, from which they finance their consumption. A more elaborate argument is needed to support the view that, not only will the goods that are produced be sold, but also that the amount of production and sale will be sufficient. At this point the apparatus of supply and demand analysis takes over; its purpose, in the writings of the classical economists of the nineteenth century, is to argue that market equilibrium will result in the sale of all goods that are produced, full employment, the recycling of all funds from saving to investment, and balanced trade. We will take them one at a time.

*1. Markets for goods and services.* For any particular item that firms produce and want to sell to consumers (or other firms), we can envision a market as in Figure 1. A temporary oversupply would occur if the price is P**, above its equilibrium level of P*. The solution is for the price to fall back to its equilibrium. If the economy is competitive, so that firms are competing for customers, this will tend to happen on its own, without the need for any outside intervention. The process takes a bit of time, of course. It may happen, then, that there will be periods in which unsold goods pile up on the shelves and the economy stagnates, but the remedy is simply patience: we should wait for prices to get pulled back to their equilibrium levels, eliminating all excesses of supply over demand

**Figure 1: Markets for Produced Goods and Services**

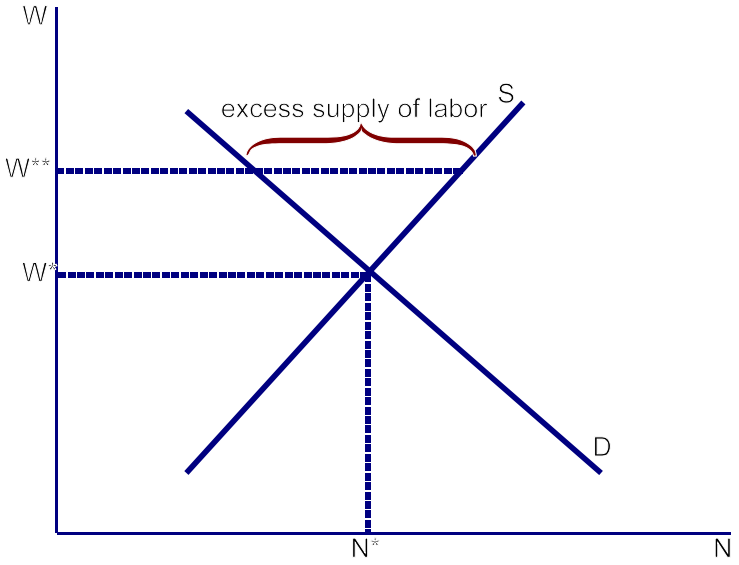



If the price is P**, above its equilibrium level of P*, there will be unsold goods or services.

*2. Labor markets.* To keep matters as simple as possible, suppose all workers and all jobs are absolutely identical, and that jobs are filled in one giant market. (We could propose two or ten or five hundred different

labor markets, but it wouldn't make any difference to the argument.) Then we are in a world depicted by Figure 2, which we saw in Chapter 5.

**Figure 2: Supply and Demand in an Aggregate Labor Market**

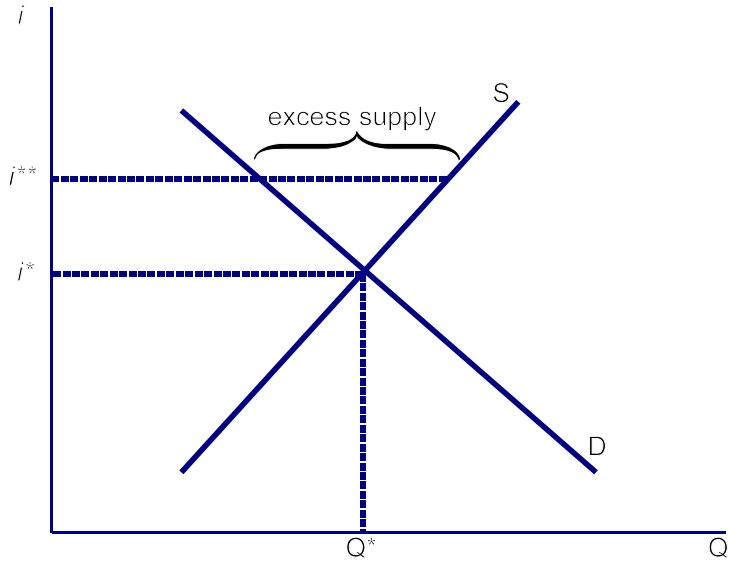



When the wage is set at W**, above the equilibrium level of W*, labor supplied exceeds labor demanded.

