PEARSON ECONOMICS 11

THE MARKET ECONOMY

2023



Tim Dixon • John O'Mahony



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Elsevier: Journal of Government and Economics: 'The Proper Role of Government in the Market Economy: The Case of the Post-COVID Recovery' by Professor Joseph E. Stiglitz, May 14, 2021), p. 211.

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Solt, Frederick: Frederick Solt, 2022. "Measuring Income Inequality Across Countries and Over Time: The Standardized World Income Inequality Database." SWIID Version 9.3, June 2022, p. 40.

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Welcome

The Market Economy

You are standing on the starting block of your study of economics, about to dive into a world that uses special language, concepts and theories to build a complex understanding of how the economy works in the modern world. It's a daunting task, there is a lot to learn, and a fair bit of it does not come naturally. It is, however, very rewarding.

Understanding economics will help you to unlock many of the mysteries of the modern world. You will better understand the issues involved in making personal choices – what kind of job to choose, what course to study, what to spend money on, and whether to borrow or save. You will better understand the forces around you – what makes indicators such as interest rates, share prices, unemployment and the Australian dollar move up and down. And you will better understand the forces that shape our world today – making better sense of issues discussed in the media every day, and how Australia fits into what we describe as the global economy.

If it seems hard going at first, you should find that studying Economics gets easier as you go along. Initially, you need to understand the foundations and building blocks of modern economies – the technical aspects of how markets work, how consumers make decisions about what they want, and how businesses decide what to produce. This is the main focus of the Year 11 course and of this book. It is economics at the micro level (the level of individual agents and markets). The significance of what you learn here may not be immediately obvious, but once you have put these blocks together the bigger picture should become clear.

In the Year 12 course, the focus is on the big picture: how the global economy works and how governments manage the economy and choose between competing policy goals. This is economics at the macro level. But to understand the bigger picture of how economies function in the real world, you need a solid grasp of the foundations of economics. And that's what this book is about.

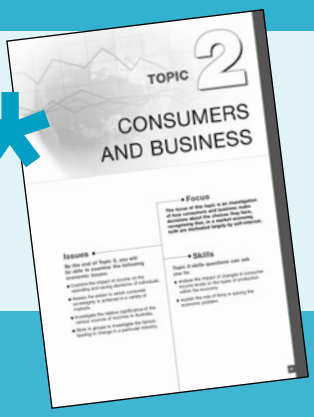
This is the twenty-second edition of *The Market Economy*, and we're as enthusiastic about this edition as we were for the first one back in 2001. This textbook is a collaborative effort of a whole team of economic researchers. Each year, the book is comprehensively revised and refined to reflect feedback from students and teachers, as well as changes in global and domestic economic conditions and developments in the economic policy environment. Our thanks to all of the team involved in the production of this textbook, both for this year and previous years.



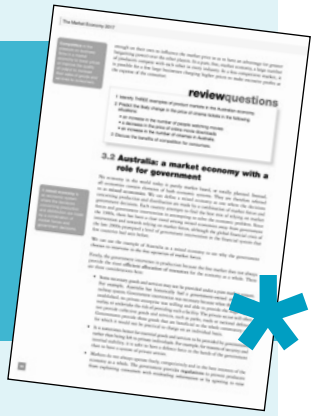
The textbook team (L-R): Zain Ahmed, Ben Lorschy, Tim Dixon, Natalie Baker, Michael Pahos, Joel Bank, Michelle Mountford, Luke Goldman, John O'Mahony.
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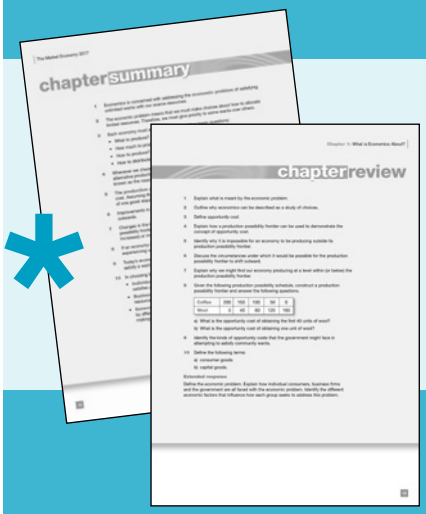
Congratulations on choosing ***Pearson Economics 11: The Market Economy*** as your Year 11 Economics text. Before you use this book, we'd like to highlight some of its key features.



The text is divided into six Topics following the structure of the Year 11 Economics syllabus. Each Topic is introduced by a page that includes the relevant Focus, Issues and Skills for that Topic, reflecting the syllabus objectives. This is followed by an introduction to each chapter within the Topic.



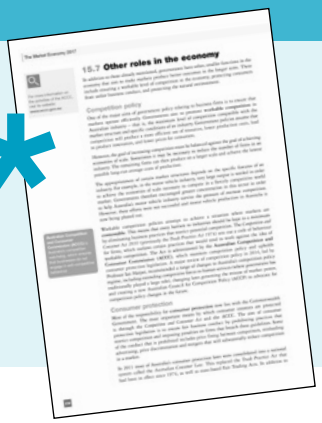
As well as case studies, quotations and summaries of key information, the 2023 edition of ***The Market Economy*** includes regular **review questions** throughout the text and **margin definitions**.



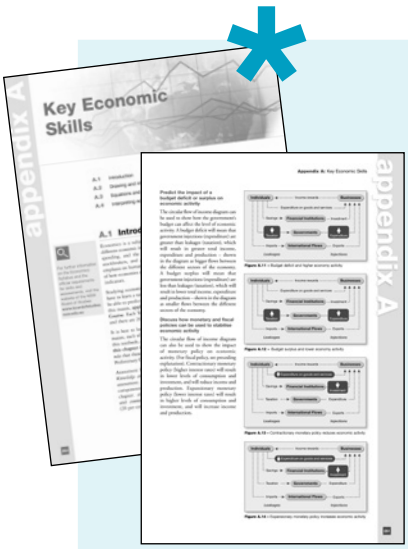
Each Chapter concludes with a 10-point **Chapter Summary** and then **Chapter Review** questions. The Chapter Summary is a good starting point for your notes on each chapter, and the review questions are a great way to test your understanding of the chapter.



The comprehensive **Glossary** at the back of the text provides a ready reference for over 350 key economics terms and concepts.



Throughout the text you will find references to useful websites relevant to that area of study.



A unique feature of ***The Market Economy*** is the Appendix: **Key Economic Skills,** which gives you the opportunity to master the 26 skills of the Year 11 Economics syllabus. The Appendix covers three main areas: drawing and interpreting economic diagrams, equations and calculations, and interpreting economics data and information. By working through this material you will develop and reinforce the key economic skills.

The Market Economy Workbook Ninth Edition

The accompanying workbook *The Market Economy Workbook Ninth Edition* is a great resource to further help you in your study of the Year 11 Economics syllabus.

This year we have added enhanced answers to the workbook answers, including worked solutions for answers that require calculations and additional explanations for answers that require you to demonstrate a deeper understanding of key concepts and knowledge. These will allow you to not only confirm whether you arrived at the right or wrong answer, but to understand why.

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4. Search for 'The Market Economy'
5. Click on 'Workbook answers' from the list.

We really hope that this text makes your study of Economics more enjoyable and rewarding. The book is revised and updated each year to make sure it stays sharp and contemporary.

TOPIC 1

INTRODUCTION TO ECONOMICS

Focus

The focus of this topic is the need for choice by individuals, businesses and governments. Their decisions determine the nature of the economy and create the diversity of economies found in the world.

Issues

By the end of Topic 1, you will be able to examine the following economic issues:

- Identify the opportunity costs involved in economic decisions made by individuals, businesses and governments at local, state and national levels
- Examine the ways that the economic problem affects individuals at different income levels
- Examine the implications of unemployment and technological change using production possibility frontiers
- Compare and contrast the ways that different economies deal with specific problems or issues.

Skills

Topic 1 skills questions can ask you to:

- construct and interpret production possibility frontiers
- distinguish between equilibrium and disequilibrium situations in the circular flow of income model
- explain how an economy might return to an equilibrium situation from a disequilibrium situation
- identify bias in media items on economic issues affecting the local, state and national economies
- identify key features of an economy through analysis of a variety of information types and sources
- work in groups to investigate aspects of economics and economies.

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Topic 1

Introduction

Topic 1 introduces some essential concepts in the study of economics. You will find that in studying economics we continually come back to these core concepts.

Chapter 1 places the study of economics within the bigger picture of human life. Economics is essentially about how we solve the economic problem of unlimited wants but limited resources – that is, how we choose between alternatives. This involves concepts of opportunity costs and production possibilities. The three groups that influence how we make these choices are individuals, businesses and governments.

Chapter 2 examines how economies operate, as well as the process that determines how economies produce and distribute goods and services. We examine the circular flow of income, a model that explains how the economy works by dividing it into five sectors and explaining the income flows between each sector. Chapter 2 finishes with a brief discussion of the concept of equilibrium, another essential economic concept.

Chapter 3 compares the different ways in which economies attempt to solve the economic problem. We compare the characteristics of a market economy, where business and consumers determine what is produced, with a centrally planned economy, where governments make the decisions about production and distribution. Australia is a mixed economy – one that combines a market economy with some level of government intervention. We look at how Australia compares to other economies in Asia across a range of indicators, including economic growth, quality of life, employment and unemployment, distribution of income, environmental sustainability and the role of government.

What Is Economics About?

1

1.1 The economic problem and the role of choices

1.2 The production possibility frontier

1.3 The future implications of choices

1.4 The economic factors underlying choices



The economic problem is about *choices*

1.1 The economic problem and the role of choices

Historically, experts in economics have wrestled with one fundamental issue above all else: how to solve what we call the **economic problem**. That is, how can a society satisfy the unlimited wants (of individuals or the community) with the limited resources available? It can be summarised as follows:

- Our wants are unlimited.
- Resources are scarce – that is, the resources we have to draw from to satisfy our wants are limited.
- Since we cannot satisfy all our wants with our limited resources, we must choose between them.
- Therefore, we need to rank our preferences – we will choose our highest-preference wants, and leave some wants unsatisfied.

The study of economics is essentially about attempting to solve the economic problem – trying to allocate our limited resources for the satisfaction of our unlimited and competing wants. The economic problem can be applied to every aspect of the economy, from simple interactions between businesses and customers to larger issues such as the supply of education. Economics is the study of choices, in which each decision we make involves choosing one option but deciding against an alternative.

Understanding wants

People in all countries need to obtain **goods** and **services** for their daily lives. Goods such as food and shelter, and services such as health and education, are essential for our lives. While these are basic **needs** essential for human survival, individuals also **want** a whole range of other goods and services to make their lives easier, or give them pleasure. Economics assumes that humans pursue maximum self-interest, meaning that we have unlimited wants and limited means to satisfy them. Economics does not attempt to change the fact that we may be greedy. Rather, it attempts to help us work out which wants are our highest priority, and how we can organise production in order to satisfy the maximum number of our wants.

Wants can be defined as the material desires of individuals or the community. They are items that provide some pleasure or satisfaction when they are consumed. Economists say that individuals derive **utility** (which broadly means satisfaction or pleasure) from the consumption of goods and services. People have desires for the basic necessities of life, such as food or shelter, which we can further classify as **needs**, as well as for non-essential items, such as a pair of headphones, an overseas holiday or expensive clothing.

Individual wants are the desires of each person. An individual's desire depends on personal preferences, but can be influenced by broader social trends. The number of individual wants that can be satisfied differs from person to person, depending on their ability to purchase goods and services (that is, their level of income). Individuals who have low incomes are affected by the economic problem more severely than those on higher incomes. People who have low incomes can satisfy fewer of their wants. They may not even be able to cover the cost of basic needs such as food, housing and clothing. The less income a person has, the fewer wants they can satisfy.

Collective wants are the wants of the whole community. What is desired will depend on the preferences of the community as a whole – not only those of the individual person. Collective wants are usually provided by the government. In Australia, local government provides collective wants for local neighbourhoods, such as parks, libraries and local sporting facilities. State governments provide most wants for the wider community, such as hospitals, schools and a police force, while the Commonwealth (or Federal) Government satisfies the wants of the entire nation, such as a defence force. Governments provide collective wants by using taxation revenue collected from the community.

Our wants are **unlimited**. As soon as we have satisfied one want, we will seek to satisfy another one. Because our means of satisfying wants are limited (as a result of our limited income) we cannot satisfy them all at once. In other words, we cannot have everything we want. As a result, **we must choose between our wants**. This means that some wants will be satisfied sooner at the expense of others. Generally, the most pressing wants will be satisfied first. For example, we would satisfy our want for food before buying a new laptop.

Some wants will be **recurrent**. When we satisfy a want such as food, we are faced with the fact that we will have to satisfy this want over and over again in the future. Further examples of recurrent wants include newspapers, clothes and petrol. Other wants are complementary. A want is said to be complementary if it naturally follows the initial satisfaction of another want. For instance, when you satisfy the want for a car, you will also want petrol and car accessories.

Our wants also change over time. As people grow older, their wants change. The factors that affect these changes include age, income, technology and fashion. For example, a one-year-old wants a pram; an eleven-year-old wants a video game console; a twenty-one-year-old wants a car; and a ninety-one-year-old may want a wheelchair. As your income increases, you are able to afford more luxury goods, and you increase the range of wants that you can satisfy. Technology also introduces new wants that people seek to satisfy. A generation ago, most individuals did not own a mobile phone, whereas today they are an almost universal possession.

The key economic issues

All economies – regardless of their type – must attempt to answer the following questions:

1 What to produce?

Because of limited resources, no economy can satisfy all individual and collective wants. It must decide which wants it will satisfy first and which it will leave unsatisfied. Therefore, it must decide what goods and services will be produced.

2 How much to produce?

To allocate limited resources efficiently and maximise the satisfaction of wants, an economy must make decisions about how much of each good or service it will produce. When it produces too much of a good, resources will be wasted, and when it produces too little, the wants of some individuals will be left unsatisfied.

3 How to produce?

Having decided what and how much to produce, an economy must decide how to allocate its resources in the production process. It must look for the most efficient method of production that uses the least amount of an economy's resources so that the greatest number of wants are satisfied at any one point in time.

4 How to distribute production?

Having produced a certain range and quantity of goods and services, an economy must decide on their distribution among the population. In modern economies, each person's share of total production depends on their level of income. People on higher incomes can afford to buy more goods and services than people on lower incomes, and therefore receive a bigger share of total production. Each economy must decide whether it wants a more **equitable** (even) distribution of production or a more **inequitable** (uneven) distribution. This is a difficult question because there is often a conflict between equity and efficiency – more efficient systems may produce less equitable outcomes.

Opportunity cost

Whenever we satisfy one want, we are giving up the opportunity of satisfying an alternative want. The *real* cost of satisfying a want is, therefore, not the money we pay for it, but the next-best alternative want that we have to forgo. This cost is known as the **opportunity cost** (it is also sometimes referred to as the **economic cost** or **real cost**).

Opportunity cost represents the alternative use of resources. Often referred to as the *real* cost, it represents the cost of satisfying one want over an alternative want. This is also known as economic cost.

Opportunity costs can be applied to the individual, the business firm and the government:

- The individual consumer, with limited resources (represented by her limited income) may have to choose between satisfying her desire for a car and an overseas holiday. If she chooses the car, the real cost is the overseas travel that she has to forgo.
- The business firm must also make a choice in the allocation of its scarce resources. An entrepreneur who decides to produce a computer gives up the opportunity to produce something else – such as electrical appliances – with those resources.
- The government has limited resources that it can use to satisfy community wants. If the government allocates resources to constructing a new fleet of submarines, it may be at the expense of a new motorway or airport.

reviewquestions

1 List TWO examples of each of the following types of wants:

a) individual wants b) collective wants

c) recurrent wants d) complementary wants

2 Identify which of the following are examples of opportunity costs:

- paying $1200 for a new smartphone
- missing a rugby game to go to a music concert
- missing a work shift because the bus was late
- amalgamating local councils to expand the police force.

3 Explain how all societies face the economic problem, with reference to the four key economic issues.

1.2 The production possibility frontier

Production possibility frontier is a graphical representation of all the possible combinations of the production of two goods or services (or two types of goods or services) that the economy can produce at any given time.

The **production possibility frontier** can be used to demonstrate how opportunity costs arise when individuals or the community make choices. The production possibility frontier (sometimes also known as the production possibility curve) shows the various combinations of two alternative products that can be produced, given technology and a fixed quantity of resources, when all resources are used to their full capacity.

The following example of a production possibility frontier is based on a number of simplifying assumptions, including:

- the economy produces only two goods – in this case, oil and leather
- the state of technology is constant, meaning there are no technological advances in this scenario
- the quantity of resources available remains unchanged, and
- all resources are fully employed.

A simple production possibility frontier

Oil	160	120	80	40	0
Leather	0	20	40	60	80

Figure 1.1 – Production possibility schedule for oil and leather

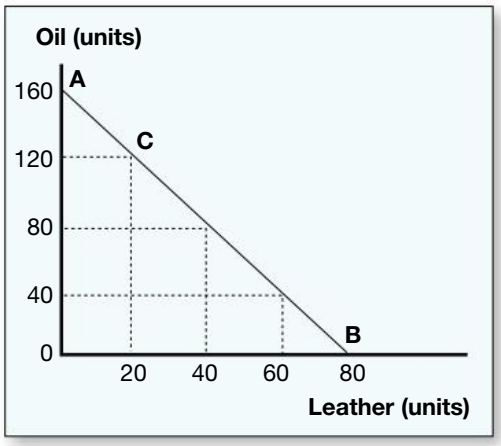
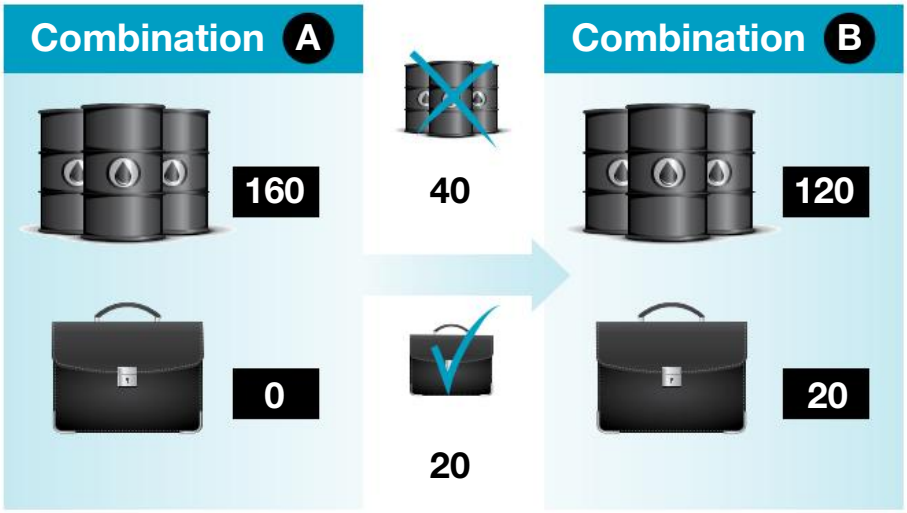


Figure 1.2 – Production possibility frontier for oil and leather

Given the above assumptions, we can construct a production possibility schedule. Figure 1.1 shows the production possibilities that would result if all our resources were used and were divided between the production of oil and leather. By graphing the data in figure 1.1, we can construct the production possibility frontier in figure 1.2.

The production possibility frontier shows all the possible combinations of production of oil and leather at a given point in time. We may choose to produce only oil and no leather (point A on the diagram), or just leather and no oil (point B), or any combination of oil and leather between these two extremes. Society must choose which combination is most desirable.

The production possibility frontier shows the maximum an economy can produce at a given point in time. All points on the frontier itself represent points at which the economy is operating at full productive capacity – that is, all resources are fully employed. If the economy were producing at a point inside the curve, it would be producing less than its maximum possible output and resources would not be fully employed.



When society wants to change its production combination, there is a cost involved – the opportunity cost. This can be seen in figure 1.2. Assume that the economy is producing at point **A** on the production possibility frontier (160 units of oil and no leather) but wanted to move to point **C** (120 units of oil and 20 units of leather). In order to get the 20 units of leather we would have to give up 40 units of oil. Therefore, the opportunity cost of obtaining the 20 units of leather is 40 units of oil.

We can calculate the opportunity cost of obtaining each individual unit of leather by dividing up the 40 oil units given up by the 20 leather units gained. Thus, for each unit of leather, we must give up 2 units of oil. In other words, the opportunity cost of leather is 2 units of oil.

New technology and the frontier

However, the production possibility frontier does not always remain the same. With the application of **new technology**, we may be able to develop more efficient methods of production. This might allow us to produce a higher quantity of a good with the same resources. This can be represented by an outward shift of the production possibility frontier.

Applying this to the previous example, an improvement in technology, such as enhanced oil extraction methods, increases the maximum production level to 200 units of oil with the same level of resources as before. Figure 1.3 shows the new production possibility frontier.

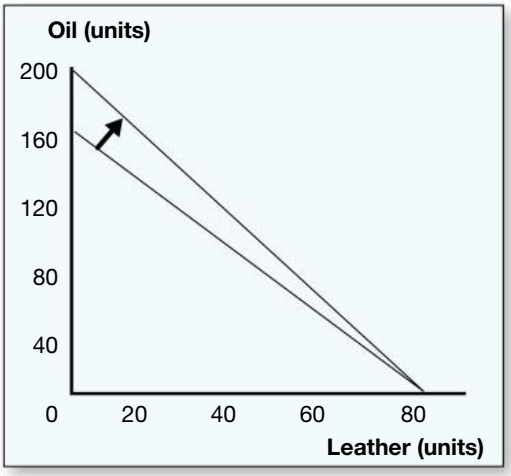


Figure 1.3 – An improvement in the technology of oil production

New resources and the frontier

Anything that increases the availability of production inputs will change the production possibility frontier. This includes discovery of new resources, or an expansion of the population through immigration, which would increase the number of people available for work. As a result of these new inputs, we would be able to produce more of both goods. This would also push the production possibility frontier outward, as shown in figure 1.4.

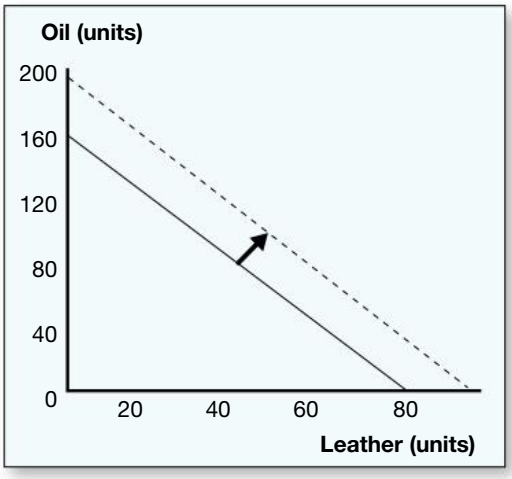


Figure 1.4 – Impact of the discovery of new resources

Unemployment and the frontier

The production possibility frontier can shed light on what occurs when an economy experiences unemployment. We usually refer to unemployment as the problem of a person being available for work but unable to find it. A similar problem may occur not just for people, but also for any input into the production process. If any resources are **not** fully employed, the frontier itself would not change, but we would change our position in relation to it. Our economy would be producing at a point somewhere within (or underneath) the production possibility frontier, as shown by point **A** in figure 1.5.

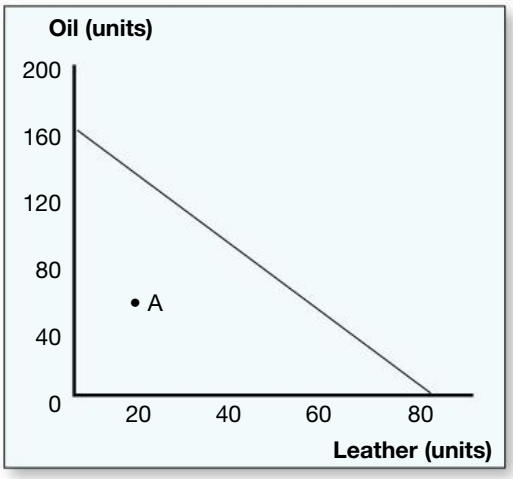


Figure 1.5 – Unemployed (or underemployed) resources

This situation indicates that we have an inefficient allocation of resources. We are not achieving a maximum satisfaction of wants with the minimum opportunity cost, which would deliver an efficient outcome. Because the economy has resources that are not being used efficiently in production, the total output of goods and services is less than what it could be. These resources would be "unemployed".

The shape of the production possibility frontier

In the analysis so far, the production possibility frontiers have been straight lines. For this to be the case, it must be possible to shift all resources between the production of oil and leather so that the opportunity cost of producing leather is constant (in other words, the economy could substitute between the production of the two goods at a constant rate).

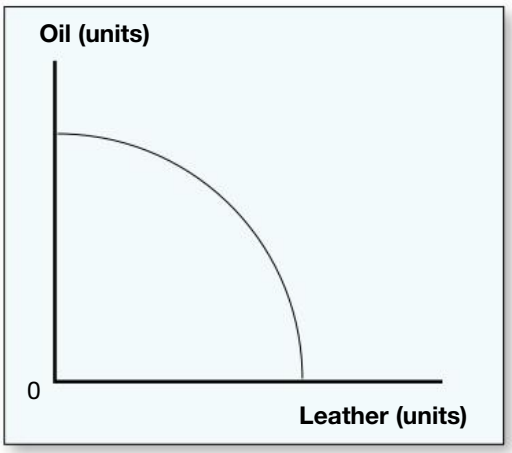


Figure 1.6 – Concave production possibility frontier

In the real world, this is generally not the case. Some resources are better suited to oil production, and others to leather – we cannot simply expect to move resources from oil production to leather without any loss of productive capacity, and vice versa. Therefore, as we move more and more resources into the production of leather, they will become less productive, which will increase the opportunity cost of leather. When this is taken into account, the proper shape of a production possibility frontier is drawn concave to the origin (as shown in figure 1.6), but the overall conclusions that have been discussed remain the same.

reviewquestions

1 A factory is able to produce a maximum of 1000 espresso machines or 2000 food processors. Construct a production possibility frontier and calculate the opportunity cost of producing one food processor.

2 Illustrate the effects of each of the following situations on a production possibility frontier for oil and leather:
- the invention of a new oil drill
- an improvement in stitching technology
- an increase in a nation's intake of working-age migrants.

3 Identify the change in the opportunity cost of producing more units of leather as an economy moves down to the right on the production possibility frontier shown in figure 1.6.

1.3 The future implications of choices

In making economic choices today, we can influence economic outcomes in the future. In a general sense, an economy as a whole can choose between producing goods that satisfy consumer demand immediately (**consumer goods**) and goods that will increase our productive capacity in the future (**capital goods**), such as machinery. While capital goods do not satisfy consumer wants now, they will allow us to satisfy these wants in the future by expanding our ability to produce. The trade-off between producing consumer goods and capital goods is represented in figure 1.7.

