	1989/90	1990/91
Private final consumption spending	218.1	220.2
Gross private investment spending[1]	72.2	58.7
Government spending	79.2	83.6
Exports	60.1	66.8
Indirect taxes less subsidies	44.5	43.3
Increase in stocks	4.5	−1.3
Imports	67.4	64.0
Wages, salaries and supplements	184.6	186.8
Gross operating surplus	141.9	139.0
GDP(P)—production-based	378.9	387.8

[1] Includes increase in stocks

CHAPTER 19

Economic fluctuations, unemployment and inflation

After reading this chapter you will be able to:

1 Describe the way the economy moves over time (pp. 550–54).

2 Identify the major determinants of the business cycle (pp. 555–57).

3 Define the various types of unemployment and the concept of full employment (pp. 557–63).

4 Relate the consumer price index (CPI) to the cost of living (pp. 563–66).

5 Describe the recent experiences of Australia and neighbouring economies with inflation (pp. 566–67).

6 Distinguish between anticipated and unanticipated inflation and explain who gains and who loses when inflation is unanticipated (pp. 569–72).

KEY TERMS AND CONCEPTS

business cycle **552**
consumer price index (CPI) **563**
cyclical unemployment **558**
deflation **563**
depression **553**
employment **557**
expansion **553**
fixed-dollar assets **571**
frictional unemployment **557**
full employment **559**
GDP deflator **563**
GDP gap **561**
indexing **570**
inflation **563**
labour force **557**
long-term unemployment **564**
natural rate of unemployment **559**
peak **553**
potential GDP **561**
recession **553**
seasonal adjustment **554**
stagflation **566**
structural unemployment **558**
trough **553**
unanticipated inflation **570**
unemployment **559**
variable-dollar assets **571**

The former United States central banker, Paul Volcker, once gave the following explanation for the existence of economic fluctuations or business cycles.

> *A long period of prosperity breeds confidence and confidence breeds new standards of what is prudent and what is risky. For a while the process is self-reinforcing, sustaining investment and risk taking. But it may also contain some of the seeds of its own demise . . . We find ourselves with more houses and shopping centres and oil tankers and steel capacity than we can readily absorb. Financial positions are extended and the economy has become more vulnerable to adverse and unexpected developments . . . The mood turns conservative and uncertain.*

Economic fluctuations have been a major problem for mixed economies over time, and unemployment and inflation are major costs associated with that problem. In this chapter we concern ourselves with the nature of business cycles and the interrelated problems of unemployment and inflation. Much of our discussion in the following chapters focuses on trying to understand the causes of economic fluctuations, unemployment and inflation. We also look at various policies aimed at eliminating, or at least *reducing*, these problems.

HOW THE ECONOMY MOVES

Even the most casual observer of an economy is aware that it seems to move by 'fits and starts'. Periods of rapid growth alternate with periods of slower growth or even contraction. Periods of expanding business and employment opportunities are followed by periods of increased business failures and rising unemployment. These economic fluctuations, often referred to as business cycles, are most commonly recognised by their effects on unemployment, sales and the behaviour of prices—in particular, the rate of inflation. Of course, the business cycle is reflected in many other measures of economic activity as well.

In the NEWS

BUSINESS GETS BULLISH

Stephen Ellis and David Shires

(Source: Australian Financial Review, 25 August 1995.)

Business is continuing to bankroll Australia's strong economic upswing, with official figures revealing another big rise in capital spending in the June quarter and bullish investment plans for the year ahead.

Australian Bureau of Statistics figures released yesterday show private capital expenditure rose 6.5 per cent to $8.8 billion in the June quarter in seasonally adjusted terms.

This left capital expenditure 16.3 per cent higher over 1994/95—a result in line with Government forecasts for strong investment. Adding to the good news, companies lifted their estimates of the amount they intend to invest in 1995/96 by 11.2 per cent.

This fresh evidence that companies are still investing strongly supports the Government's case that low-inflation growth can be sustained—a claim renewed by the Prime Minister, Mr Keating, yesterday in a strong defence of Labor's economic record.

In a speech to the National Press Club, Mr Keating conceded that Australia's improved economic performance and the buoyant sentiment apparent in the corporate sector were not reflected in a greater sense of security and prosperity in the electorate.

'We know that the figures indicating that Australia has moved beyond the realms of recovery into a sustained period of growth do not translate into ease and comfort for every household and community,' he said.

QUESTIONS

1 From your knowledge of the Australian economy in 1995/96, was low inflation maintained?

2 In his speech, how aware do you think Mr Keating was of the challenge of economic fluctuations?

GROWTH AND FLUCTUATIONS

Some idea of the way in which the Australian economy moves is conveyed in Figure 19.1(a) by the graph of real GDP (in 1989/90 dollars) since 1929/30. Two things are obvious:

1 The economy grows over time, but

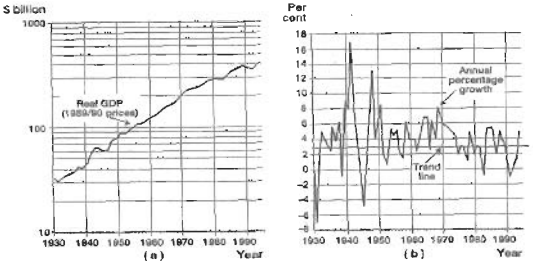
2 there are irregular fluctuations in its rate of growth from one year to the next.

The size of these fluctuations is further illustrated by the graph of the annual percentage changes in real GDP over this period of time in Figure 19.1(b). Since World War II the fluctuations have generally been less marked than those of the 1930s or 1940s.

The fluctuations during the 1930s were a reflection of unstable conditions resulting from the Great Depression. The fluctuations of the 1940s came about when the economy was put on a wartime footing during the first half of the decade and then reconverted to peacetime during the second half. It is easy to see from part (a) why one might describe the economy as 'climbing a cliff and then briefly resting on a plateau, before climbing another cliff'.

FIGURE 19.1

REAL GDP FLUCTUATES ABOUT A LONG-TERM GROWTH TREND



Part (a) shows real GDP (1989/90 dollars) since 1928/30. It fluctuates about a long-term growth trend. Note that the vertical axis in part (a) is a logarithmic, or ratio, scale on which equal distances represent equal percentage changes. (Convince yourself by checking that the distance from 100 to 1000 equals that from 10 to 100.) If real GDP were plotted on an ordinary arithmetic scale, its plot would curve sharply upward because a given percentage change in a small number would be represented by a smaller distance than the same percentage change in a larger number.

The plot of the annual percentage changes in real GDP shown in part (b) gives a more vivid picture of the fluctuations. These are the so-called business cycles with their peaks and troughs. These fluctuations have been milder since the early 1960s by comparison with the 1930s and the turbulent war and post-war years of the 1940s.

THE BUSINESS CYCLE

business cycle The somewhat irregular but recurrent pattern of fluctuations in economic activity ■

The fluctuations in real GDP that are so clearly shown in Figure 19.1(b) are often called business cycles. Business cycles are irregular but recurrent patterns of fluctuations in economic activity. These fluctuations are apparent in aggregate measures of sales, output, income, employment and a host of other measures over a period of years, quite apart from any long-run trends in these series. Comparing parts (a) and (b) of the figure, we can see that such cycles are a phenomenon quite separate from the growth trend in this aggregate measure of economic activity. The growth trend (of roughly 3 per cent over this period) is represented by the horizontal unbroken line in part (b). The business cycles during this period are represented by the irregular but recurrent up-and-down movement of the sawtoothed solid line about this trend.

