Chapter 7: Employment and Unemployment

Along with the growth rate of GDP, the rate of unemployment is one of the official measures of macroeconomic performance most discussed in the media, by policymakers, by business leaders, and by economists. Like the other indicators discussed in Chapters 5 and 6, the official unemployment rate is interesting because it, in a crude way, measures something about human well-being—or, in this case, ill-being.

Although some level of unemployment is unavoidable in a changing economy, a high rate of unemployment is a bad thing. Partly this is because high unemployment represents an inefficient utilization of national resources. The economy could be more productive if idle labor resources were put to work.

More dramatically, however, the experience of wanting and needing a job, but not being able to find one, can have a devastating effect on the job seekers themselves and on their families and communities. Besides the obvious strains and difficulties that accompany the loss of income, being unwanted by employers can be a profoundly unsettling experience in a society in which your identity is often tied up with “what you do.” Higher rates of suicide, domestic violence, and depression often occur during periods of high and sustained unemployment. Social cohesion can also deteriorate when people feel marginalized from the mainstream of economic life.

How well is this social distress captured in official measures of employment and unemployment? What are some of the causes of unemployment? How has unemployment varied over time? How is the nature of work changing, in recent decades, and what will the future hold? These are the questions we will discuss in this chapter.

1. Measuring Employment and Unemployment

The U.S. Bureau of Labor Statistics (BLS), collects and publishes information on employment and unemployment. Every month, they interview 60,000 households, asking whether individual household members have jobs or are looking for work.¹

Bureau of Labor Statistics (BLS): In the United States, the government agency that compiles and publishes employment and unemployment statistics.

¹ Actually, they use two surveys. Another survey collects data every month from nearly 400,000 nonfarm businesses and government establishments, compiling information from the employer point of view. While this chapter will focus on data from the household survey, it is important to note that sometimes these surveys disagree because of the different ways they are conducted. It sometimes happens that one survey shows a month-to-month gain in employment, for example, while the other shows a loss. Since employment growth is a politically sensitive topic, there is often debate about which set of numbers should be believed.
1.1 Who is “Employed”?

If you live in a U.S. household, you may someday get a telephone call from a BLS interviewer. After a few preliminaries he or she will ask you the questions shown in Box A of Figure 7.1. If you can answer “no” to all of these questions, you are part of the civilian, noninstitutionalized, aged 16 and over population about which this survey gathers data, and the interviewer will ask you questions about employment.\(^2\) If you answer any question in Box A "yes," the interviewer will not ask you about employment. Official employment and unemployment statistics do not include you.

Figure 7.1 Classifications in the Household Survey

The household survey asks people a series of questions to determine if they are employed, unemployed, or not in the labor force.


If you are part of the surveyed population, you will then be asked the questions in Box B of Figure 7.1, starting with "Last week, did you do any work for pay or profit?" Anyone who answers “yes” will be classified as employed. If you did any paid work last week--even if you worked for only an hour or two at a casual job--the interviewer will code you as "employed." If you answer “no,” you will then be asked more questions. For example, if you have a paid job but just did not happen to put in any hours last week because you were sick, on vacation, or on certain kinds of leave, you will be coded as working and “employed.” Also, if you did unpaid work in a family-run business, such as

\(^2\) Trends in employment statistics over time, then, need to be analyzed in the light of considerations such as changes in age demographics, military policy, and rates of disability and incarceration.
a retail store or farm, you will be classified as “employed” as long as you worked in it more than 15 hours a week.

**employed person (BLS household survey definition):** a person who did any work for pay or profit during the week before they are surveyed by the BLS or who worked 15 hours or more in a family business.

Note that the “family business” situation is the only case where unpaid work currently counts in the official statistics. If you work fewer hours in your family business, or are, for example, occupied with caring for your children or other family members or doing community volunteer work, you will not be considered to be “employed.” The BLS is currently seeking to improve its measures of people’s productive activities, both paid and unpaid, by instituting a new “time use” survey. This survey gathers data on how much time people spend in activities including paid work, unpaid work taking care of home and family, unpaid volunteer work, and leisure. In the meantime, however, it is important to note that—based on a convention that originated with the first employment statistics collected in the 1940’s—terms like “labor,” “work,” and “employment,” in official statistics generally refer to paid work only.

### 1.2 Measuring Unemployment

If your answers to the household survey do not result in you being classified as “employed,” you will be asked the questions about job search and availability shown in Box C of Figure 7.1. Activities such as contacting employers and sending out resumes count as “active” job search. Merely participating in a job training program or reading the want ads do not. The question about whether you could start a job probes to find out if, in fact, you are available for work. If, for example, you are a college student searching during April break for a summer job, but you aren’t available to start the job until June, you would answer “no” to the availability question. If you can answer “yes” to both these questions you are classified as **unemployed**.

**unemployed person (BLS definition):** a person who is not employed, but who is actively seeking a job and who is immediately available for work.

If you are either employed or unemployed, the BLS classifies you as part of the labor force. But what if you are neither “employed” nor “unemployed”? Then you are classified as **“not in the labor force.”** Often people in this category are taking care of a home and family, in school, disabled, or retired. People who are institutionalized, in the military, or under 16 are also not members of the labor force, as the labor force is defined by the BLS.

**labor force (BLS definition):** made up of people who are employed or unemployed

**“not in the labor force” (BLS definition):** the classification given to people who are neither “employed” nor “unemployed.”
Notice, in Figure 7.1, that the vast majority of U.S. residents who are not “employed” are either “not in the labor force” (about 77.4 million) or are not part of the surveyed population (about 70.6 million). In comparison, about 7.0 million people in this month were formally counted as “unemployed.”

Every month, having made estimates of the number of employed and unemployed people in the country, the BLS calculates the official unemployment rate. This follows the formula:

\[
\text{unemployment rate} = \frac{\text{number of people unemployed}}{\text{number of people in the labor force}} \times 100
\]

For example, in May, 2006, looking at Figure 7.1 you can see that the BLS estimated that 144 million people were employed and 7.0 million people were unemployed. The unemployment rate was thus calculated as 4.6%:

\[
\text{unemployment rate} = \frac{7.0 \text{ million}}{144 \text{ million} + 7.0 \text{ million}} \times 100 = 4.6\%
\]

The unemployment rate represents the fraction of the officially defined labor force which is made up of people not currently working at paid jobs, but who are currently looking for and available for paid work.

\[\text{unemployment rate}: \text{the percentage of the labor force made up of people who do not have paid jobs, but who are immediately available and actively looking for paid jobs}\]

The unemployment rate reported in the media is often “seasonally adjusted.” Over the course of a year, some swings in unemployment are pretty predictable. For example, agriculture and construction tend to employ fewer people in the cold winter months, and each year many students enter the labor force in June. The BLS releases “seasonally adjusted” figures that attempt to reflect only shifts in unemployment that are due to factors other than such seasonal patterns.