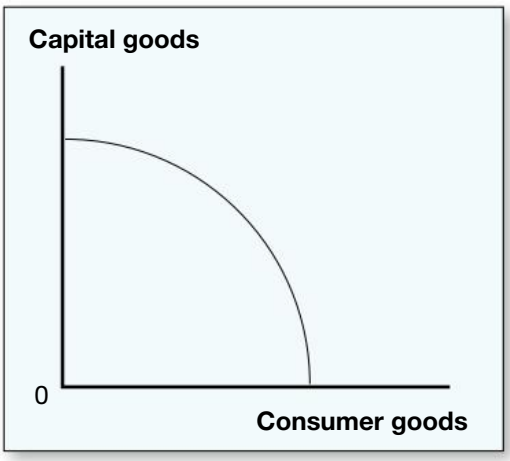


Figure 1.7 – The choice between consumer and capital goods

Consumer goods and services are items produced for the immediate satisfaction of individual and community needs and wants.

Capital goods are items that have not been produced for immediate consumption but will be used for the production of other goods.

In the long run, an economy that focuses more on the production of capital goods will increase its productive capacity and experience a higher level of economic growth. A country that is producing at a higher point on the frontier will, in the long term, be able to satisfy its consumer wants better than a country at a lower point on the frontier. In effect, the country choosing to produce more capital goods now is making the choice to forgo satisfying some wants today so it can satisfy a greater number of wants tomorrow.

The principle that economic decision making has future implications is true for individuals, businesses and governments. For example:

- An **individual** may choose to go without an overseas holiday or extravagant lifestyle and instead take out a mortgage and purchase a house. Saving up for a deposit will represent a significant sacrifice for many individuals, only to be followed by years of scrimping to pay off the mortgage. In the longer term, however, home ownership improves an individual's financial security, as they will not have to pay rent and will also have an asset that they can pass on to their children when they die.
- A **business** must choose to focus on one area of business activity over another. Businesses have a limited amount of labour, capital, entrepreneurial skill and other resources, so they must focus on the products in which they are likely to maximise profit. This involves a difficult assessment of which areas of business activity they can be most successful in over the medium to longer term. Businesses are likely to be most effective if they can identify where the next wave in business growth is likely to come from. For example, many businesses that invested in communications and information technology have achieved extraordinary financial success. If a business only chooses to operate where other businesses have already been successful, they may find that they have entered the market too late and are unable to obtain a competitive advantage.



The future implications of education for individuals

One of the most important economic decisions made by individuals is whether to invest in further education beyond high school. While students might prefer to hang out at the beach or go on an overseas holiday than be stuck in a classroom, most choose to sacrifice some enjoyment now in order to add to their education and improve their workforce skills. This should expand their job options and increase their future income.

Evidence confirms that education, particularly tertiary education, does improve individuals' earning potential. According to the 2021 Graduate Outcomes Survey, the median salary for new graduates with a bachelor's degree is $65,000 a year in their first year, up from $64,700 in 2020. While this is almost 30 per cent below the average annual earnings for all Australian full-time workers, research shows that higher-education graduates earn around 20 per cent more over their working lives compared with people who leave school after Year 12. Dentistry graduates enjoy the highest median starting salary ($100,000), followed by medicine ($76,000), social work and education (both $72,000), and engineering ($70,000).

The survey also noted that university graduates enjoy better job prospects. Among university graduates, 68.9 per cent are able to find full-time employment soon after entering the job market, compared to only 60.7 per cent of non-university graduates. The overall employment rate (including part-time work) is also notably higher at 84.8 per cent for university graduates, compared to 79.2 per cent for non-university graduates.

Furthermore, completion of a higher education or Vocational Education and Training (VET) qualification is increasingly a prerequisite for access to, and successful participation in, the labour market. A report by the National Skills Commission found that nine out of every ten new jobs will require post-school qualifications in the next five years. Further, 71 per cent of Australians aged 20 to 64 years held post-school qualifications in 2021, up from 60 per cent in 2009.

A decision to invest in education may require sacrifices in the short term, but it will pay off in the future.

- The decisions of **governments** have very important long-term implications, both for governments themselves and for the entire economy. A government may choose to give the highest priority in its spending to satisfying immediate needs, such as increased welfare benefits and health care. As a result, it may provide less funding for other areas of expenditure, such as education, infrastructure, and research and development. In the longer term, this is likely to result in a lower level of economic growth, because the country will have a lower skills base in its workforce, less innovation and weaker infrastructure (such as an inadequate transport system or limited bandwidth in its communications systems). The difficulty for governments is that in the short term it may be more politically popular to satisfy immediate wants than to plan for future needs.

reviewquestions

1 List TWO examples of a capital good and TWO examples of a consumer good.
2 Describe the costs and benefits of producing capital goods in an economy.
3 Outline a possible future economic benefit for each of the following choices:
- saving money in a bank account
- pursuing tertiary education
- working beyond the retirement age.

1.4 The economic factors underlying choices

In the process of making economic choices, all participants in the economy must weigh up a range of factors relating to their short- and long-term objectives. The following section reviews some of the factors that affect the economic decision-making process for individuals, businesses and governments.

Individuals

The economic choices made by individuals are shaped by a variety of factors, including their age, income, expectations, future plans and family circumstances. Personality factors will also influence economic decision making; for example, some people are keen to embrace change and risk, while others will avoid risk and prefer security.

Whatever their level of income, individuals must make a choice about how much of that income they will **save** and how much they will **spend**. This will, of course, be influenced by their income level, as well as a range of other factors, such as age, the performance of any assets they hold and their expectations of whether their income is likely to rise or fall in the future.

Plans in relation to education, work, family and retirement also play a substantial role in influencing economic decision making. The decision to undertake further education may involve forgoing income for several years, although in most cases it will be rewarded with higher income in the longer run. In the meantime, the individual's ability to consume will be restricted by their limited income. When a couple decides to start a family, they may have to cut down on personal expenditure and one partner may reduce their working hours and income to care for young children. Later in life, the decision to retire involves adjusting to a much lower income when more free leisure time may give an individual more opportunities to consume.

Individuals also contribute to economic decision making by voting in elections. Economic policy issues are a central feature of political debate in Australia, and they are major priorities of government programs and election campaigns. Political parties regularly debate who is best at managing the economy and the budget, and which party is most likely to deliver lower levels of unemployment, inflation and interest rates. Elections involve individuals making a choice about who to vote for, and economic policies, especially on tax and infrastructure, significantly influence voting behaviour.

Business

Firms face choices in many aspects of their business operations. In pricing its products, a business may choose a higher price, hoping that this will maximise profits and only have a small impact on the level of sales. The pricing decisions that businesses make are also based on their marketing strategy – whether they are trying to sell a product to the mass market or target a more exclusive group of consumers.

In making decisions relating to production and resource use, businesses will seek to minimise their costs and maximise quality. This may sometimes involve difficult choices; for example, a business may face higher costs in the purchase of better quality equipment, but the equipment may have a longer operating life and require less maintenance. Businesses will generally choose inputs that are cheaper, but if the supply of a cheaper input is not assured, they may choose to pay slightly more for an input that has a more reliable supply. Businesses may also need to consider ethical issues, such as the importance of the natural environment. For example, a business may consider whether it is willing to pay a higher price for using inputs that are more environmentally sustainable (such as paper rather than plastic wrapping).

Businesses can also face complex choices in how they manage industrial relations issues. Businesses can choose to employ people on wage levels set by industrial awards; they can negotiate wage agreements with their whole workforce; or they can negotiate individual contracts with their staff. They also face choices about whether they will encourage union representation or involvement from employees in decision making.

Government

Governments can have a significant influence over the economic choices of individuals and business. This influence may include making it less or more expensive to make some choices. For example, by taxing cigarettes more heavily, governments attempt to discourage individuals from smoking.

In more extreme situations, governments may seek to influence economic behaviour by prohibiting certain activities and imposing heavy penalties on those who break the law. For example, businesses operating in the same industry are prohibited from meeting together to set prices for their industry, because this degrades competition and harms the interests of consumers.

Equally, governments may wish to encourage certain economic activities and may provide incentives for them. For example, in order to encourage individuals to join a private health insurance scheme, the Australian Government provides a tax rebate of up to 33 per cent to low- and middle-income earners for private health insurance payments, and imposes the Medicare levy surcharge (a tax penalty) on higher-income earners who do not take out private health insurance. Private health insurance coverage now extends to around 55 per cent of the population, compared with 30 per cent before these policies were introduced.

The government's influence on the economy is a result of both influencing the decisions of individuals and businesses, and providing goods and services directly.

reviewquestions

1 Outline THREE economic factors that may cause people to increase their level of saving.

2 Describe how each of the following business strategies could maximise business profits:

- raising the selling price
- lowering the selling price
- purchasing more efficient capital goods
- offering higher salaries to staff.

3 Identify TWO examples of business activities that the government may wish to encourage, and TWO business activities the government may want to discourage or ban altogether.

chapter summary

1 Economics is concerned with addressing the **economic problem** of satisfying unlimited wants with our scarce resources.

2 The economic problem means that we must make choices about how to allocate limited resources. Therefore, we must give priority to some wants over others.

3 Each economy must answer the following four basic questions:

- What to produce?
- How much to produce?
- How to produce?
- How to distribute production?

4 Whenever we choose to produce or consume one product, we miss out on the alternative products that could have been produced using those resources. This is known as the **opportunity cost**.

5 The **production possibility frontier** is a simple way of explaining opportunity cost. Assuming that only two goods are produced, it shows that producing more of one good requires us to produce less of the other.

6 Improvements in **technology** will cause the production possibility frontier to shift outwards.

7 Changes in the levels of **resources** will change the position of the production possibility frontier, moving it outwards (when the level of available resources increases) or inwards (when the level decreases).

8 If an economy is producing at a point below the production possibility curve, then it is experiencing **unemployment** of resources.

9 Today's economic choices affect tomorrow's economic outcomes. If we choose to satisfy a want today, we may not be able to satisfy a want in the future.

10 In choosing between satisfying present or future wants:

- **Individuals** must make choices between spending or saving. Spending satisfies present wants while saving raises future living standards.
- **Businesses** must make choices about price, how much to produce, what resources to use and how to manage their employees.
- **Governments** can influence the choices of individuals and businesses by affecting the cost of choices and other factors underlying their decision-making processes.

chapter review

1 Explain what is meant by the *economic problem*.

2 Outline why economics can be described as a study of choices.

3 Define *opportunity cost*.

4 Explain how a production possibility frontier can be used to demonstrate the concept of opportunity cost.

5 Identify why it is impossible for an economy to produce outside its production possibility frontier.

6 Discuss the circumstances under which it would be possible for the production possibility frontier to shift outward.

7 Explain why we might find our economy producing at a level within (or below) the production possibility frontier.

8 Given the following production possibility schedule, construct a production possibility frontier and answer the following questions.

Beef	200	150	100	50	0
Tea	0	30	60	90	120

a) What is the opportunity cost of obtaining the first 30 units of tea?

b) What is the opportunity cost of obtaining one unit of tea?

9 Identify the kinds of opportunity costs that the government might face in attempting to satisfy community wants.

10 Define the following terms:

a) consumer goods

b) capital goods.

Extended response

Define the *economic problem*. Explain how individual consumers, business firms and the government are all faced with the economic problem. Identify the different economic factors that influence how each group seeks to address this problem.

2 How Economies Operate

2.1 The production of goods and services

2.2 The distribution and exchange of goods and services

2.3 The business cycle

2.4 An overview of the economy: the circular flow of income

2.1 The production of goods and services

Goods and **services** are the outcome of the production process. They are the products that satisfy our wants and needs. Goods are tangible things such as food, cars and electronic equipment, while services are intangible acts that are of benefit to us, such as receiving medical help or watching a movie.

Factors of production are any resources that can be used in the production of goods and services. The four main types are natural resources (or land), capital, labour and enterprise.

A **factor of production** can be defined as any resource that can be used in the production of goods and services. A factor of production, therefore, is simply another name for a resource or input. The quantity and quality of an economy's factors of production (or resources) can influence how wealthy or poor that country will be. Thus, the people in a country with abundant, high-quality resources would be better able to satisfy their wants, and they would have a much higher **standard of living**, or quality of life, than people in a country with fewer, poorer-quality resources.

As outlined in Chapter 1, the supply of these resources is limited. Therefore, producers face an opportunity cost when they are deciding how to use resources in the production process. Over time, this decision can be affected by the availability of the factors of production. For example, the size and quality of the labour force may change as educational standards improve, and higher investment in plant and machinery would lead to an increased availability of capital. Alternatively, environmental damage may reduce the quantity of natural resources that can be used in the production process.

There are four factors of production in an economy: natural resources, labour, capital and enterprise. The return (reward) to the owners of these resources are rent, wages, interest and profit, respectively.

RESOURCE	Natural resources	Labour	Capital	Enterprise
REWARD	Rent	Wages	Interest	Profit

Natural resources

Natural resources include all naturally occurring materials that are used in the production process (sometimes also called *land* as shorthand for all natural resources). It includes items such as soil, water, forests, mineral deposits and fishing areas.

The reward to the owners of natural resources is called **rent**. This use of the concept of rent goes beyond the idea of renting property. It covers all the income rewards derived from the productive use of natural resources.

Labour

Labour is human effort, both physical and mental, used to produce goods and services. The supply of labour for production depends on a number of factors, and these can change over time. The size of a country's population is obviously important in determining how much labour is available. Population size will be influenced by birth rate, death rate, and immigration. Other factors that influence the availability and quality of labour resources include the school leaving age, the retirement age, social attitudes towards the role of women in the workforce, the availability of child care, educational standards and the amount of on-the-job training.

Wages are the reward to the owners of labour. Again, economists use this term in a wider sense than its common usage. As well as regular payments for a standard working week, the term wages includes executive salaries, commissions, fees for professionals and the earnings of self-employed people.

Capital

Capital is the "produced means of production." This means that capital goods are not produced for immediate consumption, but to be used in the production of other goods and services. Examples of capital include machinery, tools, factories and computers. These types of capital goods are generally owned privately by individuals or firms. **Infrastructure** (or social overhead capital) is another form of capital that is usually owned by the community as a whole. Infrastructure includes roads, railways, bridges, telecommunications networks and schools. Although most of this capital is not owned by businesses, its existence is vital for them to operate – for example, good roads are necessary for the transport of goods, and a reliable power supply is necessary to operate machinery. It is important to note that economists' definition of capital does not include financial assets such as money, shares, stocks and bonds.

Capital equipment can greatly increase the **productivity** of other resources – that is, how much output they can produce per factor of production per unit of time. Using capital goods can increase the level of production from the existing workforce and natural resources, enabling us to satisfy more wants than would otherwise be possible. The amount of capital available can therefore have a significant effect upon the future earning capacity of an economy.

Funds become available for entrepreneurs through other people's savings. Entrepreneurs borrow money that has not been spent by consumers (known as their savings), which can then be used to invest in capital goods. In effect, when consumers save money rather than spend it, they are shifting resources from consumer goods to capital goods.

The owners of capital are rewarded by earning **interest**. When entrepreneurs borrow the excess savings in the economy, they pay interest on their loans. This interest is the price of capital. Alternatively, for those firms and entrepreneurs who invest their own surplus funds in capital equipment, the interest rate they could earn if they simply put the funds in a bank account represents the opportunity cost of investing in capital.

Enterprise

Enterprise involves organising the other factors of production (natural resources, labour and capital) for the purpose of producing goods and services. It is the vital ingredient that brings the production process together. The entrepreneur makes the management decisions concerning all aspects of production and bears the risk that these decisions may not be the correct ones. The right decisions will mean a successful business, the wrong ones may result in failure.

Profit is the return to enterprise. This is not merely revenue earned minus actual expenses. Entrepreneurs are entitled to receive rent for the use of any land that they own in the production process, wages as a return for their work effort and interest for any capital invested into the business. Profit is the income received over and above these other rewards. It is earned because the entrepreneur sets up and runs a successful business despite the considerable risk of failure.

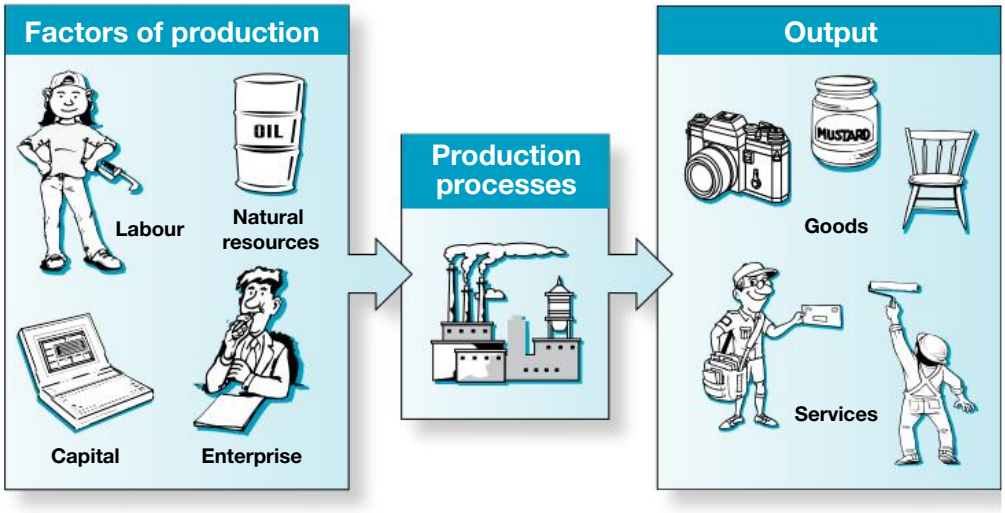


Figure 2.1 – Combining natural resources, labour, capital and enterprise

Each of the four resources is limited in its supply, reflecting the **problem of scarcity** in economies:

- There are limits to the amount of natural resources available for production, including land, fossil fuels or even clean air and water.
- Our supply of labour is limited by our population size, labour market skills and people's willingness to work.
- Our supplies of capital are limited by the extent to which governments and the private sector are willing to invest, as well as the level of domestic (or overseas) savings available for investment.
- The supply of entrepreneurial skills is also limited by the size of the population and a range of other cultural and economic factors, including – most importantly – the ability and willingness of individuals to innovate and take risks.

In a market economy, decisions about how scarce resources are allocated in production are largely determined by consumers' spending patterns. Firms will respond to consumer demand by obtaining the resources necessary to produce the items consumers want. Motivated by the main aim of making a profit, firms pay for the resources and labour skills that are necessary to produce those goods and services that are in demand. Therefore, efficient industries that face growing consumer demand and higher prices will be able to attract more resources. Furthermore, those resources that are relatively cheaper will be more attractive for profit-maximising firms.

Business firms can often use several different combinations of resources. Therefore, the business must decide which combination of resources to use in the process of production. Depending on which factor is used in greater proportion, the method of production may be more labour-intensive (where more labour is used relative to other factors) or more capital-intensive (where relatively more capital is used).

reviewquestions

1 Identify the major factor of production used in each of the following activities:
   - providing child care
   - production of motorcycles
   - managing a small business
   - emu farming.

2 Describe ONE example of a capital good that would increase the productivity of labour.

3 Outline how the problem of scarcity affects the supply of land and natural resources in the economy.

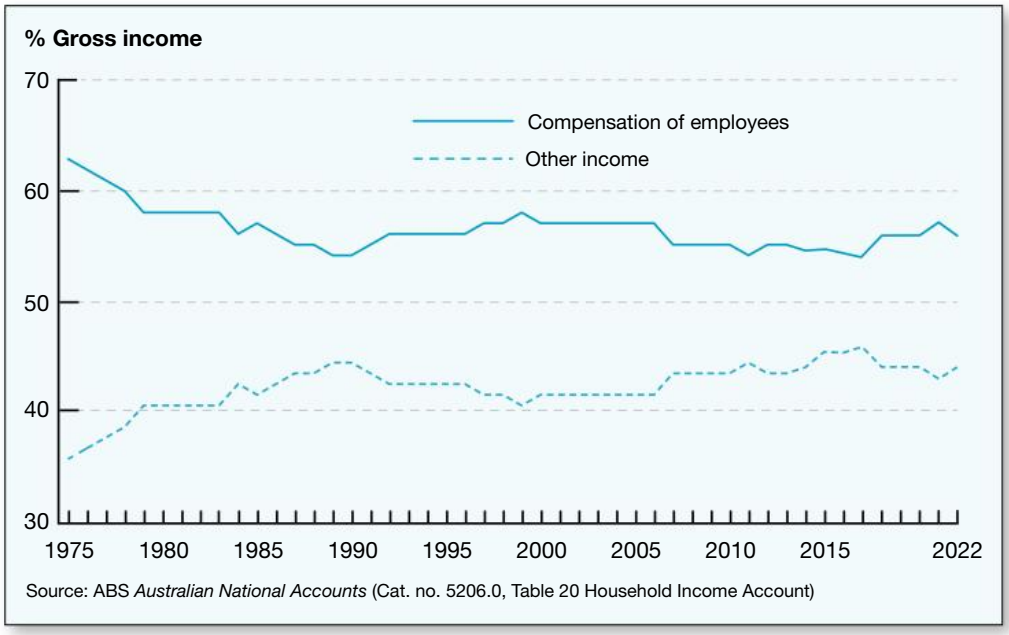
2.2 The distribution and exchange of goods and services

Working out how to distribute what an economy produces is difficult. We have to strike a balance that provides rewards for investment, entrepreneurs and innovation, as well as ensuring that everyone has an acceptable quality of life.

The total amount of goods and services produced in an economy in a given year is known as **Gross Domestic Product**, or **GDP**. GDP also measures the total income of a society that is received for the production of goods and services. One of the main functions of an economic system is to determine how to distribute and exchange the goods and services produced in the economy. Usually this involves assigning each individual a certain level of income, which commands for him or her a certain proportion of the output produced. Individuals can then exchange this income with others to obtain goods and services.

Market economies do not attempt to distribute output equally within society. Instead, market economies **provide people with income** as a reward for their contribution to the production process. The owners of natural resources, capital or entrepreneurial skill used in production receive income based on the value of their input. Workers are paid according to the value of their labour. The price that is paid for inputs determines the individual's share of total output and will generally depend on how scarce or highly demanded their resources are. Rent of land in the centre of the city, or the labour of a highly skilled manager, involves a larger sum of money because city land and sophisticated management skills are in high demand and scarce supply.

Figure 2.2 shows the proportion of total income (or output) for Australian households that comes from labour (called compensation of employees) compared with the owners of the other factors of production. During recent decades, the distribution of output has been relatively stable. Separately (and not shown in figure 2.2), wages have shrunk as a share of the overall economy, while corporate profits have been increased – but this is a different issue to the sources of household income.



Source: ABS *Australian National Accounts* (Cat. no. 5206.0, Table 20 Household Income Account)

Figure 2.2 – Distribution of total gross income

In addition, individuals do not all receive the same level of wages. Workers' income levels are influenced by how much they work, their skills and expertise, educational qualifications and their bargaining power in wage negotiations with employers. How such factors can influence the distribution of income between workers will be discussed in more detail in Topic 4, in our analysis of the labour market.

The benefit of such a system of distribution is that it provides incentives for people to obtain better skills and work harder in order to improve their share of output, or to develop entrepreneurial skills and start their own business. This will improve the resource base and encourage innovation and technological advancement.

However, the problem with this system of distribution is that it can be unfair, particularly for people who are unable to contribute to production because of illness, age or disability. Those with less bargaining power may also be unable to secure a fair return for their labour input. Therefore, governments may decide to intervene to correct inequitable market outcomes and help people who would otherwise not receive an adequate level of income. In this way, governments can influence the distribution of goods and services: in effect, by taking money from higher-income earners through taxation, and redistributing it to lower-income earners through social security payments.

Individuals and businesses generally use money as a **medium for exchanging goods and services**. This makes it easier for people to conduct transactions when only one party is interested in what the other has to offer. In other words, the existence of money as the basis of exchange allows individuals to specialise in how they contribute to the production process. Even local services such as babysitting, cleaning and home repairs are generally paid for in cash rather than by the exchange of another good or service. However, this form of exchange can occur. The non-cash exchange of goods and services is known as **barter**. Bartering was common in earlier societies, but is rare in an advanced economy with a stable currency. Nevertheless, in recent years there has been a small resurgence of bartering through online swapping sites. The Australian Tax Office guidelines note that barter transactions are subject to the same tax rules as for cash and credit transactions (such as GST and income tax liabilities). Additionally, the growth of cryptocurrencies in the past decade, such as the digital payment system Bitcoin, has created new forms of exchange using digital currencies. Cryptocurrencies resemble cash in that they are a medium of exchange but operate outside of the central banking system.

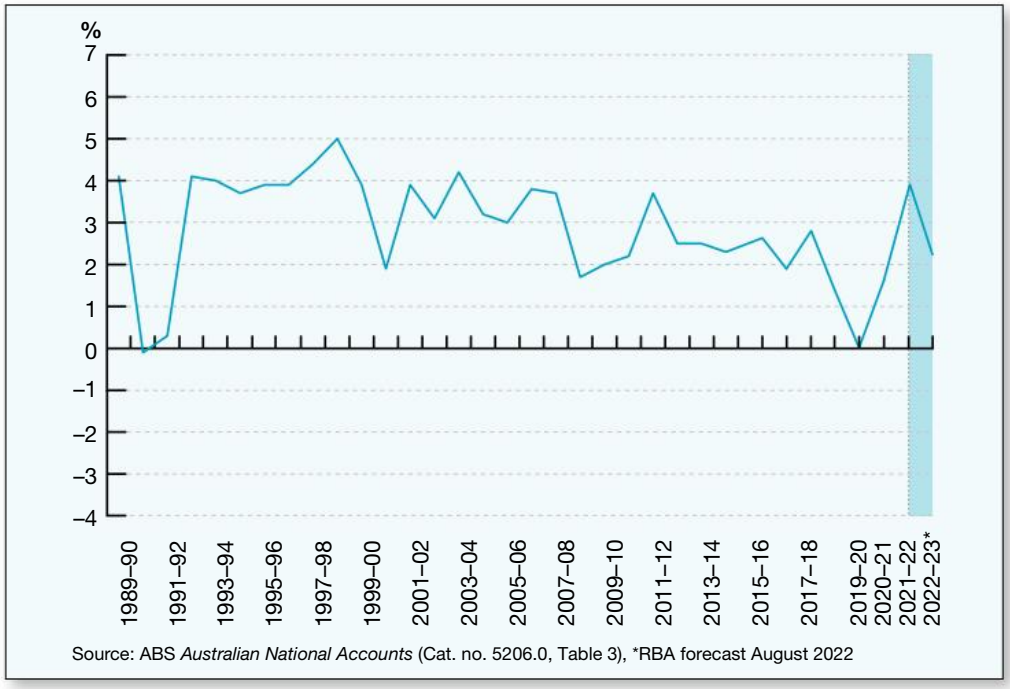
reviewquestions

1 Explain how the distribution of income in an economy may influence the distribution of output.
2 Outline the role of factors of production in the distribution of income.
3 Identify ONE disadvantage of a barter economy.

