

# MACROECONOMIC OBJECTIVE: UNEMPLOYMENT

## 13.1

## Introduction to the four macroeconomic objectives



During the Great Depression, queues for jobs and queues for food were a common sight.

Throughout your study of microeconomics, a prevailing theme was the inefficiency resulting from the intervention of government in free markets. It was observed that a government's role in the microeconomy should generally be limited to intervening to promote a more socially optimal level of output when markets fail to allocate resources efficiently. Whenever the market can achieve efficiency on its own, the goal of government should be to not interfere, lest it run the risk of misallocating society's scarce resources. Microeconomics focuses mainly on the objectives of private firms and individuals in their efforts to maximize profits and utility, and on the impacts on efficiency of the free market interactions of individual consumers and producers.

Macroeconomics, on the other hand, is rooted in the formulation of economic policies on a national and international level. You will examine the impact of various interventions by government and central banks, analyse the effects of government policies on various macroeconomic indicators, and evaluate the various policy options available to governments and central banks based on competing theories of the macroeconomy.

Macroeconomic policies are aimed at the following four objectives:

- **Full employment.** Most of the people who are willing and able to work in a nation should be able to find work. High unemployment creates social and economic challenges for a nation and should be avoided through macroeconomic policies wherever possible.
- **Low inflation.** The average price level of goods and services in a nation should increase slowly over time. Unanticipated fluctuations in the price level in a nation are undesirable and should be avoided through macroeconomic policies.
- **Economic growth.** The nation's output of goods and services should increase year after year, so as to ensure constant improvement in the standard of living of the nation's people. Avoiding recession (i.e. negative growth) should be a goal of macroeconomic policies.
- **Income distribution.** The nation's income should be distributed relatively equally across the various levels or classes of society, so as to ensure economic opportunity to all the nation's citizens. A grossly unequal distribution of income is an obstacle to economic development and may lead to social, political or economic unrest in a country. Therefore, promoting some degree of equality in income distribution is a goal of macroeconomic policies.

Economists and policymakers encounter numerous obstacles in the pursuit of these macroeconomic objectives. Deciding on an appropriate policy for achieving them is a

What criteria can be used to order macroeconomic objectives in terms of priority? Are such criteria external to economics (that is, normative)?



contentious and often lengthy process. The competing theories of the Keynesian and neo-classical schools of economic thought form the basis for economic policies that offer governments various methods of achieving these goals. However, the effectiveness of these policies is often questionable and difficult to determine without implementing the policies in a real economy.

This chapter examines the first of the four macroeconomic objectives: low unemployment.

## 13.2

## The meaning of unemployment

### Learning outcomes

- Define the term unemployment.
- Explain how the unemployment rate is calculated.
- (HL only) Calculate the unemployment rate from a set of data.
- Explain the difficulties in measuring unemployment, including the existence of hidden unemployment, the existence of underemployment, and the fact that it is an average and therefore ignores regional, ethnic, age and gender disparities.

## Defining unemployment

From an economic perspective, to be unemployed means that you are actively seeking but unable to find work. A person who is not working is not necessarily unemployed, to be considered unemployed in an economic sense, a person must:

*be out of work and willing to accept a suitable job or start an enterprise if the opportunity arises, and actively looking for ways to obtain a job or start an enterprise.*

International Labour Organization (ILO)

The International Labour Organization monitors and measures employment data around the world and promotes fair and equal employment through its development of labour standards which are adopted by member states.



## How unemployment rate is calculated

Governments monitor the level of unemployment in the nation by calculating the unemployment rate (UR), which is found by dividing the number of unemployed by the labour force.

$$UR = \frac{\text{number of unemployed}}{\text{labour force}} \times 100$$

According to the World Bank, a country's labour force is the sum of employed and unemployed persons aged 15–64 (age range may vary from nation to nation). Persons who are neither employed nor seeking employment are not in the labour force; this includes retired persons, students, those taking care of children or other family members, and others who are neither working nor seeking work.

Examples of people who *are* part of the labour force:

- A part-time retail sales clerk who is also going to college is part of the labour force because she is employed.
- A full-time nurse is part of the labour force because he is employed.
- A factory worker whose plant closed and who is applying for jobs at other firms is part of the labour force because he is unemployed.

Unemployment is the condition of someone of working age (16–64) who is willing and able to work, actively seeking employment, but unable to find a job.



Unemployment rate is the percentage of the total labour force in a nation that is unemployed.



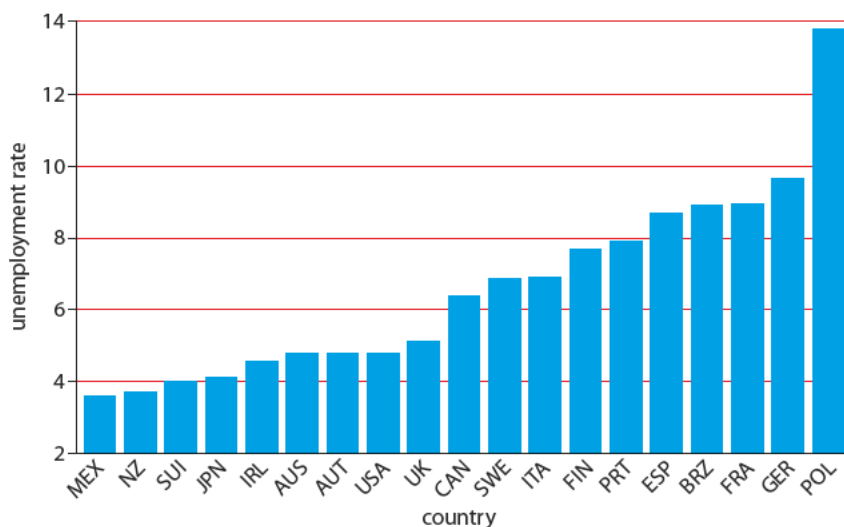


- A recent college graduate interviewing at different companies for her first job is part of the labour force because she is unemployed.