The BLS also estimates unemployment rates for various demographic groups, occupations, industries, and geographical areas. Historically, unemployment rates have generally been substantially higher for minority populations than for whites, for teenagers than for older people, and for less educated people than for the more educated. Unemployment rates often have differed somewhat by gender, though not with any consistent pattern. Some representative unemployment rates for May, 2006 are given in Table 7.1.

---

3 New figures are released monthly. See www.bls.gov.
1.3 How People Enter and Exit Unemployment

Often, when we think of unemployed people, we think of someone who has lost their job—perhaps a friend or a relative who has been “downsized” from a position. Losing one’s job, however, is not the only way of becoming unemployed.

The BLS classifies unemployed people according to four main reasons for unemployment:

- **Job losers** left their last job involuntarily;
- **Job leavers** have voluntarily quit their jobs;
- **Reentrants** are people who were in the labor force at some previous time, and have now joined it again after some period away;
- **Entrants** are people who have just joined the labor force for the first time.

On average, about half of the unemployed are job losers, although the proportions of the unemployed in each group varies over time. During recessions, people are more likely to have been laid off and less likely to want to voluntarily leave a job (since they are not sure they will find another) than in times of greater prosperity. Sometimes when one family member loses a job, other family members will enter (or reenter) the labor force in order to try to make up for the lost wages.

How do people get out of being unemployed? Obviously, one way is by getting a job. However, people can also leave unemployment by leaving the labor force. They may stop actively looking for work because they have decided to go to school or take care of children. Other people leave unemployment when they enlist in the military, go to jail (see News in Context), or die—thus moving out of the surveyed population. Some

---

Note: People are allowed to indicate more than one race group. However, these statistics do not include people who indicated more than one race.
of these life changes may reflect deliberate, positive decisions. But some unemployed people may simply give up actively searching for work because they have had no success after months of looking.

**News in Context: US prison population rises to 2.18 million**

*May 21, 2006*

WASHINGTON (AFP) - The US prison population, already the largest in the world, grew in 2005 to 2.18 million, according to government statistics.

The number of inmates grew 2.6 percent between July 1, 2004 to June 30, 2005, an average of 1,085 prisoners per week. According to the annual Census of Jail Inmates, this was the largest increase since 1997. Women make up an increasing proportion of jail inmates, reaching 12.7 percent of the population in 2005, compared to 10.2 percent in 1995. Nearly 4.7 percent of African American men are behind bars in the United States. That percentage grows to nearly 12 percent for black men 25-29. For that age group, 2.9 percent of Hispanics are in prison as are 1.7 percent of whites.

One American in 136 is in prison. By comparison, the proportion in France is one in 1,000.


*Do you think, in light of the very high incarceration rate in the United States, that official unemployment statistics are understated, overstated, or about right?*

1.4 Discouraged Workers and Underemployment

The fact that some “not in the labor force” people might want jobs but have given up looking for them has troubled employment analysts for some time. To the extent people give up on looking, the official unemployment rate *underestimates* people’s need and desire for paid jobs.

In recent years, the BLS has added questions to the survey to try to determine how many people in the “not in the labor force” population may want employment, even if they are not currently searching for work. If someone says that they are available for work, want to work, and have looked for work recently even though they are not looking now, the BLS calls them "marginally attached workers." If they also say that the reason they are no longer looking is that they believe there are no jobs out there for them, they are called *discouraged workers*. They may have become discouraged because they believe their skills don’t match available openings, because they have experienced discrimination, or because they have been turned away time after time.

**discouraged workers**: people who desire and are available for a job, but give discouragement as the reason for no longer looking for a job
But let’s take a closer look at the people classified as “employed,” too. In the BLS statistics a person is counted as “employed” if they do any paid work at all during the reference week, even if only for an hour or two. Some people prefer part time work, of course, because of the time it leaves them for other activities like schooling or family care. Some are limited to part time work for health reasons. But others want and need full-time work, and are only settling for part-time work until they can find something better. The household survey asks people who work part time about their reasons for doing so. In May 2006, 19.7 million people reported working less than 35 hours per week for reasons such as health or family responsibilities. In the same month, 4.1 million people reported working part time for what the BLS calls “economic reasons”—that is, slack business conditions or because part-time work was all they could find.

What indicator, then, should we look at to see if the national employment situation is “bad” or “good”? The BLS now actually publishes various measures of labor underutilization, that allow you to see the situation from a variety of different perspectives. For example, if you add in “marginally attached” workers and people who involuntarily work part time, the rate of labor underutilization in May, 2006 is 8.2%, as compared to the official unemployment rate of 4.6%.

The BLS also counts people as employed even if the kind of work they did does not begin to tap into their skills. Suppose you paint your aunt’s living room for cash while you are waiting to hear back on job applications for management or computer positions. The BLS counts you as already employed. People who are working at jobs that underutilize their abilities, as well as those that work fewer hours than they like, can be said to be underemployed.

**underemployment:** working fewer hours than desired, and/or at a job that does not utilize one’s skills

If we are concerned about human well-being, underemployment as well as unemployment should be of concern. While underemployment due to an underutilization of skills is certainly of considerable concern or both efficiency and quality-of-life reasons, official surveys do not currently attempt to measure this sort of underemployment.

**Discussion Questions**

1. How would the BLS classify you, personally, on the basis of your activities last week? Can you think of an example where someone you would think of as working would not be considered by the BLS to be officially “employed”? Is it true that people who are not working are generally counted as “unemployed”?

2. Do you know anyone who is a “discouraged worker”? How about someone working part time “for economic reasons”?
2. Types of Unemployment

While the BLS statisticians are mainly concerned with calculating the numbers of the unemployed, economists are more concerned with the causes of unemployment. Economists often apply a three-way categorization of types of unemployment, which—while abstract and not tightly related to BLS categories—can be helpful in thinking about some of the major causes of unemployment.