2.3 The business cycle

On the basis of our discussion so far, we might assume that economies grow and change in a stable pattern. In reality, the level of economic activity – the amount of goods and services produced in a given period of time – is never constant. Market economies such as Australia's are subject to a cycle of ups and downs known as the **business cycle** (also sometimes called the economic cycle). This is shown below in figure 2.3.

The **business cycle** refers to fluctuations in the level of economic growth due to either domestic or international factors.



Source: ABS *Australian National Accounts* (Cat. no. 5206.0, Table 3), *RBA forecast August 2022

Figure 2.3 – Australia's economic growth performance

Over time, economies usually experience an overall trend of growth in their **output**. However, they are subject to a continuing pattern where a period of strong growth is followed by an economic slowdown, in which the level of economic activity often falls. The economy may then stay weak for some period of time before recovering, gradually achieving a faster level of economic growth, peaking and then slowing again. Although the performance of economies is rarely exactly the same as this model of the business cycle, in broad terms the cyclical pattern of growth recurs in market economies.

Recession is the stage of the business cycle where there is decreasing economic activity, defined as two consecutive quarters (six months) of negative economic growth, that is, a fall in GDP.

The cyclical pattern of economic activity presents problems for a society. Cyclical flows cause significant disruptions for both individuals and businesses. During periods of economic downturn, known as **recessions**, firms usually postpone plans for new investment, reduce their production and reduce their demand for labour. As a result, employment falls and many people can become unemployed.

The increase in unemployment has negative effects for consumers. Families are forced to rely on their savings and social security payments to meet expenses while their normal sources of income have dried up. As those who have become unemployed reduce their consumption, the economy can contract further and more people may be put out of work. As unemployment rises, more people fall below the poverty line. As living standards fall, health problems can rise, educational opportunities may be disrupted and social problems such as crime and suicide can increase. Together, these effects will result in a lower **quality of life**.

During an economic upturn, the opposite is the case. A **boom** in economic growth is associated with increased investment and production. This increases demand for labour and leads to falling unemployment levels. Therefore, an economic upturn tends to increase the disposable income available to most consumers, which may lead to a further expansion of the economy as consumption levels rise. An improvement in quality of life occurs during an upturn as poverty levels fall.

IMPACTS OF THE BUSINESS CYCLE

Recession	Boom
Falling production of goods and services	Increasing production of goods and services
Falling levels of consumption and investment	Rising levels of consumption and investment
Rising unemployment	Falling unemployment
Falling income levels	Rising income levels
Falling quality of life	Rising quality of life

Because a prolonged downturn in the business cycle can have such negative effects, one of the main economic aims of governments is to smooth out the cycle. Governments step in to stimulate economic growth during periods of recession to restore the economy to growth and improve employment opportunities. In the longer term, governments also attempt to ensure that the economy can sustain economic growth for a longer period of time to avoid any major economic downturn. When the COVID-19 pandemic hit the Australian economy in 2020, the Federal and State Governments responded with international travel restrictions, border closures, and lockdowns that dramatically curbed economic activity, pushing Australia into its first recession in almost three decades, as shown in figure 2.3. Even with unprecedented policies to keep people in jobs and help businesses to ride out a period of weak economic activity, during this period employment fell by almost one million people. However, the economy recovered quickly from the pandemic, and by 2022 unemployment was below its pre-pandemic level. In this instance, a sharp downturn in the business cycle was engineered by the government (to save lives during the pandemic) but was also quickly reversed through successful government policies.

reviewquestions

1 Outline the effect of a recession on each of the following:
   - payments of unemployment benefits
   - business investment plans
   - income levels.
2 Identify the year in which the last recession occurred in the Australian economy.
3 Describe the economic effects of a boom in the business cycle.

2.4 An overview of the economy: the circular flow of income

Economists sometimes build theoretical models that can help to describe features of economic activity. An example of this is the **five-sector circular flow of income model**, which describes the operation of the economy and the linkages between the main sectors in the economy.

The circular flow of income model is based on dividing the economy into five sectors, as shown in figure 2.4. A sector may be defined as a part of the economy where the participants are engaged in a similar type of economic activity. We can divide the Australian economy into five such sectors – **individuals**, **businesses**, **financial institutions**, **governments** and **international trade and financial flows**.

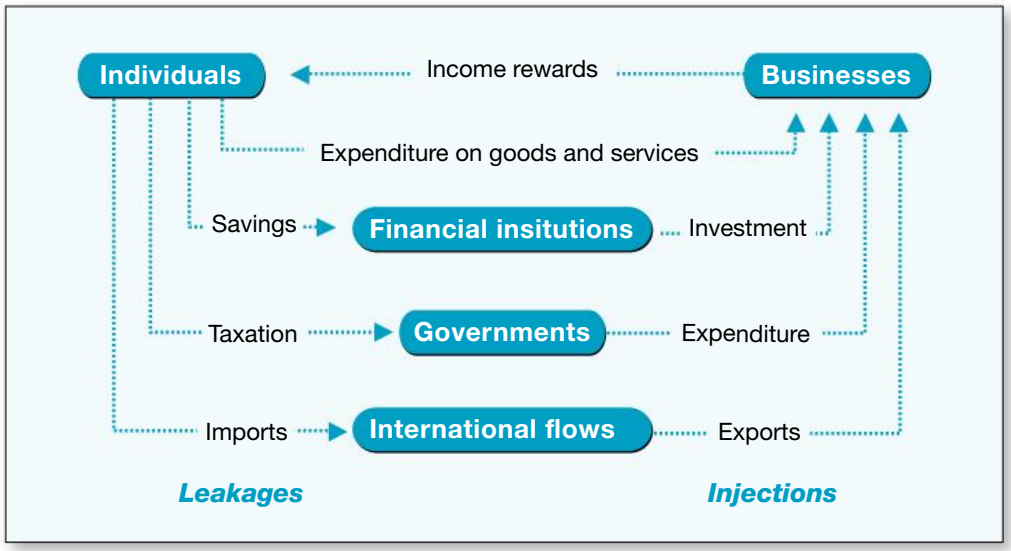


Figure 2.4 – The five-sector circular flow of income model

Individuals

This sector consists of all individuals in the economy. It is concerned with their activities in earning an income and spending it on goods and services. These individuals are the owners of productive resources and the consumers in our economy.

Individuals supply factors of production (inputs) such as labour and enterprise to businesses, which they use to produce goods and services. As a reward for supplying resources such as labour and enterprise to firms, individuals receive incomes in the form of rent, wages, interest and profit.

Individuals' income goes either to spending on consumption of locally produced goods, savings, paying tax or purchasing imports.

Businesses

This sector consists of all the business firms engaged in the production and sale of goods and services (apart from financial services, which are included in the financial sector). It concerns all their activities involved with buying factors of production, and using them to produce and sell goods and services.

Businesses depend on individuals to supply the resources needed for the production process, as well as the consumption of goods and services produced. Without individuals, businesses would not exist. Similarly, individuals depend on businesses to produce the goods and services that they demand, as well as provide the income to buy them. Without businesses, individuals would find it difficult to survive. In other words, individuals and businesses need each other – they are interdependent.

It is important to note that the circular flow diagram depicts the flow of money between individuals and businesses, rather than the flow of goods and services or factors of production.

Financial institutions

This sector consists of all those institutions that are engaged in the borrowing and lending of money. They act as the intermediaries between savers and borrowers of money. It includes organisations such as banks, building societies, finance companies, credit unions, superannuation funds and life insurance companies.

Financial institutions are needed for individuals and firms to be able to undertake saving and investment. Financial institutions (sometimes also known as the **capital market**) are the third sector in our economy. This sector is made up of all the financial intermediaries that accept savings (deposits) from individuals and lend them out to businesses for investment purposes. Therefore, the financial institutions perform the function of mobilising savings so that they can be used for investment.

Leakages are the items that remove money from the circular flow of income, decreasing aggregate income and the general level of economic activity. The three leakages are savings, taxation and imports.

Savings represents a **leakage** from the circular flow, as savings involves money that is put aside and withdrawn from the circular flow of income. This leakage leads to a reduction in the size of the circular flow of income, which also means a reduction in the level of economic activity. When individuals decide to save part of their income, this upsets the state of equilibrium in the economy, and as a result the level of economic activity will change.

The following example, based on figure 2.5, demonstrates the effect of savings on the size of the circular flow of income:

Year	Value of output $m	Household income $m	Household expenditure $m	Household savings $m
1	1000	1000	1000	0
2	1000	1000	900	100
3	900	900	810	90
4	810	810	729	81
5	729	729	656.1	72.9

Figure 2.5 – The effect of savings on the size of the circular flow

- **Year 1**: Firms produce $1000 million worth of output, which generates $1000 million income to individuals, which they spend on consumer goods. Because at this stage they save nothing, the value of output generated in the next time period (year 2) remains the same at $1000 million.
- **Year 2**: Firms have produced $1000 million worth of output, which generates $1000 million income to individuals. This year, however, and in each subsequent year, individuals decide to save 10 per cent of their income. Therefore, expenditure drops to $900 million, and we have $100 million of savings.
- **Year 3**: Because of reduced expenditure caused by individuals saving part of their income, firms cut back on production. The value of production in year 3 is now $900 million. This fall in production means that firms demand fewer resources (for example fewer workers will be employed) and individuals receive less

income (income will drop to $900 million). As individuals save 10 per cent of this, expenditure will come down to $810 million and savings to $90 million.

This same scenario is repeated in subsequent years, with the leakage of savings causing a fall in expenditure on goods and services, a fall in production, a fall in the demand for resources and a fall in income to the owners of those resources. Left to itself, the leakage of savings will progressively reduce the size of the circular flow of income (level of economic activity) until it ceases to exist. In other words, our economy would be faced with a cycle of falling expenditure, falling production, falling income and rising unemployment until it eventually collapsed. In order to stop this from happening there must be something to counteract the leakage of savings, namely an **injection of investment** (see figure 2.6).

Injections into the circular flow model of income are those flows of money that increase aggregate income and the general level of economic activity. The three injections are investment, government spending and exports.

In fact, savings are essential if investment is to occur, allowing the creation of new capital goods. The acts of saving and investing are vital for the growth and prosperity of our economy. By forgoing some current consumption of goods and services, we can invest in capital goods and improve the future productive capacity of the economy. This actually increases our stock of productive resources (capital being one of the four factors of production) and allows us to produce an even greater volume of goods and services in the future.

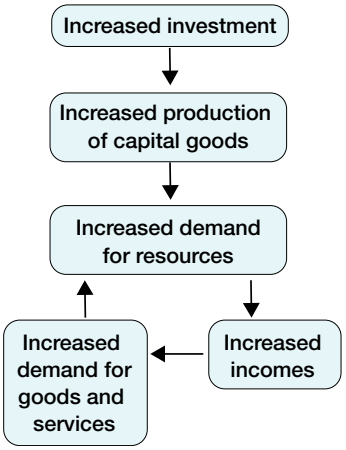


Figure 2.6 – The effects of increasing investment

Investment is defined as any current expenditure that is made in order to obtain benefits in the future. For example, the purchase of new capital goods, such as machinery, by businesses is investment – firms must make a capital expenditure now in order to gain profits in the future from the output the machine will help to produce. Investment represents an injection into the circular flow and, as such, has the opposite effect to a leakage – increasing the size of the circular flow of income (and therefore increasing the level of economic activity).

When firms undertake investment expenditure they increase the demand for capital goods. This stimulates production in the firms that produce them, who in turn demand more resources. As more resources are employed, individuals' incomes will increase, stimulating a further increase in the demand for consumer goods and services, which in turn means even more resources will be employed, and higher incomes generated. In other words, spending on investment would lead to rising expenditure, production, employment and income levels in the economy.

Overall, individuals, businesses and financial institutions together make up the **private sector** in our economy.

Governments

In Australia, the government sector consists of the three levels of government – Commonwealth, state and local. The government sector helps to satisfy collective (community) wants such as roads, railways, schools, hospitals and defence. It obtains the resources to do this by imposing taxes on the other sectors in the economy.

The government plays two major roles in the circular flow of income. Firstly, it imposes **taxes** on individuals and businesses, and secondly, it uses this tax revenue to undertake various **government expenditures**.

Taxation represents a leakage from the circular flow. When individuals pay income tax, this reduces the amount of money they have to spend on goods and services. Similarly, when the government taxes businesses, it reduces the funds available to pay for resources. Therefore, taxation would cause a reduction in the level of economic activity, with falling income, output and employment opportunities.

For simplicity, the leakage of taxation is shown in figure 2.4 as coming only from individuals, even though the government does tax businesses as well. The reason for this is that the majority of tax revenue comes from individuals. In 2020–21, income tax levied on individuals represented about 40 per cent of total taxation revenue.

Government expenditure represents an injection into the circular flow for two reasons. Firstly, when the government spends revenue on collective goods and services, it provides income to government employees, and employees of the private businesses from which it purchases goods and services. Secondly, the government uses part of its tax revenue to make transfer payments such as pensions and unemployment benefits, which represents income to the recipients. Therefore, government expenditure would cause an increase in the level of economic activity, with rising income, output and employment opportunities.

This sector is also referred to as the **public sector**, and together with the private sector, it makes up the **domestic sector** in our economy.

International trade and financial flows

This sector covers all transactions that our economy has with the rest of the world. These transactions include **exports** (goods and services produced in Australia and sold overseas), **imports** (goods and services produced overseas and sold in Australia) and **international money flows** (financial transactions such as borrowing, lending and income payments between Australia and the rest of the world).

The international trade and financial flows sector shows flows into our economy as an injection, while any outward money flow is regarded as a leakage. In order to keep our circular flow diagram simple, we only include imports and exports in relation to the international sector, even though we do experience other international money flows such as borrowing, lending and income movements. Any other international money flows into Australia can be regarded as having the same effect as receipts for exports, and any other money flows out, having the same effect as payments for imports.

Imports are goods and services produced overseas but sold in Australia. Payments for imports are regarded as a leakage from the circular flow because money is withdrawn from the Australian economy and paid to businesses overseas. Similarly, any other money flows out of Australia, such as lending, or paying income overseas, would constitute leakages from our circular flow.

Like all leakages, imports reduce the size of the circular flow, causing a decrease in the level of economic activity, with falling income, output, and employment opportunities.

Exports are goods and services produced in Australia but sold to overseas customers. Payments for exports are regarded as an injection into the circular flow, because money is paid to Australian businesses by consumers in other countries. This inflow of income stimulates production and employment opportunities in Australia. Similarly, any other inflow of money from overseas, such as foreigners lending or paying income to Australians, would constitute an injection into our circular flow.

Like all injections, exports increase the size of the circular flow, causing an increase in the level of economic activity, with rising income, output and employment opportunities.

Equilibrium

Equilibrium occurs in the circular flow of income when the sum of all the leakages is equal to the sum of all the injections to an economy (see figure 2.7). There are three leakages: savings, taxation and imports, and three injections: investment, government spending and exports.

Equilibrium occurs in the circular flow of income when the sum of all the leakages is equal to the sum of all the injections in an economy.

Disequilibrium occurs when there is an inequality between total leakages and total injections in an economy. The economy tends to move towards equilibrium, and as this process occurs, there will be a change in the level of income. The possible outcomes are summarised as follows:

- Whenever **total leakages** are greater than **total injections** there will be a downturn in the level of economic activity, with falling incomes, falling production and rising unemployment. In the circular flow model, as the level of economic activity falls, total leakages from the economy will also fall as consumers have less income to save, to spend on imports or to have collected as taxes. Therefore, leakages and injections will eventually be equal and the economy will again be restored to equilibrium, but at a lower level of income in the circular flow.
- Whenever **total injections** are greater than **total leakages** there will be an upturn in the level of economic activity, with rising incomes, rising production and rising employment. In the circular flow model, as the level of economic activity increases, total leakages from the economy will also increase, as consumers have more income to save, to spend on imports or to have collected as taxes. Therefore, leakages and injections will eventually be equal and the economy will again be restored to equilibrium, but at a higher level of income in the circular flow.

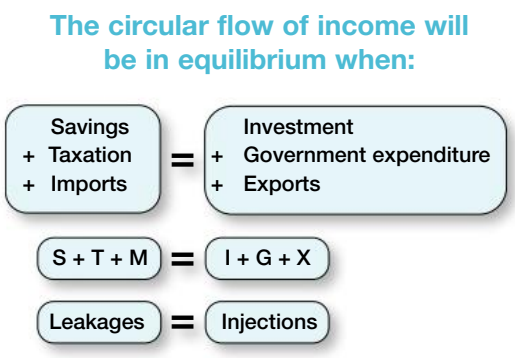


Figure 2.7 – Equilibrium

The government can have a significant influence on the circular flow in that it can change the levels of taxation and government revenue, and therefore manipulate the size of total leakages and injections and the overall level of economic activity. In so doing, it is possible for the government to offset any undesirable outcome from the inequality of savings and investment or international trade and financial flows. It can stimulate the economy by increasing injections in relation to leakages, or dampen the economy by increasing leakages in relation to injections.

reviewquestions

1. Explain how a high level of savings in an economy might reduce economic activity.
2. Assume that the Australian economy has a low level of savings and a high level of investment. Outline TWO ways in which the economy might remain in equilibrium (without changing the levels of saving or investment).
3. A hypothetical economy continually experiences an excess of import spending over the sale of its exports. Describe the effect on the level of economic activity in this economy.
4. Explain how changes in the circular flow of income will lead to fluctuations in the business cycle.

chapter summary

1 Business firms combine the **factors of production** to produce goods and services. **Goods** are tangible items for consumption, whereas **services** are intangible acts that are of benefit to consumers.

2 The four main factors of production are:

- **natural resources** or land, which earn **rent**
- **labour**, which earns **wages**
- **capital**, which earns **interest**
- **enterprise**, which earns **profit**.

3 Market economies distribute goods and services based on the individual's contribution to the production process: the larger the contribution, the greater amount of output received.

4 Modern market economies use money to **exchange** goods and services between people. Non-cash exchange can also take place, where a good or service is directly traded for another good or service. This transaction is called **bartering**.

5 Market economies are subject to recurring fluctuations in the level of economic activity, known as the **business cycle**, which affects income levels, employment opportunities and quality of life in an economy. Despite this cycle, the overall trend over time in an economy is generally towards increased output.

6 The **circular flow of income model** is a theoretical model that describes the operation of the economy and linkages between the main sectors in the economy.

7 The five sectors in the circular flow of income model are:

- individuals
- businesses
- financial institutions
- governments
- international trade and financial flows.

8 The **private sector** consists of individuals, businesses and financial institutions. The government sector represents the **public sector** in our economy, and combined with the private sector, makes up the **domestic sector**.

9 **Leakages** represent all the outflows from the economy (savings, taxation and imports) and **injections** represent all the inflows into the economy (investment, government spending and exports). When the sum of all the leakages in our economy is equal to the sum of all the injections, we say that the economy is in **equilibrium**.

10 Whenever there is **disequilibrium** there will be a change in the level of economic activity. It will increase when injections exceed leakages and decrease when leakages exceed injections. Therefore, by altering its contribution to leakages and injections, the government has a large degree of influence over the level of economic activity.

chapter review

1 Explain the economic meaning of the following terms:

a) natural resources

b) labour

c) capital

d) enterprise.

2 Briefly describe how goods and services are distributed in a market economy.

3 Define the term *business cycle*, and explain the impact of changes in the business cycle on output, employment and quality of life in the economy.

4 Identify whether the following flows are leakages or injections:

a) imports

b) government expenditure

c) savings

d) taxation

e) exports

f) investment.

5 Explain what is meant by *financial institutions*. Outline their role and give THREE examples of such institutions.

6 Outline the relationship between savings and investment and discuss why they are important for the future growth prospects of the economy.

7 Based on the circular flow model, explain what the government would do if it believed that:

a) economic activity was too low

b) economic activity was too high.

8 Apart from receipts for exports, identify what other money flows into Australia would also be regarded as injections.

9 Identify what is meant by *equilibrium*.

10 Explain the effect on the circular flow of income when:

a) total leakages exceed total injections

b) total injections exceed total leakages.

Extended response

Using a diagram, outline the main features of the five-sector circular flow of income model of the Australian economy. Explain how leakages and injections influence the level of economic activity. Examine how the government can influence the level of economic activity.

3 How Economies Differ

3.1 The market economy

3.2 Australia: a market economy with a role for government

3.3 Comparing economies

3.1 The market economy

In a pure **market economy**, all major economic decisions are made by individuals and private firms motivated by self-interest. Under this system, most economic resources are owned by the private sector, and people are able to seek wealth without the government intervening or affecting their business activities. Other names used to describe this system are capitalist, free enterprise and laissez-faire.

The market economy is often contrasted to a **centrally planned** economy. Under a centrally planned system, government planners make economic decisions, individual choices have little role in influencing economic outcomes. Public ownership of factors of production allows the government to allocate resources as it sees fit. In the past, Russia, Eastern Europe and China followed the planned economy model, but it is no longer pursued by any major economy.

It is important to note that just as no fully planned economy exists, there is no example of a pure market economy in the world today. Probably the closest example is found in eighteenth- and early nineteenth-century England, when there was very little government intervention in economic activity. This is known as the laissez-faire approach (which can be translated as "let things be"). The main weakness of this system was that those who owned and controlled the means of production became extremely wealthy, while the majority were exploited and had few opportunities to get out of poverty. It was also vulnerable to a volatile cycle of boom and bust. These faults led to modifications to the laissez-faire system, with governments gradually playing a greater role in economic decision making.

Characteristics of a market economy

The market system

Product market is the interaction of demand for and supply of the outputs of production, that is, goods and services.

A **market** is a network of buyers and sellers seeking to exchange a particular product at a certain price. In a free-market economy, there are markets for all the goods and services produced, as well as for the resources that produce them.

In the markets for goods and services, known as **product markets**, the buyers are the consumers, and they constitute the demand for products. The sellers are the businesses, and their output decisions make up the supply of products. Price becomes very important

here because it will affect the level of consumer demand as well as supply by the businesses. Consumers want to buy at the lowest possible price so that they can satisfy more of their wants, whereas firms want to sell at the highest possible price so that they make as much profit as possible. In the market economy it is this market, or price mechanism, that brings supply and demand together to determine the price for each good and service (the price at which goods and services are actually bought and sold).

We can illustrate the **price mechanism** with the following example. Because of unexpectedly sunny weather, the demand for sunglasses increases. This will force up the price of sunglasses as consumers compete to buy the limited stock. Because they can now sell their product at a higher price, manufacturers of sunglasses will be encouraged to produce more. This shows how the price mechanism conveys the wishes of consumers (in this case to produce more sunglasses) to the producers through a movement in price. A decrease in the demand for sunglasses would have the opposite effect. It would lead to a lowering of their price, and therefore a fall in the production of sunglasses.

Price mechanism is the process by which the forces of supply and demand interact to determine the market price at which goods and services are sold, as well as the quantity produced.

Changes in demand and supply in the product market will also influence supply and demand in the **factor market**, which is the market for factors of production. For example, given the increased consumer demand for sunglasses, producers will need extra factors of production to increase supply (inputs such as plastics, metals and skilled labour). In order to attract resources away from other areas of production, the manufacturer will have to offer higher prices for them (for instance, offer higher wages to labour). In this way the price mechanism also influences the way in which resources are allocated in the economy.

Factor market is a market for any input into the production process, including natural resources, labour, capital and enterprise.

Private ownership of property

Individuals have the right to own the means of production (or resources) and can use these to derive income and acquire wealth. They also have the right to sell their property or transfer ownership to someone else under whatever conditions they choose.

Consumer sovereignty

Consumers play a very important role in the market economy. They are free to choose how they will spend their income in order to satisfy their wants. Therefore, consumers will ultimately decide what goods and services will be produced by exercising their freedom to choose which wants they will satisfy. Businesses will produce whatever goods and services are in demand. This concept is known as **consumer sovereignty**, because consumers determine the answer to the question of what to produce and how much should be produced.

Consumer sovereignty refers to the manner in which consumers, through market demand, collectively determine what is produced and the quantity of production.

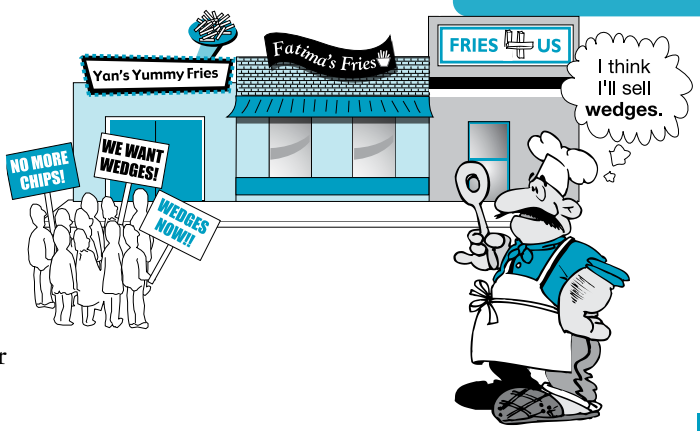
Freedom of enterprise

Individuals have the right to use their resources as they choose. This means that entrepreneurs are free to set up profit-making activities and have the right to determine what goods and services they produce and how they will undertake that production. Workers are free to choose their occupations or, for that matter, whether they work or not.

Competition is the pressure on business firms in a market economy to lower prices or improve the quality of output to increase their sales of goods and services to consumers.

Competition

Competition is the force that allows the price mechanism to work effectively. Competition means there are large numbers of buyers and sellers. This ensures that no single buyer or seller is big enough on its own to influence the market price so as to have an advantage (or greater bargaining power) over the other players. In a pure free-market economy, a large number of producers compete with each other



in every industry. In a less competitive market, it is possible for a few large businesses charging higher prices to make excessive profits at the expense of the consumer.

reviewquestions

1 Identify THREE examples of product markets in the Australian economy.

2 Predict the likely change in the price of cinema tickets in the following situations:
- an increase in the number of people watching movies
- a decrease in the price of online movie downloads
- an increase in the number of cinemas in Australia.

3 Discuss the benefits of competition for consumers.

3.2 Australia: a market economy with a role for government

A **mixed economy** is an economic system where the decisions concerning production and distribution are made by a combination of market forces and government decisions.

No economy in the world today is purely market based, or totally planned. Instead, all economies contain elements of both economic systems. They are therefore referred to as **mixed economies**. We can define a mixed economy as one where the decisions concerning production and distribution are made by a combination of market forces and government decisions. Each country attempts to find the best mix of relying on market forces and government intervention in order to solve the economic problem. The era of globalisation since the 1980s saw a trend away from government intervention and towards relying on market forces, although governments have again been playing a more interventionist role since the global financial crisis of the late 2000s.