Examples of people who *are not* part of the labour force:

- A stay-at-home mother is not part of the labour force because she is not employed nor seeking employment.
- A college graduate who volunteers in a community centre is not part of the labour force because although he is working, he is not formally employed nor is he seeking employment.
- A discouraged worker who has been looking for a job for 18 months but has given up the job search is not part of the labour force because he is no longer seeking employment.
- An engineer who goes back to school to earn a teaching degree is not part of the labour force because he is not currently seeking employment.

Figure 13.1 shows average unemployment rates over the years 2005–07 for 19 developed and developing countries. National governments employ their own means of collecting unemployment data, but the Organization for Economic Cooperation and Development (OECD) uses the method devised by the ILO. Therefore, the figures in the bar chart can be compared with confidence despite the fact that the figures reported by each individual nation may vary due to different methods of collection.



**Figure 13.1**

Unemployment rates in the OECD countries (2005–07).

Unemployment rates vary across countries depending on the current macroeconomic conditions and institutional factors such as the existence of social safety nets, the education levels of the workforce, and the evolving structures of the economy, among others. Figure 13.2 (overleaf) shows the unemployment rates across Europe in 2008.

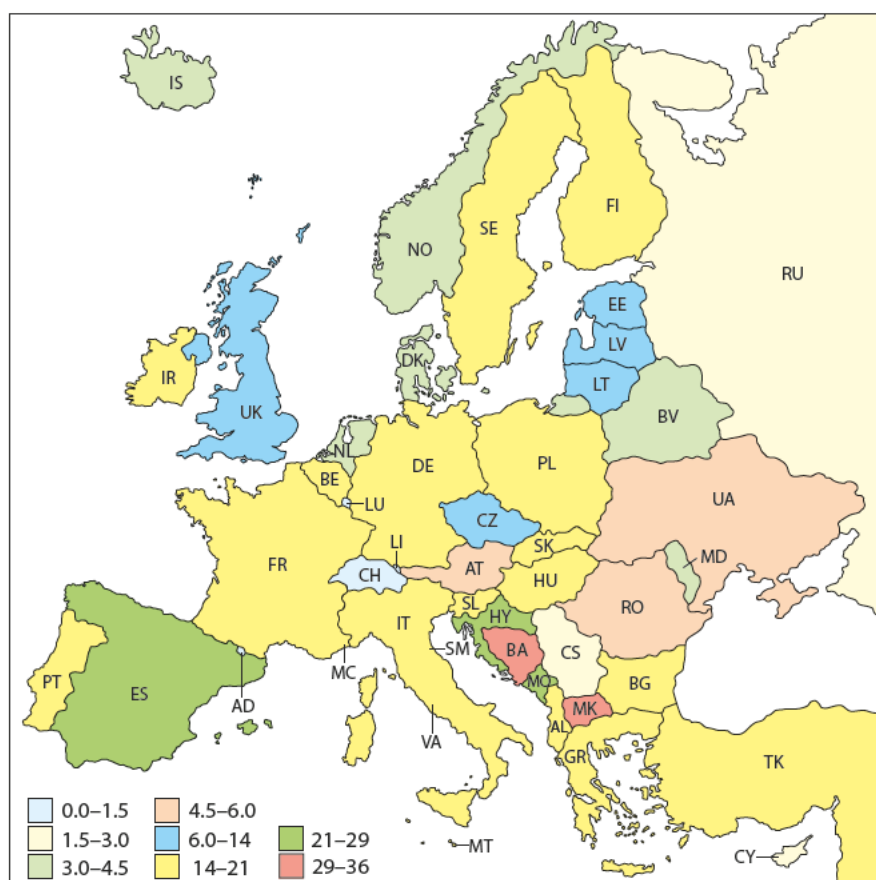
## Calculating the unemployment rate (HL only)

The unemployment rate is found by dividing the number of unemployed by the total labour force.

$$\text{UR} = \frac{\text{number of unemployed}}{\text{labour force}} \times 100$$

**Figure 13.2**

Unemployment rates in Europe (2008).



What evidence would we need to determine the underlying causes for the different levels of unemployment across geographically similar countries such as those in Europe?

### Worked example

In 2007, Brazil's labour force totalled approximately 100 million people. The number of people of working age who were actively seeking but unable to find work (the unemployed) in Brazil totalled 8.9 million. What is Brazil's unemployment rate (UR)?

$$\text{UR} = \text{number of unemployed} / \text{labour force} \times 100$$

$$= 8.9 \text{ million} / 100 \text{ million} \times 100$$

$$= 8.9\%$$

### HL EXERCISES

- 1 In country X, there are 60 million people of working age. Of these, 70% are available for work, while 39 million are currently employed.
  - a Calculate the number of people in country X's labour force.
  - b Calculate country X's unemployment rate.
- 2 Assume immigration increases the number of people of working age in country X to 65 million, while the labour force increases to 44 million.
  - a Calculate the new labour force participation rate (percentage of working-age population in the labour force) in country X.
  - b Assume unemployment is now 9%. How many unemployed people are there in country X?