2.1 Frictional Unemployment

Frictional (or search) unemployment merely reflects people’s transitions between jobs. The fact that some people are unemployed does not necessarily mean that there are no jobs available. In April 2006, for example, while 7.0 million people were looking for jobs, there were also an estimated 4.1 million job vacancies—that is, jobs looking for people! Even in a well-functioning economy, it may take many weeks for people and suitable jobs to find each other. An unemployment rate of 0% could only happen if everyone who wants a job always takes one immediately—within a week. Not only is this unlikely, this is also in some ways undesirable. Taking the first job offered is often not the best thing for the person looking for the job, nor for the economy as a whole. Everybody benefits if people take the time to find good job “matches”—places where their skills and talents can be put to valuable use. Because information about job openings takes time to find, and employers may want to spend time interviewing and testing applicants, making a good job match is not an instantaneous process.

| frictional unemployment: | unemployment that arises as people are in transition between jobs |

For the most part, economists don’t worry too much about frictional unemployment, because some amount of frictional unemployment—say, 2-3%—is inevitable and much of it tends to be short-term. Things like innovative web technologies for matching job offers to job seekers may reduce frictional unemployment by reducing search time.

Many job seekers rely on state unemployment insurance programs to ease their income needs while they spend time searching for work. Unemployment compensation benefits are, in many states, set equal to half a worker’s earnings or a state-set maximum (whichever is less). Workers who qualify can usually receive benefits for up to 26 weeks. Part of the justification for these programs is to allow people the time to make good matches.

2.2 Structural Unemployment

**Structural unemployment** arises in an economy when a mismatch occurs between the kinds of jobs being offered by employers and the skills, experience, education, and geographical location of potential employees. One important cause of structural unemployment is sectoral shifts, such as will be described in Chapter 8, where employment in some sectors fall while employment in other sectors rises. The
U.S. economy may have a lot of new jobs for financial analysts and nurses aides in the Southwest, for example. But these won’t do you much good if you live in the Northeast and have skills in engine assembly or web design.

**structural unemployment:** unemployment that arises because people’s skills, experience, education and location do not match what employers are looking for

On the positive side, structural unemployment arises from what economist Joseph Schumpeter (1883-1950) called “creative destruction.” Schumpeter thought this was a good and necessary thing for capitalist economies. Technological and entrepreneurial innovations have often contributed to improved living standards, even though they cause some job opportunities to dry up. People skilled in outdated technologies—buggy-whip manufacturing is a classic example—necessarily become unemployed. Society could have tried to prevent unemployment in buggy-whip manufacturing by banning the introduction of the automobile, but the cost in economic growth would have been immense. If we, today, begin to move away from internal combustion engines due to their negative environmental impacts, the conventional auto industry will decline just as the buggy-whip industry declined at the end of the horse-and-buggy era. New technologies, new markets, and new concerns create new opportunities.

On the negative side, shifts in employment patterns by sector and industry are very disruptive, and often very painful, to the people who work in the declining sectors and to their families and communities. People in the declining sectors see the value of their specialized human capital depreciating rapidly. Whole towns and cities may become economically depressed when a major industry closes down, since the unemployed workers spend less at local businesses and property values plummet. Displaced workers *may* be able to train for a new career—especially if they are young and able to move to wherever the new jobs may be. But many displaced workers, particularly older ones, may never find the kind of pay and satisfaction that they had at their earlier occupations. Older displaced workers are more likely than younger ones to stay unemployed for long periods, or exit the labor force.

Governments at all levels have tried various policies to prevent or alleviate structural unemployment. The governments of some countries, notably Germany and Japan in the 1980’s and 1990’s, have followed industrial policies through which they directly encourage the development and retention of certain key industries through loans, subsidies, and tax credits. During negotiations on international trade (see Chapter xx), one sensitive issue is always the impact that increased trade might have on the employment levels in various industries in each country.

Government policies in the United States that target structural unemployment often focus on attempting to help displaced workers find new employment. For example, the Trade Adjustment Assistance Reform Act of 2002 provides benefits for certain worker displaced as a result of increased imports or the shifting of production to other countries. Workers who qualify for the program can receive retraining along with temporary income support payments and assistance with health insurance. The key
feature of these programs is that they are targeted to particular workers, in particular sectors of the economy. There has been some question, however, as to whether they have actually been successful in getting displaced workers into new, good jobs. Business policies at the firm level are also relevant: firms can help prevent structural unemployment if they make retaining and/or retraining their loyal employees a priority, even while responding to changes in technology and trade.

2.3 Cyclical Unemployment

Cyclical unemployment is unemployment due to macroeconomic fluctuations—specifically, unemployment which occurs due to a drop off in aggregate demand.\(^5\) During recessions, unemployment rises as demand for the products of business falls off. During recoveries, this kind of unemployment should decrease.

\textbf{cyclical unemployment:} unemployment caused by a drop in aggregate demand

Traditionally, a \textbf{recession} has been defined as a case where GDP falls for two consecutive calendar quarters. Most economists look to the National Bureau of Economic Research (NBER), a nonprofit and nongovernmental economic research organization, to "officially" mark the beginning and end of recessions. The NBER determinations are strongly based on GDP data, though they also look at other indicators such as the levels of industrial production and wholesale-retail sales.

\textbf{recession:} traditionally defined as occurring when GDP falls for two consecutive calendar quarters, now "officially" marked by the National Bureau of Economic Research.

Figure 7.2 shows the monthly unemployment rate in the United States from January 1969 to May, 2006. Unemployment was at a low of 3.4% in 1969, and at a high of 10.8% in 1982. Notice in the figure that since 1982 the U.S. economy has apparently been characterized by less frequent and shorter recessions. However, while earlier recovery periods were characterized by immediate upswings in employment, the recessions that NBER says ended in 1991 and 2001 were followed by continuing job slumps. The continued loss of jobs well into 2003, after the last recession, caused many commentators to call it the “jobless recovery.” Apparently, while GDP grew, it grew too slowly to provide jobs for new entrants and keep up with increasing labor productivity. Is an economy really “recovering” if employment is still dropping or stagnating?