We can use the example of Australia as a mixed economy to see why the government chooses to intervene in the free operation of market forces.

Firstly, the government intervenes in production because the free market does not always provide the most **efficient allocation of resources** for the economy as a whole. There are three considerations here:

- Some necessary goods and services may not be provided under a pure market system. For example, Australia has historically had a government-owned and operated railway system. Government intervention was necessary because when the system was established, no private enterprise was willing and able to provide the huge capital outlay, or undertake the risk of providing such a facility. The private sector will often not provide collective goods and services, such as parks, roads or national defence. Governments provide those goods that are beneficial to the whole community and for which it would not be practical to charge on an individual basis. Other goods and services may be partially produced by the private sector but will require governments to supplement the supply in order to satisfy desirable social outcomes. For example, the government provides public healthcare and education to supplement the existing private supply.
- It is sometimes better for essential goods and services to be provided by government, rather than being left to private individuals. For example, for reasons of security and internal stability, it is safer to have a defence force in the hands of the government than to have a system of private armies.
- Markets do not always operate freely, competitively or in the best interests of the economy as a whole. The government provides **regulations** that are enforced by the Australian Competition and Consumer Commission (ACCC) to prevent producers

from exploiting consumers with misleading information or by agreeing with their competitors to raise prices. The government may also legislate to ban the production of undesirable goods and services (for example, illicit drugs or internet gambling) and ensure adequate safety standards for all products sold on the market.

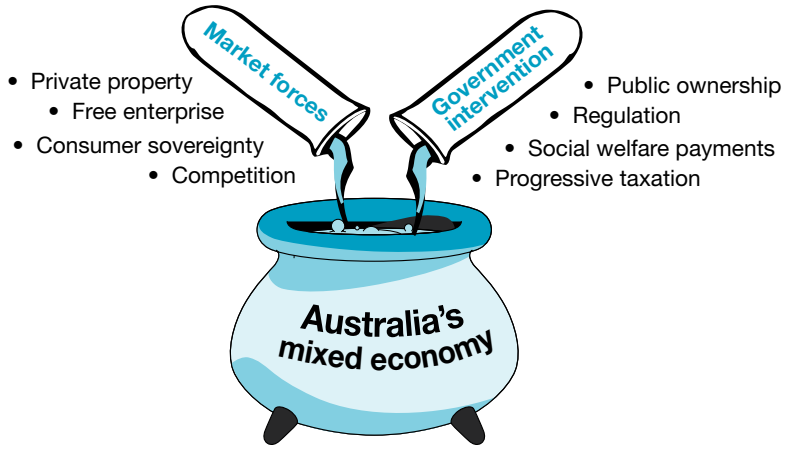
Secondly, the government intervenes in the **distribution** of output (income) because the free market will not necessarily provide a socially desirable or fair distribution. This is done in two ways:

- **Social welfare payments**: Under the price mechanism alone, there would be no income earned by those who did not contribute to the production process. In other words, there would be no provision made for the elderly, the unemployed or the chronically sick. In Australia, the government overrides market forces and redistributes income by taxing people on higher incomes more heavily, and by making social welfare payments to the members of society who do not contribute to the production process. Examples of social welfare payments include disability pensions, age pensions and unemployment benefits. In 2020–21, the Australian government spent an estimated $168 billion on social security and welfare payments (not including student payments which are included in educational expenses).
- **Progressive income tax**: The government also causes an overall redistribution of income in order to achieve a more **equitable** (even) sharing of produced output. It does this through the use of a progressive income tax system. Under such a system, high-income earners are taxed at higher marginal rates and pay proportionately more tax than low-income earners.

Finally, as we saw in Chapter 2, the market economy is subject to the fluctuations of the business cycle. Governments often intervene through the implementation of macro-economic (counter-cyclical) policies in order to smooth the effects of the cycle and reduce the problems of insufficient or excessive economic activity. Governments also intervene during times where there is a threat of major economic or financial problems, such as during the COVID-19 pandemic in 2020.

WHY GOVERNMENTS INTERVENE IN THE MARKET ECONOMY

Resource allocation	• to provide important goods and services that would not otherwise be provided by the private sector • to restrict production of harmful goods
Income distribution	• to create a fairer society and look after people
Economic stability	• to smooth out sharp fluctuations in the economic cycle • to ensure stability in the economy and the financial system



How the mixed economy aims to solve the economic problem

In a mixed economy like Australia's, the answers to the four important questions – what to produce, how much to produce, how to produce, and how production will be shared – are primarily determined by the operation of markets. However, governments intervene to a limited extent to modify certain market outcomes. The government can intervene in market outcomes in several ways.

What to produce?

The government can influence what is produced in many ways. The government can be a producer itself. It can provide collective goods and services such as schools, roads, bridges and a defence force, as well as competing directly with private enterprise and providing certain consumer goods and services (for example, ABC television and radio services). It can encourage some forms of production through subsidies, tax incentives or start-up funding. It can also limit, or even prohibit, the production of goods that it considers undesirable. For example, in October 2021 the purchase of nicotine vaping products without a prescription was made illegal following concerns of increased uptake amongst young people.

How much to produce?

Governments can influence the scale of production in many ways. The government can limit the production of some goods or delivery of some services. For example, state governments regulate the number of taxi licenses that are issued to taxi drivers, in order to ensure the safe and reliable transport services and viability for business operators, although this is being challenged by the growth of competitive ride sharing companies such as Uber, Ola, Didi and Bolt. Governments can also encourage greater provision of certain goods and services that are desirable, but would otherwise be under-provided. These are sometimes referred to as **merit goods**, and examples of government policies to promote their production include government subsidies for the arts (theatre, opera, film, fine arts) as well as for education and renewable energy. The government can encourage Australian producers competing with foreigners to increase output by imposing protectionist trade policies, including import restrictions and taxes on goods and services entering Australia, or by granting subsidies (cash payments or lower taxes) to Australian producers.

Merit goods are goods and services that are not produced in sufficient quantity by the private sector because individuals do not place sufficient value on them.

How to produce?

The government can influence the cost of factors of production and how those factors are used in the production process. For example, industrial relations laws provide a framework for setting minimum wage levels and working conditions in different industries, influencing labour costs. Furthermore, laws that regulate the behaviour of firms, such as safety rules, environmental controls and the prohibition of child labour, will mean that firms will not always be able to choose the cheapest method of production.

How to distribute production?

Many government policies affect how production is distributed throughout society. Higher-income earners pay more of their income in tax, and this money is redistributed to lower-income earners through welfare. This changes the distribution of production that would prevail if incomes were determined entirely by market forces and the price mechanism. In addition, the government may intervene in factor markets for redistribution purposes; for example, by imposing a minimum wage in the labour market.

INTERVENTION OR INTERFERENCE?

The role of government in the economy is hotly debated. If you listen to the language of people opposed to the government, you may hear government intervention described as *bureaucratic interference*, a *red tape nightmare* and *socialism*. On the other hand, those who support the role of government may speak of *giving people a fair go*, *decent minimum standards*, *basic rights* and the need to protect individuals from the *dog-eat-dog* brutality of unchecked market forces. This language reflects the very different perspectives that different people and groups bring to the debate on what role governments should play in a market economy.

reviewquestions

1. Identify FOUR examples of government intervention in a mixed economy.
2. Define the term *merit good*, and identify TWO examples of a merit good of which the government may encourage production.
3. Outline how the government might intervene if large companies engaged in misleading advertising.

3.3 Comparing economies

To understand how the Australian economy operates and how well it has performed, we need to compare it with other economies. Traditionally, Australia has been compared with other advanced industrialised economies in Europe and North America and with Japan (all of whom are members of the Organisation for Economic Co-operation and Development). This approach reflects Australia's historic and cultural ties with Europe and the importance of an economy's level of industrialisation to other economic outcomes, such as living standards and patterns of employment.

While Australia's relationships with other advanced economies remain significant, it is increasingly important to also understand the **Australian economy within the Asian economic region**. There are many reasons for analysing Australia within its regional context:

- Australia's trading relationships are mainly with Asian economies, with over two thirds of Australia's exports destined for the economies of China, Japan, ASEAN and the Republic of Korea (South Korea).
- Australia's relatively strong performance through the global downturn of the late 2000s – which battered the economies of Europe and North America – highlighted how Australia's economic fortunes are linked to the fortunes of Asian economies more than to other advanced economies.
- Rising living standards in Asia and the shift towards market-oriented economies in the region in recent decades make for more meaningful comparisons and economic analysis.

The economic region of Asia is home to a very **diverse group of economies**. It includes the full spectrum of economies from large, powerful economies like China and Japan to small island economies like Tonga and Vanuatu. Asia includes such wealthy economies as South Korea and less-developed economies like Timor Leste. Asia includes some of the fastest-growing economies such as India and slowest-growing economies like Japan. Asia is home to several former centrally planned economies like Vietnam, while also being home to some of the most pro-market economies in the world, including Singapore and Hong Kong. The process of industrialisation across the Asian region has differed markedly between individual economies.

In comparing Australia with other Asian economies it is important to recognise the diversity of different Asian economies. Australia is more similar to some Asian economies on some economic indicators, and more similar to other economies on other indicators. There is no single Asian economy, nor is there a typical Asian economy.

We will compare Australia's economy with other Asian economies across five areas: economic growth and the quality of life; employment and unemployment; distribution of income; environmental sustainability; and the role of government in health care, education and social welfare. Because of how international organisations categorise countries, our comparisons will be structured around two types of Asian economies: advanced economies such as Japan, South Korea, Singapore and Hong Kong; and Emerging and Developing Asia, which takes in the ASEAN economies of Indonesia, Malaysia, the Philippines, Thailand and Vietnam and other significant economies such as China and India.

Economic growth and quality of life

By world standards, Australia is a middle-sized economy with a relatively small population (just under 26 million people), and an economy that sits just outside of the world's top 10, measured by Gross Domestic Product. Within the Asian economic region, however, the Australian economy is more significant, being the fifth largest. As shown in figure 3.1, the Chinese economy dominates the Asian region, followed by the five middle-sized economies of Japan, India, Australia, South Korea and Indonesia. Reflecting the increased importance of Asian economies, all six of these economies are members of the Group of 20 (G20), which brings together the world's largest and most important economies. The G20 is an important grouping within the global economy, in part because it is more representative than the older G7 group, which includes only one Asian economy, Japan.

	Country	GDP, US$ billion, 2021
1	China	17,734
2	Japan	4937
3	India	3173
4	Korea, Rep.	1799
5	Australia	1543
6	Indonesia	1186
7	Thailand	506
8	Singapore	397
9	Philippines	394
10	Malaysia	373
Source: World Bank, September 2022		

Figure 3.1 – Size of economies in Asia

The Asian economic region has been the **world's fastest-growing economic region** since the Second World War. Following Japan's rapid industrialisation in the 1950s and 1960s, a second wave of **newly industrialised economies** achieved rapid economic growth over the 1970s and 1980s. The Asian "tiger" economies of South Korea, Singapore, Hong Kong and Taiwan pursued growth strategies that relied on competitive labour costs and growing export markets, particularly for manufactured goods, to achieve rapid industrialisation. The process of industrialisation, which took centuries in some European economies, was achieved in these economies over only a couple of decades. As capitalist economies, the tiger economies' success contrasted with the relatively slower economic development of the region's communist and centrally planned economies over the same period.

Recent decades have seen a third major phase of economic development in Asia. There are 15 Emerging and Developing Asian economies, which, under the International Monetary Fund (IMF), include China, Indonesia and India. This group of economies has experienced the fastest growth, with an average annual economic growth of 7.1 per cent over the past four decades. The other advanced economies in Asia – Singapore, South Korea, Taiwan (formally known as Chinese Taipei) and Hong Kong SAR (which were at one time called "newly industrialised economies") – have had an average growth rate of 5.3 per cent over the same period, while the Japanese economy has slowed to just 1.6 per cent per year. This reflects the fact that in the process of economic development, the period of industrialisation creates a period of very rapid economic growth, but once industrialisation has occurred, the rate of economic growth slows down.

Figure 3.2 shows economic growth trends across Asia for four decades. It shows that Emerging and Developing Asia has experienced strong and consistent economic growth, the other advanced economies have gradually slowed, and Japan's economy has had very weak growth for the past two decades. Economists call it *convergence* when less developed economies grow faster to "catch up" to the development levels of wealthier countries.

Figure 3.2 also shows the severity of the Asian financial crisis in the late 1990s, and how the Japanese and newly industrialised economies were more affected by the global downturn of the late 2000s than the large developing economies, such as China and India. COVID-19 caused a significant economic contraction in 2020 across the region. Japan experienced the sharpest reduction in economic growth, Australia and the other advanced economies a milder downturn, and Emerging and Developing Asia experienced a small contraction, before strong recoveries in 2021 and 2022.

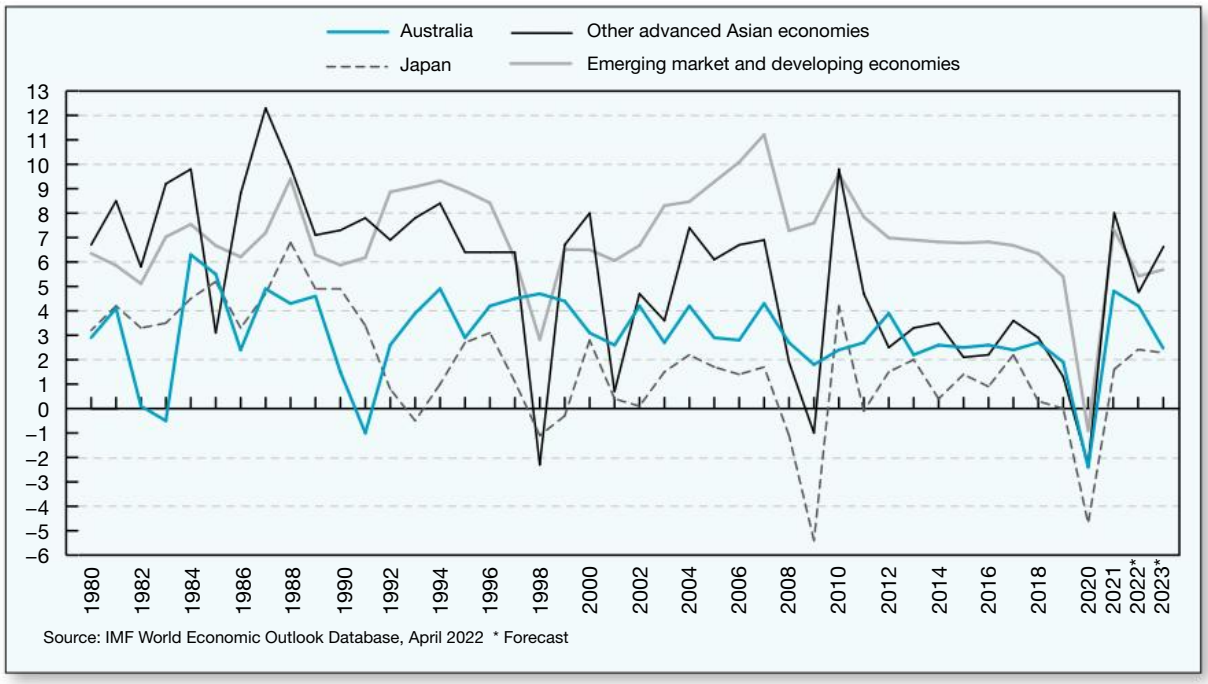


Figure 3.2 – GDP growth, selected economies

How does Australia's economic growth performance compare with the rest of Asia? Australia's trajectory has been very different because it achieved industrialisation and high living standards before the Second World War. Like other advanced economies with high living standards, its economic growth rate (around 3 per cent over the past four decades) is **slower than most economies in Asia** (but still faster than most advanced economies around the world). As shown in figure 3.2, after severe downturns in the early 1980s and early 1990s, Australia achieved relatively stable economic growth. Australia continued its growth during the Asian financial crisis of the late 1990s, in part because it was less integrated with the East Asian "tiger" economies, yet by the global financial crisis of the late 2000s, Australia's booming trade relationship with China helped it to continue growing and narrowly avoid recession. Since then, Australia's average growth rate has been slower, but it still remains slightly ahead of most advanced economies.

While economic size and growth might tell us which economies produce the biggest and smallest outputs, they do not tell us how economic outcomes for individuals in those countries compare. For this, we must examine **living standards**. GDP per capita is a measure of living standards that takes the financial value of all goods and services produced by a nation in a year and divides this by the total population. According to this measure, Australia has the second-highest standard of living in the Asia region at US$59,934, behind Singapore (US$72,794) and ahead of Hong Kong (US$49,660), New Zealand (US$48,801) and Japan (US$39,285). Individuals in these economies have living standards that are, on average, more than ten times higher than the average citizen in low- and middle-income countries in the region, which are US$4103 in South-East Asia and US$2176 in South Asia.

ALL EGGS IN THE CHINA BASKET?

In 2020, Australia's run of continuous economic growth of almost three decades came to an abrupt halt as a result of the severe contraction caused by the COVID-19 pandemic. A significant factor in Australia's success up to that period was its close links with fast-growing Asian economies, particularly China. During the late 2000s financial crisis, Australia's downturn was mild, in part because of the continued growth of China. Australia's export volumes surged, helping Australia achieve growth of just over one per cent during the financial crisis while other advanced economies contracted sharply. The deepening of financial and trade ties with China has helped Australia during macroeconomic shocks. Annual trade between Australia and China has exceeded US$200 billion.

As Australia emerged from the COVID-19 pandemic, Chinese demand for Australian exports again strongly supported recovery. However, relying so heavily on China brings economic risks as well. In 2020, China placed bans on Australian exports of barley and beef in response to Australia's call for a global inquiry into the origins of COVID-19 (which was first detected in Wuhan, a large city in China). Anti-dumping tariffs of up to 218% were also placed on Australian wine exports, causing a 98% reduction in China's market value for exporters. News reports also speculated that Chinese students might be discouraged from studying in Australia, and Chinese power stations might be discouraged from buying Australian coal, undermining two of Australia's largest export earners. A slowdown in the Chinese economy saw iron ore prices fall by more than half in just a few months. These developments stirred debate about what Australia needs to do more to diversify its export base and trading relationships. However, despite the trade restrictions, in 2021–22 Australia exported $151 billion worth of goods to China, which was still above its 2019–20 level. Further, the election of the new Albanese government led to a reopening of official communication lines as a chance to reduce the barriers to trade.

Human Development Index (HDI) is a measure of economic development devised by the United Nations Development Program. It takes into account life expectancy at birth, levels of educational attainment and material living standards (as measured by Gross National Income per capita).

Quality of life is a measure of welfare based on more than just economic output per capita. Other factors include the quality of health care, educational opportunities and climate. On these issues, Australia scores well. The quality of life enjoyed by Australians is among the highest in the world. The **Human Development Index** (HDI), a popular but narrow measure of quality of life that takes into account income, life expectancy, adult literacy and educational levels, ranked Australia fifth in the world, behind only Switzerland, Norway, Iceland and Hong Kong, and ahead of all other economies in Asia. Other economies with relatively high levels of development are those that also have higher living standards – New Zealand, Japan, South Korea and Singapore (see figure 3.3).

HDI rank	Country	GNI per capita (2011 PPP$)	Human Development Index (value)	Life expectancy (years)	Mean years of schooling (years)
4	Hong Kong, China (SAR)	62,607	0.952	85.5	12.2
5	Australia	49,238	0.951	84.5	12.7
12	Singapore	90,919	0.939	82.8	11.9
13	New Zealand	44,057	0.937	82.5	12.9
19	Japan	42,274	0.925	84.8	13.4
19	Korea (Republic of)	44,501	0.925	83.7	12.5
62	Malaysia	26,658	0.803	74.9	10.6
79	China	17,504	0.768	78.2	7.6
114	Indonesia	11,466	0.705	67.6	8.6
115	Vietnam	7,867	0.703	73.6	8.4
132	India	6,590	0.633	67.2	6.7

Source: Human Development Report Office 2021

Figure 3.3 – Human Development Index, selected countries

Some aspects of quality of life cannot be as easily measured as the components of the HDI. Australia's high quality of life extends beyond statistics to its favourable social conditions. Australia has a temperate climate and an enviable relaxed lifestyle. Australia has a high degree of cultural diversity, with more than a quarter of the population born overseas.

Australians enjoy political and religious freedoms that compare favourably with many countries in Asia. International surveys of the world's cities consistently rate Australian cities like Sydney and Melbourne as being amongst the most desirable cities in the world in which to live.

Unemployment

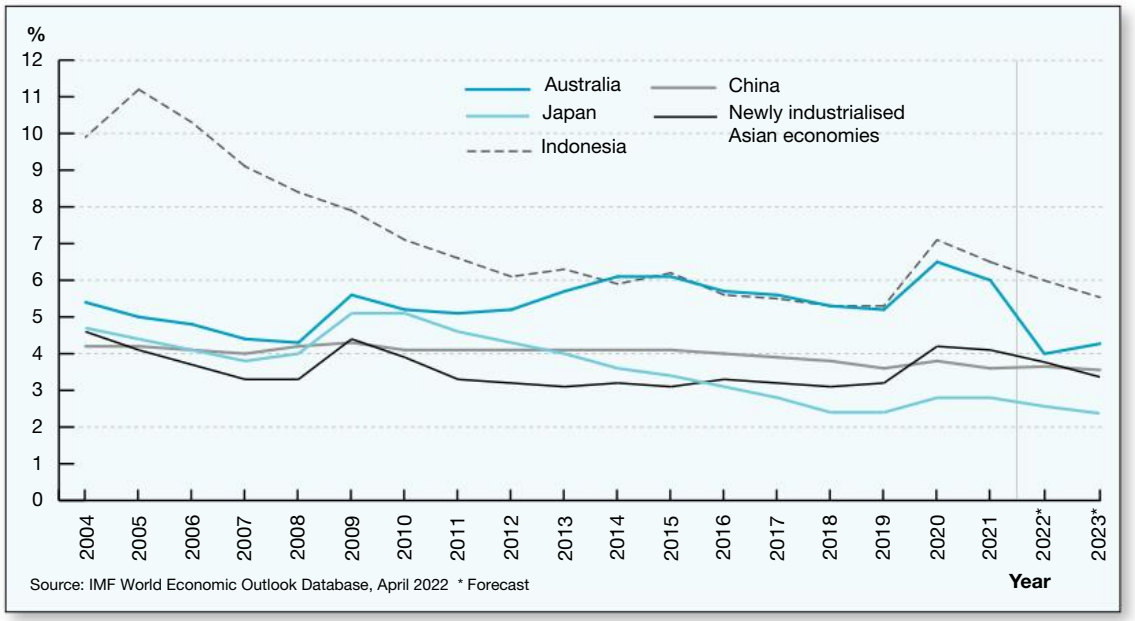


Figure 3.4 – Unemployment rates in the Asia-Pacific region

Figure 3.4 highlights the trends in unemployment rates across economies in Asia. Unemployment rates have been relatively low in these economies during the past two decades, with Indonesia making progress in bringing its rate close to other major regional economies. The COVID-19 pandemic increased unemployment rates but the increase was lower in the Asia-Pacific region than in other parts of the world. Economies recovered quickly, with Australia recording even lower rates of unemployment as it emerged from the pandemic.

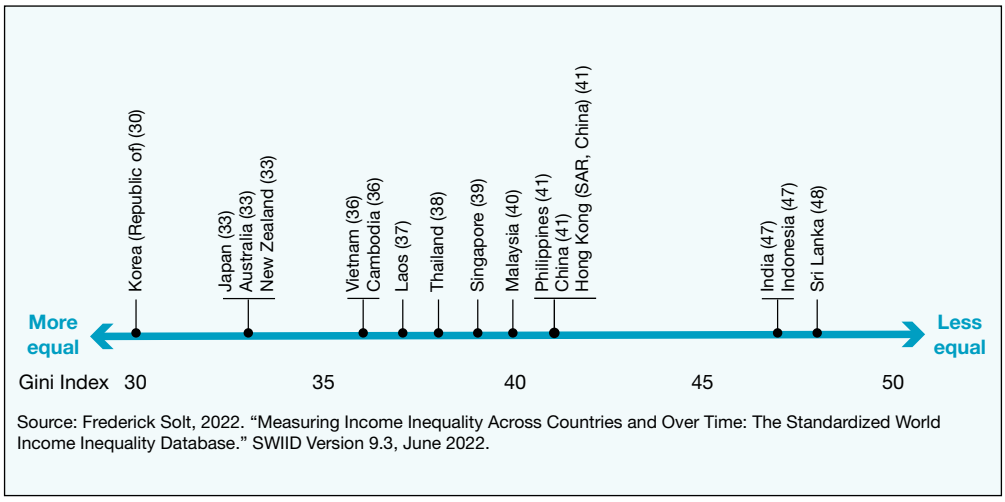
Employment patterns in Australia are similar to those of most advanced economies, with the majority of people employed in services industries such as retail trade, real estate and business services. Industries like manufacturing and construction continue to provide a substantial number of jobs, with employment in agriculture much smaller than it was in previous decades.

These employment patterns are similar in other regional economies such as Japan, which, like Australia, has less than five per cent of jobs in agriculture and almost three-quarters of the labour force employed in services. Many Asian economies that are still in the process of industrialisation have much smaller service sectors but continue to see a large portion of their workforce concentrated in agriculture. For example, approximately 30 per cent of Indonesia's labour force is employed in agricultural sectors (down from around 40 per cent in 2010). In the coming decades, the process of mass urbanisation is likely to continue in many Asian economies, which will see a substantial portion of people move from rural to urban centres to seek work in industry and services sectors.

Distribution of income

As we saw earlier in this topic, how income is distributed in an economy is very important. Even if an economy has a high average GDP per capita, if income is distributed unevenly, other people in the economy may still experience very low standards of living. In general, pure market economies tend to have a more unequal distribution of income because

those who own the resources have access to education and other opportunities, and who are able to acquire the most skills receive a greater share of income rewards than those who do not have resources such as land, capital or skilled labour. Equally, agricultural developing economies can also have a very unequal distribution of income because of the divisions between rural and urban populations and the concentration of land ownership amongst wealthier groups in society. Without government intervention, the process of industrialisation can worsen inequality as one part of society becomes much wealthier while other parts of society gain very little, or even become worse off. Mixed economies with a greater role for government in redistributing income tend to be more equal.



Source: Frederick Solt, 2022. "Measuring Income Inequality Across Countries and Over Time: The Standardized World Income Inequality Database." SWIID Version 9.3, June 2022.