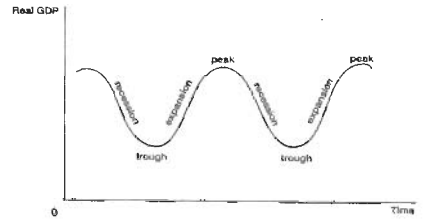
Phases of the business cycle

A hypothetical, idealised version of the business cycle, measured in terms of real GDP, is shown in Figure 19.2. The cycle may be viewed as having four phases:

1 a recession
2 a trough
3 an expansion
4 a peak

FIGURE 19.2

PHASES OF THE BUSINESS CYCLE



The two hypothetical business cycles shown here (measured in terms of real GDP) are idealisations. Actual business fluctuations are never quite this regular or periodic, and no two are ever quite this similar to each other.

The **recession** phase corresponds to the contraction, or slowing down, of economic activity. During this phase, unemployment rises while sales, income and investment all fall. An unusually severe recession is sometimes called a **depression** (such as the Great Depression of the 1930s, which is noticeable in Figure 19.1). The lower turning point of the business cycle is often called the **trough**. At this point, economic conditions are at a low ebb. This is followed by an upturn in economic activity, or the expansion phase of the cycle. During this phase, unemployment falls and sales, income, output and capital formation all rise. This phase and the subsequent upper turning point, or peak phase, of the cycle are sometimes referred to as a boom. Output, income, sales and capital formation reach their highest levels, while unemployment falls to its lowest level. Business and consumer optimism about the future typically rise throughout the expansion phase of the cycle and fall during the recession phase.

recession A contraction, or slowing down, in the growth of economic activity ■
depression An unusually severe recession ■
trough The lower turning point of a business cycle ■
expansion The upswing of a business cycle ■
peak The uppermost point in the upswing (expansion) of a business cycle ■

Comparison of the real world of Figure 19.1 with the hypothetical one of Figure 19.2 indicates that actual business cycles are not nearly as regular or periodic as the idealised picture presented in Figure 19.2. This is the reason why real-world business cycles are more accurately called business fluctuations—no two are ever quite alike. Furthermore, it is not always very clear when the economy is passing into another phase of the business cycle.

Seasonal variation

To get a clearer picture of business cycles, it is helpful to identify any long-run trend that may be in the data. This is essentially what we did in Figure 19.1(b). In addition, it is helpful to adjust the data for seasonal variation. For example, general retail sales in Australia are typically high in December because of the Christmas holidays. On the other hand, sales of certain goods, say combustion heaters, are typically low at that time of year but high during the winter months. From the standpoint of the business cycle, we need to know how sales look after allowing for their typical seasonal behaviour. 'Raw' retail sales data typically rise from November to December in a given year. When we allow for the usual seasonal rise in these data at that time of year, we might find that retail sales have risen less than normally; for example, because the economy is in a recession.

How do statisticians adjust data to remove seasonal variation? Suppose past monthly sales data indicate that, on average, air conditioner sales in February are 1.9 times as high as average monthly sales over the course of a year. Similarly, suppose air conditioner sales in August are only 0.7 times as large as average monthly sales over the course of a year. To remove the seasonal variation from the data, the statistician would divide the February sales figures by 1.9 and the August sales figures by 0.7. In similar fashion, the sales figures for each month would be adjusted by such seasonal adjustment factors. The resulting sales figures are said to be *seasonally adjusted*. Seasonal adjustment is the process of manipulating economic data to remove the effect of regular variations arising from custom and weather over the course of a year.

seasonal adjustment The process of manipulating economic data to remove the effect of regular variations arising from custom and weather over the course of a year ■

One of the difficulties with seasonal adjustment is that seasonal variation patterns often change over time. Given that the seasonal adjustment factors are necessarily derived from past data, they are not able to account for these changes in the most recent data. Thus seasonal adjustment may not accurately remove the seasonal variation from these data.

Duration of cycles

The ups and downs of the Australian economy have been traced by a number of economists for the period between 1950 and the early 1990s. Boehm recognises nine cycles over the period. The timing of these cycles is reported in Table 19.1. Measured from trough to trough, the average duration was 59 months. The longest cycle was 76 months, while the shortest was only 44 months. The average length of the expansion phase was 35 months, and the average length of the recession phase was 24 months.

TABLE 19.1

THE TIMING OF BUSINESS CYCLES IN AUSTRALIA, 1951–91

PEAK	TROUGH
April 1951	November 1952
August 1955	January 1958
April 1965	January 1968
May 1970	March 1972
February 1974	October 1977
June 1981	May 1983
November 1985	March 1987
June 1989	September 1991

(Source: E.A. Boehm, Institute of Applied Economics and Social Research, University of Melbourne.)

CHECKPOINT 19.1*

When we look at the graph in part (a) of Figure 19.1 it appears that the expansion phase of business cycles is a great deal longer than the recession phase. Would you agree with this assessment? Why or why not?

What do you think the monthly seasonal adjustment factors for textbook sales would look like over the course of a year?

*Hints and answers to all Checkpoints can be found at the back of the book.

DETERMINANTS OF THE BUSINESS CYCLE

The characteristics of the business cycles of an economy depend on the way it is 'put together'—the nature of its products, the structure of its markets, the interconnecting relationships between its industries. They also depend on the shocks that hit it; that is, on the way it is influenced by other economies.

Product characteristics: durables and non-durables

Industries that produce durable goods—steel, machinery, motor vehicles, construction, consumer appliances and so forth—experience much larger fluctuations in employment, production and sales over the course of a business cycle than do industries that produce non-durable goods—clothing, food products, agricultural commodities and so on. The main reason for this lies precisely in the difference in the nature of durable and non-durable goods.

When an economy goes into recession, unemployment rises. Businesses find themselves with idle productive capacity in the face of lagging sales as consumer and business optimism about the future declines. Consumers tend to make the old car or refrigerator last another year, particularly if they are unemployed or faced with increasing job uncertainty. Similarly, businesses make do with existing plant and equipment, especially since some of it is made idle by the slowdown in sales and the accompanying buildup of unsold inventories. In short, when times are bad and a cloud of uncertainty shrouds the future, durable goods purchases tend to be postponed. This is possible precisely because durable goods *are* durable. So a recession hits durable goods industries especially hard.

By contrast, non-durable goods purchases cannot be put off for nearly as long. People can't postpone eating, brushing their teeth, being sick or heating their homes. They also seem very reluctant to cut back on smoking, drinking and other personal consumption habits. As a result, history shows that during recessions non-durable goods industries do not experience nearly as severe a decline in employment, production and sales as do durable goods industries.

The size of the service sector also has some effect on an economy's business cycle. Services have some similarities to non-durable goods because they cannot be stored. If they are essential, buyers will continue to demand services, even in a recession. But many services are not essential. If a household's budget is tight, a haircut can wait or even be done at home.

On the other hand, during business cycle expansions, durable goods purchases previously postponed are carried out. Rising sales put increasing demands on productive capacity, and businesses have greater incentives to buy new equipment and expand plant size. Similarly, consumers have more job certainty; employment and pay cheques rise; and more households are willing to replace the old car or refrigerator with a new one. As a result, durable goods purchases pick up at a faster rate than purchases of non-durables.