Not surprisingly, given that the field of macroeconomics was born out of the problems of the Great Depression, cyclical unemployment is of major concern to macroeconomists. While \textit{structural} unemployment affects only some sectors of the economy and some amount of \textit{frictional} unemployment seems inevitable, cyclical unemployment is spread broadly through the economy and can cause considerable economic hardship. For this reason, it seems that avoiding or minimizing cyclical

\(^5\) As noted in Chapter 1, “Aggregate Demand” means the total demand for all goods and services in a national economy
unemployment should be an important goal of economic policy. Explanations of why macroeconomic fluctuations occur, and what kind of policies might be used to dampen them (and thus reduce cyclical unemployment) will receive extended discussion in Part III of this book.

Unemployment rates rise during recessions (shown in grey). During recent “recoveries,” they have also continued to climb.

Figure 7.2 Unemployment Over the Business Cycle, U.S. 1969-2006

Discussion Questions

1. Reflecting on the experience of you or someone you know, how long would you say it might normally take for someone to find a job, in your area? Comparing your answers in a group, do you find different opinions? What might be some of the factors that make frictional unemployment last a longer or shorter period of time?

2. Do you know of places in your city or region (or nation) that have been particularly hard-hit by unemployment and underemployment, recently or in past decades? Do you know why this hardship occurred? Would you characterize this unemployment as frictional, structural, or cyclical?

3. Theories of Unemployment

Why does unemployment arise, and what can be done about it? Economists favor different theories, depending on whether they take a more Classical or a more Keynesian view.
3.1 The Classical Theory of Unemployment

In Classical economic theory, unemployment is seen as a sign that smooth labor market functioning is being obstructed in some way. The Classical approach assumes that markets behave as described by the idealized supply-and-demand model presented in Chapter 4: the labor market is seen as though it were a single, static market, characterized by perfect competition, spot transactions, and institutions for double-auction bidding.

Such an abstract labor market is depicted in Figure 7.3. While in Chapter 4 we examined markets for assets and produced goods, in this case “quantity” is not measured as a number of *things* (like apartments or swimsuits) but rather a quantity of labor *services*. We can think of this quantity as being measured, for example, by the number of workers working full days over a given time period. The “price” of labor is the (real) wage (in this case, per day). Workers supply labor, while employers demand it. We assume that every unit of labor services is the same, and every worker in this market will get exactly the same wage. The equilibrium wage in this example is $W_E$ and the equilibrium quantity of labor supplied is at $L_E$.

In Figure 7.3, where the market is free to adjust, there is no involuntary unemployment. Everyone who wants a job at the going wage gets one. There may be many people who would offer their services on this market if the wage were higher—as the portion of the supply curve to the right of $L_E$ demonstrates. But, given the currently offered wage rate, these people have made a rational choice not to participate in this labor market.
Within the Classical model, the only way true, involuntary unemployment can exist is if something gets in the way of market forces. The presence of a legal minimum wage is commonly pointed to as one such factor. As illustrated in Figure 7.4, if employers are required to pay a minimum wage of W* (“W-star”) that is above the equilibrium wage, this model predicts that they will hire fewer workers. At an artificially high wage W*, employers want to hire only L_D workers. But at that wage, L_S people want jobs. There is a situation of surplus, as we discussed in Chapter 4. The market is, in this case, prevented from adjusting to equilibrium by legal restrictions on employers. Now there are people who want a job at the going wage, but can’t find one. That is, they are unemployed.

In a Classical (idealized) market for labor, the only thing that can cause true unemployment is something that interferes with the adjustments of free markets, such as a legal minimum wage.

The minimum wage only affects a portion of the workforce, however—people who are relatively unskilled, including many teenagers. But unemployment tends to affect people at all wage levels. Classical economists suggest other “market interference” reasons for unemployment, as well. The economy might provide less than the optimal number of jobs, they believe, because:

- regulations on businesses reduce their growth, restricting growth in the demand for labor
- labor-related regulations (such as safety regulations, mandated benefits, or restrictions on layoffs and firings) and labor union activities increase the cost of labor to businesses, causing them to turn towards labor-saving technologies and thus reducing job growth
- public “safety net” policies such as disability insurance and unemployment insurance reduces employment by causing people to become less willing to seek work
Labor-market recommendations derived from a Classical point of view tend to focus on getting rid of regulations and social programs that are seen as obstructing proper market behavior. Like other Classical proposals, such labor market proposals assume that the economy works best under the principle of laissez-faire – “leave it alone.”

3.2 Imperfect Labor Markets

The Classical theory of labor markets depends on rapid market adjustment – in particular, the elimination of any labor surplus through falling wages and a resulting full-employment equilibrium at a lower wage rate. But is this realistic? John Maynard Keynes, reflecting on the experiences of the Great Depression, pointed out that that certain aspects of real world human psychology and institutions make it unlikely that wages will fall quickly in response to a labor surplus. No one likes to feel that they are losing something. (How would you feel if your boss told you she was cutting your wage?) Employers may be slow to reduce wages because they fear that workers will strongly resist such a move—perhaps with strikes, mass demonstrations, or even violence.

As the Classical-Keynesian synthesis (introduced in Chapter 1) took form, many economists came to favor a more Keynesian explanation for cyclical unemployment. Given enough time, they argued, markets might be able to adjust as described in the Classical model. But Keynesian-oriented economists also developed "sticky wage" theories, which hypothesize that wages may stay at a level above equilibrium for some time. Wages may eventually adjust in the way shown in the Classical model, but too slowly to keep the labor market always in equilibrium.

"sticky wage" theories: theories about why wages may stay at above-equilibrium levels, in spite of the existence of a labor surplus

In addition to psychological resistance to wage cuts, as mentioned above, a minimum wage might also make wages "sticky". Wages may also become set at particular levels by long-term contracts, such as many large employers negotiate with labor unions.