Figure 3.5 – Income inequality, selected economies

In general, the economies of Asia have greater levels of inequality than the developed economies of Europe. Figure 3.5 shows that industrialised economies within Asia, such as Japan, New Zealand and Australia, have a more equal distribution of income (as measured by the Gini Index, a measure of inequality that is a number between 0 and 100, with lower numbers indicating a more equal distribution of income). Countries that prioritise markets and have less government intervention in the economy, such as Singapore and Hong Kong, have only a small role for government in redistributing income, and this helps explain their more unequal distribution of income. Other economies in Asia, including China and India, are also relatively unequal societies in particular due to the rapid pace of industrialisation and the widening gap between poorer rural areas and wealthier urban areas.

Environmental sustainability

Over recent decades, environmental sustainability has been an increasingly important part of modern economies. Whether development is compatible with the natural environment is now a key part of economic decision making in many countries. Australians mostly think of their country as having superior environmental qualities compared with other economies in the region, including less water and air pollution, more national parks and more efficient industrial processes. In several respects, this is true. The process of industrialisation in both China and India has created enormous environmental damage, with severe public health impacts from high levels of air pollution, poisoned river systems and exposure to pollution and toxic chemicals. By comparison, Australia has a much cleaner environment. However, for an industrialised country, Australia often ranks poorly for environmental sustainability. For example:

- Australia has a very poor record of **preserving biodiversity** despite being one of only 17 "megadiverse" nations in the world and being home to more species than any other developed country. Since European colonisation, 100 endemic species of plants and animals have become extinct in Australia, which means Australia has been responsible for 6–10 per cent of the species extinctions that have occurred in the

world since 1500 AD. In addition, a further 1852 animals and plants are officially listed as being at risk of extinction.

- The effects of climate change pose major challenges to Australia's management of its water resources. Droughts and bushfires have become more common and more severe during recent years, and state and federal governments frequently clash over the management of the Murray-Darling river system. Nevertheless, water shortages have contributed to Australia having a relatively high level of water productivity (US dollars of economic output per cubic metre of freshwater used). According to a recent estimate by the World Bank, Australia's water productivity of US$89 per cubic metre of water is high compared to South Korea (US$53), New Zealand (US$19) and the average water productivity of all countries within the East Asia and Pacific region (US$19).

The most significant environmental issue facing Australia and the Asian region is **climate change**, also known as global warming, related to the emission of greenhouse gases, such as carbon dioxide (CO_2), nitrous oxide (NO) and methane (CH_4). Empirical evidence in recent years has made the impacts of climate change more visible. Since 2001, the world has experienced 21 of the 22 warmest years on record, with 2020 being the hottest year ever recorded according to the US National Oceanic and Atmospheric Administration. Meanwhile, ice thickness in the Arctic region has decreased 40 per cent since the 1960s, and extreme weather events are occurring with greater frequency. The combined effects of La Niña and global warming led to record-breaking rainfall in 2022 in parts of Australia, with some areas experiencing repeated flooding. The United Nations Intergovernmental Panel on Climate Change estimates that increased greenhouse gas emissions could lead to average global temperatures rising by between 1.0 and 5.4 degrees during this century unless action is taken to reduce carbon emissions. The consequences of rising temperatures include rising sea levels, more severe and unpredictable weather events, and increased threats to global economic growth, food security and human health. Some of the economies most vulnerable to the impacts of climate change are in the Asian region, where there are extensive low-lying coastal areas and increasingly common extreme weather events.

Achieving international agreement to reduce greenhouse gas emissions has proved slow and difficult. The 2015 climate summit in Paris saw nearly 200 countries agree to keep "the increase in global average temperature to well below 2°C above pre-industrial levels" – the benchmark that scientists believe is necessary to prevent the most dangerous impacts of climate change. The Paris Agreement, which became effective in November 2016, was significant because, for the first time, it included developing nations such as China and India, as well as the United States. As of 2022, there were 197 countries who were parties to the agreement and 194 countries that had ratified the agreement (including Australia). Australia was criticised at the 2021 United Nations Climate Change Conference in Glasgow, also known as COP26, for its reluctance to commit to reducing Australia's emissions as quickly as other advanced economies. The Glasgow summit also made only slow progress, with a formal agreement to phase down coal power and a commitment for greater financial support for developing countries.

Australia is implementing domestic policies to reduce greenhouse gas emissions with the ultimate goal of reducing carbon emissions by 43 per cent on 2005 levels by 2030 and net zero carbon emissions by 2050. This new target builds on the previous goal of reducing carbon emissions by five per cent of 2000 levels by 2020. Climate policy has proved difficult for successive Australian governments during the past two decades, and economists have been critical of the lack of any overall policy framework for reducing carbon emissions. Australia's emissions per person – approximately 15 tonnes of carbon dioxide – are among the highest in the world, and are around 50 per cent more than Japan and more than 100 per cent above the average across the East Asia and Pacific region (see figure 3.6).

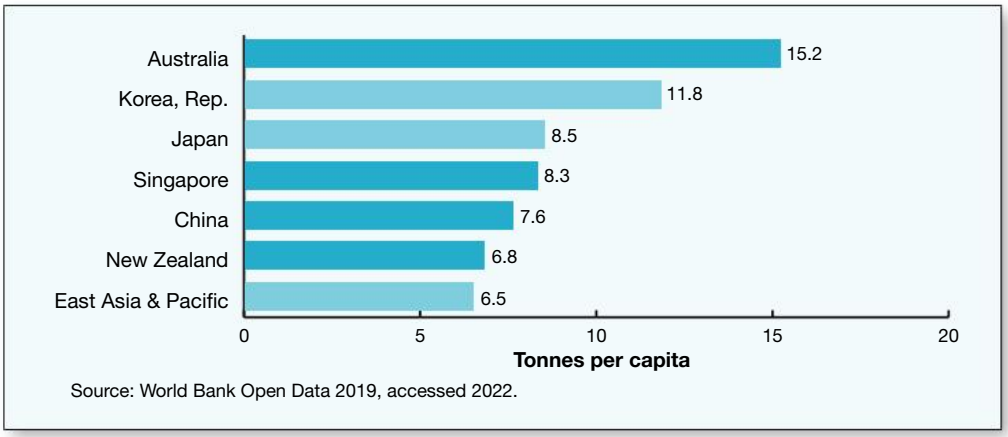


Figure 3.6 – Carbon dioxide emissions, selected economies

Like Australia, all Asian economies face specific environmental challenges, and there is no single measure of environmental sustainability. For example, Indonesia is a significant contributor to climate change because of the destruction of its forests. China's emissions of carbon dioxide are now the largest of any individual economy. India has some of the most polluted cities in the world owing to poor urban planning and outdated infrastructure that has not kept pace with the influx of people moving to urban centres. Even small island economies of South-East Asia contribute to pollution of the ocean through industrial waste and sea litter. Both domestic policies and greater global cooperation are required to address the many environmental issues affecting Asia.

The role of government

A major question facing any society is the extent to which the government should be involved in economic activity. Governments can be directly involved in what an economy produces and how it is produced by operating government-owned businesses, setting price levels, or imposing other rules and regulations. Less direct actions can include taxes, subsidies and other measures to encourage resources to move from some sectors in the economy to others. Finally, the role of government is also often measured by its role in providing key services, including health care, education and social welfare.

For most of the second half of the twentieth century, the role of government in Asian economies was shaped by whether they were **market economies** or **planned economies**. Market economies were concentrated in East Asia and included Japan, South Korea, Singapore and Indonesia. Planned economies were concentrated on the Asian continent and included China, Vietnam, India and Cambodia. Over the past three decades, the divisions between the types of economies have become less significant. Planned economies such as China and Vietnam have reduced government control over economic decision making, and market forces of supply and demand have played a greater role. Over the same period, the governments of market economies have intervened to promote the development of competitive export sectors and rapid industrialisation.

Between these two competing economic models, Australia's economic system has always had more in common with the **market economies** of East Asia. During the Cold War, which pitted capitalist countries against communist countries, Australia was firmly allied with capitalist countries such as Japan and South Korea. Australia's economy has always been governed primarily by market forces, especially in key sectors like agriculture, mining, construction and manufacturing. As a mixed economy, there has also been a role for government in certain service industries, including telecommunications, aviation, banking and insurance. But even in these sectors, recent decades have seen a reduced role for the government through policies of **deregulation** and **privatisation** of government-owned businesses.

The Index of Economic Freedom – compiled by Washington-based think tank the Heritage Foundation – uses 10 indicators such as private property rights, government regulation of the economy and spending on welfare and other services to assess the degree to which governments intervene in the operation of the market. The 2022 index rated Australia as the twelfth "free-est" economy in the world, behind Singapore, New Zealand and Taiwan from the Asian economies, which are well known for their commitment to free markets, but ahead of Japan and South Korea. By contrast, Timor-Leste ranked in the bottom 15, and North Korea recorded the lowest freedom rating ("repressed").

Another way of comparing the role of government in Australia with that in other countries is to consider the percentage of GDP spent by the government and collected in taxation revenues. Higher levels of **government spending** generally indicate a greater role for government in the economy. General government expenditure in Australia was 45 per cent of GDP in 2020. This is similar to (or slightly below) most other advanced economies, including Japan (also at 45 per cent), but it is well above the average for the rest of Asia. Government spending averages 22 per cent of GDP in the ASEAN-5 economies and 33 per cent for Emerging and Developing Asia. In other words, compared with most Asian economies with lower living standards, Australians pay more in tax and receive more benefits and services from their government. This was reflected in the Australian Government's response to the COVID-19 pandemic in 2020, when it significantly expanded spending to limit the economic harm from the pandemic. This increased government spending helped Australia to recover more quickly than many other economies, as vaccines became available and the pandemic receded.

A useful way of comparing the role of government in different economies is to examine the provision of health and education services. Australia has a well-established system of universal **health care** known as the Medicare system. This is in stark contrast to most developing economies in Asia, whose public health systems are less developed, and where some rely on private health care. As shown in figure 3.7, public spending on health care in Australia is high compared with most economies in Asia, at just over 7 per cent of GDP. Australia's belief in a strong government role in the provision of health care is shared by most industrialised economies, including Japan, although in recent years there has been a greater emphasis on privately funded health care in Australia. Many developing economies in Asia are struggling with the diseases of poverty, caused by poor water and sanitation, alongside emerging "lifestyle" diseases associated with greater prosperity, such as obesity, diabetes and cardiovascular diseases. Many Asian countries also face serious respiratory disease problems in the long term because of high rates of smoking. In Australia, the smoking rate in 2021 was 12 per cent, compared with around 25 per cent in China, South Korea and Vietnam (and around 40 per cent in Indonesia).

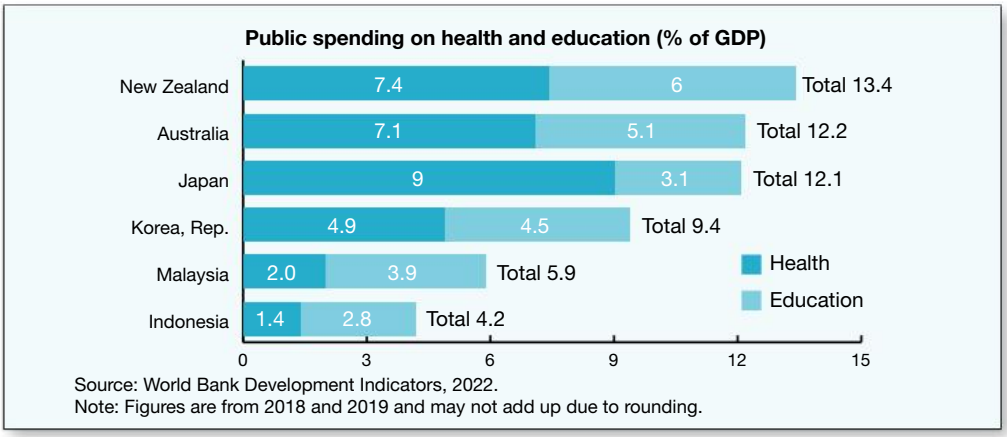


Figure 3.7 – Government expenditure in health care and education

At a primary and secondary level, there is universal free education in Australia, as in most other advanced economies. Around one-third of students here attend private schools. The government provides most educational services in Australia. The vast majority of

universities in Australia are public. Nevertheless, Australian university students now pay a substantial share of the cost of their education, although the actual payment of those costs can be deferred under the Higher Education Contribution Scheme, which allows students to defer payment for undergraduate university courses until they find employment.

There is a wide variation in educational outcomes across the Asia-Pacific region. International surveys of maths and science education find high levels of achievement in Singapore, South Korea, Japan and several other East Asian countries. In lower-income economies, educational outcomes are not as strong, even when there is a strong cultural emphasis on education. Private sources of funding often play a more significant role than in most advanced economies, especially at a post-secondary level.

Australia's government funding of education is above average compared with Asian nations. As shown in figure 3.7, public spending on education accounts for 5.1 per cent of the economy, which is more than most other economies in Asia. For some countries, lower government spending on education reflects a greater reliance on private contributions to education expenses. In Japan and South Korea, for example, there are large private education sectors, especially for high schools. In developing countries, however, lower public spending on education simply reflects the greater competition for scarce government resources. They also face a more basic set of education challenges, including raising literacy levels and extending education to large rural populations.

As with several other aspects of the economy, Australia's **social welfare** system provides a level of assistance much greater than that in most Asian countries. The purpose of welfare in Australia is to ensure a minimum standard of living for people who are unable to work or are looking for work. Welfare benefits include unemployment benefits, the age pension, disability support payments, family payments and paid maternity leave. Compared with many Asian economies, Australia has an extensive system of social welfare.

Australia's public expenditure on elderly and disabled pensions is high by regional standards. At 4.2 per cent of GDP, spending on pensions is higher than in economies as diverse as South Korea (4.0 per cent), Indonesia (0.15 per cent) and India (1 per cent). Japan has much higher spending in this area (11.9 per cent), reflecting its older population and greater reliance on publicly funded pensions.

As more economies in Asia become industrialised, it is likely that demands for social welfare in those countries will increase. By contrast, the trend in Australia is towards restricting social welfare as its population ages, by tightening eligibility for benefits. Almost all social security payments, including age pensions, are subject to a "means test", limiting benefits for people with other sources of income or assets. Unemployment benefits have been tied to participation in "Work for the Dole" community projects and requirements to seek work. Superannuation is increasingly funding the needs of people in retirement, either fully or in part replacing the role of the traditional age pension. With an ageing population, Australia faces growing pressures to sustain its system of social welfare in coming decades so that taxes do not need to rise, while ensuring adequate resources for other government priorities such as health care, education and infrastructure provision.

reviewquestions

1. Identify which economies in Asia are of a similar size to the Australian economy.
2. Discuss the difference between standards of living and quality of life with reference to these indicators in Australia and at least ONE economy in Asia.
3. Describe the distribution of income and environmental sustainability in Australia and in TWO economies in Asia.
4. Compare the role of government in the Australian economy to ONE economy in Asia for the provision of health care, education and social welfare.

chapter summary

1 In a **market economy**, most economic decisions are made by private individuals pursuing their self-interest. The market economy is characterised by private ownership of property, freedom of enterprise, consumer sovereignty and a system of competitive markets.

2 Economies can be placed at some point along the spectrum between the extremes of a centrally planned economy and a pure market economy. However, most economies are closer to the market economy model than to the centrally planned model.

3 The main differences in market economies relate to the extent of government intervention in the economy and the degree to which corporations take into account wider social interests in their decision making.

4 Australia is a **mixed economy**, where the decisions concerning production and distribution are made by a combination of market forces and government decision making.

5 Government intervention occurs in a market economy for three main reasons: to reallocate resources, to redistribute income and to stabilise the economy from the effects of the business cycle.

6 Economic growth is measured by changes in **Gross Domestic Product (GDP)**. Gross Domestic Product (GDP) per capita measures the total value of goods and services produced by a nation, divided by its population. Australia has a high standard of living compared with most economies in Asia.

7 The quality of life in an economy is commonly measured by the **Human Development Index**, which measures income, life expectancy and educational levels. Australia ranks second in the world by this index.

8 The degree of inequality in the distribution of income in Australia is similar to industrialised Asian economies such as South Korea and New Zealand. Higher levels of income inequality exist in developing economies such as China, India and Malaysia.

9 In recent decades, governments have paid greater attention to the issue of **environmental sustainability**, which involves using resources at a rate that can be maintained over the long term without depleting the natural environment.

10 **Government in Australia** has traditionally played a major role in providing health care, education and welfare. Although the role of government in each of these areas has to some extent been reduced in recent years, it remains greater than in many Asian economies.

chapterreview

1 Explain how the market economy attempts to solve the economic problem.

2 Explain how the centrally planned economy attempts to solve the economic problem.

3 Discuss the role played by the price mechanism in a market economy.

4 Explain what is meant by a *market*, and outline the two basic types of markets. Discuss how these two market types are related.

5 Define the term *mixed economy*.

6 Briefly examine the main problems with leaving a market economy to function by itself without any government intervention.

7 Discuss the ways in which the government can intervene in the economy to improve economic outcomes.

8 Identify whether Australia is a market, mixed or centrally planned economy.

9 Outline the reasons for differences in economic growth trends in Australia and economies in Asia.

10 Discuss the extent to which the Australian Government is involved in the health care system. How does this differ from other countries?

Extended response

a) How does Australia compare to other economies in Asia, in terms of:

- economic growth and quality of life
- employment and unemployment
- distribution of income
- environmental quality.

b) Define what is meant by an *economic system*. Explain how Australia's economic system attempts to solve the economic problem. In your answer, use specific examples to demonstrate how the government intervenes to affect the operation of free-market forces.

TOPIC 2

CONSUMERS AND BUSINESS

Focus

The focus of this topic is an investigation of how consumers and businesses make decisions about the choices they face, recognising that, in a market economy, they are motivated largely by self-interest.

Issues

By the end of Topic 2, you will be able to examine the following economic issues:

- Examine the impact of income on the spending and saving decisions of individuals
- Assess the extent to which consumer sovereignty is achieved in a variety of markets
- Investigate the relative significance of the various sources of incomes in Australia
- Work in groups to investigate the factors leading to change in a particular industry.

Skills

Topic 2 skills questions can ask you to:

- analyse the impact of changes in consumer income levels on the types of production within the economy
- explain the role of firms in solving the economic problem.

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Topic 2

Introduction

Both individuals and businesses within the market economy are driven by self-interest, yet understanding how self-interest affects our economic decisions is no simple matter. We must gain an accurate picture of what individuals and firms believe their self-interest to be, as well as how their interests are affected by the economic conditions around them. Once we do this, we will have a much clearer picture of the actions of individuals and firms in the market economy.

Chapter 4 examines the role of consumers in a market economy who buy goods and services to satisfy their needs and wants. We analyse the role of individual income and age in influencing consumers' decisions to spend and save. Chapter 4 concludes with a discussion of the sources of consumer income.

Chapter 5 examines the role of business in the market economy – how businesses make their production decisions and how businesses contribute to the economy by boosting economic growth and providing individuals with employment and income. We examine the goals of businesses and how firms can maximise their profits. Finally, we consider the impact of investment, technological change and ethical decision making on businesses in a market economy.

Consumers in the Market Economy

4

4.1 Consumer sovereignty

4.2 Decisions to spend or save

4.3 Factors influencing individual consumer choice

4.4 Sources of consumer income

4.1 Consumer sovereignty

One of the main assumptions in a market economy is that consumers determine what is produced. Consumers will ultimately decide what goods and services will be produced by exercising their freedom to choose what they buy and which wants they will satisfy. Business firms will produce whatever goods and services are in demand. This concept is known as **consumer sovereignty** because consumers determine the answer to the questions of what to produce and how much should be produced. This is also one of the great strengths of the market economy because production is geared to what people want and their wants are satisfied.

Consumer sovereignty is based on consumers sending signals to producers through their demand for goods and services. Where their demand is high relative to supply, prices will rise. Producers will then notice that higher profits can be made by producing those items for which demand is greatest. As a result, they will shift resources into those other forms of production. Consumer sovereignty can therefore determine how resources are allocated in an economy.

Through the operation of consumer sovereignty, consumer income levels determine the types of production that occur in an economy. As an economy becomes more prosperous and income levels rise, demand for luxury goods increases, and so does their production. Thus, as an economy experiences an upturn and consumer incomes rise, the production of goods such as sports cars and designer clothing will increase. Similarly, production of these items will go down in an economic downturn.

However, consumer sovereignty is not absolute. In the twenty-first-century market economy, there are several aspects of business conduct that can reduce the sovereignty of consumers:

- **Marketing**: Advertising and direct marketing exert a powerful influence over the spending patterns of consumers. The importance of marketing to the functioning of market economies has grown substantially in recent years. While some marketing strategies are informative, most strategies place a strong emphasis on understanding their target consumer in order to manipulate their behaviour. Marketers conduct extensive research into the wants, interests, desires and fears of consumers. They then use this information as the basis for both mass marketing (such as television, radio and print media) and direct marketing (such as targeted social media advertisements, including the use of social media influencers across Facebook, Instagram and TikTok, as well as more traditional email approaches). Consumer sovereignty is diminished by manipulative or deceptive marketing practices.

- **Misleading or deceptive conduct**: Consumers can be deceived by false or dishonest claims about a product, leading them to pay for items that they do not really want to buy. This is especially common among claims over weight-loss supplements, anti-aging products, investment schemes, baldness treatments and other health products and services.
- **Planned obsolescence**: Firms sometimes produce goods that are designed to wear out quickly or go out of date, in order to encourage consumers to make further purchases in the future. By emphasising the importance of keeping up with the latest technology and most recent products, firms can manipulate people to buy a product more often than they would otherwise. For example, smartphone manufacturers update phone models regularly with new and improved features to encourage people to upgrade to a new phone, even if their old one continues to function effectively.
- **Anti-competitive behaviour**: Firms that operate in markets where there are few other sellers can also diminish the ability of consumers to choose what they really want. For example, businesses may manufacture electronic devices so that only the company's brand of accessories, such as power supply cords and batteries, are compatible. This may not be necessary for the optimum performance of the device, which could work just as well with cheaper generic brands of accessories, but it can be a strategy to reduce consumer choice and to try to manipulate consumers into purchasing more products from the same business.

Economists debate the extent to which these factors diminish true consumer sovereignty and create a degree of business sovereignty. Some critics argue that a great deal of consumer demand for goods and services is generated by deceptive marketing practices that manipulate people's fears and insecurities. Others argue that these practices are a natural part of the market economy and, despite these patterns of business conduct, consumers still ultimately choose for themselves what they buy.

reviewquestions

1 Explain how consumer sovereignty can influence the production decisions of businesses.
2 Outline THREE examples of business practices you have observed that reduce consumer sovereignty.
3 Explain how government policy can be used to support consumer sovereignty.

4.2 Decisions to spend or save

In overall terms, after consumers have received income and paid their tax, they make a choice to either spend or save the remaining money. This is expressed in the following equation:

$$Y = C + S$$

Where:

Y = Disposable (after tax) income
C = Consumption expenditure
S = Savings

This equation means that, for a specific level of income, any increase in consumption will cause an equal reduction in the level of saving, and similarly, a rise in saving will bring an equal reduction in consumption. It also indicates that any change in the level of income will result in a change in the levels of both consumption and savings.

The proportion of an individual's income that is spent on consumption is called the **average propensity to consume (APC)**. The proportion of an individual's income that is saved is known as the **average propensity to save (APS)**. Because each dollar of an individual's disposable income must be spent or saved, the APC and APS must sum to 1.

Average propensity to consume (APC) is the proportion of total income that is spent on consumption.

Average propensity to save (APS) is the proportion of total income that is not spent but is saved for future consumption.

$$\frac{C}{Y} = APC \quad \frac{S}{Y} = APS$$

Where: APC = Average propensity to consume
APS = Average propensity to save

Figure 4.1 shows the level of savings for a range of high-, middle- and low-income economies. This includes savings by households, businesses and governments. While those economies with higher per capita incomes tend to save a greater proportion of their income, the relationship between income and savings levels is weak at an economy-wide level.

Country	GDP per capita (US$, 2021)	Gross saving (%GNI, 2021)
Luxembourg	135,683	30
Norway	89,203	39
United States	69,288	19
Australia	59,934	26
Japan	39,285	27
Brazil	7519	18
South Africa	6994	18
Indonesia	4292	34
India	2277	31
Burundi	237	6

Source: World Bank, World Development Indicators 2022

Figure 4.1 – Income and savings levels, selected countries

A variety of factors influence levels of spending and saving in an economy, including:

- **Income levels and future expectations**: Individuals have greater capacity to save as income levels across an economy rise. Savings levels may be higher in economies with greater inequality in the distribution of income (because those with higher incomes have more capacity to save). If they feel uncertain about their future income level, individuals are more likely to save.
- **Cultural factors**: Decisions about saving and spending are influenced by individual personality factors (e.g. more cautious versus more easygoing personalities) and by wider cultural values. For example, in some East Asian economies people tend to save more of their income than people in other industrialised economies, and previous generations tended to save more than people today.
- **Confidence and future expectations:** When consumers are worried about the economic outlook, job stability or future income, they are more likely to exercise caution and increase their savings. On the other hand, if they are confident about the future and expect their income to rise, they are more likely to increase their consumption and save less. In some instances, a change in consumer confidence may not be linked to actual changes in economic outlook. For example, recent research from the Reserve Bank of Australia identified patterns of consumer spending in relation to a change in government at elections, finding that consumers who voted for the winning party were more optimistic about economic conditions and were more likely to increase their consumption than consumers who voted for the losing party.
- **Life stage and age distribution**: Our consumption and savings behaviours change over the course of our lives, reflecting different phases such as young adulthood; starting a family and settling down; late middle age when incomes are generally highest, and then retirement and old age.
- **Government policies**: The government can influence an individual's patterns of consumption and savings by making it more attractive to save (such as through lower taxes on superannuation savings) or to spend (such as through the abolition of consumption taxes).

- **Availability of credit**: Spending is likely to be higher if credit is readily available, as this creates a new source of money for expenditure. Further, individuals are less likely to save if they feel confident that they will be able to access credit easily in the future.

In overall terms, however, the two most significant factors that influence a consumer's decision to spend or save are their **level of income** and **age**.

Income

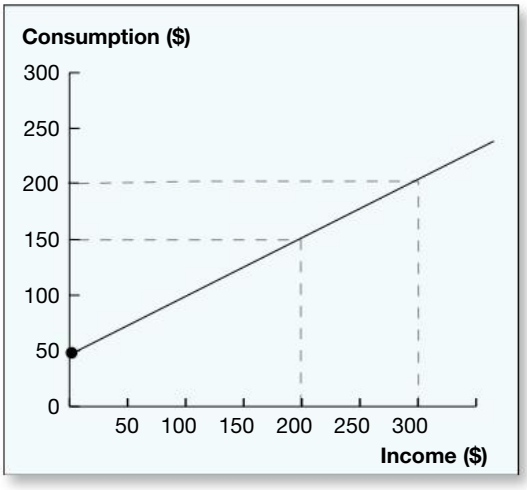


Figure 4.2 – The consumption function

The **consumption function** is a graphical representation of the relationship between income and consumption for an individual or an economy. It is usually upward sloping with a gradient less than one, and with a positive y-intercept.