If the wage is at its equilibrium level W*, the number of workers seeking work and the number of jobs offered are both N*. In the classical view, this meant that there was no unemployment. In a more modern understanding, such as the perspective developed in Chapter 5, there is some **structural** and **frictional** unemployment, but we can still call N* a possible level of **full employment**. (The number of unemployed workers would equal the number of unfilled jobs.) But suppose the wage is above this level, at W**. Now there are more workers looking for jobs than there are jobs to be filled. This excess supply of labor would constitute unemployment above its full-employment level. Of course, there is a simple solution: lower the wage. As the wage falls back to W*, excess unemployment disappears through some combination of more jobs being offered and fewer workers looking for them. Better yet, the classical view is that there is no need for remedial action by government to bring this about; the natural tendency of markets to move toward an equilibrium will accomplish this on its own. Unemployment will last only as long as it takes the market to adjust. The worst thing a government could do, according to this analysis, is interfere with the process by trying to prop up wages. Thus, minimum wage laws, laws that protect unionization, unemployment insurance benefits and similar measures are all seen as counterproductive.

*3. Credit markets.* What about the assumption that the money people save will not disappear, but will be returned to the economy through lending? Here the analysis is more or less the same as it was for goods and labor. In Figure 3 we see a hypothetical market for credit (loans). The supply of credit comes from individuals who save a portion of their earnings; since they are induced to save more when they get a higher return (the interest rate *i*), the supply curve slopes upward. The demand comes from borrowers who want to increase their spending on consumption or investment; since the interest rate is a cost to them, their curve slopes downward. All savings are lent out at the equilibrium interest rate *i**, but savings pile up un-lent at a higher interest rate like *i***. Once more, the solution is for a price—here the interest rate—to fall, and once more, this will tend to happen simply by the market functioning on its own. We could imagine, for instance, that as banks begin to take in more in deposits than they can lend out, they will lower their interest rates. They will pay less to depositors, reducing the supply of savings flowing to them, and they will charge less to borrowers, increasing the demand for loans. Between these two effects, the equality between saving and lending will be reestablished.

**Figure 3: Supply and Demand in an Aggregate Credit Market**




When the interest rate is at *i***, above the equilibrium *i**, the supply of savings exceeds the amount borrowers wish to borrow.

There is one further wrinkle in this analysis of credit markets. Suppose that there are two kinds of entities in the economy, households and businesses, and two types of spending, consumption and investment. Let's say that households spend only on consumption and firms only on investment. Then total savings S is the sum of household savings $S_{HH}$ and business savings $S_B$:

$$S \equiv S_{HH} + S_B$$

Borrowing, meanwhile, is undertaken either by households or businesses. If households do it, they spend it on consumption and it can be represented as negative saving. One way to see this is to imagine that one household borrows from another. If household A saves $100 and lends it to household B, then household saving is up by $100, but also down by $100, and the net effect, for both households combined, is zero. This is what we mean by saying that borrowing is negative saving. (The word more commonly used to signify this is "dissaving".) So net household saving is the sum of all the money households save minus the amount they borrow. This is written algebraically as:

$$S_{HH} \equiv GS_{HH} - L_{HH}$$

where GS means "gross savings" and L is "loans taken". The implication is that lending from households to households cancels out, so that lending out of net savings $S_{HH}$ goes only to businesses. If businesses devote their savings (retained earnings) only to investment, then