More recently, economists have also come up with other theories. One is that the efforts of "insiders" may contribute to keeping wages high. “Insiders” are people who already have jobs within an organization. Insiders may be able to keep their wages high by setting up various barriers that prevent their employer from dismissing them and hiring lower-priced “outsiders.” Insiders may have contracts that specify a high wage and that make them difficult to fire. Or they may refuse to cooperate with new workers or harass them, reducing new workers’ productivity. In the insider-outsider theory, employed workers use the power they derive from such labor turnover costs to keep their wages artificially high.
insider-outsider theory: the theory that “insider” workers who are already employed may have the power to prevent “outsider” workers from competing with them and lowering their wages

Yet another recently-developed explanation is that employers may find it to their advantage to pay employees wages that are somewhat higher than would be strictly necessary to get them to work. Managers don’t just offer “the going wage” and then sit back. They must attract, train, and motivate workers if their enterprise is to be productive. Efficiency wage theory suggests that paying higher-than-necessary wages may improve employee productivity. Workers may be healthier and better nourished, and therefore more able to do quality work, when they are better paid. (This is especially true when talking about wage rates at the low end of the scale.) Also, workers may quit less often if they know they are getting “a really good deal” from their employer than if they are getting barely enough to motivate them to take the job, or just the same as they could get anywhere else. A lower likelihood of quitting makes employees more valuable to an employer because the employer saves on the costs of training new workers. Workers may also work more efficiently if being caught shirking means potentially losing their “really good deal.” If the higher-than-necessary efficiency wages creates a pool of unemployed people, this only further reinforces employees’ incentives to work hard because then they will be even more afraid of losing their good jobs.

efficiency wage theory: the theory that an employer can motivate workers to put forth more effort by paying them somewhat more than what they could get elsewhere

In sum, in the Classical-Keynesian synthesis, legally or contractually-set wages, fear of worker unrest, the power of insiders, and efficiency wages are thought sometimes to cause wages to be "sticky." By making real world labor markets work differently than the market pictured in the classical model, these phenomena mean that it is unrealistic to expect that labor markets can adjust rapidly to maintain full employment.

What sort of policies do "sticky wage" theories lead to? To the extent that unemployment is seen as a real problem in these theories, more government activity to relieve unemployment-related hardship may be proposed, such as the aggregate demand policies we will discuss in Part III of this book, or programs of unemployment benefits or job creation. Some economists also argue that a moderate level of economy-wide price inflation tends to relieve some "sticky wage" unemployment. How could this be so? Suppose you are working for $12 per hour now, and your employer says he wants to cut your wage to $10 per hour. You would probably resist—especially if you see that other people are not suffering such wage cuts. But suppose, instead, that your wage stays at $12 per hour, and, over time, inflation reduces the purchasing power of your wage to $10 per hour (in terms of prices of the base year). Your nominal wage has stayed the same, but your real wage (and thus your real cost to your employer) has fallen. Since this has happened more subtlety—and is felt more economy-wide—than a cut in your personal nominal wage, you may not feel as compelled to resist. According to some theories, such a drop in the wage (in real terms) should cause employment to increase.
3.3 Unemployment and Aggregate Demand

While Keynesian economics is often closely associated with "sticky wage" theories, Keynes' own critique of Classical views actually went much farther. He questioned whether the theory of a smoothly functioning labor market, as portrayed in Figure 7.3, is really a good starting place for thinking about macroeconomics and unemployment. This view is carried forward today by a number of economists (who sometimes call themselves Keynesian, or also Post Keynesian or Institutionalist).

Recall that the supply-and-demand diagram, as we introduced it in Chapter 4, was meant to be a way of thinking about a single, spot market in which a single, completely standardized good is being traded. But "the economy" as a whole is not just one smoothly-functioning market in which prices move to equate quantity supplied and quantity demanded. It is made up of markets for potatoes and markets for health care, markets for steelworkers and markets for schoolteachers, markets for real estate and markets for credit, markets for goods and services to be delivered now and for goods and services to be delivered months (or longer) in the future—as well as nonmarket institutions and transfers of all sorts. All these arenas of economic action have their own institutional peculiarities, and all are interwoven by a network of flows of incomes and payments. Hence, economists who are critical Classical theory see diagrams see like Figure 7.3 and 7.4, which portray only an idealized, abstract, detached, and institutionless labor market, as fundamentally misleading and beside the point.

In the real world, where issues of motivation, labor relations, and power are important, even the Classical idea that minimum wages cause substantial unemployment may be called into question. In a well-known study, economists David Card and Alan Krueger found that a moderate increase in the minimum wage in New Jersey did not cause low-wage employment to decline, and may even have increased it. The study came under fire from economists who believed (given graphs like Figure 7.4) that such a result simply could not be true. But the Classical world assumes perfect competition, whereas real world employers may have enough power in the labor market to be able to pay workers less than what they are worth. Labor markets seem to be more complicated than a simple supply-and-demand model suggests.

Keynes' own focus was on the level of aggregate demand in the economy, and on businesses expectations about future profitability (as will be discussed more in Chapter 9). Keynes believed that even if wages did fall quickly in a number of labor markets, this might do more harm than good. Workers who have lower wages will have less to spend. If they do not buy as much, this reduces demand for the goods being produced by businesses all over the economy. If businesses cannot sell their goods, they will tend to cut back on their investments and on the number of workers they employ. Prices as well as wages may fall (as was observed during the Great Depression), keeping real wages constant and thus giving employers no incentive to hire more workers. Low aggregate demand for goods and services could lead to a vicious cycle of unemployment, low incomes, and low spending in the economy as a whole, as illustrated in Figure 7.5.

---

6 Keynes explained his theory of employment in Chapter 19 of The General Theory (1936).
Rather than blaming unemployment on "the wage being too high," as illustrated in a graph of a hypothetical unified national labor market, Keynes identified the cause of cyclical unemployment as insufficient labor demand in many individual labor markets, economy-wide, leading to a glut of workers overall. Fixing the problem of unemployment in a recession or depression, then, to Keynes and his followers, is not just a matter of making labor markets work more smoothly. Rather, aggregate demand in the economy has to be increased in order to stimulate hiring. Questions of aggregate demand and Keynesian policy will be taken up in Part III of this book.

![Figure 7.5 The Keynesian Model of Employment Determination](image)

In the Keynesian model, aggregate employment depends on the level of aggregate demand in the economy as a whole. If total spending is low, then employers will not want to produce a great deal because they do not want to end up with unsold goods. If production is low, they will not need many workers. If few workers are hired, then aggregate income will be low—in what can become a vicious cycle.