## Labour force participation rate

The labour force participation rate (LFPR) is the ratio of the number of people in the labour force to the entire working-age population of a nation. LFPRs vary from country to country as well as over time.

Throughout the second half of the 20th century and into this century, LFPRs rose across much of the western world, primarily because of the large numbers of women entering the workforce during those years.

Along with labour productivity, a country's LFPR is an important determinant of its potential for economic growth (another of the four macroeconomic objectives). The greater the proportion of the working-age population that is in the labour force, the greater a nation's production possibilities, since the main factor that can increase a nation's production possibilities curve (PPC) is the quantity of resources. A greater LFPR means a larger number of workers available for employment in a nation and, therefore, it increases the nation's production possibilities.

A government may promote a growth in the LFPR by enacting supply-side policies such as:

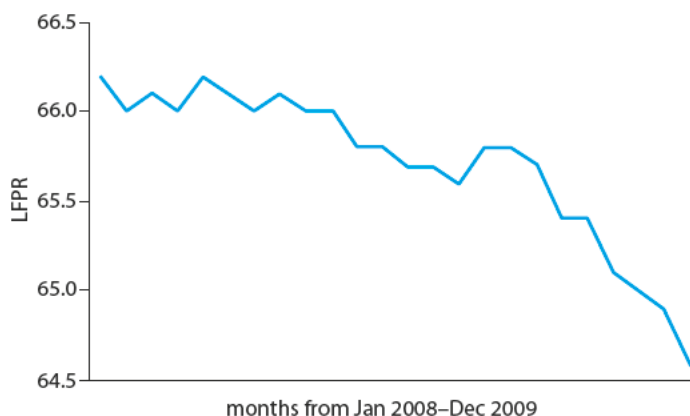
- reduction in unemployment and social security benefits
- improved access to public education and job training for all members of society including women, minorities and immigrants
- other policies that encourage and enable people of working age to enter the labour force and become productive members of society.

## Shortcomings of the unemployment rate as a measure of economic health

### Changes in the labour force participation rate make the unemployment rate appear lower than it really is

During recessions, the LFPR tends to decline as discouraged workers give up on their job search and leave the labour force. One of the major shortcomings of using the UR as an indicator of the well-being of a nation's citizens is that it does not account for the workers who have left the labour force due to low expectations for employment. Figure 13.3 shows the LFPR in the US during the recession of 2008–09.

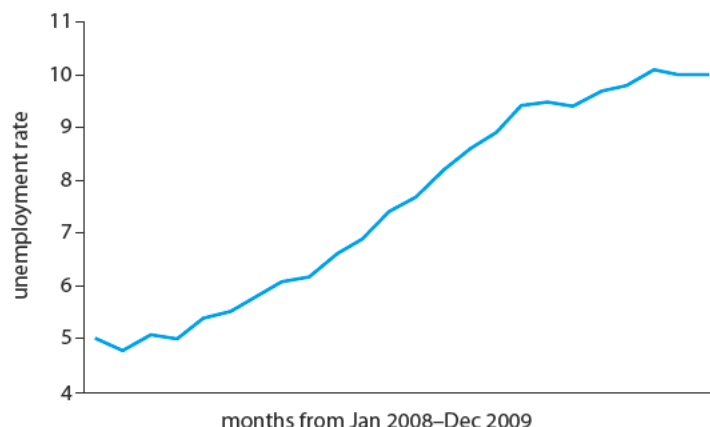
During the recession in the United States, the LFPR declined by 2%, indicating that several million people left the labour force. Many of these were discouraged workers who, while they were unable to find work, were not counted among the unemployed since they



**Figure 13.3**  
LFPR declines during a recession.

were no longer seeking employment. At the same time, the unemployment rate doubled from 5% to 10%, representing millions of new unemployed Americans looking for but unable to find jobs (Figure 13.4).

**Figure 13.4**  
Unemployment rate rises during a recession.



The labour force participation rate (LFPR) is the proportion of the working-age population that is either unemployed or employed. If the LFPR drops, it may be because people have chosen to give up searching for jobs or they have decided to retire early or go back to school. A decline in the LFPR can cause the unemployment rate to understate the true number of people out of work in a nation.



Notice, however, that during the last few months of the period, the LFPR dropped dramatically from around 66% to 64.5%. The sudden drop in LFPR caused the increase in unemployment of the previous two years to slow and eventually level out at 10%. Does the levelling out of the unemployment rate mean Americans stopped losing their jobs? Probably not; rather, the unemployment rate stopped rising because the number of people who continued to lose their jobs roughly equalled the number of people dropping out of the labour force because they had given up on the job search.

The fact that unemployment stopped increasing at 10% around the end of 2009 could be interpreted as a sign that the economic slowdown in America was coming to an end. On the other hand, the drop in the LFPR at the same time is evidence that millions of American workers were giving up the job search due to low expectations of finding work, a fact which can be interpreted as a sign that America's economy was doing worse than the unemployment rate might suggest.

To better understand how the unemployment rate may understate the number of people out of work during a recession, let's consider a scenario based on Figures 13.3 and 13.4.

### Worked example

In 2008, the size of the US working-age population was approximately 225 million people.