As **income** rises, people tend to save a higher proportion of their income; that is, APS rises and APC falls. Consumers on lower incomes spend proportionately more of their disposable income than people on higher incomes. As income rises, people do not need to spend as much of their income on essential items. For example, a person with a disposable income of $300 per week might have to spend it all on basic costs of living, whereas someone receiving $3000 per week might comfortably save 50 per cent of that income. The consumption function diagram shows the relationship between income and consumption for an individual. As income rises, so too does the level of consumption. However, even at very low income levels, individuals tend to have some positive level of consumption, say $50 per week, which may be financed through credit or existing savings. As income rises, say from $200 to $300 per week, consumption also rises, from $150 to $200. However, because income rises faster than consumption, the average propensity to consume falls. In the example in figure 4.2, APC falls from 0.75 to 0.67, and APS rises from 0.25 to 0.33 as income rises from $200 to $300.

To complete the story, economists have also developed terminology around the concept of a person's propensity (or tendency) to consume or save for each extra dollar they earn.

Marginal propensity to consume (MPC) is the proportion of each extra dollar of earned income that is spent on consumption.

Marginal propensity to save (MPS) is the proportion of each extra dollar of earned income that is not spent, but saved for future consumption.

- The **marginal propensity to consume (MPC)** is the proportion of each extra dollar of income that goes to consumption (and is the slope of the consumption function in figure 4.2).
- The **marginal propensity to save (MPS)** is the proportion of each extra dollar of income that is saved.

$$\text{MPC} = \frac{\text{change in consumption}}{\text{change in income}} \qquad \text{MPS} = \frac{\text{change in saving}}{\text{change in income}}$$

Since each extra dollar of income earned must be either spent or saved, the sum of MPC and MPS for an individual (or household) must always be one. Therefore:

$$\text{MPC} + \text{MPS} = 1$$

In our simple example in figure 4.2, both the MPC and the MPS remained constant when income increased (that is, the consumption function was a straight line with a gradient of 0.67). In reality, as a person's income rises, their marginal propensity to consume tends to fall and their marginal propensity to save tends to rise. Therefore, the consumption function tends to become less steep as income rises.

The relationships explained on the previous page also apply to the economy as a whole. In general terms, as a country's national income rises, the overall level of savings in the economy should rise at a faster rate. However, like many economic relationships, this does not always hold true – for example, although the United States is one of the richest nations in the world, its savings level is not high by international comparison, as the data in figure 4.1 shows.

Age

Age also plays a role in savings and consumption patterns. An individual's income stream and propensity to consume and save are not constant throughout their life. According to the simple consumption theory, an individual or a household would consume a constant proportion of their income each period. This is clearly not the case. Individuals and households tend to smooth their consumption – if they expect to earn a very high level of income this period and very low or no income in the following period, they are likely to save up around half their income this period so as to have a reasonably constant standard of living in both periods.

Over the course of our lifetime, our consumption and savings behaviour moves through several patterns. When people are young, they tend to receive lower levels of income because they lack skills, experience and education. Therefore, they tend to spend most of their income and save very little – in fact they will often dis-save (or borrow) in order to finance their education. However, once people start working, and especially in middle age, their incomes rise, and they will consume a smaller proportion of their income, as they start saving and accumulating assets for retirement. In retirement, people no longer earn income from their labour, and they consume out of past savings and wealth, or rely on the government's age pension.

This way of looking at a household's consumption behaviour can explain why individuals on higher incomes tend to have a lower average propensity to consume compared with lower-income earners. We can explain this by saying that individuals who are on higher incomes save more to accumulate wealth and assets for retirement, whereas low-income earners must use a higher proportion of their income just to meet the costs of daily needs such as food and living expenses. Thus, as an individual grows older, their average propensity to consume initially falls (as their income rises) and then subsequently rises again after retirement.

This theory is known as the life-cycle theory of consumption. Figure 4.3 shows an individual's income, consumption and savings patterns during their lifetime, according to this theory.

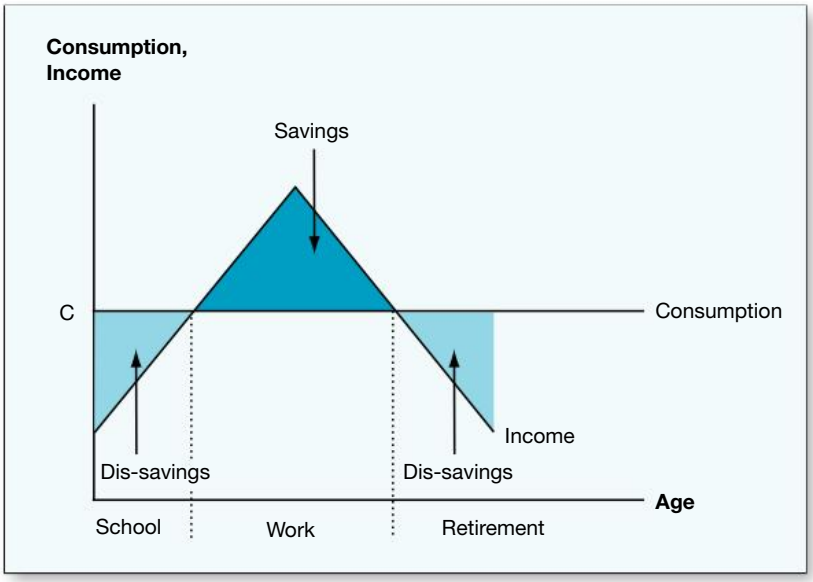


Figure 4.3 – Life-cycle theory of consumption

reviewquestions

1 Distinguish between average propensity to consume and marginal propensity to consume.

2 Consider a person earning $2000 a week who consumes $1200 of their income. Suppose that when they receive a 25 per cent pay rise, their consumption rises to $1400 a week. Calculate the following:

- their average propensity to consume at their new income level
- their marginal propensity to consume after their increase in income.

Now suppose that this person decides to work part-time so they can complete a part-time university course. Their income falls to $1000 a week. Assuming they have a constant marginal propensity to consume, calculate the following:

- their new level of consumption
- their new level of saving.

3 Explain THREE factors which influence an individual's decision to spend or save.

4 If high-income earners tend to save a larger proportion of their income than lower-income earners, identify which economy's average propensity to consume would be higher – one with a relatively equal distribution of income, or one with a very unequal distribution of income.

4.3 Factors influencing individual consumer choice

Utility is the satisfaction or pleasure that individuals derive from the consumption of goods and services.

In addition to the decision about whether to save or spend, the consumer must decide how to spend their money. We have an almost endless range of ways to spend our money. Economists assume that in their expenditure decisions consumers aim to maximise their **utility**, or well-being. Achieving higher utility means that an individual has satisfied more of his or her wants. In aiming to maximise utility, or the level of satisfaction of their wants, consumers have to choose which goods and services to buy, and in this choice they are constrained (or limited) by the market prices of goods and services and their level of income. The demand of each consumer for a particular good or service is known as **individual demand.**

The main factors affecting the consumer's expenditure choices are:

1 The level of income

A person's income level is one of the main influences on an individual's spending pattern. As individuals earn higher incomes, they tend to choose to buy more items and items of higher quality. The range of goods or services that might be purchased by an individual on a salary of $300,000 a year would be quite different from that of a pensioner who is living off an income of $40,000 per year from the age pension and their superannuation. For example, a new car might increase the pensioner's level of utility, but the pensioner may not have enough income to satisfy this want.

Another factor that may influence consumption is house prices. Rising house prices makes people feel wealthier – the so-called "wealth effect" – which makes them more likely to spend money. Recent research shows that a 10 per cent increase in housing wealth in Australia raises the level of consumption by 1.5 per cent in the long term.

2 The price of the good or service itself

In considering whether or not to purchase a good, consumers must decide whether or not they are willing to pay the nominated price for the item, given their level of income.

Some goods are considered **necessities** for daily life, and people will need to buy them regardless of price changes. For example, if the price of basic food increases, people will not reduce their demand for food greatly, because they need it for survival. (Gourmet foods like caviar or oysters, however, are hardly necessary for survival and would be more responsive to price changes.) In contrast, consumers are likely to reduce their demand for other goods, particularly luxury items, as price increases.

3 The price of substitute and complement goods

The quantity of a good demanded at any time will be affected by the prices of other goods. Consumers consider some goods to be close **substitutes**, such as butter and margarine or rival ridesharing apps (consumers are easily able to substitute one for the other). If the price of margarine rises, consumer demand for butter, which is a substitute, will also tend to increase.

A substitute is a good that consumers may choose to buy in place of another good, such as butter and margarine or rival ridesharing apps.

On the other hand some goods are considered to be **complements**, and consumers tend to purchase them together. Possible examples include iPhones and AirPods, cars and petrol, and surfboards and wet suits. If the price of an iPhone falls, we would expect an increase in consumer demand for iPhones as well as for their complements, AirPods.

A complement is a good that is used in conjunction with another good. For example, petrol would be a complement of cars.

4 Consumer tastes and preferences

Another major influence on a consumer's decision on how to spend their money is their tastes and preferences. An individual will decide to purchase those goods and services that give them the highest level of utility or personal satisfaction. Generally, we assume that a higher quantity of most goods increases consumer utility. However, some goods and services will give an individual consumer higher satisfaction than others. For example, a consumer who has a preference for fruit juice and who dislikes soft drinks will tend to spend more on juices and consume relatively fewer soft drinks.

Some goods may in fact subtract from consumer satisfaction. For example, if a consumer who dislikes watching sport were to purchase a ticket to the NRL Grand Final, this would reduce their utility (they gain no extra satisfaction for the ticket), and they will probably not value the purchase. Consumer tastes and preferences can be changed by experimentation and learning (a consumer who dislikes watching sport may change their mind after watching a particularly exciting win by a local team).

As **consumer tastes and preferences** change over time, so too will the demand for particular goods. For example, clothing that is coming into fashion will face an increase in demand, while consumer demand for clothing that is going out of fashion will decrease.

Innovation and **technological progress** lead to consumers demanding new and better products at the expense of superseded ones. The *Digital 2022 Australia* report from media company We Are Social found that Australia has over 31 million cellular mobile connections and over 20 million internet users. The report also noted that 68% of Australians make purchases over the internet, with over 50 per cent buying something online each month. Ten years ago, less than half that number of Australians were internet subscribers, and online shopping was still in its infancy, reflecting major shifts in consumer behaviour in response to technological change.

5 Advertising

Advertising can have a major impact on individual consumer choice, sometimes even creating demand for a particular good or service where none existed before. People are saturated with advertising all day long, from pop-up ads on the internet, sponsored content on social media, SMS advertising, seeing billboards at bus shelters and railway stations, to reading messages on other people's clothing. Advertising and marketing represent major activities in a modern market economy. In Australia, billions of dollars are spent every year on advertising. Advertising can make demand for goods and services less responsive to price increases by building consumer loyalty to particular brands over time.

reviewquestions

1 Identify TWO pairs of substitute goods and TWO pairs of complement goods.
2 Explain, using examples, how the development of technology influences individual consumer choice.

4.4 Sources of consumer income

Consumers gain their income from a variety of sources. Consumer income mainly comes as a return for resources such as labour, land, capital and entrepreneurial initiative. These resources are also known as the factors of production. Consumer income can also come from the government in the form of social welfare.

Returns to factors of production

Consumer income can be defined as the rewards to the owners of the factors of production. Consumers receive income from the sale of these factors of production. These are:

- **Wages from labour:** This is the main source of income for consumers. It comes in the form of wage or salary payments for labour when consumers participate in the labour market. It also includes non-wage income such as fringe benefits, employer contributions to superannuation, and workers' compensation payments.
- **Rent from land:** Many consumers own land that becomes a source of income when it is rented. For example, consumers may own an investment property that generates property income.
- **Interest from capital:** Returns from the ownership of capital are a significant source of consumer income. People with greater wealth tend to enjoy a much higher income level, because wealth creates ongoing income through returns from owning capital. For most consumers, their ownership of capital occurs indirectly through superannuation and other investment funds or through the ownership of shares. They may earn interest on savings held in cash management accounts or bonds. Many Australians now own shares in companies such as Telstra, Woolworths and the Commonwealth Bank, which earn them dividends each year.
- **Profit from entrepreneurial skills:** A substantial number of Australians are involved in operating businesses, especially small businesses. If the business makes a profit, this income is considered a return for their use of entrepreneurial skill.

Social welfare

A significant proportion of household income in Australia is received by way of social security or social welfare, known as transfer payments, as figure 4.4 indicates. This is income collected through taxation and then transferred from governments to consumers. More than a third of government revenue is used to make these social welfare payments. Examples of these transfer payments include:

Social welfare payments are payments made to increase the incomes of individuals or families in need of assistance by the government; for example, unemployment benefits and family allowances.

- **Age pension:** For people who are over 67 years of age and retired from working.
- **Parenting payment**: For primary carers of young children, means tested according to income level.
- **Disability support pension**: For people with a permanent physical, intellectual or psychiatric condition that stops them from working.
- **JobSeeker payment**: For people aged between 22 and 67 who are seeking work, but are unable to find it.

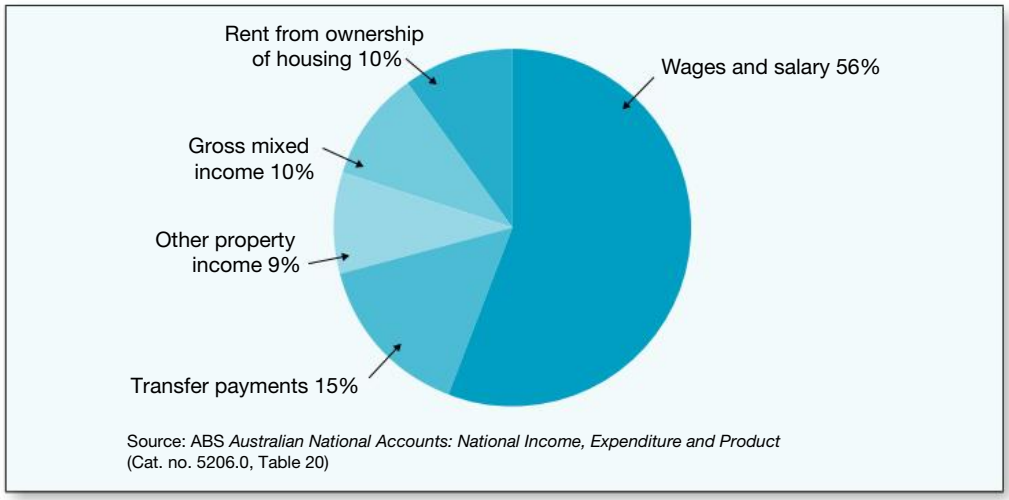


Figure 4.4 – Sources of household income, 2021–22

The aim of social welfare is to provide a minimum income safety net, allowing consumers to purchase the basic necessities of life. In times of economic downturn, governments sometimes raise transfer payments in order to increase consumer demand and help economic growth to pick up. For example, the JobKeeper payment scheme, which ran from March 2020 to March 2021, was a temporary subsidy for businesses significantly affected by COVID-19, providing $1500 per eligible employee per fortnight.

Figure 4.5 demonstrates that government social welfare spending provides income to a wide range of people in the community. Despite common perceptions that a large percentage of welfare spending goes to unemployed people, in fact they only receive around 6 per cent of the welfare budget. In the 2022–23 Budget, total social security and welfare spending was $222 billion. The largest beneficiaries of this welfare spending are the elderly and people with disabilities. Disability expenditure is expected to increase by 10 per cent a year from 2022–23 to 2025–26, reflecting additional funding associated with the response to the Royal Commission into Aged Care Quality and Safety.

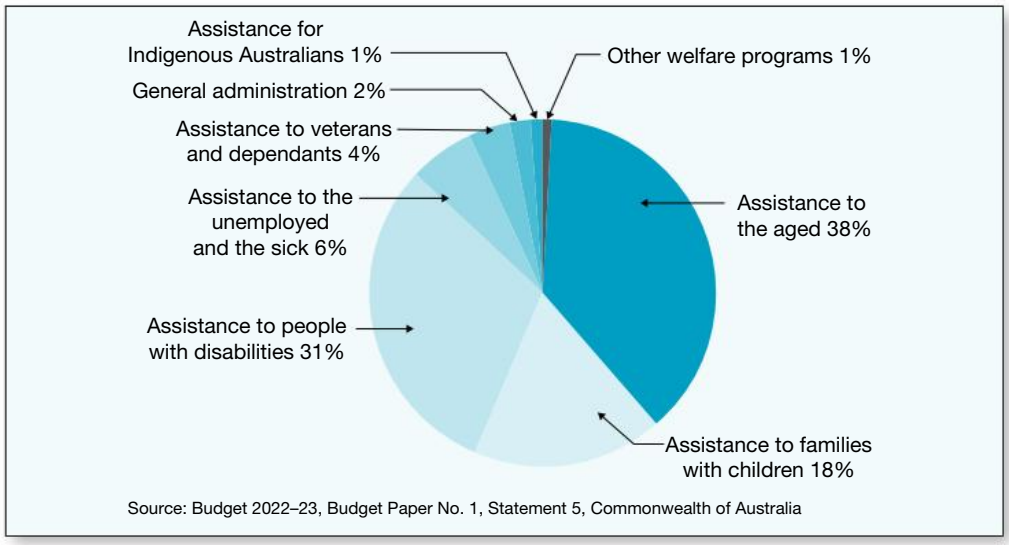


Figure 4.5 – Commonwealth social welfare expenditure 2022–23

reviewquestions

1 Identify TWO sources of income for Australians.
2 State the THREE most significant social welfare payments in the Australian economy.

chapter summary

1 In a market economy, consumers decide what goods and services will be produced by exercising their freedom to choose their purchases. This concept is known as **consumer sovereignty**.

2 Consumer sovereignty can be reduced by certain forms of business behaviour including marketing, misleading or deceptive conduct, planned obsolescence or anti-competitive behaviour.

3 All income in the economy must be saved or consumed. This is shown by the equation: Y = C + S.

4 The pattern of consumer **savings** can be influenced by a variety of factors including culture, an individual's personality, expectations, future spending plans, tax policies and availability of credit. However, the two most important influences are individuals' income and age.

5 Higher-income earners tend to save proportionally more than lower-income earners – they have a higher **average propensity to save (APS)** and a lower **average propensity to consume (APC)**. As income in the economy increases, the level of both savings and consumption tend to rise, but savings usually rise faster than consumption.

6 The **consumption function** diagram shows the relationship between consumption and income for an individual. The slope of the consumption function gives the **marginal propensity to consume (MPC)**, the proportion of each extra dollar of income that goes to consumption.

7 The **life-cycle theory of consumption** states that consumers save according to their stage of the life cycle, where most of a person's savings occur while they are of working age. Dis-savings occur before work begins and after retirement.

8 **Individual demand** is defined as the demand of each consumer for a particular good or service. Factors influencing individual consumer choice include the level of income, the price of the good itself and the price of substitutes or complements, consumer tastes and preferences, and advertising.

9 **Income** is derived from the sale of the four factors of production: natural resources, labour, capital and enterprise. Their respective returns are rent, wages, interest and profits.

10 The government may provide social welfare to supplement an individual's income or provide a basic standard of living in the absence of any income. These are called **social welfare payments**.

chapter review

1 Discuss what is meant by *consumer sovereignty* and the extent to which this principle operates in our economy.

2 Explain how changing levels of income influence an individual's decision to spend or save.

3 Calculate the average propensity to consume and average propensity to save for the following individuals:

- Miriam, who has an annual income of $55,000 and saves $5000 per year
- Stephen, who receives a weekly income of $1500 and spends $1250 per week

4 Draw a consumption function diagram based on the information in the following table.

Income ($)	0	100	200	300	400
Consumption ($)	100	150	200	250	300

Calculate the marginal propensity to consume and the marginal propensity to save.

5 Explain the effect that age has on an individual's consumption and savings patterns.

6 Consider how savings patterns might be affected if an economy was to experience an economic downturn.

7 Distinguish between a *substitute good* and a *complementary good*. Explain how a change in the price of a substitute good might affect the individual demand for an item.

8 Give an example of how changing consumer preferences have influenced demand for a good or service in recent years.

9 Outline the main sources of income for Australian households.

10 Explain what is meant by *social welfare payments* and their importance to Australian households.

Extended response

Explain the factors that influence an individual's demand for goods and services. Discuss the role that advertising and marketing play in influencing consumer demand. Outline government policies that might be used to encourage individuals to increase their savings.

5 Business in the Market Economy

5.1 Business firms and industries

5.2 Production decisions

5.3 What business contributes to the economy

5.4 Goals of the firm

5.5 Efficiency and production

5.6 Investment, technological change and ethical decision making

5.1 Business firms and industries

Industry is the collection of firms involved in making a similar range of items that usually compete with each other, such as the financial services industry or the motor vehicle industry.

Businesses occupy a central role in the economy. Essentially, a **business firm** is an organisation involved in using entrepreneurial skills to combine factors of production to produce a good or service for sale. An **industry** consists of those firms involved in making a similar range of items that usually compete with each other. For example, we speak of the motor vehicle industry, the hospitality industry and the pharmaceutical industry.

Business firms are the major production units in our economy, and their size, behaviour and performance influence our overall productive capacity. Because of their importance, we need to gain some understanding of how they function. In particular we look at how they make production decisions, what they contribute to the economy, the main objectives of a firm, how they achieve efficiency, and the impacts of technological change and ethical decision making on how they operate.

5.2 Production decisions

What to produce

The first decision for someone operating a business is what to produce. Several factors may influence a business operator's decision:

- The **skills and experience** of the business operator. A person is likely to be most successful operating in an industry that they know well, where they understand the demands of consumers, the nature of production, how to maintain quality and so forth, and where they also may have personal contacts.
- Industries where there is strong **consumer demand**. An entrepreneur is more likely to be attracted to an industry where rapid growth is being experienced, because they are more likely to find opportunities to expand the business. For example, the mining boom of the 2000s saw many people create an almost instant fortune from mining investments. However, other business operators will sometimes go to declining areas

of the economy, where businesses may be poorly run or undervalued and there are opportunities to consolidate them into more efficient businesses.

- Specific **business opportunities**. An individual might find a specific business opportunity that is particularly attractive. For example, they may find a region that does not have a particular kind of business, or through family or contacts they may have an opportunity to develop a business in which they might not otherwise have had an interest. Alternatively they may find a **niche market** by focusing on the tastes of a specific set of customers, such as legal services for information technology companies.
- The amount of **capital** required to start the business. For many entrepreneurs, access to capital is a constraint in starting up a business. Small business owners commonly mortgage their house and other assets in order to start up their firm. An entrepreneur is likely to be attracted to a business that has lower start-up costs, as this may minimise their risk.

Niche market is a segment of a mass market for a good or service that can be defined by the specific tastes or characteristics of the target customers.

Once a firm has initially decided what to produce, it is likely to continue producing that item. However, a business that is committed to expansion will regularly review its product lines and look for opportunities to expand into other areas (and replace less profitable product lines). The more a business gets to know its field of operations, the more likely it is to find opportunities that may not have been obvious in the beginning.

How much to produce

Having decided what to produce, a firm must next decide how much to produce. This will be based on its assessment of the level of consumer demand and its ability to convert that demand into sales of its items. If it produces too much, the unsold goods may spoil, but if it produces too little, it may not be able to provide goods to potential customers. A business may commission market research to determine the likely sales levels of specific items; this information may also be useful to help it determine what price levels would be appropriate.

In their initial operations, firms can face a difficult decision in determining how much to produce. For those firms that require large production runs in order to maximise efficiency, the pressure to produce a large quantity of output may conflict with a lack of access to capital. On the other hand, some businesses may be able to respond quickly to the level of demand, such as a café that may only need to add extra staff and purchase more supplies.



The question of how much to produce is most difficult when a firm starts up or when it introduces a new product line. In other circumstances, firms are generally able to anticipate market demand reasonably well by observing past trends. Established businesses will nevertheless find it difficult to anticipate the impact of changes in external conditions on consumer demand (such as a global pandemic increasing demand for face masks).

How to produce

Having decided on its products and quantities of production, a business must next decide how to produce. The production process involves combining a range of resources (known as inputs) in order to create goods and services (known as outputs). A firm's decision about how to produce depends upon the relative efficiency of the four factors of production (natural resources, labour, **capital** and enterprise), which can change over time, as shown in the diagram overleaf. Firms will choose the combination of factors of production that is most efficient.

Capital is the manufactured products used to produce goods and services, commonly described as the "produced means of production".

Factors of production

Natural resources



New resources can be discovered and new technology can improve the productivity of natural resources.

Natural resources can be diminished through exploitation, such as overfishing or deforestation.



Labour



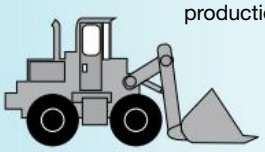
Investment in education and training can increase the productivity of the nation's workforce.

A decline in the birth rate, a reduction in migration, or the ageing of a population will reduce the quantity of people available to work.



Capital

Businesses increase the economy's capital stock through investment in goods that are used in the production process.



Over time, old capital will wear out and become obsolete. This discarded (or worn out) component of capital is known as depreciation.



Enterprise

The supply of entrepreneurs – the innovators and risk takers – will increase under favourable political and economic conditions, providing opportunities to make high profits.



An uncertain environment – such as political instability or economic downturn – will generally reduce the willingness of individuals to innovate and take risks.



The sharing economy

In recent years the emergence of the sharing economy has challenged traditional business models where companies produced goods and services for consumption by individual consumers. In the sharing economy, digital platforms like Uber and Airbnb have directly connected the owners of cars, houses and other assets with people who want a lift or somewhere to stay. Sharing economy business models now play an important role in markets alongside traditional businesses like taxis and hotel companies.



Some level of households sharing assets and services with others has been part of the economy for centuries, but digital platforms have made it a lot more convenient by improving information flows, lowering transaction costs and facilitating better rating systems that individuals can trust. And while it's called "sharing", it is very serious business – its global market value is forecast to be US$1.5 trillion by 2024. Other examples of digital platforms directly connecting buyers and sellers include meal delivery services, used by over 7 million Australians in 2022. This sector has experienced rapid growth from 3.3 million users in 2018, driven by COVID-19 lockdowns and the convenience of the services. The sharing economy opens up whole new ways to answer the economist's question: "How to produce?"

reviewquestions

1 Outline the factors that an entrepreneur must consider when deciding what goods or services to produce.

2 Describe the effect of the following factors on a firm's decision of how much to produce:

- reduction in migration
- increased number of firms in the industry
- increase in labour costs
- decreased competition from imported products.