Regional variations

Business cycles do not affect all regions of a country in the same way. Resource-based industries such as agriculture, mining, oil and gas, forestry and fishing tend to be unstable. Weather plays a major role in influencing the fortunes of farmers—both at home and overseas. A poor season in Russia or China can greatly help the prospects of Australian wheat farmers, but a drought in Australia's main wheat-growing areas and good seasons abroad will have the opposite effect. New oil and gas discoveries on Australia's North West Shelf provide strong stimulus to the Pilbara and Western Australian economies, but falling international oil prices will have an adverse impact. Political events in the Middle East may complicate this picture further.

Because Australia's regions have different economic bases, this may create policy problems. The economies of Victoria and South Australia, which depend more heavily on manufacturing, may be experiencing strong expansion while the resource-based states of Queensland and Western Australia are in recession. And of course the reverse can be the case, as happened quite dramatically in the early 1990s.

Market structure

Markets in which there are numerous firms competing with one another in the production and sale of a product tend to reduce prices more sharply in the face of declining demand than do those dominated by a few large firms that have monopoly-type power. On the other hand, monopoly-type markets tend to reduce output and employment more sharply than do markets with numerous competing firms. In short, over the course of the business cycle, monopoly-type markets adjust to changing demand largely by changing production rather than price. Highly competitive markets with numerous firms, in contrast, adjust largely by changing price rather than output.

Monopoly-type market structures tend to prevail in durable goods industries such as steel, oil, electrical machinery, appliances and motor vehicles. On the other hand, competitive market structures tend to prevail in non-durable goods industries such as agriculture and wearing apparel. There are literally tens of thousands of farmers, for example.

External factors

We have briefly examined a few of the important aspects of the economy's internal, or endogenous, structure that determine how it moves when it is subjected to external shocks. The nature of its products (durable versus non-durable), the structure of its markets (competitive versus monopolistic), and the interconnecting relationships between its industries are all important internal determinants of the economy's motion. In subsequent chapters we will examine other characteristics of the economy's internal structure that are also important determinants of the way it moves. These affect the economy just as weight, size and centre of gravity affect the way a rocking horse moves when given a push.

Now we look briefly at a few frequently cited explanatory factors underlying business cycles that are generally regarded as external, or exogenous; these are causes, like the push applied to the rocking horse. The factors include:

- changes in population growth rates and migration trends
- new inventions and technological developments
- the discovery of new mineral deposits and energy sources
- the opening up of new land frontiers
- political events and social upheavals, such as wars

While these factors are generally thought of as external to the workings of the economy, it is sometimes difficult to make a clear-cut distinction. For example, increases in the population growth rate seem to be encouraged by economic expansion and dampened by recession. However, this is a two-way street. Increases in the population growth rate tend to stimulate economic expansion, while decreases tend to slow down the growth of demand for goods and services. The same sort of two-way influences may exist for many of the so-called external factors listed above. Unstable economic conditions in post-World War I Germany may have contributed to the rise of Hitler and the advent of World War II, which in turn pulled many Western economies out of the depression years of the 1930s. On the other hand, the fourfold increase in oil prices caused by the Arab oil-exporting countries in 1973/74 is viewed by most economists as an external shock to Western economies that helped to trigger the major recession of the middle and late 1970s.

Optimism and pessimism

Finally, the ebb and flow of optimism or confidence about the future—what John Maynard Keynes called 'animal spirits'—is often cited as a crucial factor in the business cycle. For example, it is sometimes argued that optimism lost touch with reality in the late 1920s. This allegedly led to excessive speculation in land and stocks and to overinvestment in plant, equipment and property—far beyond what the demand warranted. When sober judgment finally set in, most Western economies were plunged into the deepest and longest depression of the modern era, and a mood of deep pessimism prevailed. At its depth in 1932, US President Franklin Roosevelt may have assessed the main problem very well when he said, 'The only thing we have to fear is fear itself.'

More recently in Australia we have seen wide swings in optimism and pessimism about the state of the economy. One such example was the so-called resources boom of 1980 and 1981 which subsequently gave way to a deep recession when confidence dissipated. The optimism of many Australians during the late 1980s also lost touch with reality. One result of this was a long and deep recession in the early 1990s.

The American economist Gardner Means did a study of the percentage drop in product price and the percentage drop in production in each of 10 industries during the onset and downturn of the Great Depression of the 1930s. These industries were textile products, agricultural implements, agricultural commodities, petroleum, motor vehicles, leather, cement, food products, iron and steel, and automobile tyres. How do you think they ranked:

(a) in terms of the degree of price reduction observed in each of them?
(b) in terms of the degree of output reduction?

CHECKPOINT 19.2

EMPLOYMENT AND UNEMPLOYMENT

Official definitions of an economy's labour force typically include all persons of working age who are employed, plus all those who are unemployed but actively looking for work. In most economies, this encompasses more than half of the population aged over 15 years. Official definitions of employment measure the number of full-time and part-time workers who work in a paid rather than a voluntary capacity.[1]

While the labour force includes people in the military, unemployment is a problem that afflicts only the civilian labour force. *Unemployment* exists whenever there are workers who make themselves available for work by actively looking for a job but are unable to find one. Our discussion of unemployment and employment therefore focuses on the civilian labour force. In the discussion that follows, we consider such questions as: Are there different types of unemployment? Is there such a thing as a normal level of unemployment? What is full employment? What are the costs of unemployment?

labour force All persons over the age of 15 who are employed, plus all those actively looking for work ■ **employment** Measure of the number of full-time and part-time workers who work in a paid rather than voluntary capacity ■ **frictional unemployment** Short periods of unemployment caused when a worker leaves one job to look for a better one, by seasonal layoffs, or by new graduates looking for jobs on leaving university ■

TYPES OF UNEMPLOYMENT

Unemployment comes about in three different ways.

1 The worker may leave his or her current job to look for a better one, giving rise to what is called frictional unemployment.

2 The worker's current job may be permanently eliminated—for example, the plight of blacksmiths at the beginning of the 20th century, or more recently of factory workers as and when robots are introduced to run the production line—possibly causing so-called structural unemployment.

structural unemployment Caused by fundamental changes in the kinds of jobs that the economy offers ■

3 The worker's current job may be temporarily eliminated by a recession, thus giving rise to cyclical unemployment.

cyclical unemployment Caused by a fall in total demand for goods and services (recession) ■

Let's look more closely at each of these types of unemployment.

Frictional unemployment

Often workers leave jobs to look for ones that pay better or are more attractive in some other way. In the meantime they may be unemployed for short periods of time while they are between jobs. Suppose, for example, that each worker in the labour force changes jobs once a year and is unemployed for a two-week period while in transition. Suppose also that the number of workers changing jobs at any one time is spread evenly over the year. Then 2/52, or 3.8 per cent, of the labour force is unemployed, if there are no other causes of unemployment.

Other forms of frictional unemployment are due to seasonal layoffs, such as those that affect farm workers and people in the tourist industry. New entrants into the labour force with marketable job skills (such as new university graduates) are also frequently unemployed for a brief period of time before finding a job.