$$S \equiv L \text{ implies } S \equiv I$$

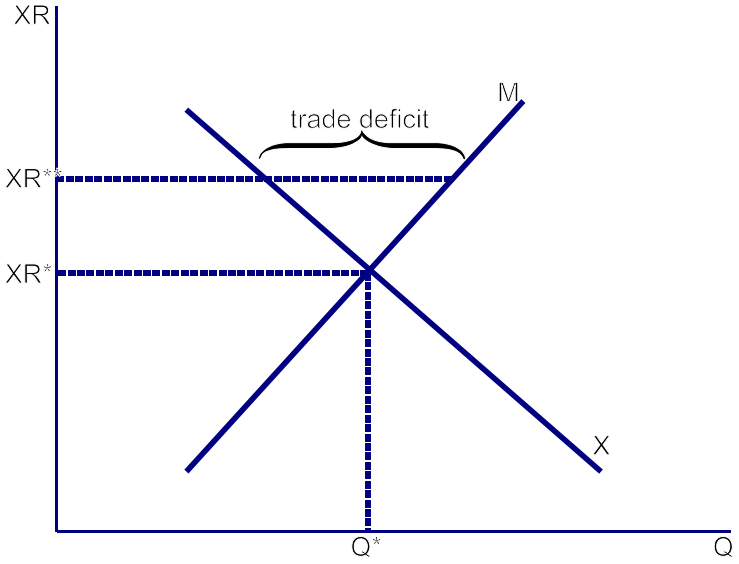
since both $S_{HH}$ and $S_B$ are loaned only to finance investment. In other words, in the classical economic world, savings are identically equal to investment; if there is too little investment, it must be because there are not enough savings. This is an important conclusion, one that should be filed away for future reference.

*4. International trade.* An economy can suffer from insufficient employment and output if it has a large, persistent trade deficit. Imagine, to take an extreme case, that a country imports *everything* it consumes and exports nothing. (If the research stations in Antarctica were countries, they might be in nearly this situation, unless they could sell their research for a high price.) The money would come from borrowing from abroad, or from drawing down past savings. (These are equivalent, since borrowing is negative saving.) As long as borrowed funds remain available, this "economy" can continue to function, but it does so without any

employment or output. Wouldn't this violate the equilibrium conditions in the previous three markets? After all, unemployment would be universal, no goods would be produced, and there would be negative savings accompanied by no investment whatsoever.

Clearly, balanced international trade must be part of the story. (This is somewhat simplified; in a fuller version of the story, trade could be unbalanced from year to year as long as it balances over the long run—more on this later.) Not surprisingly, the classical vision has room for trade too. Figure 4 portrays this, with the crucial role being played by the exchange rate between domestic and foreign currency, XR. As pictured here, XR represents the number of units of foreign currency equal to one unit of your own, such as yen or euros per dollar (if the home country is the US). Thus a high XR means more foreign units exchange for one domestic one, and the opposite for a low XR. Of course, a high XR means that there will be less demand for exports (expensive) and more for imports (cheap); thus at XR** imports exceed exports and there is a trade deficit.

**Figure 4: Exports and Imports in Relation to the Exchange Rate**




When the exchange rate is too high at XR**, imports M exceed exports X.

So far, so good. But this is not a supply and demand diagram; it shows exports and imports instead. What process can lead to a reduction of XR** to XR*? The most convenient answer would depend on making one more assumption: suppose that the only reason for holding a currency is to use it for purchases of goods and services. This would explain why we hold our own currency; it is what we need to make purchases in our own country. Similarly, foreigners would want our currency for the purpose of buying our exports, and we would want theirs to buy their imports. Then the balance between M and X—the trade balance—would also determine the balance between the demand for the two currencies, and, if exchange rates are set in the market, the exchange rate itself. If M > X, as at XR**, there is more demand for foreign currencies than the home currency, so the exchange rate should go down. This process would stop at XR*, where supply and demand for these currencies have equalized.