3 Explain why a firm might choose a higher proportion of labour than capital in its production process.

5.3 What business contributes to the economy

The performance of individual business firms has a major impact on the performance of an economy. A healthy, growing private sector will generate a higher rate of **economic growth** and a stronger revenue base to fund the services provided by governments. For example, during the mining boom in the 2000s, global demand for minerals and resources fuelled large price increases for Australian exports of coal, iron ore, nickel, zinc and copper. In the resource-rich states of Western Australia and Queensland, there are a higher proportion of firms in the minerals and resources industries, and this ensured that these states sustained faster growth than other states, such as New South Wales, Victoria and Tasmania, which have a smaller proportion of firms in these industries.

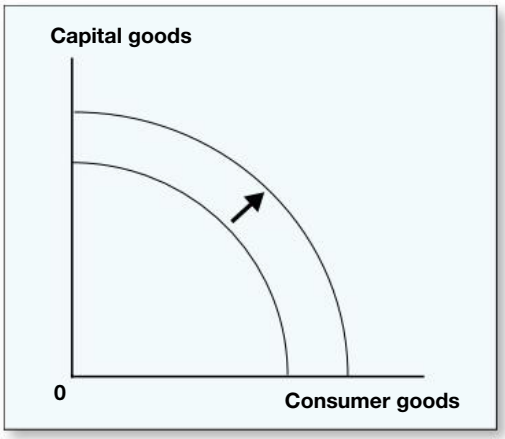


Figure 5.1 – An increase in the economy's productive capacity

Growing businesses also employ more people and reduce the incidence of **unemployment**. For example, the growth of business and financial services, and the professional, scientific and technical services sectors, resulted in much faster job creation in the Sydney region in recent years, while unemployment rates in smaller cities such as Wollongong and Newcastle have generally been higher.

Businesses can also contribute to regional development. Food processing, tourism, advanced manufacturing and the creative industries are significant employers in regional economies and are considered to be important drivers for economic growth in regional Australia. The benefits of regional development can include better regional infrastructure, improved liveability and population attraction and retention.

Finally, growth in individual businesses also increases an economy's **productive capacity** over time, as shown in figure 5.1. This would be reflected in an outward shift in the production possibility frontier, which was discussed in Chapter 1. Increasing a nation's productive capacity results in greater economic output and greater competitive pressures, which leads to lower inflation and translates into improved living standards.

Given the substantial contribution that individual firms can make to a country's economic growth and productive capacity, it is not surprising that governments offer significant assistance to encourage the development of new businesses. Commonwealth and state governments provide a range of business assistance programs, including streamlined business approvals, grants, rebates, subsidised training and export assistance. For example, the Export Market Development Grants (EMDG) scheme is an Australian Government financial assistance program, administered by Austrade for aspiring and current exporters. Funding is designed to help Australian businesses get more exposure in international markets, allowing them to develop brand recognition and form relationships with potential customers. In 2022, the EMDG assisted more than 5,000 Australian businesses in starting or expanding their export business. This reflects the benefits that the success of individual firms can offer to an entire economy.

reviewquestions

1 Explain the role of business growth in reducing unemployment.
2 Outline TWO ways a business might increase its own productive capacity.

5.4 Goals of the firm

The objectives of the firm can be viewed as the motives of the entrepreneur (or entrepreneurs) who own and run the firm. There are a number of objectives that a firm can pursue in its day-to-day operations – it may try to maximise profits, sales or growth, or it may simply engage in satisficing behaviour.

Maximising profits

Profit motive refers to the process by which a business seeks to maximise profit by using the lowest-cost combination of resources and charging the highest possible price.

Maximising profits – making the biggest possible profit, or the smallest possible loss – is recognised as the main objective of most firms. Profit is the difference between the firm's total revenue (output sold multiplied by price) and its total costs of production. In fact, we will see later when we examine the theory of business firms that economists generally assume that the desire to maximise profits guides the behaviour of all firms. Although profit maximisation is the main objective of most businesses, firms may have other objectives.

Meeting shareholder expectations

The main responsibility of company directors, who make decisions for a business firm, is to serve the interests of shareholders. This is a legal responsibility governing the operation of corporations in Australia, and it is the overriding concern of most business managers. Company directors are chosen to represent shareholder interests on boards, and so they will generally aim to meet the expectations of their shareholders. Sometimes this will create tensions because there may be a conflict between actions that maximise share price and dividends in the short term, but are likely to reduce the firm's value in the longer term. Shareholders are often interested in maximising short-term returns on their investment.

Increasing market share

Because the entrepreneurial function of larger businesses today is generally split between the owners (shareholders) and paid managers, the goal of profit maximisation may not always be the highest priority. Instead, a business may seek to increase its market share, that is, the percentage of sales the business has in the overall market. Market share is a measure of consumer preferences for a particular business's product over that of its competitors. A higher market share can also be linked to more sales and a competitive advantage.

Maximising growth

Another motive of management may be to maximise the rate of growth of the firm's assets. In the long run, a larger asset base should allow a business to achieve higher profits. It can also bring management other rewards, such as higher salaries and prestige. However, a strategy of maximising growth can sometimes lead to a business failure.

Starbucks – the perils of maximising growth, not profits



The world's largest coffee chain, Starbucks, has over 34,300 stores in 80 countries and had revenue of over US$29 billion in 2021. After rapid expansion in the United States in the 1980s, it went international in the 1990s, and has achieved revenue growth averaging 10 per cent every year during the past decade. While Starbucks was highly successful in some countries, the Australian venture was a lesson in the complexities of global business. By focusing on rapid growth, Starbucks failed to understand that Australia's market for cafés was more competitive and mature than America's, with different consumer preferences, sophisticated small business operators and strong local customer loyalty. It lost money and had to close most of its stores. By 2016, the chain had closed all but 23 of its Australian stores compared with its peak of 84 in 2008. The Australian franchise for Starbucks was taken over by the owners of 7-Eleven, the Withers Group, who relaunched the Starbucks brand with a strategy focused more on areas popular with tourists and large retail shopping centres. While this strategy saw the number of Starbucks stores in Australia recover to 61 in 2022, the company has continued to struggle in Australia, reporting an operating loss of approximately $3.9 million in 2021.

Satisficing behaviour

Satisficing behaviour means that a firm does not attempt to maximise any particular objective, but rather seeks to achieve what it regards as an adequate level of attainment in each area. For example, a firm may seek to earn a satisfactory level of profit (an acceptable rate of return on investment for shareholders) rather than maximising profits. This may be in the firm's interests in the long run, because excessive profits may attract new competitors into the industry, or may provoke greater regulatory oversight. Sometimes firms may aim for non-financial outcomes – for example, newspaper proprietors have often sought political influence or social prestige rather than purely maximising profits. A small but growing number of businesses operate as *social enterprises*, with the goal of positive social or environmental impact, such as recycling or green energy businesses, and businesses that employ higher numbers of people who have disabilities, have been homeless or have recently arrived as refugees.

Satisficing behaviour is the idea that firms will attempt to pursue a satisfactory level in all goals (profit maximisation, sales maximisation etc.) rather than maximising any single goal.

While profit maximisation may not necessarily be the overriding objective of all firms, when we analyse the pricing and output policies of firms operating under different market structures, we assume this to be the case.

reviewquestions

1. Identify TWO goals of firms and why it may not be possible to achieve both goals at the same time.
2. Identify TWO examples of businesses that you think have been successful in meeting their goals. Examine which goals you think are the most important to each business.

5.5 Efficiency and production

Productivity

Productivity refers to the quantity of goods and services the economy can produce with a given amount of inputs, such as capital and labour.

Once a business firm has decided to supply certain goods to the market, its next challenge is to deliver the good or service at a minimum cost. An essential part of minimising costs is to be as efficient as possible in the production process, an aim reflected in the concept of productivity. **Productivity** refers to how much we produce with a given quantity of resources, per unit of time.

An increase in productivity can be defined as an increase in output per factor of production (input), per unit of time. Increasing productivity is desirable because it means that the firm is making more efficient use of its limited resources. Increased productivity allows a firm to satisfy a greater number of wants using the same level of resources.

It is important to avoid confusion between the terms *production* and *productivity*. **Production** refers to the total amount of goods and services produced. We can increase production by increasing the amount of resources we use, or working those resources for a longer period of time. For example, it is possible for a paving contractor to increase the amount of paving completed each day by working longer hours or by employing more labour to help.

To increase productivity, we need more than just an increase in production – we need to increase production proportionately more than the increase in inputs of resources. For example, if a concrete paving contractor can more than double the area paved when they double the amount of labour used, then there has been an increase in productivity – more is being produced per unit of labour per unit of time. This means that the resources are being used more efficiently.

There are substantial benefits to the economy when firms use resources more efficiently. In a general sense, because we are able to produce more goods and services with our existing resources, our overall **living standards** increase (in other words, the economy is able to satisfy more wants). Economists generally recognise that, in the long term, improvements in productivity are the key to increasing living standards in a country.

Productivity contributes to an improvement in our standard of living in several ways:

- **Less wastage of our scarce resources**: Because we are using our resources more efficiently, we are able to produce more with a given quantity of resources.
- **Lower production costs and higher profits for the business firm**: Because each factor of production can produce more in any given time period, it costs less to produce the same quantity of goods and services.
- **A lower inflation rate**: Because of lower production costs, firms do not have to raise the prices of the goods they produce and may even be able to reduce these prices.
- **Higher incomes**: Since labour is more productive, firms can afford to pay better wage rates to workers without increasing prices.
- **Improved international competitiveness of Australia's industries**: Increased productivity compared with foreign businesses will make Australian goods more competitive on local and international markets.

Specialisation and productivity

One of the major ways business firms can increase their productivity is **specialisation**, where the factors of production – labour, natural resources and capital – are used more intensely for a smaller number of production processes. Figure 5.2 describes how specialisation can occur in relation to these three factors of production.

TYPE	DEFINITION	EXAMPLE
Division of labour (*specialisation of **labour***)	Occurs when businesses break down their production process into a number of sub-processes, allowing labour to specialise in a particular part of the process, and thus avoiding the time and effort of moving from one process to another.	The assembly-line approach to car production, where each worker completes a small task in the construction of each vehicle.
Location of industry (*specialisation of **natural resources***)	Occurs when a large number of businesses that produce similar goods and services congregate in the same area to reduce production costs by sharing common infrastructure requirements.	The concentration of advanced technology industries in the Macquarie Park industrial area in Sydney's north-west.
Large-scale production (*specialisation of **capital***)	Occurs when businesses grow so large they can use highly specialised capital equipment in their production process.	A large wine producer that uses specialised machines to bottle, cap, and label wines.

Figure 5.2 – Types of specialisation

Internal economies and diseconomies of scale

In many situations, firms are able to reduce their per-unit costs of production as their output increases. In particular, manufacturing businesses often require a very high level of output before they can compete with other firms.

The concept that a firm needs to achieve a large scale of production in order to minimise costs is known as **internal economies of scale**. Economies of scale are experienced when average costs per unit of production fall as the size of output grows. **Average cost** is the per-unit cost of production, obtained by dividing the total cost of producing a certain level of output by the total quantity produced. Assuming that there is adequate demand for the output, the manufacturer will continue to expand the business, while the firm can lower the per-unit production costs because this will increase the firm's overall profitability.

A firm cannot continue to grow and benefit from falling per-unit costs of production indefinitely. It will eventually reach the point where costs of production will start to rise because of certain disadvantages associated with becoming too big. These disadvantages are known as **internal diseconomies of scale**. Most of the factors that cause diseconomies of scale are related to management problems. As the size of the business grows, management may not be able to efficiently organise all areas of the business, slowing down the production process and increasing costs.

Internal economies of scale are the cost saving advantages that result from a firm expanding its scale of operations. They occur when a firm's output level is below the technical optimum.

Internal diseconomies of scale are the cost disadvantages (specifically, the increase in marginal costs per unit) faced by a firm as a result of the firm expanding its scale of operations beyond a certain point. The firm's output level is above the technical optimum.

INTERNAL ECONOMIES OF SCALE

The cost-saving advantages that result from a firm expanding its scale of operations can be summarised as follows:

- By becoming larger, the firm is better able to take advantage of specialisation of labour by breaking up the process of production into different stages.
- A large firm will be able to invest in more efficient capital equipment.
- A large firm can buy its raw materials in bulk, and bulk buying generally reduces the per-unit cost of these inputs (also known as economies of size).
- A large firm can generally find a market for its by-products, whereas a smaller firm would have to discard them as waste. For example, a large-scale furniture manufacturer might be able to sell its timber off-cuts to a trophy manufacturer, whereas a small-scale enterprise would have to dispose of them.
- A large firm can put resources into research and development, which can expand new production lines, and further reduce per-unit costs in the future by implementing improved production techniques. A larger firm can invest in human capital, improving the skills of its labour force through training programs that are specifically tailored for the firm's needs.
- Larger firms usually find it easier and cheaper to raise finance for business expansion.

Where has productivity growth gone?



In the long term, there are three factors that drive economic growth: population size, participation rate (what proportion of the population is working) and productivity growth (the outputs achieved for each unit of input). Recent data shows a sustained slowdown in various measures of the productivity of Australian businesses. In 2022, the Productivity Commission's 5-year Productivity Inquiry found that the economic shock caused by the COVID-19 pandemic also contributed to a global slowdown in productivity.

The pandemic's impacts on productivity were varying and sometimes counterintuitive. These impacts included a decline in multifactor productivity for the first time in nearly a decade, and an increase in labour productivity due to labour shifting in relative terms to more productive industries.

The pandemic contributed to several changes to business operations, including:

- Greater rates of remote work
- Growth in online commerce
- Innovation in the delivery of public services such as health and education
- Changes to business models and labour mobility.

The COVID-19 pandemic is expected to have an enduring impact on Australia's productivity. As the economy recovers, productivity growth will be dependent on an economic environment with flexible and dynamic policy settings, a combination of economy-wide and structural reforms, and targeted policies to support production and innovation.

The pandemic also contributed to faster takeup of digital technologies by businesses and consumers. This is expected to support productivity growth, particularly in services sectors which have historically experienced lower rates of productivity growth. The Productivity Commission identified a role for government in enabling the use of technology through addressing barriers such as skills, security and access to digital infrastructure.

INTERNAL DISECONOMIES OF SCALE

The disadvantages that cause per-unit production costs to increase once a firm expands its size past a certain point can be summarised as follows:

- Management can lose touch with the day-to-day running of the firm and inefficiency can increase.
- The large size of the firm may lead to duplication and paperwork (red tape can bog down the decision-making process).
- Problems arise in workplace relations because management no longer know the staff personally. Management would be increasingly unaware of the problems and issues faced by different workers. This can increase the tension in the relationship between employers and employees, and lead to misunderstandings and workplace disputes.
- Generally speaking, there is a decrease in managerial and administrative efficiency, which tends to overshadow the advantages of being large, and leads to an increase in the per-unit production costs of the firm.

The relationship between production costs and internal economies and diseconomies of scale is shown in the long-run average cost (LRAC) curve (figure 5.3).

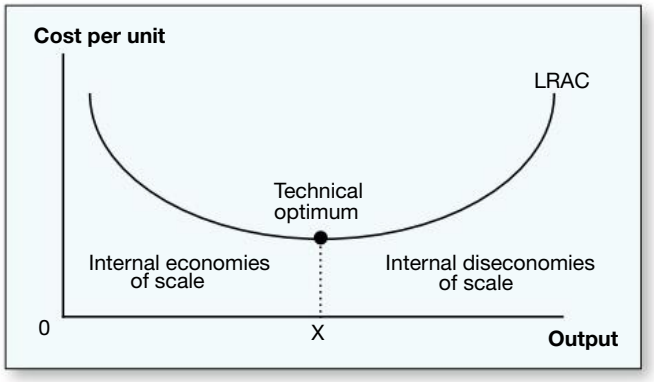


Figure 5.3 – The long-run average cost curve

- As the firm increases the scale of its operations up to output level *X*, its per-unit production costs are declining, as revealed by the falling LRAC curve of the firm. The firm can continue to take advantage of internal economies of scale up to this point.
- If the firm increases its scale of operations past output level *X*, its per-unit production costs start to rise, as revealed by the rising LRAC curve of the firm. Past this point, internal diseconomies of scale will now outweigh internal economies of scale.
- Point *X* represents the most efficient level of production for the firm (sometimes known as the **technical optimum**). At this point, average costs of production are at the lowest possible level. This is the point where the firm has taken maximum advantage of internal economies of scale, without having to suffer excessive internal diseconomies of scale. On this basis, the firm should continue to grow up to point *X*, but not past it.

Technical optimum is the most efficient level of production for a firm. At this point, average costs of production are at their lowest possible level.

Learning by doing

A benefit of continuously repeating production processes is that a firm gets more practice – and can become more efficient at completing the same tasks in the production process over time. Learning by doing, as it is known, results in a downward shift of the firm's long-run average cost curve – meaning lower per-unit production costs at each level of output (see figure 5.4).

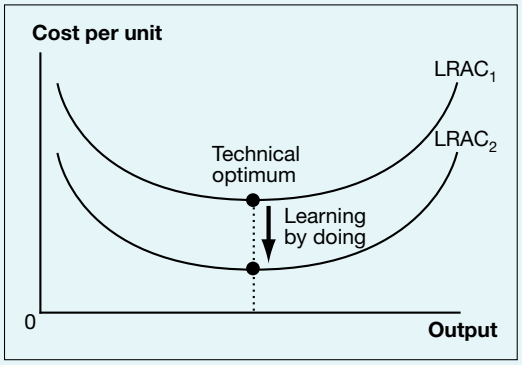


Figure 5.4 – Learning by doing

External economies and diseconomies of scale

In addition to factors relating to a firm's own production process, there are other cost advantages and disadvantages that can affect a business that lie completely outside its control and occur regardless of a firm's level of production. These are known as **external economies and external diseconomies of scale**.

EXTERNAL ECONOMIES OF SCALE

External economies of scale are the advantages that accrue to a firm because of the growth of the industry in which the firm is operating. They are not the result of the firm changing its own scale of operations.

External economies of scale are cost-saving advantages that accrue to a firm because of outside influences, and are not the result of the firm changing its own scale of operations. They can be summarised as follows:

- Increasing localisation of industry generally means that all firms in a particular region would enjoy certain cost-saving advantages, such as locating near a highly populated area with a supply of skilled labour, a plentiful supply of necessary inputs and a major consumer market.
- As an industry as a whole grows, all firms in that industry generally derive some extra benefits. This could involve the government providing special research and development to help promote the industry. For instance, the CSIRO has developed new strains of disease-resistant, high-yielding wheat, which benefit all wheat farmers, both big and small. Likewise, private enterprise might also be willing to provide research and development, as well as other beneficial services (such as transport) to a growing industry.
- A growing, competitive and more sophisticated capital market would be of benefit to all firms as it could provide cheaper investment funds from a wide variety of sources.

On the other hand, cost disadvantages may accrue to a growing firm because of outside influences, which are known as **external diseconomies of scale**.

EXTERNAL DISECONOMIES OF SCALE

External diseconomies of scale usually result from the growth of the industry in which the firm is operating, but they can also result from rapid growth across the entire economy. They are not the result of the firm changing its own scale of operations and can be summarised as follows:

- The growth of industry causes increased pollution. For example, in China, rapid industrialisation, combined with weak environmental controls, has contributed to huge problems with air pollution in several major cities. The pollution problems are so severe that they are contributing to illness and premature deaths, and requiring occasional closures of factories and restrictions on driving, with harmful effects on business.
- The trend towards increasing the concentration of industry and people in existing urban areas can eventually cause transport bottlenecks. This can increase the transport costs of all firms. For example, the growth of Tokyo resulted in extraordinary increases in property prices, forcing many Japanese people to live far away from urban centres. This has meant that millions of commuters spend long hours travelling to and from work each day.
- As an industry grows, the cost of a firm's raw materials can rise, as the increasing demand forces up their price. This is especially likely to occur if there is only a very limited supply of these resources. For example, strong global growth in electric vehicle manufacturing has led to a surge in the price of lithium, a key component in electric vehicle batteries.

External diseconomies of scale are the disadvantages faced by a firm because of the growth of the industry in which the firm is operating. They are not the result of a firm changing its own scale of operations.

reviewquestions

1. Describe the benefits of increased productivity for an economy.
2. Compare and contrast the specialisation of labour and the specialisation of capital.
3. Identify TWO examples of how a business could experience internal diseconomies of scale.

5.6 Investment, technological change and ethical decision making

The business environment in the twenty-first century is highly competitive and fast-changing. Business managers need to be alert to the opportunities offered by trends like globalisation and new technologies. They also need to understand **ethical decision making** and what impact their business has on broader society, especially on the natural environment. These forces have significant implications for how businesses operate in the market economy. The following section examines some of the implications that technological change and ethical decision making have for several aspects of business conduct.

Ethical decision making is when business decisions about production methods, employment and other matters are made taking into consideration the impacts on broader society and the environment, and not simply to maximise profits for the firm.

Production methods

Technological change and innovation have increased the productive capacity of the economy by making it possible to use existing resources more efficiently. Investment in technology has led to radical changes in the methods used to produce goods and services. For example, a large number of firms, such as car manufacturers, have automated many aspects of the production process. The impact of technological change on production methods has varied from firm to firm. However, in many cases it has led to lower costs, increased efficiency, a reduction in the size of the workforce and the possibility of larger production runs.

ETHICAL DECISION MAKING



Recent years have seen many scandals involving dishonesty and abuses by businesspeople that have prompted huge fines. In 2020, Westpac received a $1.3-billion fine, the largest in Australian corporate history, for more than 23 million breaches of money-laundering laws. Its offences included failing to report international transactions and insufficient monitoring of suspicious transactions. In 2022, Google agreed to pay $60 million in fines after being found guilty by the ACCC and the Federal Court of Australia for breaching consumer laws. It had mislead Android phone users into thinking Google was not collecting personal location data via their mobile devices.

Such cases have prompted calls for business managers to embrace more **ethical decision-making** processes, so that business decisions take into account the impacts they have on broader society and do not just aim to increase profits for shareholders. Business ethics is not just about abiding by the law, meeting contractual obligations, and treating customers well in order to build relationships – it is about going above and beyond what is required by the law, and taking into account social interests in decision making. Board members and decision makers must therefore maintain the business's "social license" to operate. Unethical decision making may damage the reputation of the business, as well as impact revenue and profits. Increasingly, consumers, citizens, governments and even a business's employees expect that a business will be driven by not just the profit motive, but a broader social purpose.

A wide variety of business decisions can be affected by business ethics, such as what to produce (is it ethical to produce tobacco that can cause lung cancer?), how to produce (is it ethical to use contractors in countries like China where workers are paid very low wages and work in unsafe factories?) and how to market goods and services (is it ethical to make exaggerated claims about a product?). The pressure on businesses to increase profits can often result in corporations engaging in unethical behaviour, and this has resulted in a greater focus on the role of ethics in business decision making. Corporate social responsibility or "triple bottom-line reporting" programs also aim to encourage more ethical decision making.

In a globalising economy, ethical decision making is also playing a greater role in production methods, with some businesses taking account of social interests that may not directly contribute to increased profits. Ethical decisions are especially important when businesses have global supply chains and are involved in production processes in developing countries, where they can potentially cut costs by paying workers low wages, or using chemicals or production methods that are not allowed in developed economies.

An environmental example of an ethical business decision might be a furniture manufacturer in a developing economy choosing to use plantation timber rather than timber from old-growth forests. Of course, this decision may simply reflect normal business considerations, if native forest timber is more expensive than plantation timber. However, to the extent that the business is taking account of the environmental impact of its timber sourcing strategy, ethics are playing a role in decision making.

Prices

One of the most significant changes that information and communications technologies have brought about is a more well-informed marketplace. Search engines give consumers immediate online access to any number of businesses locally or overseas, so that they can quickly compare prices between competing firms. This has squeezed profit margins and forced firms to reduce their costs to compete with overseas competitors.

Employment

New technologies have had a mixed impact on the demands of firms for employees. One obvious effect is that technological change has made many previous jobs redundant. Many businesses have been able to reduce their staffing levels substantially, as automation has reduced their requirement for labour. The increased competitiveness of overseas firms has also caused some firms to cut back local manufacturing operations or move them offshore, resulting in job losses within Australia. On the other hand, the growth of new technologies provides new job opportunities, with strong demand for employees with specific information technology skills, such as coding.

Ethical decision making is also having an impact on firms' employment strategies. For example, in hiring new employees, some businesses have affirmative action strategies that actively seek to recruit women, reflecting the historical under-representation of women in senior leadership roles and certain professions. Under law, all businesses must meet equal employment opportunity obligations in hiring new employees, but ethical factors might encourage businesses to go further than their legal obligations by actively hiring employees from groups that have traditionally suffered disadvantage or discrimination.

Output and profits

Businesses that invest in technology are likely to be able to offer better quality products at a lower price. In addition, by utilising the latest technology, they are better able to respond to changes in market demand and to customise their output to the specific needs of the marketplace. This, in turn, is likely to further increase demand for their products, resulting in a higher level of output and increased profitability. While this can lead to a virtuous cycle of investment, output growth, and expanding profits in the longer term, in the shorter term, businesses must be prepared to make a substantial investment in technology.

However, there is of course no guarantee that a business that invests in new technologies will necessarily be successful. Some technologies may fail to perform to expectations and may require substantial expenditure to repair problems. In the long term, not all investments in technology will recoup their costs. A business may invest substantially in a new technology, only to find that it is superseded by an even better technology that competitors invest in at a much lower price.

AUSTRALIAN TRADE COMMISSION – INTERNATIONAL INVESTMENT IN AUSTRALIA

In 2021, the total value of foreign investment in Australia was more than $4.1 trillion. The largest sources of foreign investment in Australia are the United States (with $1 trillion or 25 per cent of total foreign investment in 2021), the European Union ($763 billion or 18 per cent) and the United Kingdom (with $719 billion or 17 per cent). Other major equity investors in Australia include Japan and Hong Kong.

The mining and quarrying industries accounted for over $360 billion of foreign direct investment (FDI) in 2021, equivalent to over one-third (34 per cent) of the total FDI stock by industry. Investment in mining and quarrying was worth almost three times the contribution of real estate activities, the industry that has the second-largest share of FDI ($137 billion). The sectors experiencing the most growth in 2021 were real estate activities (up $16 billion) and financial and insurance activities (up $8 billion). The manufacturing sector experienced the largest decline in the value of FDI, down $8 billion in 2021.

Source: ABS *International Investment Position, Australia: Supplementary Statistics* (Cat. no. 5352.0, Table 2 and Table 15)

Examples of new business investment in Australia			
Company	**Country of origin**	**Investment ($)**	**Product / technology**
George Weston Foods	United Kingdom	133 million	Flour mill and food production facilities
Nyrstar	Belgium	400 million	Electrolysis plant
Frucor Suntory	Japan	400 million	Beverage manufacturing facility

Source: Australian Trade and Investment Commission (Austrade) 2022

Types of products

New technologies expand the range of products that may be produced to satisfy market demand. Technological change creates completely new products and industries. Improvements in technology are a major reason why some people regularly update products such as cars, computers and mobile phones. If a new production technology is more flexible, it may make it possible to customise output to the specific wants of individuals. Smaller production runs may become more affordable, thus broadening the range of products and making it easier to satisfy consumer demand.