Structural unemployment

As the term *structural* implies, this kind of unemployment is due to fundamental changes in the structure of labour demand—specifically, the kinds of jobs that the economy offers. Technological change, the development of new industries and the demise of old ones, and the changing economic role of different regions in a country all mean that new kinds of jobs need to be done and that many old ones cease to exist. The new jobs often require different skills and educational backgrounds from the old ones and are frequently located in different regions.

Workers often find themselves displaced by these structural changes. They may lack the required skills and training needed to gain employment in other areas of the economy. Often they are dismayed by the prospect of having to move away from old friends and familiar neighbourhoods. As a result, they end up among the ranks of the long-term and hard-core unemployed. This is a particular problem among older workers, and among unskilled workers in declining economic regions. It is also often a problem among Aboriginal people who live in remote regions and whose levels of formal education fall well below the national average. In general, the basic characteristic of the structurally unemployed is their lack of marketable skills.

Cyclical unemployment

Cyclical unemployment, sometimes called demand-deficient unemployment, is caused by the business cycle. When an economy's total demand for goods and services rises during the expansion phase of the cycle, employment rises and unemployment falls. During the recession phase, total demand for goods and services falls, causing unemployment to rise and employment to fall. Cyclical unemployment looms large in the movement of the unemployment rate.

THE NATURAL RATE OF UNEMPLOYMENT—OR, WHAT IS FULL EMPLOYMENT?

It is clear from our discussion of frictional unemployment that *full employment* need not mean that there is a zero rate of unemployment. The general view among economists is that the existence of frictional unemployment and a certain amount of structural unemployment constitutes a natural rate of unemployment, towards which the economy automatically gravitates in the absence of other disturbances. Full employment is the level of employment associated with the natural rate of unemployment. In the early 1960s, economists generally felt that full employment roughly corresponded to a 1.5 per cent unemployment rate—what might be called the natural unemployment rate. Since that time, the level of the natural unemployment rate has been revised upwards. In recent years, a number of economists have come to think that it may be somewhat more than 6 per cent. Why is this? Should we be concerned? How we measure unemployment, and the nature of the relationship between population growth and labour force growth, has a lot to do with the answers to these questions.

natural unemployment rate The existence of frictional unemployment and a certain amount of structural unemployment constitutes a natural rate of unemployment towards which the economy automatically gravitates in the absence of other disturbances ■

full employment Level of employment associated with the natural rate of unemployment ■

unemployment An outcome in which there are workers without employment even though they are looking for work, or where available factors of production in an economy are idle ■

Measuring unemployment

The most commonly used definition of unemployment states that to be considered unemployed you must be out of work, looking for a job and available to take one immediately. Some think this definition is too broad because it doesn't distinguish between those who need jobs to support themselves and their families, and those who don't. Hence critics say that this measure overstates unemployment distress. They point out that a full-time student seeking part-time work, or a job-seeking teenager living at home with two working parents, count just as much in this measure of unemployment as does a jobless head of household out of work for weeks. However, others argue that this measure understates unemployment because it doesn't include 'discouraged' workers who have dropped out of the labour force after a prolonged and unsuccessful search for a job. Nor does it include part-time workers who are looking for a full-time job.

Population and labour force growth

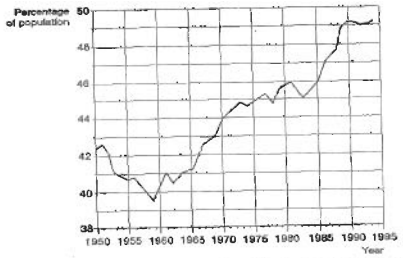
Longer-run changes in the size of the labour force relative to the size of the total population have implications for the unemployment rate and the percentage of the working age population employed. So do longer-run changes in the age and sex of the labour force.

If the size of the total population grows faster than the size of the labour force, the number of people demanding goods and services will grow faster than the number of people who want jobs. Other things remaining the same, this should tend to lower the unemployment rate. On the other hand, if the size of the labour force grows more rapidly than the size of the total population, the number of people wanting jobs will increase faster than the number demanding goods and services. This will tend to increase the unemployment rate, other things remaining the same.

From the latter half of the 1960s up to the present, countries like Australia have had to cope with a labour force that has grown faster than the total population; that is, the labour force as a percentage of the total population has increased, as shown in Figure 19.3. In part this has been due to the maturing of the post-World War II 'baby boom' generation, which has swelled the working-age population during these years. This is shown clearly in Table 19.2. In the three decades up to 1993, percentage employment growth easily exceeded

FIGURE 19.3

LABOUR FORCE AS A PERCENTAGE OF AUSTRALIA'S POPULATION



The labour force as a percentage of the total population has increased since the early 1960s. This reflects the maturing 'baby boom' generation entering the labour force, and the decline of the birth rate since that time.

TABLE 19.2

PERCENTAGE OF LABOUR FORCE AND POPULATION GROWTH, AUSTRALIA, 1953–93

PERIOD	POPULATION GROWTH	LABOUR FORCE GROWTH
1953–63	23.7	21.8
1963–73	23.8	34.0
1973–83	14.0	17.6
1983–93	14.7	24.3

(Source: Australian Bureau of Statistics, The Labour Force (various years).)

percentage population growth. In addition, the proportion of working-age women who have moved into the labour force has increased dramatically. Whereas only about 30 per cent of the country's population of adult females were in the labour force in the years after World War II, more than 50 per cent now work or are seeking work. Despite this, the economy has done quite well in providing jobs for these people.

On the negative side, many economists argue that the more rapid rate of growth of the labour force relative to that of the total population has contributed to a rise in the level of what should be considered the natural unemployment rate (the rate that corresponds to full employment). They believe that the unusually large increase in the

number of new job-seekers relative to the growth in the population pushes the level of frictional unemployment higher. Another possible factor in a higher natural unemployment rate is the increased flow into the public's pockets of transfer payments—unemployment benefits, pensions and so on. This may well cause people who are not really trying very hard to get employed to list themselves as unemployed.

THE COSTS OF UNEMPLOYMENT

Labour is an essential factor of production in our economy. Consequently, the greater the total demand for goods and services, the higher the level of employment and the lower the level of unemployment, given the available labour supply. Recall from Chapter 2 that unemployment exists whenever any available factors of production are idle. The term *available* is important. *Unemployment* exists whenever there are workers who make themselves available for work by actively looking for a job but are unable to find one.

For society as a whole, unemployment means that fewer goods and services are produced, and a smaller pie means there is less available for all. This is the economic cost of unemployment. As a matter of public policy, unemployment is of particular concern because it also represents hardship for the unemployed. How might we measure these costs and hardships?

Economic cost: the GDP gap

How can we measure the economic cost of unemployment to society? First, we might estimate the economy's potential GDP. Potential GDP is what GDP would be if the economy's resources were 'fully' employed. In practice, this equates to the situation where the natural rate of unemployment occurs.

potential GDP What GDP would be if the economy were 'fully' employed ■ **GDP gap** Potential GDP minus actual GDP, which is equal to the value of goods and services not produced because there is unemployment ■

We would then subtract actual GDP from potential GDP to get the GDP gap. The GDP gap is the monetary value of final goods and services not produced because the level of unemployment is in excess of the natural rate of unemployment.