3.4 Is There a “Natural” Rate of Unemployment?

Because of macroeconomists’ special interest in cyclical unemployment, many have adopted a somewhat unfortunate term—the “natural” rate of unemployment—to describe the rate of unemployment that they hypothesize would occur in the absence of cyclical fluctuations. Figure 7.6 shows what might happen in a highly stylized business cycle in which actual unemployment fluctuates around a “natural rate.” Booms are said to reduce unemployment below a stable “natural rate,” and recessions to make unemployment rise above it.

“natural” rate of unemployment: the rate of unemployment that would prevail in the absence of business cycles, according to some theories
A related concept is that of the **non-accelerating inflation rate of unemployment (NAIRU)**. This is conceptualized as the lowest rate of unemployment that can be maintained without causing the economy to “overheat.” The concept of the NAIRU can best be understood by looking back at the Phillips Curve graph we created in Chapter 2, reproduced as Figure 7.7. In this graph, you can see that inflation rises
steadily but not dramatically as unemployment is reduced towards 4%. But as the unemployment rate passes below about 4%, the Phillips Curve distinctly bends upwards, with inflation rising more sharply from year to year. Since unemployment below about 4% seems to be associated with rapidly rising inflation, we could say that the NAIRU during the 1963-1969 appears to be about 4%, as represented in the graph by the vertical line.

**non-accelerating inflation rate of unemployment (NAIRU):**

the lowest rate of unemployment that can be sustained without causing rapidly rising inflation

If the world were as simple these two figures suggest, the “natural rate” and the NAIRU would mean essentially the same thing. Unemployment higher than the NAIRU, like unemployment higher than the “natural rate,” would be associated with low production and a sluggish economy. Unemployment lower than NAIRU or “natural rate” would be associated with higher production and inflation.

But the world is not so simple. If you refer back to Figure 2.4 in Chapter 2, you will see that after 1969 the relation between inflation and unemployment doesn’t look a bit like the Phillips Curve in Figure 7.7. Over longer periods of time, it is clear that if a NAIRU exists at all, it certainly moves around. Some economists argue that NAIRU is a useful concept, even if it can be difficult to say just what number should be associated with it. Other economists believe the concept is no longer useful.

The concept of a “natural rate” has even more significant problems. First, the word “natural” sometimes leads people to think that there is something right or inevitable about unemployment at the “natural” rate—no matter how much noncyclical unemployment (such as structural unemployment from shifts in international trade) people may be suffering. Second, the concept reflects one particular theory, that of the Classical school of macroeconomics. The inventor of the “natural rate of unemployment” concept was economist Milton Friedman, who is a great believer in the efficiency of market forces.

Second, as with the NAIRU, the study of history shows that it is very difficult to match a particular number with the “natural rate” idea. Figure 7.8 reproduces data from the previous section. You can see that the actual pattern is not the flat line suggested in theory in Figure 7.6. If we were to suppose that unemployment was fluctuating around some specific rate, it might appear that this rate climbs during the 1970s and then gently falls after the early 1980s, as illustrated in Figure 7.8. (This is one of many possibilities. Others might picture the natural rate rising in steps like a staircase, or in other patterns.)

A “natural rate” that changes over time is a slippery concept, however. A current unemployment rate of 5% would be considered excessive due to cyclical considerations if you believe that the “natural rate” is 4%. But the same rate would be considered to be a sign of a vibrant macroeconomy if you believe that the “natural rate” is 6%. Because of this problem, a number of economists do not believe the “natural rate” concept is very useful.
Looking at real world data, there does not seem to be any one, constant rate around which unemployment fluctuates. In recent decades the “natural” rate might be considered to be anywhere from about 4% to over 7%.

While economists from the Classical school believe that the economy will tend to return to an equilibrium position whenever it is pushed away, and thus favor the concept of a "natural" rate, other economists question whether an economy is really a stable system at all. Some economists, including John Maynard Keynes and Joseph Schumpeter (1883 –1950) envisioned economies as more dynamic and evolving. While Keynes is often associated with a rather pro-government political stance, and Schumpeter with the more libertarian, small-government views held by adherents of the Austrian School of economics, both Keynes and Schumpeter stressed the inherent instability of economic systems. To them, factors such as uncertainty, innovation, institutions, and technological advance made economies quite unpredictable.

To use a hiking analogy, Classically-minded economists believe that the path of an economy is like a walking trail already laid out through the woods. While a hiker (economy) sometimes steps off the trail (diverges from the “natural” path), he always returns to it. The path of an economy as envisioned by Keynes and Schumpeter and others, on the other hand, is more akin to the path taken by a hiker who ventures into the unknown wilderness, creating the trail as she goes. As society and institutions evolve, these economists and their followers believe the economy can move in any direction, often quite unpredictably.

Discussion Questions

1. Which arguments seem most convincing to you, those of Classical labor market theorists, “sticky wage” theorists, or economists concerned with aggregate demand?
What are some strengths and weaknesses of each argument? (Is one argument more
elegant—that is, does it seem to explain a great deal with a minimum of fuss? Is one
argument more realistic?)

2. Can you, looking at Figure 7.2 or 7.7, predict where the unemployment rate is headed
next?

4. Employment, Unemployment, and Well-Being

Because the world we live in is constantly changing, macroeconomics also has to
adapt to take into account changes in the labor force, the changing the nature of work,
and the evolution of people’s goals regarding employment. This section looks at some of
the current challenges to how we think about employment and unemployment issues on a
national scale.

4.1 The Changing Labor Force

The labor laws and labor-related social policies that were enacted during and after
the Great Depression made certain assumptions about what a “good job” was. Most
workers were men, and the assumption was that men who were employed full time—
perhaps with options for overtime hours as well—could provide for their families, and
formed the base of the a solid, reliable workforce and a stable society. These
assumptions influenced macroeconomic thinking, as well. Employment of the male
“breadwinner” was the explicit or implicit goal of employment policies.