- In January 2008, LFPR = 66.2%. This tells us that 66.2% of the working-age population were either employed or unemployed, so the size of the labour force was 149 million.
- With unemployment at 5%, 7.5 million Americans would have been considered unemployed in January 2008.
- By December 2009, LFPR = 64.6%, putting the labour force at 145.3 million people. In other words, about 3.7 million people had left the labour force since January 2008.
- Unemployment, meanwhile, had climbed to 10% by January 2009, meaning 14.5 million people were unemployed (10% of the labour force):
  - labour force at the beginning of 2008 = 149 million
  - labour force at the end of 2009 = 145.3 million
  - number of people who left the labour force between January 2008 and December 2009 =  $149 - 145.3 = 3.7$  million.
- The 2% decline in LFPR is most likely explained by the decision of unemployed Americans to give up searching for work and drop out of the labour force. If these

individuals had persisted and continued to fail in their pursuit of a job, then an additional 3.7 million Americans would have been counted as unemployed.

The 3.7 million discouraged workers are not considered unemployed since they left the labour force. In addition to the 14.5 million unemployed Americans at the end of 2009, there were nearly 4 million more who had given up on the job hunt and left the labour force. If these individuals had been accounted for, then there would have been over 18 million unemployed Americans by the end of 2009, which would have put the unemployment rate at roughly 13%. Because discouraged workers are not included in the unemployment measure, unemployment understates the hardships of a nation's workers during economic downturns.


This example over-simplifies a far more complex situation. For instance, as the LFPR declined between 2008 and 2009, America's working-age population actually grew due to normal population growth and immigration, therefore the total number of unemployed and discouraged workers would have been even larger than our calculations indicate. In addition, millions of Americans became *underemployed* as employers cut back on hours to reduce costs during the slowdown in aggregate demand.

## Underemployment vs unemployment

Another reality not reflected in unemployment data is that an individual's status as 'employed' does not take into account the number of hours or the type of employment the individual is experiencing. Part-time workers who would rather be working full-time are considered employed, despite the fact that from their perspective they are underemployed. Additionally, people stuck in jobs for which they are over-qualified (e.g. an engineer waiting tables because of the lack of engineering jobs) are also considered employed. Such workers' dissatisfaction with their level of employment or their type of employment is not reflected in the nation's unemployment figures – another shortcoming of the unemployment rate as a measure of well-being of the nation's workforce.

In March 2010, when the US unemployment rate was 9.7%, a poll (by the Gallup organization) of 20 000 American households determined that underemployment in the US stood at 20.3%. This figure included the 9.7% of Americans counted as unemployed, but also counted those who were working part-time but wanting full-time work. According to Gallup:

*As unemployed Americans find part-time, temporary, and seasonal work, the official unemployment rate could decline. However, this does not necessarily mean more Americans are working at their desired capacity. It will continue to be important to track underemployment – to shed light on the true state of the U.S. workforce, and the millions of Americans who are searching for full-time employment.*

 Underemployment is the condition of a worker who is technically employed, but is either over-qualified for the type of work he or she is doing or is working part-time when full-time work is desired. Underemployment is not accounted for in unemployment figures, this helps explain why the unemployment rate is an imperfect measure of a nation's macroeconomic reality.

### EXERCISES

- 3** (HL only) Study the employment data below and answer the questions that follow.

	SWITZERLAND	SPAIN
Population aged 15–64 (total)	5 175 054	31 141 200
Unemployed persons (total)	153 518	1 821 917
Labour force (total)	4 264 435.1	21 950 810.9

Data from The World Bank

- a Calculate Switzerland's labour force participation rate (LFPR).
- b Calculate Switzerland's unemployment rate (UR).
- c Calculate Spain's labour force participation rate (LFPR).
- d Calculate Spain's unemployment rate (UR).
- 4 What macroeconomic factors might explain the differences in the unemployment rates in Spain and Switzerland?
- 5 What political, institutional and social factors might explain the different labour force participation rates in Spain and Switzerland?
- 6 Evaluate the unemployment rate as an accurate measure of the well-being of a nation's workforce.

## Graphing unemployment: the labour market diagram

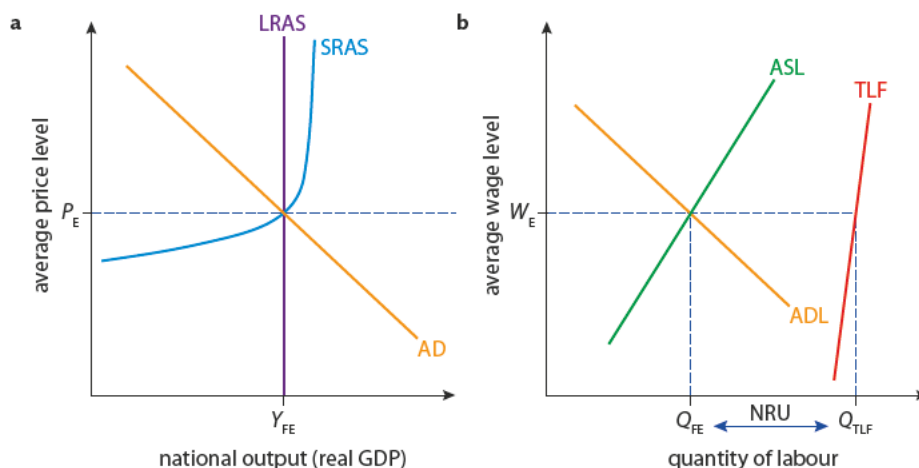
A nation's labour market consists of the aggregate supply of labour (ASL) of and aggregate demand for labour (ADL) in all sectors of the nation's economy. An economy in which national output is at its full-employment level has achieved equilibrium in the labour market, meaning at the equilibrium wage rate (the price of labour) almost everyone who wants a job has a job.