Several economists have attempted to measure the GDP gap for Australia. A recent set of estimates is given in Figure 19.4(b). The unemployment rate is shown in part (a). We can see by comparing the two graphs how the GDP gap widens when the unemployment rate rises and narrows when the unemployment rate falls. In the late 1960s, during the Vietnam War period, unemployment was very low and the actual GDP equalled or exceeded potential GDP (the GDP gap was negative). This reflects the fact that the potential GDP does not represent the maximum GDP the economy can produce, but rather that which it can produce at what is considered the natural level of unemployment. At the natural level of unemployment, the economy is considered to be operating at full employment. When the economy produces above its potential level, productive facilities are being utilised beyond their most efficient capacity levels and there is much overtime employment. The unemployment rate is squeezed below what is considered its natural level.

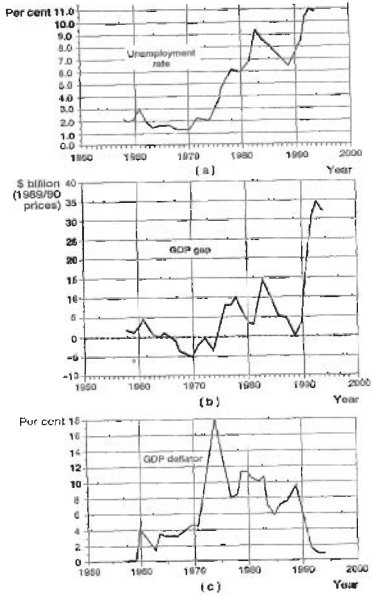
The GDP gap for the years in which the Australian economy operated below its potential is indicated clearly in Figure 19.4(b). These areas represent the economic costs of unemployment, measured in constant 1989/90 dollars.

Other costs of unemployment

The burden of unemployment is obviously more severe if you happen to be among the unemployed. And different groups in the labour force tend to have a higher incidence of unemployment than others. For example, in November 1992, when Australia experienced its highest official rate of unemployment since World War II, the official unemployment rate for

FIGURE 19.4

THE GDP GAP, UNEMPLOYMENT RATES AND PRICE LEVELS IN AUSTRALIA, 1958–93



The difference between potential and actual GDP since 1958 is the GDP gap shown in part (b) expressed in constant 1989/90 dollars. Comparison of the behaviour of the unemployment rate, part (a), with that of the GDP gap indicates how the unemployment rate rises when the GDP gap widens and falls when the GDP gap narrows. From 1966 to 1969, the Vietnam War years, the unemployment rate was at its lowest levels and actual GDP exceeded potential GDP (the GDP gap was negative). This reflects the fact that the potential GDP does not represent the maximum GDP the economy can produce at a natural rate of unemployment.

Until 1971 the annual percentage rise in the general price level (the GDP deflator), part (c), tended to be larger when the GDP gap narrowed and the unemployment rate fell, and smaller when the GDP gap widened and the unemployment rate rose. By contrast, there was a jump in the percentage rise in the general price level in the mid-1970s, accompanied by an unprecedented widening in the GDP gap. The pre-1971 pattern re-emerged briefly in the late 1980s, but the gap widened dramatically in the deep recession of the early 1990s.

the civilian labour force was 11.3 per cent. Among males it stood at 12.2 per cent, while among females it was 10.5 per cent. For adults (those aged 20 years and over) it was 8.6 per cent, while among teenagers, the newest entrants to the labour force, it was about 23 per cent.

Aside from those aspects of unemployment that can be quantified, there is a social pathology associated with unemployment that is more difficult to measure. People who

are unemployed for extended periods tend to run down their 'human capital'—the value of their formal education and other job skills. The unemployed worker often suffers a loss of self-esteem. Medical researchers have reported findings suggesting that anxiety among unemployed workers leads to health problems and family squabbles. Severely prolonged unemployment of family breadwinners often leads to broken homes and desertion. History suggests that high unemployment rates tend to spawn political and social unrest, and that more than one social order has been upset for want of jobs. The high unemployment rates among teenagers in our cities has had a lot to do with the sense of hopelessness, desperation and anger that leads to high crime rates.

In the aftermath of the major economic recession of the early 1990s, long-term unemployment recently became a major issue of policy discussion in Australia. *Policy Perspective 1* 'Australia's long-term unemployment problem', considers the magnitude of the problem and reflects on some of the suggested policy solutions.

Comparing parts (a) and (b) of Figure 19.4, what appears to be the level of the natural unemployment rate on which the estimate of potential GDP, the full employment level of GDP, is based?

CHECKPOINT 19.3

PRICE CHANGES AND INFLATION

The burden of unemployment falls most heavily and obviously on those who are unemployed. Inflation, while often more subtle, affects virtually everybody. Inflation is a pervasive rise in the general level of prices of all goods and services. Inflation therefore reduces the purchasing power of money.

The term *inflation* is not used when the prices of just a few goods rise. Rather, it refers to a situation in which the average of all prices rises. (Deflation is just the opposite of inflation—the average of all prices falls.) When we discussed the difference between money GDP and real GDP in the last chapter, we saw that inflation means that a dollar will purchase fewer goods tomorrow than it does today. Economists measure a country's annual rate of inflation by computing the percentage change in the general level of prices from one year to the next. The formula is:

$$\text{Rate of inflation} = \left(\frac{\text{Price level this year} - \text{Price level a year ago}}{\text{Price level a year ago}} \right) \times 100$$

Official government statistical agencies compile a number of measures of prices. The most commonly used and widely publicised measure in most economies is the consumer price index (CPI). The consumer price index is a measure of the rate of change in prices paid by household consumers for the goods and services they buy.

Very often the press, politicians and the public in general interpret the CPI as a measure of the 'cost of living', and changes in the CPI as changes in living costs. However, examination of the way in which the CPI is constructed reveals that a change in the CPI may be a misleading measure of the actual change in the cost of living. An alternative measure of prices is given by the GDP deflator—mentioned in the last chapter. The GDP deflator measures the rate of change of prices of all the expenditure components (consumption goods, investment goods, government purchases and net exports) that make up GDP.

The following example shows how to calculate price indexes. Suppose that our economy consumes four types of goods and services—food, shelter, clothing and

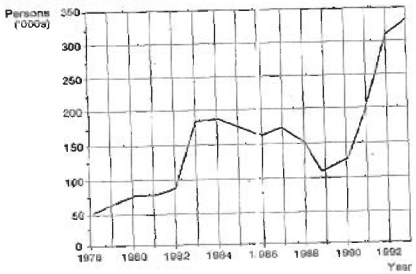
inflation A rise in the general level of prices of all goods and services which causes the purchasing power of a dollar to fall ■ **deflation** A general fall in prices that causes the value of a dollar measured in terms of its purchasing power to rise ■ **consumer price index (CPI)** A commonly used and widely recognised measure of the general level of prices in the economy, constructed as a weighted average of the prices of a market basket of goods and services purchased by a typical urban worker's family ■ **GDP deflator** Measures the rate of change of prices of all the expenditure components that make up GDP ■

POLICY PERSPECTIVE 1

AUSTRALIA'S LONG-TERM UNEMPLOYMENT PROBLEM

Long-term unemployment—a term which refers to people who have been searching for work for a year or more—has considerable social and macroeconomic costs. It rises strongly in recessions and then, as the experience of the 1980s and early 1990s shows, it is difficult to reduce. Chapman (1993) notes that the figure rose from 80 000 to 190 000 between the beginning of 1981 and September 1983. Even though employment grew by one and a half million jobs between 1983 and 1990, long-term unemployment dropped back to only 120 000 by 1990. With the new recession it jumped again from 130 000 to 310 000 between 1990 and 1992. Figure P19.1 illustrates what was happening.