This is just one version of the "balanced trade" story that plays a key role in classical economics. As we saw in Chapter 8, the original version was Hume's specie flow mechanism. There it was not the nominal exchange rate—the amount of one currency that exchanges for another—that adjusts, but prices in the deficit country. When a country has a trade deficit it experiences an outflow of gold, and this forces it to restrict the amount of currency in circulation, which in turn causes its prices to fall. That lowers the real exchange rate: the nominal rate is the same, but, adjusted for deflation, prices of exports are now lower and prices of imports are now higher. This was expected to restore trade balance, and it was expected to happen automatically and relatively quickly. In either case, whether it is the nominal exchange rate that adjusts, as in Figure 4, or the real rate, as in Chapter 8, the result is the same.

Bringing all four of these kinds of markets together, we can see the consistency in the classical vision of macroeconomics. All output will be sold. All who wish to work will be employed. All savings will be invested. All income that leaves the country due to imports will return as exports. These things are not all true at every instant, and the economy can sometimes get into a rut. Nevertheless, the automatic mechanism of market equilibration can be counted on to set it right. In every case, the necessary adjustment is achieved by the forces of supply and demand, altering prices in a way that eliminates the problem. No intervention by public authorities is necessary; indeed, it would probably just get in the way. If markets are free and competitive, equilibrium should be restored quickly, and macroeconomic problems should melt away. We know that this vision had power over the imaginations of most of the leaders in the main capitalist countries for over a century, because their economies suffered repeated downturns, some severe and long-lasting, but their faith in the restorative force of free markets was unshaken.

**The Keynesian Challenge**

Classical economics survived one economic breakdown after another, but it finally succumbed to the combined power of the Great Depression and the thinking of Keynes. Keynes persuaded most economists to reject the analyses you have just read, and to adopt instead an entirely different way to approach the study of whole economies. Keynes himself did not feel he had overturned all previous doctrine. He accept most of what we today call microeconomics, but believed that this was not sufficient to explain why economies often fail to use much of the human and financial resources available to them. His new theories became the starting point for what is now called macroeconomics, and this is why students normally have to take two different courses, micro and macro, to be regarded as "introduced" to the field. Over time, many economists came to question Keynesian theories, and the division between macro- and microeconomics became more uncomfortable. What we need to study today often differs greatly from Keynes' economics of the 1930s, but his ideas are still the starting point.

One word of warning before we go further: Keynes, despite being a brilliant and popular writer, never explained his new thinking very clearly. There are many memorable passages in the *General Theory*, but readers come away from it still wondering what the man meant. It is almost certainly true that the reason for this is that Keynes never quite "figured it out"; he arrived at the general ideas that made sense to him, and later others, and that would guide economic policy for decades to come, but the precise argument eluded him—as it still partly eludes us.

In this context, there is no easy way to present Keynesian economics. You can find many expositions that differ from one another in fundamental ways and lead to very different conclusions. This has the tendency to push authors into debates over what Keynes "really" meant. The argument I will present in this chapter is in the spirit of Keynes but not the letter. Is it the real Keynes? I don't know, but I doubt that Keynes himself knew what he "really" meant. Instead, what follows is an account that foregrounds the central issue for Keynes, the indeterminacy of total output and employment in a capitalist economy, since this makes it easier to follow the more detailed issues that lie ahead. I won't even say that this is what Keynes should have said—but maybe it's what he should have said if he were writing an introductory macroeconomics textbook.

With that behind us, let's get to the main point. Each of the four markets pictured above has been enlisted by classical economics to justify the claim that market economies will produce at their potential. The common problem with them, Keynes argued, is that what works on a micro level—supply and demand setting prices and output—doesn't work at the macro level of the whole economy, because the size and price level of the overall economy play a role in determining the supply and demand curves for each individual market. That is, market analysis at the micro level takes the total income of the economy and the prices of other goods as given and determines prices and quantities of a single good in a single market; so it already assumes what needs to be analyzed. There is no alternative to studying the entire economy as a whole, and in particular allowing the size of the economy to vary in order to achieve equilibrium. To put it perhaps too simply, Keynes argued that the system logic of a capitalist economy is different from the logic of individual markets, in the sense we explored at the beginning of Chapter 4.

Let's see how this insight applies to each of the four classical markets.