Over the second half of the twentieth century, however, the composition of the
labor force changed considerably. Women’s labor force participation (LFP) rate rose
dramatically, while men’s LFP dipped. The labor force participation rate is calculated as

\[
\text{Labor force participation rate} = \frac{\text{number of people in the labor force}}{\text{number of people in the civilian, noninstitutionalized age 16 and over population}} \times 100
\]

The LFP rate indicates the fraction of potential paid workers who are either in paid jobs,
or who are seeking and available for paid work. Figure 7.9 shows the labor force
participation (LFP) rates of men and women (age 16 and older). In 1950, many women
worked only until they were married, or after their children were grown, so that women’s
LFP was only 34%. During the next four decades, women increasingly entered the labor
market, until women’s LFP rate flattened out at about 59-60% from the mid-1990s
onwards. The rise of the civil rights and women’s movements during the 1960s and
1970s certainly contributed to this expansion in women’s labor market activities. Some
economists also point to expansion of the service sector (discussed in Chapter 8),
reductions in the average number of children per family, and other factors to help explain
this increase.
During the latter half of the 20th century, women’s rate of participation in paid labor market activities increased dramatically, while men’s tapered off.

Men’s LFP, meanwhile, dropped from 86% in 1950 to 73% in 2006. Tendencies to increased time spent in schooling before beginning work, and earlier retirement from work, explain some of this change. In 1950, 70% of the people in the labor force were male; now, the figure is only 54%.

The labor force has changed in other ways as well. In 1975, Hispanics or Latinos made up only about 4% of the U.S. labor force. Currently, this statistic is 13%.

4.2 The Changing Nature of Work

For most of the twentieth century, people often thought of “a job” (or at least a good job) as something you typically did Monday through Friday, 40 hours a week, for a wage or salary and benefits (such as health insurance and pension plans). People often expected to stay in the same job for years, or even decades. In recent years, it has become popular to talk about how employment is becoming more “flexible.” The term “flexibility” has two very different meanings in the context of macroeconomics and labor economics, however.

One meaning of “flexible” work is work that is more suited to people’s varying needs, especially given family constraints, desires to get an education, and so on. Some workers—especially professional and managerial workers—now enjoy “flextime” or the ability to set their starting and ending times. Job-sharing and part-time work allow employment to be more easily combined with family care, studying, or leisure pursuits. It is still the case, however, that many jobs are inflexible and not “family friendly.” The
United States is practically alone among industrial nations in not offering paid, job- 
guaranteed leaves for new parents. These sorts of lack of flexibility create problems for 
people who want “good jobs” with good pay and promotion opportunities, but who want 
to be able to do meet other life goals and make other important contributions as well.
The term "flexibility" can also refer to people's ability to change jobs when they want to, 
or retrain for new careers.

But the term “flexibility” has also been used to refer to policies that make things 
easier for employers—and often make life more difficult from a worker's perspective. 
Many employers would like to be able to have complete discretion over setting their 
worker's hours and pay, to be able to terminate employees quickly and without fuss, and 
to offer little in the way of benefits. Increasingly, some firms have hired many people as 
“independent contractors” or “consultants,” or as part-time workers, to avoid having to 
pay the benefits that they pay their regular full time employees. More people now work 
non-standard workweeks, whether they want to or not, in an economy that is increasingly 
"24/7" (twenty-four hours a day, 7 days a week). Given short hours and low pay, some 
workers find themselves working two or more part-time jobs to get by.

Since unions often try to block such “flexibilization” of work by bargaining for 
guaranteed hours, increased benefits, and assurances of job security, the reduction in 
union power is one component of this phenomenon. Union membership topped out at 
about one-third of the workforce in the mid-1950s, with significant membership from 
private industry. Currently, only about 13% of workers are union members, and many of 
them are public sector employees such as teachers, police, and firefighters.

To some extent, "flexibility" from the employee's perspective is also in the 
interest of employers. Workers who are more well-rested and less stressed about their 
families, because of accommodating schedules and expectations, can be more productive. 
And to some extent, "flexibility" from the employer's perspective is also in the workers' interest. 
An overly rigid labor market, in which workers are too expensive and difficult 
to fire, could cause employers to try to minimize the number of workers they must hire, 
thus reducing the number of jobs. From a well-being perspective, the question is how a 
good balance can be achieved.

Another aspect of work patterns that has changed substantially in the last few 
decades is the pattern of hours of work. While some observers claim that people in the 
United States we are now working increased hours, and others claim that we are now 
benefiting from increased leisure, the average workweek has, in fact, changed little in 
the last thirty or so years. What has happened, however, is that some groups of people 
are increasingly working very long hours, and others very short hours, so that there are 
now more people at both extreme ends of the spectrum.

In 2000, 26.5% of employed men and 11.3% of employed women worked 50 or 
more hours per week, up from 21% and 5.2%, respectively, in 1970. Often people in this 
group are professionals or managers with heavy job responsibilities. People in such job 
categories usually receive fringe benefits from their employers—but do not, by law, have
to be paid extra when they work overtime. On the other hand, the number of people working short hours has also been increasing. In 2000, 8.6% of employed men and 19.6% of employed women worked 30 hours a week or less, up from 4.5% and 15.5% in 1970. Often these employees are in hourly wage jobs where overtime pay would be required by law (if the employers would offer the extra hours). Part time workers are less likely than full time workers to be offered fringe benefits.  

Is the increasing divergence in the hours that people work evidence that they are now able to tailor their workweeks to their own convenience, or that their employers are making them work too much, on the one hand, or offering so little work that they find it hard to get by financially, on the other? Survey evidence suggests that, in many cases, it is the latter. Jerry A. Jacobs and Kathleen Gerson, in their book The Time Divide, report that “Those who work few hours on average prefer to work more, while those who work many hours on average prefer to work less.” In one survey, 80% of men and 90% of women working over 50 hours per week stated that they would prefer to work less. Those who worked 50-60 hours stated that, on an average, they would prefer 13 fewer hours. On the other hand, many people working short hours wanted to work more. Most people tend to preferred hours that are in the 25-40 hour per week range.

This is important when thinking about the macroeconomics of labor markets, since any given number of total employment hours can have very different well-being consequences depending on how the hours are spread across the population of workers. One case would be an economy in which some groups of people work very long hours, while other people are unemployed or underemployed. Another case would be where working hours are distributed more evenly, allowing workers to have time for family care while reducing the number of unemployed.

Several countries in Europe have had movements towards shorter standard working hours, often for macroeconomic reasons of reducing standard measures of unemployment, but also to encourage strong families and to reduce consumption for ecological reasons. Most European countries have legal limits on the number of hours per week an employee is allowed to work, and vacation time of at least one month per year is standard—even for workers who are just starting out. Because of these different patterns of employment, a typical full-time worker in Europe now works an average of about two hundred hours (the equivalent of five forty-hour weeks) less per year than a full-time worker in the United States.