FIGURE P19.1
LONG-TERM UNEMPLOYMENT IN AUSTRALIA, 1978–93



The consequences of continuing long-term unemployment

Two main points stand out. First, continuing high levels of long-term unemployment make it difficult for government subsequently to achieve low levels of inflation and unemployment. This is because a larger part of unemployment becomes less relevant to employers. Either the skills of the long-term unemployed waste away, or their attitudes to work decline, or both. Employers are less likely to consider this group as employable. The longer-term natural rate of unemployment may rise because of high recent or current levels of long-term unemployment.

Second, there is likely to be an increase in income and wealth inequality. This will lead to social unrest, greater levels of crime, poor health, family breakdown, and a greater level of welfare dependency of disadvantaged population groups on the public sector. If people are unemployed for more than two years, there seems to be a danger that they might become a 'permanent underclass'.

What can government do?

Sloan (1993) identifies three basic types of labour market programs designed to assist the unemployed. They are:

- **Wage subsidy schemes for private sector employers.** These provide financial incentives to employ members of the target group under certain conditions and for defined periods.
- Public sector job creation schemes. These usually create fully subsidised temporary jobs in the public sector.
- Training schemes.

Over the past two decades there has been growing government interest in labour market programs. There have been large increases in total expenditure, with around 0.5 per cent of GDP being spent annually in the area. The emphasis of these programs has generally moved more towards wage subsidy and training schemes.

Wage subsidy schemes tend to be cheaper but appear to benefit the 'least disadvantaged' groups most. They seem less effective in recessions when business confidence is low. Public sector schemes have advantages in that they can target the 'most disadvantaged' groups, focus on specific regions and be implemented in severe recessions. Critics often question the social value of public sector projects. In contrast to the demand-side orientation of wage subsidy and public sector programs, training schemes have a supply-side orientation. They perform best when the economy is growing. These schemes can lead to frustration among recipients if they do not obtain jobs after completing their training.

QUESTIONS

1. Using a reference such as Australian Bureau of Statistics, *The Labour Force, Australia* (Cat. No. 6203.0), update the information in Figure P19.1 on long-term unemployment. How do recent trends compare with those in the figure? In relative terms has long-term unemployment become more or less of a problem?
2. Visit your local branch of the Commonwealth Employment Service. Ask about the labour market programs they currently administer. Classify these programs according to whether they are wage subsidy, public sector job creation or training schemes.

REFERENCES

Chapman, B. J., 'Long-term unemployment: The dimensions of the problem', *Australian Economic Review*, 2nd quarter, 1993, pp. 22–25.

Sloan, J., 'Some policy responses to long-term unemployment', *Australian Economic Review*, 2nd quarter, 1993, pp. 35–40.

entertainment. As we can see from Table 19.3, a typical household consumes 100 units of food, two units of shelter, four units of clothing and 10 units of entertainment in the base year. The cost of living in the base year is $(100 \times \$2) + (2 \times \$325) + (4 \times \$25) + (10 \times \$5)$, or $1000. The cost of buying the same bundle next year is $1076; that is, $(100 \times \$2.20) + (2 \times \$350) + (4 \times \$24) + (10 \times \$6)$.

If we set the price index equal to 100 in the base year, then its value in the next year is 107.6. We would calculate the rate of inflation as:

$$\text{Rate of inflation} = \left(\frac{107.6 - 100}{100}\right) \times 100 = 7.6 \text{ per cent}$$

TABLE 19.3

CALCULATING A HYPOTHETICAL PRICE INDEX

GOOD OR SERVICE	QUANTITY CONSUMED IN BASE YEAR (units)	PRICE IN BASE YEAR ($)	COST OF LIVING IN BASE YEAR ($)	PRICE IN NEXT YEAR ($)	COST OF LIVING NEXT YEAR ($)
Food	100	2.00	200	2.20	220
Shelter	2	325.00	650	350.00	700
Clothing	4	25.00	100	24.00	96
Entertainment	10	5.00	50	6.00	60
Total			1000		1076
Price index			100		107.6

One problem with viewing percentage changes in a price index such as this as changes in the cost of living is immediately obvious. While construction of the index for any subsequent year uses the subsequent year's prices for each expenditure category, the weights used are still those for the initial year. But we know that expenditure patterns change over time, a fact that the above index ignores. How does this bias a measure like the CPI as a tool for measuring changes in the cost of living? When the prices of different goods change relative to one another, consumers tend to spend more on goods that have become relatively cheaper, and less on those now relatively more expensive. As the weights in the CPI are not changed to reflect this fact, over time it will overstate the importance of the relatively higher priced goods. Therefore the CPI, and changes in it, may be biased upwards.

We look in some further detail at how the CPI is used and interpreted in practice in *Policy Perspective 2* 'The consumer price index in Australia'.

RECENT EXPERIENCES WITH INFLATION

An Australian perspective

The annual percentage change in a measure of the general price level (the GDP deflator) for the years since 1958 is shown in Figure 19.4(c). Note that the general price level has gone up, though at different rates, in every year over this period. It is interesting to compare the size of these percentage increases with the changes in the size of the GDP gap (part (b) of the figure) and the unemployment rate (part (a)). Generally speaking, the percentage rise in the general price level has tended to be smaller when the GDP gap widens and the unemployment rate rises—when the economy has had more excess capacity. This has long been regarded as the conventional pattern in the relationship between inflation, the GDP gap and the unemployment rate.

stagflation The existence of high rates of inflation and unemployment at the same time ■

However, the dramatic jump in the percentage rise in the general price level in the mid-1970s was subsequently accompanied by an unprecedented degree of widening in the GDP gap. In other words, the economy experienced a severe period of inflation during a deep recession. This unconventional combination of events gave rise to the term stagflation, which means the occurrence of economic stagnation combined with high rates of inflation. Since the late 1970s the conventional relationship between inflation and the GDP gap has appeared to hold again. In subsequent chapters we will examine explanations of the conventional pattern of the relationship between inflation and unemployment, as well as explanations of the pattern known as stagflation.

A regional view

A summary of the inflationary experiences of selected nations in the Asia-Pacific region between 1970 and 1991 appears in Table 19.4. Between 1970 and 1980, high levels of inflation—driven by the OPEC oil price hikes of the 1970s—affected all nations except China, which was undergoing the final stages of its Cultural Revolution. Stagflation and widening GDP gaps were common.

Between 1980 and 1991, inflation was much lower in eight of the 13 countries. There were very large falls in Indonesia and the Republic of Korea—both economies that performed well during the 1980s. But inflation also fell significantly in Australia, Japan, Malaysia, Papua New Guinea, Singapore and Thailand. Small falls occurred in the dynamic Hong Kong economy and in New Zealand which was struggling with its challenges of structural adjustment, its small size and its geographical location. Although the Indian economy seems to have made some progress, its inflation remained quite high. China's emergence into the 'market socialism' phase of its development helps to explain its increase. The economy of the Philippines continued to struggle in an unstable political environment.