A labour market being in equilibrium does not mean that there is no unemployment, rather that the unemployment which exists is natural unemployment, consisting only of those workers who are in between jobs, those whose skills no longer match up with the demand for workers in the economy and those who are voluntarily unemployed. Voluntary unemployment describes workers who would be able to work if they were willing to accept the wages offered, but choose to remain unemployed in the hope of attaining a better-paid job down the road.

In Figure 13.5 a and b, the national economy is producing at its full-employment level of real output ( $Y_{FE}$ ). The price level ( $P_E$ ) in the economy is stable and corresponds with the equilibrium wage level ( $W_E$ ) at which the labour market is cleared (everyone who wishes to work at the market wage rate is employed, with the exception of those members of the labour force mentioned above).

**Figure 13.5**

The national labour market: at full employment output, unemployment is equal to the natural rate.







The total labour force (TLF) is greater than the ASL, since at any given time there will exist a certain level of 'natural' unemployment in the economy. TLF is upward-sloping because as wage rates in the economy rise, members of the working-age population who are not part of the labour force may be incentivized to enter the labour force. At lower wage rates, members of the labour force may decide to leave and pursue opportunities other than formal employment (e.g. continued education or early retirement).

At the full-employment level of national output, the unemployment that prevails is known as the natural rate of unemployment, and is represented by the difference between  $Q_{FE}$  and  $Q_{TLF}$  (Figure 13.5b).

## 13.3 Consequences of unemployment


### Learning outcomes

- Discuss possible personal and social consequences of unemployment, including increased crime rates, increased stress levels, increased indebtedness, homelessness and family breakdown.
- Discuss possible economic consequences of unemployment, including a loss of GDP, loss of tax revenue, increased cost of unemployment benefits, loss of income for individuals, and greater disparities in the distribution of income.

Unemployment is certainly one of the most unfortunate and uncomfortable situations an individual can find him- or herself in. The individual, social and economic consequences of unemployment can be severe and long-lasting, which explains why maintaining a low level of unemployment is an important macroeconomic objective.

### Individual consequences of unemployment

- **Decreased household income and purchasing power.** An obvious consequence of unemployment is a decline in a household's ability to provide the standard of living to which it may have grown accustomed when one or more members of the household were employed. The decline in personal income could result in foreclosure on or eviction from a home, or worse, inability to meet the nutritional needs of the household.
- **Increased levels of psychological and physical illness, including stress and depression.** A less obvious consequence of unemployment is the psychological and even physical toll it imposes on the unemployed. Some studies have shown that higher unemployment rates are correlated with higher rates of cardiovascular disease, suicides, and psychiatric hospital admittances.

 You might expect the unemployment rate and the suicide rate to be related. It is true that during the Great Depression, suicide rates in the US increased dramatically. However, recessions that have been studied since then (including Sweden's in the 1990s) have not shown such a clear correlation.

### Social consequences of unemployment

- **Downward pressure on wages for the employed.** High unemployment means the supply of available labour has increased in the nation. Since wages are determined by supply and demand, an increase in the labour supply can lower the equilibrium wage rate for those who still have jobs, forcing them to accept pay cuts and reducing the real incomes of all workers.
- **Increased poverty and crime.** Regions or cities in which unemployment occurs

To appreciate how large a migration this movement of Chinese people is, imagine nearly all the people of Eastern Europe migrating to the French, Portuguese and Spanish coasts after the collapse of Communism in the 1990s.

may become depressed and therefore less attractive to new investment by businesses. The low income levels of the largely unemployed population deter businesses from opening, further contributing to the unemployment and poverty problem. Crime and unemployment are also closely linked.

- **Transformation of traditional societies.** Unemployment in particular regions or sectors of the economy can lead to social upheaval and large-scale migrations of human populations. High unemployment in rural areas of China (resulting from the replacement of farm labour with capital during the last three decades) has resulted in the largest migration in human history as nearly 300 million Chinese have left their ancestral homes to relocate to the coastal cities looking for employment opportunities in the growing manufacturing sector.

## Economic consequences of unemployment

- **Lower level of AD.** Consumption, a major component of AD, is primarily determined by disposable incomes. Unemployment lowers households' disposable income and consumption, reducing the level of demand and output in the nation as a whole. This leads to more unemployment and can pull an economy into a recession.
- **Under-utilization of the nation's resources.** Unemployment means a nation is not fully utilizing its productive resources, therefore a nation with high unemployment is producing within its PPC at a level below that which is most beneficial to an economy trying to improve the standards of living of its people.
- **Brain-drain.** Skilled workers may choose to leave a country with high unemployment if job opportunities are more abundant elsewhere. This further leads to a fall in the production possibilities of the nation with high unemployment.
- **A turn towards protectionism and isolationist policies.** Rising unemployment is often blamed by politicians and policymakers on competition from cheap foreign producers. This can lead to the rise of protective tariffs and quotas or increased government spending on subsidies for domestic producers. Such policies lead to a misallocation of society's scarce resources and in the long run will make the nation less competitive in global markets.
- **Increased budget deficits.** Unemployed workers do not pay income taxes, yet often receive monthly payments from the government to assist them until they find work. High unemployment reduces tax revenues flowing to a government while increasing public expenditures on financial support for the unemployed. This necessitates either a decrease in government spending on public goods such as infrastructure, education, defence and healthcare, or an increase in government borrowing to finance its budget deficit. As you will see (Chapter 17) large government budget deficits bring their own set of problems to a nation's economy.