4.3 Concluding Thoughts

Whether an economy is able to generate and sustain “good jobs” (and good families and communities) depends on the whole institutional structure and dynamics of the national economy. The actions of business, governmental units, nonprofits (including

---

unions, industry associations, and universities) and households all work together to
determine the numbers and types of jobs that are generated, the number of workers in the
labor force, and the skills with which workers are equipped. The responses of a country’s
business leaders, policy makers, workers and consumers to natural resource constraints
and to the challenges and opportunities offered by participation in global markets for
goods, services, and finance further significantly impact the employment situation. The
study of macroeconomics is only a beginning for this challenge.

Discussion Questions

1. What was the labor force experience of your grandparents (or others you know that
are in that generation? Of your parents (or their generation)? What do you expect your
own labor force participation to be like? Do the patterns in your family reflect the
national pattern of changes discussed in the text, or not?

2. What evidence have you seen—in your own family, or through the media—of
increasing “flexibility” in labor markets? Do you think these changes have been
beneficial, harmful, or both?

Review Questions

1. What population is included in the official household survey that measures
employment and unemployment?
2. What questions are asked to determine if someone is “employed”?
3. What makes a person count as “unemployed”?
4. How is the unemployment rate calculated?
5. What groups tend to have particularly high unemployment rates? Particularly low
rates?
6. List four ways a person may enter unemployment.
7. What is a “discouraged worker,” and why are they of concern?
8. List the three types of unemployment, and describe them.
9. What policies may be used to combat each of the first two types of unemployment?
10. Describe the Classical theory of unemployment.
11. What are some of the reasons an economy might offer less than the optimal number
of jobs, according to Classical theory?
12. Describe how “sticky wages” could lead to unemployment.
13. What are some reasons that wages might be “sticky”?
15. What are “efficiency wages,” and why might payment of them lead to
unemployment?
16. On what grounds do some economists criticize Classical and “sticky wage” theories?
17. In the Keynesian model of employment determination, what is the key factor
explaining the level of employment in an economy?
18. Compare and contrast the concepts of the “natural rate of unemployment” and the
“non-accelerating inflation rate of unemployment.”
19. What are some problems with the “natural rate” and NAIRU concepts?
20. How is the labor force participation rate calculated?
21. What have been some of the major changes in the characteristics of the labor force over the last several decades?
22. What sorts of “flexibility” are good for workers? For employers?
23. How has the number of hours worked by different groups changed over the last few decades?

**Exercises**

1. The small nation of Neverland counts its unemployed using the same methods as the United States. Of the population of 350 people, 70 are under age 16, 190 are employed in paid work, and 80 are adults who are not doing paid work or looking for work because they are doing full-time family care, are retired or disabled, or are in school. The rest are unemployed. (No one is institutionalized, and the country has no military.) Calculate the following:
   a. The number of unemployed.
   b. The size of the labor force
   c. The unemployment rate
   d. The labor force participation rate (overall, for both sexes)

2. The population of Tatooonia is very small. Luis works for pay, full time. Robin works one shift a week as counter help at a fast food restaurant. Sheila is retired. Shawna does not work for pay, but is thinking about getting a job and has been flipping through the want ads to see what is available. Bob has given up looking for work, after months of not finding anything. Ana, the only child in the country, is 12 years old.
   a. How would a household survey, following U.S. methods, classify each person?
   b. What is the labor force participation rate in Tatooonia?
   c. What is the unemployment rate in Tatooonia?

3. Suppose an economy is suffering unemployment due to “too high” wages, as theorized by Classical economists.
   a. Draw and numerically label a graph illustrating this case, in which the going wage is $20, the equilibrium wage is $15, 50 million people want to work, but only 30 million are employed.
   b. Describe some of the assumptions about labor markets that underlie this graph.

4. A computer software company advertises for employees, saying “we offer the best-paid jobs in the industry!” But why would any company want to pay more than it absolutely has to, to get workers? Can this phenomenon help to explain the existence of unemployment? Explain in a paragraph.
5. Match each concept in Column A with a definition or example in Column B.

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. “not in the labor force”</td>
<td>i. the theory that unemployment is caused by insufficient aggregate demand</td>
</tr>
<tr>
<td>b. “sticky wage” theory</td>
<td>ii. the lowest unemployment rate, in theory, consistent with inflation that does not rapidly rise</td>
</tr>
<tr>
<td>c. jobless recovery</td>
<td>iii. a theory proposed by Milton Friedman</td>
</tr>
<tr>
<td>d. frictional unemployment</td>
<td>iv. occurs when the skills, experience, and education of workers do not match job openings</td>
</tr>
<tr>
<td>e. employed</td>
<td>v. the theory that people who already hold jobs may set up barriers that keep employment from expanding</td>
</tr>
<tr>
<td>f. Trade Adjustment Assistance Reform Act</td>
<td>vi. immediately available for and currently looking for paid work</td>
</tr>
<tr>
<td>g. unemployed</td>
<td>vii. military personnel</td>
</tr>
<tr>
<td>h. Keynes’ alternative to theories that say that unemployment is caused by high wages</td>
<td>viii. a policy response to structural unemployment</td>
</tr>
<tr>
<td>i. structural unemployment</td>
<td>ix. worked 15 hours or more in a family business</td>
</tr>
<tr>
<td>j. insider-outsider theory</td>
<td>x. occurs as people move between jobs</td>
</tr>
<tr>
<td>k. natural rate of unemployment</td>
<td>xi. when GDP rises but employment does not</td>
</tr>
<tr>
<td>l. not included in the household survey covering employment</td>
<td>xii. the theory that unemployment may occur because wages are slow to fall</td>
</tr>
<tr>
<td>m. reentrant</td>
<td>xiii. someone who joins the labor force after some period away from it</td>
</tr>
<tr>
<td>n. NAIRU</td>
<td>xiv. a retired person</td>
</tr>
</tbody>
</table>

6. Locate the most recent news release on employment and unemployment statistics at the Bureau of Labor Statistics website (www.bls.gov). In a paragraph, describe how the labor force, overall unemployment rate, and unemployment rates by race and ethnicity, age, and education differ from the numbers (for May 2006) given in the text.