TABLE 19.4

INFLATION EXPERIENCES OF SELECTED ASIA–PACIFIC ECONOMIES, 1970–91

COUNTRY	AVERAGE ANNUAL RATE OF INFLATION (PER CENT)	
	1970–80	1980–91
Australia	11.8	7.0
China	0.9	5.8
Hong Kong	9.2	7.9
India	8.4	8.2
Indonesia	21.6	8.5
Japan	8.5	1.5
Korea	20.1	5.6
Malaysia	7.3	1.7
New Zealand	12.5	10.3
Papua New Guinea	9.1	5.2
Philippines	13.3	14.6
Singapore	5.9	1.9
Thailand	9.2	3.7

(Source: Adapted from World Bank, World Development Report 1993, Oxford University Press, Oxford)

POLICY PERSPECTIVE 2

THE CONSUMER PRICE INDEX IN AUSTRALIA

The most commonly used and widely publicised measure of the general level of prices in most economies is the consumer price index (CPI). The Australian Bureau of Statistics (ABS) compiles this measure in Australia.

The market basket

In Australia the CPI is a weighted average of the prices of a 'market basket' of goods and services purchased by a *typical metropolitan-area worker's* family. The weights are calculated as equal to the proportions of a typical family's expenditures in eight broad areas, based on the most recent ABS survey of the estimated pattern of household expenditure. The groups and their weights in June 1992 were as in Table P19.1:

TABLE P19.1

Food	18.324
Clothing	6.264
Housing	15.900
Household equipment and operation	18.370
Transportation	15.967
Tobacco and alcohol	7.475
Health and personal care	6.850
Recreation and education	10.850
Total	100.000

Within each of the above broad areas there are several sub-areas, and within the sub-areas several items are usually included. There are, for example, nine sub-areas for food. These are dairy products, cereals, meat and seafood, fresh fruit and vegetables, processed fruit and vegetables, soft drinks, ice cream and confectionery, meals out and takeaway meals, and other food.

Problems with the CPI as an inflation measure

The ABS estimates the CPI on a quarterly basis for each of Australia's eight capital cities. In the process, trained field staff collect more than 100 000 price quotations regularly. Commentators typically equate percentage changes in the index with the rate of inflation.

But how widely applicable is the CPI in practice? The CPI relates specifically to the purchasing patterns of typical household units of *metropolitan-area* employees. The eight capital cities that make up the group have only about 65 per cent of the country's population. Not all metropolitan-area residents work for an employer; many work for themselves. And there are large numbers of 'atypical' household units. These include retired couples, two-income households without children, sole parent families and so on. Moreover, residents of rural and remote Australia—even if they are 'typical' family units—seem likely to have different market baskets. Housing and house operation are often cheaper in these areas, but food, clothing, transport and health services may be more expensive. Percentage changes in the CPI may be quite inappropriate for assessing cost-of-living changes for all such people.

An alternative measure—the Treasury's measure of underlying inflation

During 1994 the ABS began reporting a new measure of inflation—the Treasury's 'underlying inflation rate'. The Australian Treasury developed this measure by excluding from the CPI basket a range of items whose prices:

- are highly volatile;
- exhibit marked seasonal patterns; or
- are largely affected by policy decisions.

The new measure excludes items such as meat and seafood, fresh fruit and vegetables, clothing, rent on government-owned dwellings, mortgage interest charges, consumer credit charges, local government rates, household fuel and light, urban transport fares, tobacco and alcohol, health services, pharmaceuticals, holiday travel and accommodation, education and childcare. These add up to nearly half of the CPI basket weight.

In the first part of 1995 the Treasurer began using the 'underlying rate' rather than the 'headline rate' (derived from the full CPI) as his preferred measure in policy discussion. While the full CPI rose by 3.9 per cent between the March quarter of 1994 and the March quarter of 1995, the underlying rate increased by only 1.9 per cent. Where two measures are available, politicians tend to select the more favourable one.

The changing composition and quality of the market basket

Another problem with the CPI is that some items consumers buy today were not available when the most recent expenditure survey took place. They are therefore not represented at all in the calculation of today's CPI. A somewhat similar problem arises because the CPI does not take account of changes in the quality of goods and services. Typically, higher quality items cost more. For example, today's medical care is much better than in the past (some drugs and procedures not being available before) and much more expensive as well. But the price per *constant-quality* unit of medical care has not gone up nearly as much (if at all) as the unadjusted price of medical care used in the CPI. The lack of adjustment for quality improvement in the goods and services represented in the CPI is a source of its upwards bias.

For measures such as these, it is important that the CPI basket be revised regularly to avoid overstating the rate of inflation. In Australia the ABS conducts such an exercise about every five years. The last revision was made in June 1992.

QUESTIONS

1. On the basis of market basket data given above, which expenditure class's price increase probably causes the CPI to *overstate* the cost of living in Queensland and the Northern Territory, relative to the rest of Australia?
2. The ABS has estimated the CPI in Australia for more than 40 years. Over that time it has revised market basket weights on 12 occasions. From what you know or have learned about the earlier years, list five or six items in the market basket that might have appeared when the CPI was first computed but would not appear now. What items that appear now would not have been included 40 years ago?

Source: Australian Bureau of Statistics, A Guide to the Consumer Price Index, 1993, Cat. No. 6440.0, Canberra.

ANTICIPATED VERSUS UNANTICIPATED INFLATION

Inflation is sometimes said to be the most effective, continuously operating thief. It steals the purchasing power of your money whether you hold it in your hand, your wallet, your cheque account or even in the vault of a bank. People have an incentive to protect themselves from inflation just as they have one to protect themselves from theft of *any* kind. And they will attempt to do so if they anticipate or expect inflation. It is when they fail to do so that they are most often hurt by it.

Anticipated inflation and contracts: indexing

The terms of a great many economic transactions are stated in dollars and are spelt out in a contract to which all parties to the transaction agree. Workers and management agree to conditions that stipulate the wage rate to be paid, along with other conditions of employment—length of work week, length of vacation and so on. Loan contracts set out the terms of loans mutually agreed by borrowers and lenders. These terms include the amount of a loan, the interest rate to be paid by the borrower, and the rights of each party in the event of default. Superannuation schemes, insurance policies, rent leases, building contracts, and contracts to produce and deliver goods to a customer by a certain date at a certain price are all examples of such contracts.

When one or both parties anticipate inflation, they attempt to account for it explicitly in the terms of the contract. The 1983 Prices and Incomes Accord between the Hawke Labor Government and the Australian Council of Trade Unions is a good example of such an agreement. Set in the context of a nationally centralised wage fixation system, it sought to ensure the maintenance of real wages for all Australian workers. This was to be achieved by indexing wages to movements in the CPI. Indexing adjusts the money-denominated value of wages, taxes and nominal assets at the same rate as inflation, to keep their purchasing power constant. As time went by, the links of the Accord to the CPI tended to become much more partial, but the philosophy of trying to maintain real wage levels continued.

Indexing *Methods of keeping the purchasing power of wages, taxes and fixed-dollar, or nominal, assets constant by adjusting their dollar-denominated values to the change in the general price level* ■

Suppose, instead, that unions had failed to anticipate inflation and agreed to wage increases of say 5 per cent, which did not keep pace with an inflation rate of 10 per cent. If average hourly wage rates were initially $10, the real wage rate would fall to $9.55 by the end of the year; that is, the average money wage of $10.50 after one year would have only 95.5 per cent of the purchasing power it had at the beginning of the year. With full wage indexation, average money wages after a year would have been $11 per hour. The real wage would remain at $10—10 constant dollars.