The individual, social and economic consequences of unemployment are not limited to those outlined above, but it should be clear that the costs of unemployment are wide-ranging, thus making low unemployment a worthy and important goal for macroeconomic policymakers.

Could unemployment lead to terrorism? There may actually be a correlation between the level of unemployment in a country and the likelihood of terrorism occurring there. The highest unemployment rate in the world is thought to be in the Palestinian territory of the Gaza Strip. In 2010, 45.2% of the workforce in Gaza was unemployed. Israel's long-term blockade of the territory is thought to be the main cause of the unemployment, which helps explain why, over the years, so many Gazans have turned to violence to express their outrage at their desperate economic plight, which many blame on Israel.

To access Worksheet 13.1 on Chinese workers, please visit [www.pearsonbacconline.com](http://www.pearsonbacconline.com) and follow the onscreen instructions.

## Learning outcomes

- Describe, using examples, the meaning of frictional, structural, seasonal and cyclical (demand-deficient) unemployment.
- Distinguish between the causes of frictional, structural, seasonal and cyclical (demand-deficient) unemployment.
- Explain, using a diagram, that cyclical unemployment is caused by a fall in aggregate demand.
- Explain, using a diagram, that structural unemployment is caused by changes in the demand for particular labour skills, changes in the geographical location of industries, and labour market rigidities.
- Evaluate government policies to deal with the different types of unemployment.

Unemployment comes in different forms that have different causes. There are three basic categories of unemployment:

- frictional and seasonal unemployment
- structural unemployment
- cyclical unemployment.

The first two of these are considered to be part of the natural rate of unemployment (NRU).

## Frictional and seasonal unemployment

Workers who are in between jobs or just entering the labour force for the first time are referred to as frictionally unemployed. For example, an accountant in Bristol may wish to start a new career as a mathematics teacher in Nottingham. The accountant will quit his job and move to Nottingham to seek employment as a teacher. During the period of time between his old job and his new job, which he is fairly certain he will be able to acquire rather quickly, he is frictionally unemployed. Frictional unemployment is generally short-term (three months or less) and is often voluntary in nature, meaning the unemployed person has chosen to seek employment in a different location or industry. In addition to workers in between jobs, first-time job-seekers who are fresh out of high school or university are also considered frictionally unemployed. The key characteristic among the frictionally unemployed is that such individuals possess skills that are demanded by the nation's employers, thus their prospects for employment are generally positive.

Workers who do seasonal labour (e.g. golf course employees, migrant farmers, ski-lift operators or summer-camp instructors) may be unemployed between seasons. Seasonal unemployment is also considered a type of voluntary unemployment as many such workers choose their jobs for the freedom and other benefits such employment offers.

The level of frictional and seasonal unemployment can be influenced by government policies that affect incentives among the labour force. For instance, if unemployment benefits can be collected for an entire 12 months as long as a worker is actively seeking employment, the individual has little incentive to rush the job search process and take the first decent job offered to him; such a worker is likely to remain unemployed for longer than one who can only collect benefits for three months before being cut off by the government. Additionally, if information about employment opportunities around



the country is readily available and means exist to quickly match frictionally unemployed workers with employers through job centres or online employment services, then the duration of frictional unemployment and its prevalence in the economy may be reduced.

## Structural unemployment

Joseph Schumpeter, an Austrian-American economist, famously reworked the Marxist view of the phrase 'creative destruction' to stand for the innovation and progress that destroys old methods of production. Structural unemployment is considered one of the necessary evils of this process.



When a worker loses his job due to the changing structure of the nation's economy, the individual becomes structurally unemployed. Such a situation may at first seem incredibly undesirable, as those who have been 'made redundant' because of automation through technology, cheaper foreign labour, or the decline of an entire industry in a nation are the unfortunate victims of economic change. However, structural unemployment is considered a 'natural' form of joblessness as it is only natural that as a nation grows and becomes incorporated into the global economy, the makeup of its GDP will change.

Structural unemployment occurs when a developing country moves from an agricultural base to a manufacturing base and farming techniques become less labour intensive and more capital intensive. Farmers whose skills were passed down through generations find themselves unemployed as their old techniques for tilling the land are replaced by new technology. Likewise, as a more developed nation transitions from a manufacturing base to a larger service sector, factory workers' skills may no longer be in demand, while the demand for highly educated and highly skilled 'knowledge workers' increases. In both of these examples, the nation as a whole is getting richer as productivity in the primary, secondary and tertiary sectors grows and national output rises, but the victims of such growth are those workers whose skills are no longer in demand in the new economy.

Structural unemployment is likely to endure much longer than frictional unemployment. Strategies for reducing structural unemployment lie primarily in the realm of increased worker training and improved education. Unfortunately, there are few short-term fixes to help the structurally unemployed that do not involve protectionist policies such as tariffs and subsidies that would only prolong the decline of the industries in which such workers are employed. To reduce structural unemployment over the long term, a nation must invest heavily in public education and training for adult workers in the skills that will be needed for the future economy, rather than those that were needed for the economy of the past or even the present.