*1. Markets for goods and services.* Look again at Figure 1. Supply and demand in each individual market determines the equilibrium price and quantity, but this can't apply to the economy as a whole. For one thing, the demand of consumers depends on their income, and the circular flow tells us that their income depends on how much is produced; thus at the level of the whole economy the relationships are circular and indeterminate. You could have a low level of output and employment, a low level of income for the population, and a low level of demand out of that income—or all of these could be at a high level. For another thing, price changes at the level of the whole economy can't be determined by the price fluctuations needed for individual goods to sell. Consider any good in particular—say, cars. If there is an oversupply of cars, we would expect their price to fall, *relative to the price of other goods in the economy*. If all prices are falling together, however, so is consumer income (the circular flow), and the relative price of cars doesn't change as it needs to. So one cannot simply add up prices and quantities across the various markets for goods and services and claim to explain national income or the price level. This is *not* an argument against the role of these individual markets; it *is* an argument against basing our analysis of the economy as a whole on them.

Keynes could have stopped here, but in an appendix to the *General Theory* he offered a reason why even individual markets might not clear. If we are in a situation like the one depicted in Figure 1, with the price of a good initially set at P**, the supplier has to weigh the pros and cons of offering to sell at a lower price. The pro is obvious, and the mechanism of market equilibrium is based on it: it is better to get a lower price for your goods than nothing at all. But for any good that has a shelf life—anything that can be stored and offered for sale in a future period—there is also a con to consider: if you sell an item cheaply today, you won't be able to get a higher price for it tomorrow. If you think the drop in demand is only temporary, you may want to allow your supply to exceed demand for a while, stockpile unsold goods, and sell them off later when demand rebounds. This depends on your expectations of the future, which may be more optimistic, or for that matter more pessimistic, than current conditions would indicate. The point is that the kind of supply and demand analysis represented by Figure 1 is insufficient to predict how markets will behave when participants are looking ahead to future time periods.

The upshot: market for goods may not clear, and even if they do, this does not mean that they will clear at a satisfactory level of output.

*2. Labor markets.* Figure 2 provides us with the most direct possible confrontation between classical and Keynesian thinking. The classical story is that full employment at N* is also the market equilibrium; leave the labor market alone and the economy will get there soon enough. Keynes begs to differ. This could be true for any individual labor market, *given the rest of the economy*, but it can't be true for a market that represents *all* the labor available to the economy simultaneously. There are two reasons for this. One, which Keynes stressed, is that if, wages are lowered throughout the economy, this will lower the price level more or less correspondingly, since wages constitute the largest part of prices. If this happens, however, the **real wage**, the wage adjusted for inflation (or in this case deflation), will not go down: workers have less money, but their buying power remains the same. Workers, said Keynes, are simply not in a position to bargain over the real wage; they can bargain only over **nominal wages**, the money value of their wage at whatever price level eventuates. Thus there may be no way for the economy to move from W** to W*.

In truth, most economists find this less than convincing. It is true that cutting wages throughout the economy will cause prices to fall, and this may be a separate problem for reasons we will consider later, but one should not expect prices to fall by as much as wages, since there are other inputs into production. For instance, when wages fall, profits could go up, and more money would be distributed to (some) households in the form of profit rather than wages. Thus the price of labor relative to capital would fall, and this could be the sort of adjustment depicted in Figure 1. Because of this reasoning, economists have looked for other arguments that might explain the failure of wage adjustment.

A second argument, which Keynes would have done well to give more attention to, parallels the point made concerning the market for goods: the demand for labor depends on, well, the demand for labor. That is, employers wish to hire workers to produce goods for sale, but the demand for these goods depends on the income of households which comes mainly from labor. If wages fall, for example, then the demand for goods will fall, which will then lead employers to reduce their demand for labor. Indeed, this could be a vicious circle. The problem is not solved by reducing employment rather than wages, since this too can reduce the demand

for goods. All of this is not to deny that conditions in the labor market, like excess demand, can have a powerful effect on wages, but it denies that this effect will cause a shift toward full employment. To put the matter precisely, if the demand for labor itself depends on the level of employment and the income workers have to spend on products, it does not exist as an element independent of supply. Just as there is no such thing as a supply curve for a monopolist, because monopolistic supply depends on demand, there is no aggregate demand curve for labor either.