In sum, it is not only money that is robbed of purchasing power by inflation but any contract that is stated in terms of dollars. If the inflation is anticipated, the terms of the contract can be set to protect its real value from the erosion of inflation.

Gainers and losers from unanticipated inflation

We can see that if inflation is correctly anticipated, people can try to take steps to protect themselves against it. Unfortunately, the world is an uncertain place. What is anticipated is often different from what occurs. The amount of inflation that occurs that is unexpected is unanticipated inflation. Whenever there is unanticipated inflation, there are both gainers and losers. Who are they?

unanticipated inflation *The amount of inflation that occurs that is unexpected* ■

Creditors versus debtors Suppose that A, the creditor or lender, lends $100 to B, the debtor or borrower, at a 10 per cent rate of interest for one year. We will assume that A entered into this loan agreement anticipating that there would be no inflation over the year. This means that A, the creditor, was induced to lend $100 of purchasing power by the prospect of getting back $110 of purchasing power a year from now. Conversely, B, the debtor, is willing to agree to pay $110 of purchasing power one year from now to A in order to get $100 of purchasing power today.

Suppose that over the course of the year there is actually a 20 per cent rise in the general price level—a 20 per cent rate of inflation—that was completely unanticipated by A. Now when B pays $110 at the end of the year, as stipulated by the loan agreement, this $110 has only about 90 per cent of the purchasing power of the original $100 that A lent B. The 20 per cent rate of inflation more than offsets the 10 per cent rate of interest on the loan. As it turns out, A has given up more purchasing power than A actually gets back. Due to unanticipated inflation, A has suffered a loss. B, on the other hand, ends up paying back less purchasing power than was originally received. Because of unanticipated inflation, B has gained. B's gain in purchasing power is just equal to A's loss. A would never have entered into the loan agreement with B had A known that this was going to be the outcome. B in effect has ended up getting a loan on much more favourable terms than would have been possible had A correctly anticipated the inflation.

Whenever there is unanticipated inflation, there is a redistribution of wealth from creditors to debtors that would not have occurred if the inflation had been anticipated. Financial institutions often seek to avoid the risks of losses from unanticipated inflation in loan contracts by inserting clauses allowing them to vary the interest rate.

Fixed-income groups We have noted how trade unions anticipating inflation would like to get a cost-of-living clause in the wages of their members. Indeed, all those anticipating inflation would want to ensure that their real income would not be reduced by inflation. For example, many retired people have found that their superannuation schemes do not make provision for this. The dollar incomes they receive do not rise with inflation and their real incomes therefore fall. The same thing can happen to any group of individuals in our economy who fail to anticipate inflation or who fail to anticipate it sufficiently. People with fixed-dollar incomes lose ground to those whose dollar incomes rise with any increase in the general price level. The fixed-dollar income group's claim on a share of the economy's total pie falls relative to those whose dollar incomes keep pace with inflation.

Fixed-dollar versus variable-dollar assets We have seen that if you lend out money (enter into a loan contract) but fail to anticipate a rise in the general price level, you can end up getting back a smaller amount of purchasing power than you initially bargained for. There are a number of assets that have fixed-dollar values that give them this characteristic.

If you put $100 into a fixed interest savings account at your local bank, you can subsequently withdraw the $100 plus the initially stipulated rate of interest, at any time. If in the meantime there is an unanticipated rate of inflation, you will not get back the amount of purchasing power you had counted on. There are several kinds of fixed-dollar assets—money, bonds, many bank loans to businesses and consumers, and in general any kind of asset that guarantees a repayment of the initial dollar amount invested plus some stipulated rate of interest (zero in the case of money). Parties who make these kinds of investment without anticipating inflation end up recovering an amount of purchasing power less than that for which they had bargained.

fixed-dollar assets *Any kind of asset that guarantees a repayment of the initial dollar amount invested plus some stipulated rate of interest* ■

On the other hand, there are many assets, variable-dollar assets, that do not guarantee the owner any fixed-dollar value that may be recovered. Such assets are frequently called real assets. If you buy a piece of land, you can get rid of it any time—but only at what you can sell it for. The same is true of a share in a corporation (an indirect ownership of a real asset), a painting, a car, a house or an antique. When there is inflation, these assets can frequently (but not always) be sold at a price that is higher than their original purchase price by an amount that reflects or is more than the increase in the general price level. So, people owning such assets do not necessarily lose purchasing power as do those holding fixed-dollar assets such as money, savings accounts and bonds.

variable-dollar asset *An asset that has no guaranteed fixed-dollar value* ■

An unanticipated inflation will result in a loss of wealth on holdings of fixed-dollar assets and often in little or no loss of wealth on variable-dollar assets. Fixed-dollar asset holders may thus lose relative to variable-dollar ones. Since many people own some of each kind, whether they are net gainers or losers will depend largely on the relative proportions of the total assets they hold in each category.

Unanticipated inflation and uncertainty

It is often argued that inflation isn't necessarily bad, provided it occurs at a constant rate, that everyone anticipates. Then all parties can make their plans and enter into economic transactions on terms that fully take account of inflation. There will be no gainers and losers, no unplanned redistribution of income and wealth such as occurs when there is unanticipated inflation.

When there is uncertainty about what the rate of inflation may be, fear of the [illegible]

■ [illegible]

CHECKPOINT 19.4

Deflation is the opposite of inflation. Explain how unanticipated deflation would affect the distribution of wealth between creditors and debtors, and between fixed income groups and non-fixed income groups. If inflation 'steals' money, what does deflation do? When you look at [illegible] for the years 1972–78, can you think of a possible reason for the severity of the mid-1970s recession [illegible]

WHERE DO WE GO FROM HERE?

[illegible]

■ [illegible]

■ [illegible]

■ Is there a tradeoff between inflation and [illegible]

■ [illegible]

■ [illegible]

■ [illegible]

SUMMARY

1. An economy grows through time but exhibits fluctuations about its growth trend called business cycles. The four phases of the business cycle—recession, trough, expansion, peak—may vary considerably in magnitude and duration from one cycle to the next and no two cycles are ever exactly alike.

2. The business cycle affects different industries and segments of the economy in [illegible]

3. [illegible] frictional, structural and cyclical. [illegible] unemployment since 1970.

4. The greater the economy's total demand for goods and services, the greater the total [illegible] As a result, the level of employment is higher [illegible] Moreover, the burden of unemployment is [illegible]

5. Inflation is a rise in the general level of prices of all goods and services. Inflation reduces the purchasing power of money. The effects of anticipated inflation will be [illegible]

6. [illegible]

QUESTIONS AND PROBLEMS

1. [illegible]

2. [illegible]

to own: a stamp collection, a [illegible] tion of old English c
set interest rate; cash; a collec- silver towels and line
food restaurant; a contract to c
on your neighbour's house?

5 How does inflation affect fixed- dollar income grou
at real GDP?

ENDNOTE

1 This means that many people who perform productive activi
All voluntary workers are excluded, re are housewives and pe

re excluded from the labour force
working from their homes.

3 Since the early 1980s the growth rate of the [illegible]
lower than it was during the 19 [illegible]
boom. Assuming that the popu [illegible]
level, what are the implications
4 In the event of unanticipated [illegible]