## The natural rate of unemployment (NRU)

A nation producing at its full-employment level of output still experiences some unemployment. This can be a confusing concept because the term 'full employment' makes it sound as if everyone has a job. In fact, an economy producing at full employment still experiences frictional, seasonal and structural unemployment. These combined are known as the natural rate of unemployment.

Labour markets clear when the total demand for labour equals the total supply of labour at the equilibrium wage rate. The caveat here is that the aggregate supply of labour represents those members of the working-age population who are willing and able to work. The existence of some workers whose skills are mismatched with the demand for labour given the structure of the nation's economy (the structurally unemployed) is expected in a nation producing at full employment; such unemployment is, therefore, natural. Additionally, members of the labour force who are voluntarily in between jobs or just out of school and seeking their first job (the frictionally unemployed) are also considered part of the natural rate of unemployment.



## CASE STUDY

### Help wanted: why that sign's bad

The nation has 3 million jobs going begging. And without retraining, US workers may not be able to fill them.

Surprising statistic: in the midst of the worst recession in a generation or more, with 13 million people unemployed, there are approximately 3 million jobs that employers are actively recruiting for but so far have been unable to fill. That's more job openings than the entire population of Mississippi.

Sound like good news? It's not. Instead, it's evidence of an emerging structural shift in the US economy that has created serious mismatches between workers and employers. People thrown out of shrinking sectors such as construction, finance, and retail lack the skills and training for openings in growing fields including education, accounting, healthcare, and government. At the same time, the worst housing bust in decades has left the unemployed frozen in place. They can't move to get work because they can't sell their homes.

As bad as it is now, the mismatch will create bigger problems when the economy begins to expand again. First, the unemployment rate is likely to remain distressingly high because many people who want jobs will lack the appropriate qualifications. Second, inflation could pick up sooner than expected if employers are forced into bidding wars to recruit the few people who are qualified for the work. Third, if unemployment stays high, it will put additional political pressure on Congress and the Obama Administration to push through fixes that could make matters worse in the long run, such as insulating workers from the cost of long-term unemployment to the point where they lose their appetite for work.

*Business Week*, 30 April 2009



Something that is bad for an individual could be good for society. To what extent is the existence of structural and frictional unemployment in an economy a sign of economic health vs economic hardship? What evidence would we need to evaluate the existence of these types of unemployment?



To access Worksheet 13.2 on 3 million job openings, please visit [www.pearsonbaconline.com](http://www.pearsonbaconline.com) and follow the onscreen instructions.

## EXERCISES

- 1 In what way may structural unemployment be a sign of a healthy economy, rather than a sick one?
- 2 How might government's extension of benefits to the unemployed actually prolong America's unemployment problem?
- 3 Historically, the natural rate of unemployment in Western European economies has been higher than that of the US. What types of government policy might help explain this?

## Cyclical unemployment

Without question, the type of unemployment that poses the greatest obstacle and, therefore, the one which policymakers attempt to avoid at all costs is cyclical unemployment. Workers whose skills are in demand given the structure of the nation's economy but who nonetheless lose their jobs due to a fall in total demand for the nation's goods and services are cyclically unemployed. Cyclical unemployment arises due to fluctuations in the nation's business cycle; it is also referred to as demand-deficient unemployment. Cyclical unemployment occurs when a contraction in private or public spending (consumption, investment, government spending or net exports) reduces AD and leads to a fall in national output. As output of goods and services falls the demand for labour falls and there is downward pressure on wages and prices.

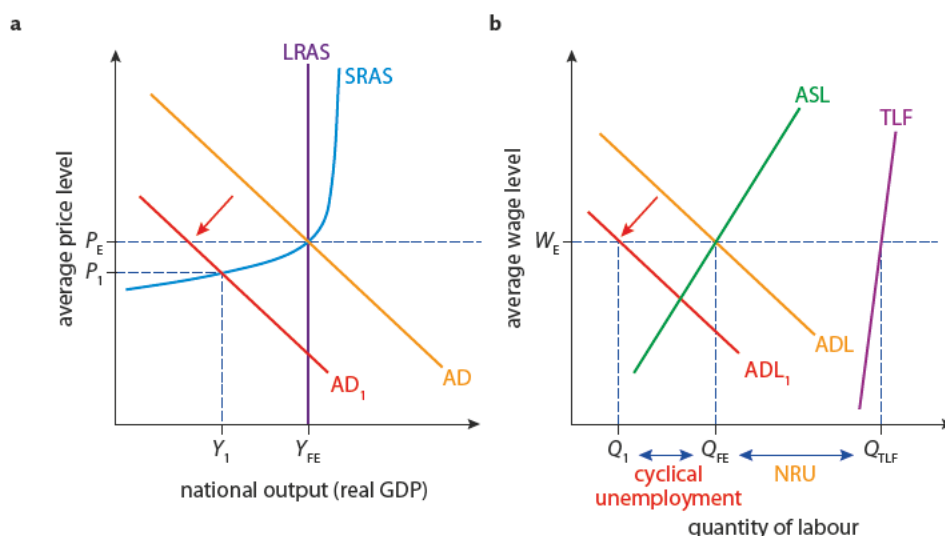
Weak AD explains the doubling of the unemployment rate in the US between 2008 and 2009. In early 2008, as the value of American assets (primarily real estate and stocks) declined, consumer spending fell as well as investment by firms now wary about future business

conditions. Soon after America's largest trading partners (the EU, Canada, Japan and China) experienced declines in income and, therefore, demand for US exports fell as well. The result was a contraction of overall output and an increase in the unemployment rate. Cyclically unemployed workers would typically be able to find work relatively quickly in an economy producing at or close to its full-employment level; but in the environment of low confidence and weak expectations for the future, firms hesitate to employ more workers, leaving highly skilled and educated members of the workforce without job prospects.