**John Maynard Keynes** (1883-1946)

Perhaps other economists may equal Keynes in their impact on the field, but Keynes the man had an impact on his times that is truly extraordinary. Popular writer, social theorist, global policy guru, arts impresario, sexual rebel—Keynes was all of these, sometimes on the same day.

Maynard Keynes was born into an academic household and was connected, one way or another, to Cambridge University in Cambridge, England his entire life. His brilliance was quickly recognized as a student, and before finishing his education, Keynes had established a social network that included many of the leading artists and thinkers of his time. His Ph.D. thesis was on probability theory—but in the context of moral philosophy—and was eventually published as a book. His first job was with the Foreign Office, specializing on the financial relations between England and India, then an English colony, and through this he became a recognized expert on international finance. He later broke with the government, however, over the Treaty of Versailles, which concluded the First World War. In a near fury, he wrote *The Economic Consequences of the Peace* (1920), which became an international best-seller. His main thesis, which proved to be disturbingly accurate, was that the reparations demanded of Germany would wreck the global economy and pave the way for the next war.

But as he was rising in fame as an economist and policy advisor, Keynes lived several other lives. He was a key member of the Bloomsbury group of writers and artists. He managed the endowment and helped expand the arts at Cambridge, where he rose rapidly to become an influential professor and campus leader. He also retained an active role in "the Apostles", a semi-secret Cambridge discussion (and more) club that included many world-class philosophers, scientists and creative people. He lived the life of an openly gay man at a time when homosexuality was still illegal, and when even the most accomplished individuals (like the mathematician Alan Turing, who may have done as much to help England win the Second World War as any other man, Churchill included) were at risk of prosecution and humiliation.

England suffered very high unemployment throughout the 1920s, and Keynes came to believe that it was unnecessary and could be eliminated by forceful government action. He became a freelance political activist, supporting any politician who seemed to be favorable to his ideas. Meanwhile, he immersed himself in the theory of financial economics, searching for the key to overcoming economic stagnation. He published a book on monetary theory and acquired an even higher global reputation. (He was appointed the editor of the *Economic Journal*, the official publication of the Royal Economic Society.) Surprisingly, he performed a sexual about-face and married one of the leading ballerinas of his time, Lydia Lopokova of the Ballet Russe.

The onset of the Great Depression in the 1930s added greater urgency to Keynes' intellectual quest. He was determined to help lead the world out of the slump not only to alleviate the suffering it was causing, but to rescue capitalism and liberal society from the twin threats of Fascism and Communism. Finally, in 1936 he published his *General Theory of Employment, Interest and Money*, which attempted to make sense of the economic disaster. Within just a few years, his dissent became the new orthodoxy. Economics textbooks were rewritten, and new kinds of economic policies came into being. Keynes was now the global icon of an economics that could be enlisted to relieve the world of poverty and disorder.

During WWII Keynes served as an unpaid advisor to the British government and the Bank of England, helping to manage the economy in wartime and prepare for the coming peace. He negotiated privately with his counterpart in the United States (Harry Dexter White, an assistant to the US Treasury Secretary), and this led to the Bretton Woods conference in 1944 that established the foundations for the postwar economic world. Keynes did not achieve many of his goals, but his ideas, even greatly compromised, served the world far better than the errors of Versailles. He performed these services while battling a debilitating heart infection. This disease, misdiagnosed and largely untreated, caused his death not long after the war was over and the institutions he had coauthored were put into effect.

*3. Credit markets.* In the world of Figure 3, interest rates adjust to equalize savings and borrowing, and therefore investment, in credit markets. No money sits and waits for an offer; money coming into banks and financial markets is equal to money going out. This is all well and good, Keynes might say, but it doesn't tell you how much income and employment there will be in this economy. The reason is the same we have seen

in each case so far: both the demand for loans and the supply of them are deeply influenced by the state of the economy itself. Take supply: the amount of money households choose to save depends not only on interest rates but also, and even more, on how much they are earning. When the economy is booming and employment and output are strong, there is more income out of which to save. When the economy sags, income and savings will fall, all else being equal. Thus the same interest rate could be associated with two entirely different supplies of savings, one at an economy in high gear, the other in one that is just sputtering along.

A similar story applies to the demand side. Businesses borrow money to invest, and they invest because they think there will be demand for the goods or services they intend to produce. If the economy is moribund, however, the urge to invest will be much lower at any interest rate. Thus, equilibrium in the credit market does not determine the level output; the level of output determines the amount of borrowing and lending that will occur when the credit market is in equilibrium.

Keynes had a great deal more to say about interest rates, investment and income, but we will postpone this for now. The main point in this context is that Keynes argued that the classical model is incomplete, and that only an analysis that takes account of possible fluctuations in national income can adequately account for the aggregate supply of and demand for loans.

*4. International trade.* Keynes was personally torn in his attitude toward trade. On the one hand, he was cosmopolitan in outlook, a man of the world. His wife was Russian. He had friends throughout Europe and the United States, and he traveled frequently to visit them. He dreamed of a world without borders, and he despised nationalism as a dangerous and self-blinding illusion. On the other, he was convinced that the pressures emanating from a globally competitive economy constituted one of the greatest impediments to rational economic policy-making. He advocated less trade and much more regulation of international movements of money. But he devoted the last years of his life to the struggle to create new foundations for global economic cooperation.

While Keynes had a deep interest in trade and international finance, he said relatively little about how his thinking on this front connected to the critique of classical economics set forth in the *General Theory*. Some of his friends and followers, however, have discussed this topic at length, and we can summarize their position here. The single biggest problem with Figure 4, according to this view, is that it considers only the relationship between imports and exports and exchange rates, *given the level of national income*. But, of course, it is exactly the level of national income that needs to be explained. If a country's income is low, its imports will be lower at any exchange rate, while its exports depend on the level of income in the other countries it trades with. Thus there are many possible equilibria in international markets associated with different levels of income and employment. This is essentially the same idea we have been tracking throughout the four classical markets.

Another problem concerns the manner in which exchange rates are determined. As we saw in Chapter 8, it is not true that only the desire to purchase goods in international trade provides the demand for currencies; on the contrary, demand can be driven by the desire to invest in other countries or simply by pure speculation. Thus a country may find itself with an overvalued currency, resulting in a persistent trade deficit, with no "automatic" tendency to self-correction. One possible remedy in such a situation would be to reduce interest rates, which encourages wealth-holders to look elsewhere for higher returns, but this can lead to a foreign exchange crisis if the trade balance does not improve as rapidly as capital outflows increase—which is almost certain to be the case, due to the J-curve.

To summarize this chapter, then, the faith of the classical economists in the ability of a market economy to reach its full output and employment potential was based on two oversights, according to Keynes. First, they didn't distinguish clearly between "supply equals demand" and "supply equals demand at a sufficient level of national income". That is, they failed to consider that there could be many economic equilibria corresponding to different levels of economic activity (as measured, say, by GDP), all of which feature supply equaling demand in individual markets. Second, they were seduced into assuming that the conceptual apparatus, the supply and demand model, that seems to work at the micro level also works at the macro. They failed to take into account the **fallacy of composition** that arises when interconnections among the parts invalidate a

simple extrapolation from the individual parts to the whole system.

It should be stressed that what we have seen in this chapter is a critique of classical economic thinking about whole economies, one that most modern economists would see as naive. In fairness, the classical economists didn't have a concept of aggregate output and employment as we understand them today to organize their thinking. The national income accounts presented in Chapter 3, for instance, date from the years immediately following the publication of the *General Theory*, and are to a large extent a response to it. Thus, we are holding them to an impossible standard. It is also conceivable that the classicals could be right about the homeostatic properties of markets, but on a more complex basis than the one we've considered here. Indeed, quite a few economists today think the classicals were mostly right and Keynes mostly wrong, but on the basis of a much more complex analysis than Keynes had to contend with in his time. We will see what sort of arguments these "new classical" economists make later in this book.