In Figure 13.6, a fall in consumption, investment or net exports leads to a fall in AD and a decline in national output and employment. Due to the inflexible nature of wages in the short run, the labour market experiences a disequilibrium wherein the total demand for labour falls as demand for goods and services declines, but the wage rate remains high (at  $W_E$ ). There is a surplus of labour, known in this case as cyclical unemployment of  $Q_1 - Q_{FE}$ . The sticky wage rate acts similarly to a minimum wage in the labour market, whereby during a recession the quantity supplied of labour (those seeking employment) exceeds the quantity demanded (the opportunities for employment). As national output falls during a demand-deficient recession, cyclical unemployment occurs in the labour market. As demand for their goods and services falls, firms must lower costs to remain in operation. Since workers are unwilling to accept lower wages in the short run, the only way firms can cut costs is to reduce the number of workers they employ.

**Figure 13.6**

Cyclical unemployment arises from a fall in aggregate demand.



To access Worksheet 13.3 on unemployment in Denmark, please visit [www.pearsonbacconline.com](http://www.pearsonbacconline.com) and follow the onscreen instructions.

In addition to the frictional, seasonal and structural unemployment that prevailed when the economy was producing at its full-employment level, there exists during a recession a level of unemployment greater than the NRU.  $Q_1 - Q_{FE}$  represents the number of cyclically unemployed workers caused by a decrease in demand for the nation's output. Demand-deficient unemployment is best addressed using demand-side policies aimed at stimulating the level of expenditure in an economy during a recession. Government and central bank policies that affect AD are discussed in Chapters 14 and 15.



If someone is structurally unemployed, you could argue that the economy no longer demands that person's skills. Cyclical unemployment, however, is strictly a function of the business cycle. Should governments pay more attention and intervene more forcefully to stop cyclical unemployment? Should the cause of unemployment influence our decision to help the unemployed?




## Types of unemployment summarized

Table 13.1 summarizes the four types of unemployment along with possible causes and solutions.


TABLE 13.1 TYPES OF UNEMPLOYMENT SUMMARIZED			
Type of unemployment	Description	Causes	Possible solution
Frictional unemployment	People who are in between jobs or looking for their first job; generally very short-term; part of NRU.	Young workers entering the labour force for the first time; workers who voluntarily quit to seek better job opportunities.	Improve information symmetry between employers and job seekers; reduce unemployment benefits.
Seasonal unemployment	Seasonal workers who need to seek other work between seasons; part of NRU.	Workers choosing jobs that allow for flexibility of time and location; such unemployment is considered voluntary.	Improve information symmetry between employers and job seekers; reduce unemployment benefits.
Structural unemployment	Workers unable to find work because their skills do not match those demanded by firms; part of NRU.	Globalization; outsourcing of secondary and tertiary sector jobs; new technologies that automate processes which used to require labour.	Improve training, education and mobility of labour force to encourage relocation as demands for labour change in regional areas.
Cyclical (demand-deficient) unemployment	Workers unable to find work because a reduction in private and public spending reduces AD.	Fall in consumption, investment or net exports reduces demand for labour; employment falls as the nation's output falls.	Implementation of fiscal or monetary stimulus aimed at increasing the level of AD and raising the nation's output and employment.
Natural rate of unemployment (NRU)	Unemployment occurring when an economy is producing at full-employment output level; structural plus seasonal plus frictional unemployment.	NRU is caused by the natural changes and shifting of resources in the economy and is considered a healthy and desirable level of unemployment.	A nation's NRU can be reduced via government policy aiming to increase productivity of the labour force and create incentives to accept work.

In this chapter you have learned about the concepts of unemployment and underemployment, seen how countries calculate their unemployment rates, and examined the various types of unemployment a nation's labour force might experience. Low unemployment is a macroeconomic objective that governments and central banks direct their policies towards in order to avoid the harsh realities of high unemployment that are imposed on individuals, society and the national economy.

 To learn more about unemployment, visit [www.pearsonhotlinks.com](http://www.pearsonhotlinks.com), enter the title or ISBN of this book and select weblink 13.1.

### PRACTICE QUESTIONS

- Distinguish between structural unemployment, frictional unemployment and seasonal unemployment. (10 marks) [AO2]
  - To what extent is the existence of structural unemployment in a nation a sign of economic weakness? (15 marks) [AO3]
- Using an AD/AS model and a national labour market diagram, illustrate and explain the causes of cyclical unemployment. (10 marks) [AO2], [AO4]
  - Examine the various costs of a persistently high level of cyclical unemployment. (15 marks) [AO3]
- Explain the concept of the natural rate of unemployment. (10 marks) [AO2]
  - Justify the claim that the unemployment rate may understate the true number of people out of work in a nation. (15 marks) [AO3]

 To access Quiz 13, an interactive, multiple-choice quiz on this chapter, please visit [www.pearsonbacconline.com](http://www.pearsonbacconline.com) and follow the onscreen instructions.