For now, however, give Keynes at least the temporary benefit of your doubt. Take it as your point of departure that modern economies often go through periods of distress, when output and income fall and unemployment rises. Consider that simple market-by-market supply and demand analysis, like the four types of markets stressed by classical economists, is not sufficient to explain this pattern, nor to provide guidance for what to do about it. In that case we need a different, more comprehensive approach. This is what Keynes promised to give us; we will look at a simplified version of his approach in the next chapter.

**The main points**

1. Classical economists, like Jean-Baptiste Say and David Ricardo, believed that shortfalls of output and employment in a market economy would be temporary and self-correcting. The forces of supply and demand would restore equilibrium and see to it that all resources, including labor and capital, were fully utilized. Government intervention was unwarranted, and even counterproductive.

2. Unsold goods would not be a permanent feature of a market economy, according to the classicals, because prices would adjust to equalize supply and demand for every item or service produced.

3. Labor markets could result in unemployment, according to the classical view, only if wages were above their equilibrium level. The pressure of excess supply of labor, however, could be relied on to reduce wages and restore equilibrium.

4. Savings and investment are determined by interest rates in the story told by classical economics. If savings exceed investment, so that money is piling up and the circular flow is impeded, this means interest rates are above their equilibrium level. Ordinary forces of supply and demand can be relied on to reduce interest rates, so that savings and investment are again brought into balance.

5. The classical approach to imports and exports emphasizes the role of real exchange rates. If trade becomes unbalanced, either exchange rates or, under the gold standard, the price level will adjust automatically. This will continue until imports and exports are once again equal.

6. In summary, the classical economics approach emphasizes the role of price changes in all the markets that make up the economy—markets in goods, labor, credit and currencies. The natural tendency is for equilibrium to be restored, which will mean that all goods offered are sold, all workers seeking employment will be hired, all savings will be reinvested, and all money leaving the country for imports will be returned via exports.

7. The Keynesian approach argues that the supply and demand curves in the classical narrative assume an overall level of economic activity, but it is the size of the economy (the level of activity) that needs to be explained. Even if all markets are in equilibrium, the result is indeterminate with respect to the level of national income.

8. The supply and demand curves for goods, according to Keynes, are ceteris paribus: they hold constant the amount of income that consumers have, which, according to the circular flow, also represents the total supply of producers. Thus there could be many equilibria in the markets for goods and services, each corresponding

to a different level of national income. There could be no unsold goods in a depression and also in a period of rapid economic growth.

9. Keynes offered two arguments for why the forces of supply and demand could not be relied on to eliminate unemployment. One is that workers and employers can bargain only over nominal wage rates, whereas real wages determine the cost of employment, and if wages in general go down, so do prices. This overlooks the possibility, however, that wages could fall relative to other inputs into production, which would lead firms to shift to a more labor-intensive system of production. A more consistent argument was that the same criticism offered of the market in goods also applies to the market in labor: the supply and demand curves in the labor market depend on a given level of national income. Indeed, there is no true demand curve for labor at the aggregate level, because the number of workers firms want to employ depends on the income consumers have to buy their products, which depends in turn on conditions in the labor market.

10. According to Keynes, interest rates alone do not determine the quantities of savings and investment; both depend on the overall level of income. If income is high, households will save more, and firms will likely invest more to produce for growing markets. Thus the balance between savings and investment is not sufficient to ensure a sufficient level of output and employment.

11. Trade balances, in the Keynesian view, depend not only on real exchange rates, but also on the incomes of the trading economies. More income in a country increases its imports; more income abroad increases its exports. Moreover, expectations of economic growth in various countries influence capital flows, which themselves affect exchange rates. Thus there is no tendency for markets to automatically produce real exchange rates that will lead to a balance in trade.

12. The version of Keynes' arguments presented in this chapter provides criticisms of classical economic thinking, but it doesn't point to any particular alternative. That is a topic for the following chapter.

**Terms to define:**
fallacy of composition
nominal wage
real wage
Say's Law