Ethical decision making in business has also played a role in the production of environmentally conscious products and services, such as organic food, renewable energy and plastic-free packaging. The growth of such markets is primarily driven by ethical consumerism, and businesses are simply making profits by selling goods and services that consumers want to buy, such as organic food, because of its health or taste benefits. Equally, business ethics plays a role in drawing people to run businesses in such markets.

Cloud services

Company intranets and cloud-based services are important business innovations enabled by the internet. Cloud services allow employees to access data on any device, whether they're at home, at work or travelling. Cloud services include:



- work-management services such as work-from-home software, time-management systems and career-planning advice
- software-as-a-service, with access to accounting, human resources and customer relationship management tools
- shared development of work documents that can be simultaneously edited by several people.

Globalisation

Technology is one of the major driving forces behind the globalisation of markets. The development of global money and stock markets, mediated by global computer networks, has made it possible for businesses to attract investment funds from across the world, and for individuals to diversify their investments. The low cost of communication allows information to flow more freely from overseas to consumers and business, allowing them to make better-informed decisions about production and consumption. Businesses are also

better able to access overseas markets for their goods. The overall effect is that technology is facilitating the emergence of a global market economy – a topic that is taken up in detail in the HSC Economics course.

Globalisation has significant implications for ethical decision making in business. Through greater access to foreign markets, businesspeople are able to source products that may be cheaper because they have been produced in an economy with fewer regulations. While it is legal to buy these goods, some of their production processes involve forced labour overseas, very low wages, dangerous work environments and the denial of the right to join a trade union and seek better pay. In a global economy, consumers and non-government organisations are paying greater attention to how goods are produced, and this is placing greater pressure on businesses to improve the practices of their subsidiaries and their suppliers. For example, confectionary business Cadbury has committed to using only fair-trade chocolate in its Australian manufacturing operations. In some instances, new businesses are emerging in sectors where poor environmental and labour standards have been widespread. For example, Australian fashion label Outland Denim has built its brand around its commitment to sustainable production practices.

Environmental sustainability

An important part of modern business is environmental sustainability – a concept that involves minimising pollution and waste, preserving the natural environment, and increasing the use of renewable energy. Businesses may change their activities to make them more environmentally sustainable in response to demands by consumers, new regulations or financial incentives from governments, or because of business ethics that value the natural environment. Efforts to make business more environmentally sustainable are a significant driver of investment in new technologies.

Environmental sustainability is affecting what goods and services are produced and how they are produced, with most major Australian corporations now having environmental policies that outline their strategy to be more environmentally sustainable. Supermarkets have committed to reducing single-use plastics in packaging. Qantas has implemented an environmental sustainability strategy that provides passengers with the option of flying "carbon neutral" – that is, allowing them to pay extra to offset the emissions from flights, and has committed to reaching net zero emissions by 2050. New technology and investment is central to its environmental sustainability strategy – for example, its target to improve fuel efficiency by 1.5 per cent a year requires investment in more efficient aircraft and accelerated development of aviation biofuels.

reviewquestions

1 Outline THREE benefits of technological change for a business.

2 Explain how ethical decision making might affect a firm's employment and what it chooses to produce.

3 Choose an industry that has undergone major changes in the past decade, such as the tourism, manufacturing or agriculture industry, and discuss:

a) How has the industry changed? For example, number of business firms, profit levels, number of customers, etc.

b) What impact has technological change had on businesses in the industry?

c) How has ethical decision making affected what products or services are produced or how they are produced?

chapter summary

1 A **business firm** is an organisation that uses entrepreneurial skills to combine the factors of production to produce goods and services. An **industry** consists of those firms involved in making a similar range of items that usually compete with each other.

2 The firm, like an economy, has to answer the following questions:

- What to produce?
- How much to produce?
- How to produce?

3 In a market economy, the questions of what to produce and how much to produce are determined by the level of consumer demand in the economy for each individual product. The problem of how to produce is typically determined by a comparison between the cost and efficiency of the factors of production in producing that good or service.

4 Although **maximising profits** is a firm's major objective, the firm also has other objectives, including meeting shareholder expectations, increasing market share and maximising growth. In some cases, a firm may not seek to maximise any particular objective, but simply engage in satisficing behaviour.

5 To achieve maximum profit, the firm must combine resources at the lowest cost. Increasing **productivity** and **efficiency** will further reduce costs.

6 Increased profits can be achieved through **specialisation**, where the factors of production are used more intensively to complete a narrow range of tasks in the production process.

7 A firm may reduce costs by increasing its level of output and achieving **economies of scale**. On the other hand, **diseconomies of scale** may result if increasing output levels begin to raise average production costs.

8 Internal economies and diseconomies of scale result from changes in production levels for the individual firm, whereas external economies and diseconomies of scale result from changes in production levels or size of an entire industry.

9 **Investment** and **technological change** can affect the costs and competitiveness of firms by improving production methods, lowering prices, reducing staffing requirements, increasing output, raising profits, expanding product variety and fostering globalisation.

10 **Ethical decision making** influences businesses when questions such as what to produce and how to produce are considered against social and environmental outcomes beyond the objectives of the individual firm.

chapter review

1 Distinguish between the terms *business firm* and *industry.*

2 Explain how, in a market economy, firms select the resources that will be used in production.

3 Discuss what business firms contribute to an entire economy.

4 Outline the different potential goals of a firm. Identify which goal is usually considered to be the most important.

5 Explain why a firm might use a higher proportion of capital than labour in its production process and how this is influenced by productivity.

6 Discuss how a business can use specialisation to increase the productivity of the factors of production.

7 Explain how a long-run average cost curve can be used to explain the concepts of internal economies and diseconomies of scale.

8 Hypothesise TWO factors that could cause a firm to experience:

a) internal diseconomies of scale

b) external economies of scale.

9 Analyse possible ways a firm can keep up with technological change and the possible benefits that can result from innovation.

10 Discuss how ethical decision making may influence the production methods of a firm and improve environmental sustainability. Provide examples of government initiatives and incentives to firms to help assist environmental sustainability.

Extended response

Outline the various possible goals of a business firm. Explain why maximising profits is considered to be the most important goal of most firms. Examine the methods by which a firm may maximise its profits.

TOPIC 3

MARKETS

Focus

The focus of this topic is the operation of markets. The way in which market prices are determined and the need and means available for governments to intervene in markets is highlighted.

Issues

By the end of Topic 3, you will be able to examine the following economic issues:

- Identify how business and governments can use information from the market
- Examine the forces in an economy that tend to cause prices to rise
- Identify reasons why government may intervene in certain markets
- Explain how market solutions can lead to improved efficiency
- Examine the nature of competition in markets characterised by oligopoly and monopoly
- Identify some of the problems that can ensue with a heavy reliance on market solutions in an economy
- Discuss how market forces can lead to environmental problems such as pollution
- Propose alternatives to market solutions.

Skills

Topic 3 skills questions can ask you to:

- graph demand and supply curves and interpret the impact on the equilibrium of changes in market forces
- analyse non-equilibrium market situations and propose solutions to them
- calculate the price elasticity of demand using the total outlay method
- work in groups to investigate and report on the nature of competition within a specific industry.

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Topic 3

Introduction

We saw in Topic 2 that both consumers and businesses are largely motivated by self-interest. In Topic 3, we will look at how markets achieve a compromise between what consumers and businesses want. Compromise occurs whenever firms and individuals come together in a market for a certain good or service. Topic 3 examines how this compromise takes place and how the different priorities of firms and individuals create different market outcomes.

Chapter 6 focuses on the consumer's point of view: the study of consumer demand. Not all consumers are as willing (or as able) to purchase a good or service at a particular price. As a result, levels of demand will vary based on price. Yet we need to understand the reasons why consumers are more or less willing to pay a certain price. Why, for example, are prescription pharmaceuticals more expensive than washing detergents? Is it simply because they cost more to produce, or is it because they are more important to us?

Chapter 7 focuses on the firm's point of view through the study of supply. Businesses make decisions about how much to produce and at what price, depending on market factors. Again, not all firms will produce an equal quantity at an equal price. Therefore, we have to look at what considerations the firms will take into account in deciding pricing and output issues. The type of industry the firm is in will affect these decisions. Consider, for example, the price-cutting effect of Amazon's entry into Australian retail markets for books and electronics, in contrast to the addition of another petrol station in a suburb, which may have no effect on the price you pay for petrol.

Chapter 8 examines the process of how consumers and firms interact in the marketplace to determine a final price and quantity of production. The market balances the interests of both consumers and firms in such a way as to allow exchange to take place. However, it does not always bring about the best outcome. The market is very good at taking both consumer interests and those of the firm into account, but it does not consider other concerns that we might have as individuals or as a society, such as the preservation of the natural environment. Because of this, an examination of the market must include a study of the solutions to the problems of markets as well.

The individual market is in many ways simply a smaller representation of the market economy as a whole. As you read the next chapter, consider how the characteristics you learn here are applicable to the economy as a whole. Are there problems with relying on the market to determine economic outcomes, and if so, can those problems be resolved?

6 Demand

6.1 Factors affecting market demand

6.2 Movements along the demand curve

6.3 Shifts of the demand curve

6.4 Price elasticity of demand

6.5 Factors affecting elasticity of demand

Demand can be defined as the quantity of a particular good or service that consumers are willing and able to purchase at various price levels at a given point in time.

As we saw in chapter 4, the demand of each individual consumer for a particular good or service is referred to as **individual demand**. In the discussion that follows we are going to be concerned with **market demand**, which is the demand by all consumers for a particular good or service. The market demand is obtained by summing the quantities demanded by all individual consumers at the various price levels.

6.1 Factors affecting market demand

The main factors affecting market demand for a particular product are similar in many respects to the factors that influence a consumer's individual demand, which we discussed in chapter 4. There are six main factors:

1. The price of the good or service itself

In considering whether or not to purchase a good, consumers must decide whether or not they are willing to pay the nominated price for the item.

Some goods are considered **necessities** for daily life, and people will need to buy them regardless of price changes. For example, if the price of basic food items increases, people will not significantly reduce their demand for food because they need it for survival. However, they are likely to reduce their demand for other goods, particularly luxury items, if their prices increase.

2. The price of other goods and services

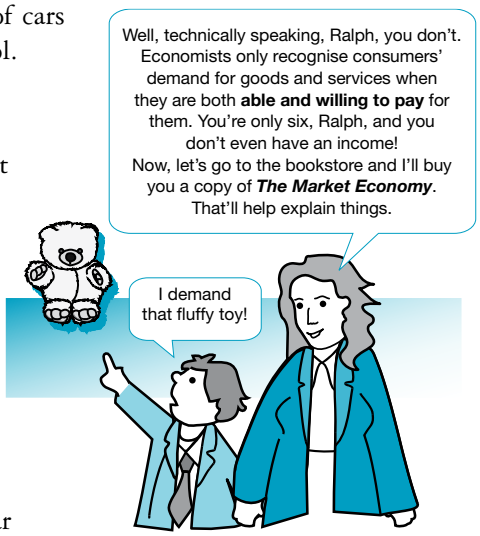
The quantity of a good demanded is also affected by the prices of other goods. Consumers consider some goods to be close **substitutes**, such as butter and margarine or a Netflix or Foxtel Now subscription (consumers are able to substitute one for the other). If the price of margarine rises, one would expect the demand for butter, which is a substitute, to increase.

On the other hand, some goods are considered to be **complements** and consumers tend to purchase them together – such as a Blu-ray player and Blu-ray discs, or a car and petrol.

If the price of cars increases, one would expect a decline in the quantity of cars demanded, as well as a decrease in demand for its complement good – petrol.

3. Expected future prices

The current consumption of a particular good or service will be affected not only by current prices, but also by expected future prices. If consumers expect that the price of a certain good will increase in the near future (for instance, due to the introduction of a new tax), they will bring forward their consumption and increase the current demand for that product. An example of this was the large increase in expenditure on home building in the months preceding the introduction of the Goods and Services Tax in 2000.



4. Changes in consumer tastes and preferences

As consumer tastes change over time, so too will the demand for particular goods. For example, concerns about exposure to COVID-19 recently shifted consumer demand from eat-in restaurants to eat-out delivery services.

Innovation and **technological progress** lead to consumers demanding new and better products at the expense of superseded ones. For example, while most music sales once came from CDs, people now mostly buy music online and download it to their smartphones or computers.

5. The level of income

As **income levels** in the economy change, so too will consumer demand. As people earn higher incomes, they become more willing and able to purchase more goods and services that they could not previously afford. Rising incomes would tend to increase the demand for luxury goods more than the demand for necessities, which are not very sensitive to changes in income levels.

A change in **income distribution** could also change the level of demand for particular goods. For example, a redistribution of income towards higher-income earners would lead to a greater demand for luxury goods.

Income distribution refers to the way in which a economy's income is spread among the members of different social and socio-economic groups.

Consumer expectations about future income levels and prospects will influence their decisions to buy certain types of goods. For example, consumers would be less likely to buy expensive luxury goods if the economic outlook was uncertain and they feared that they might lose their jobs in the near future.

6. The size of the population and its age distribution

Population size will affect the total quantity of goods demanded, while age distribution will affect the type of goods demanded. For instance, with Australia's ageing population, one would expect higher demand for retirement villages, aged care services and other goods and services required by older people.

Sometimes the behaviour of other consumers can influence an individual's decision to demand a good or service or not. If one person's demand is affected by the number of other people who have purchased the good, there is a network externality.

A positive network externality – known as the **bandwagon effect** – occurs when people demand a good because almost everyone else has one, such as children's toys and fashionable clothing.

A negative network externality – known as the **snob effect** – occurs where demand for a good is higher the fewer the people who own it, such as rare works of art and limited-edition sports cars.

The *ceteris paribus* assumption

Ceteris paribus is an assumption used in economics to isolate the relationship between two economic variables. It is a Latin phrase that means "other things being equal", or assuming that nothing else changes.

In the analysis that follows, we are going to adopt a number of simplifying assumptions to help us understand the nature of market demand. In the real world, several of the above factors often influence demand simultaneously, but it would be a difficult task if we had to analyse all of them at once. To avoid this, we focus on one factor at a time (for example, the price of the good) and analyse the response of demand to a change in price, while we assume that **all the other factors that could affect demand remain constant**. Obviously, we could adopt the same approach in examining each of the other factors that influence demand. We call this simplifying procedure the *ceteris paribus* assumption (*ceteris paribus* is a Latin phrase that means "other things being equal", or assuming that nothing else changes). The *ceteris paribus* assumption is often used in economic analysis in order to isolate relationships between particular variables. For example, we might say that if the price of a good falls, then *ceteris paribus* sales will increase.

reviewquestions

1. Identify the impact of a rise in the price of staplers on the demand for:
   - staplers
   - staples
   - paper clips.
2. State THREE examples of goods for which consumer demand has decreased because of changes in consumer tastes and preferences.
3. Explain the likely effect on demand for cars if the price of cars was expected to rise in three months' time.

6.2 Movements along the demand curve

The most obvious factor that influences the demand for a good is its price. We will therefore begin our analysis by looking at how the demand for a good responds to price changes.

The demand schedule

Making the assumption that all other factors (apart from price) that could influence demand remain constant, we can construct a **demand schedule**. This is a table showing the quantity of a good that will be demanded over a range of prices, at a given point in time. Figure 6.1 shows the weekly market demand for shoes over a given price range. The market demand schedule would be derived from the summation of all individual consumer demand schedules.

The demand schedule in figure 6.1 demonstrates the typical relationship between price and quantity demanded, sometimes referred to as the **law of demand**. The law of demand states that the quantity demanded by consumers falls as price rises. When the price of a product is reduced, consumers will buy more of that product – first, because they can afford to buy more of the product, and second, because the product is cheaper compared with all other goods and services. Therefore, more people are willing and able to buy the good at a lower price.

Price ($)	Quantity demanded (pair of shoes)
20	200
40	160
60	120
80	80
100	40

Figure 6.1 – Market demand schedule for shoes

There are occasional exceptions to this rule. For example, some high-priced luxury items, such as eating out at a fashionable restaurant, may experience a rise in the quantity demanded as their prices rise – because they become a more sought-after status symbol.

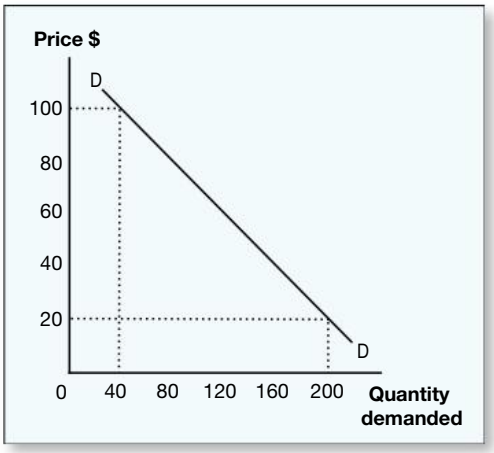


Figure 6.2 – The demand curve for shoes

The demand curve

We can graph the data presented in the demand schedule in order to get a graphical presentation, known as the **demand curve**. This is shown in figure 6.2, where price has been plotted on the vertical axis and quantity demanded on the horizontal axis.

A typical demand curve slopes **downwards from left to right**, illustrating the same relationship between price and demand as stated in the law of demand – as the price of a product increases, *ceteris paribus*, consumers will demand less of that product. For example, at a price of $20, 200 pairs of shoes are demanded, whereas at a price of $100, the market demand is only 40 pairs of shoes.

Movements along the demand curve

In fact, we can say that, assuming all other factors remain constant, any change in the price of a good will lead to a change in the quantity demanded in the opposite direction to the price change. What we get as a result of price changes is movement **along** the demand curve, which we refer to as **expansions** and **contractions** in demand (shown in figure 6.3).

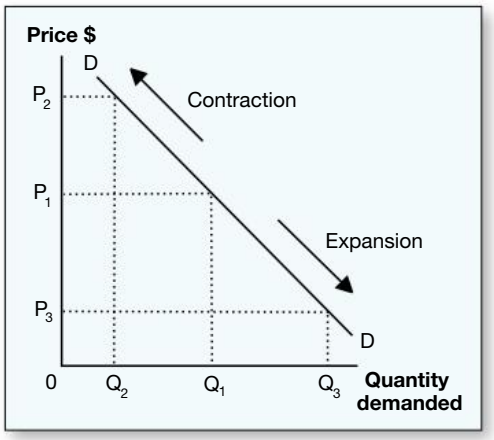


Figure 6.3 – Expansions and contractions in demand

From the diagram:

- A **contraction** in demand occurs when an increase in price from $0P_1$ to $0P_2$ causes the quantity demanded to fall from $0Q_1$ to $0Q_2$.
- An **expansion** in demand occurs when a decrease in price from $0P_1$ to $0P_3$ causes the quantity demanded to rise from $0Q_1$ to $0Q_3$.

Only **price** changes for the good itself will lead to movements along the existing demand curve by way of expansions and contractions in demand.

Contraction of demand is when an increase in the price of a good or service causes a decrease in quantity demanded. It is shown by an upward movement along the demand curve.

Expansion of demand is when a decrease in the price of a good or service causes an increase in quantity demanded. It is shown by a downward movement along the demand curve.

reviewquestions

1 Explain why the demand curve slopes downward from left to right.

2 Describe the movements along the demand curve that result from an increase or decrease in price.

6.3 Shifts of the demand curve

Having looked at the effect of movements in price, we can now turn our attention to the other factors that can influence demand. Again, when we consider the effects of a change in one of these factors we are conducting a *ceteris paribus* analysis; that is, we are assuming that all factors, other than the one being considered, remain constant.

A change in any one of the other factors that can influence demand will lead to a **shift** of the demand curve. These shifts are referred to as **increases** and **decreases** in demand, and are brought about by changes in the other factors affecting consumer demand, and not price changes.

Increases in demand

A movement in the demand curve to the **right** is called an **increase in demand**. This is shown in figure 6.4. Because the change in demand is not due to a price change we can make the following observations:

First, an increase in demand means that consumers are willing and able to buy more of the product at each possible price than before. At price $0P_1$, consumers originally demanded $0Q_1$ goods. However, following an increase in demand (shifting the demand curve to the right from D_1D_1 to D_2D_2) consumers now demand more of the product ($0Q_2$) at the same price.

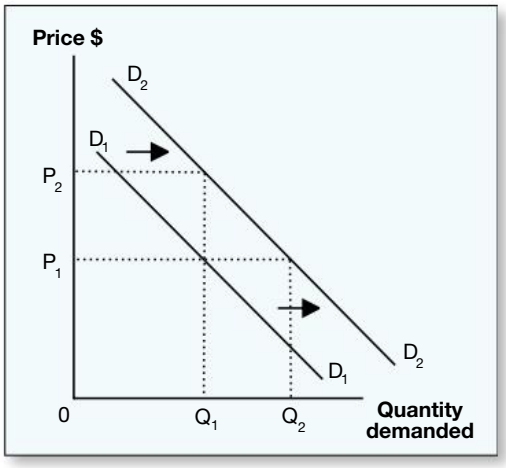


Figure 6.4 – Increase in demand

Second, an increase in demand also means that consumers are willing to buy a given quantity at a higher price than before. Consumers were originally willing to pay $0P_1$ to obtain a quantity of $0Q_1$ of the product. However, following the increase in demand (shifting the demand curve to the right from D_1D_1 to D_2D_2) consumers are now prepared to purchase the same quantity ($0Q_1$) of the product at a higher price ($0P_2$).

Decreases in demand

A decrease in demand (figure 6.5) means that consumers are willing and able to buy less of the product at each possible price than before. At price $0P_1$ consumers originally demanded $0Q_1$. However, following a decrease in demand (which shifts the demand curve to the left, from D_1D_1 to D_2D_2) consumers now demand less of the product ($0Q_2$) at the same price.

A decrease in demand also means that consumers are willing and able to buy a given quantity at a lower price than before. Originally, consumers were prepared to pay $0P_2$ to obtain quantity $0Q_2$ of the product.

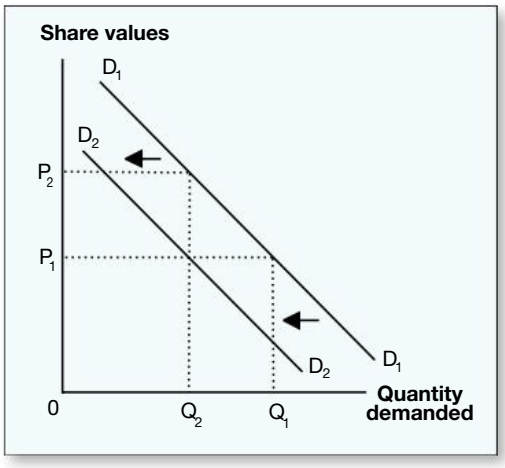


Figure 6.5 – Decrease in demand

However, following the decrease in demand (the shift of the demand curve to the left from D_1D_1 to D_2D_2), consumers are only prepared to pay a lower price ($0P_1$) in order to purchase the same quantity ($0Q_2$) of the product.

The main factors that cause shifts in the demand curve

Any factor, other than a price change, that causes the demand for a good to be stronger or weaker than it was previously will cause a shift in the demand curve.

We have already considered the factors that affect market demand. Changes in any of these factors, apart from changes in the price of the good itself, can cause shifts in the demand curve.

FACTORS THAT MAY CAUSE AN *INCREASE* IN DEMAND

Taking the example of the market for shoes, an increase in demand might be caused by the following factors:

Prices of other goods and services

- A rise in the price of substitute goods will cause consumers to demand more shoes. If the price of thongs and sandals increased, more people would be willing to buy shoes (assuming the price of shoes remained the same).
- A fall in the price of a complementary good may also increase demand (although in the case of shoes, it is likely that shoe prices would influence demand for complements such as shoelaces and shoe polish, but not vice versa).

Expected future prices

- Consumer spending is influenced by expectations about future price trends. If consumers expect that the price of new shoes will increase because of the imposition of a new government tax, they will bring forward their purchases and increase the current demand for new shoes.

Consumer tastes and preferences

- If a particular type of shoe becomes more fashionable, more consumers would want to buy more of those shoes at every price level. For example, a successful Olympic athlete promoting a new type of running shoe might increase consumer demand across the world.
- New technology that makes running shoes lighter and more shock-absorbing may increase the demand for such shoes.

Consumer incomes

- A rise in the level of income would mean that consumers can afford to buy more shoes at the same price than they could before. As a result, the demand for all shoes, apart from perhaps very low-quality ones, would tend to increase. People might simply build up their shoe collection.
- A change in income distribution that is favourable to higher-income earners might increase the demand for high-fashion Italian shoes.
- Improved consumer expectations about future income and employment prospects would increase demand for shoes.

The size and age distribution of the population

- An increase in the size of the population will increase the demand for all shoes, while a change in its age distribution will lead to an increase in demand for certain types of shoes. For example, an ageing population would increase the demand for Homyped shoes.

FACTORS THAT MAY CAUSE A *DECREASE* IN DEMAND

The factors causing a decrease in demand are basically the opposite to those causing an increase.

Prices of other goods and services

- A fall in the price of substitute goods (in our example of shoes, items such as sandals or thongs)
- A rise in the price of complementary goods.

Expected future prices

- An expected decline in the price of the product in the future (perhaps due to lower tax on shoes)

Consumer tastes and preferences

- A product such as white tennis shoes becoming less fashionable
- Technological progress that causes a good to be superseded (such as the move away from simple rubber thongs).

Consumer incomes

- A fall in the general level of income
- A change in income distribution less favourable to demand (such as a crash in financial markets affecting wealthier people and reducing demand for shoes made by expensive luxury brands such as Prada)
- Deteriorating consumer expectations about future economic prospects (perhaps due to a recession being experienced by our major trading partners).

The size and age distribution of the population

- A decrease in the overall size of the population and a change in its age distribution (such as a decrease in the birth rate bringing about a decline in demand for baby shoes)

reviewquestions

1. Distinguish between an expansion of demand and an increase in demand.
2. Identify the change in demand for HD TVs caused by each of the following:
   - a fall in the price of HD TVs
   - the introduction of 8K Ultra HD TVs, with better screen resolution
   - an expectation that TV prices will fall
   - the launch of the low-cost Disney Plus streaming service, offering unlimited access to 4K video content.
3. Outline possible causes of a decrease in demand for each of the following goods and services:
   - fixed-line telephone services
   - *The Australian* daily newspaper
   - long-distance air travel.

6.4 Price elasticity of demand

We have already discussed how changes in the price of a good can bring about changes in the quantity demanded. We will now take this one step further and look at *the extent* of these changes in demand that result from price changes.

The meaning of price elasticity of demand

Price elasticity of demand measures the responsiveness of quantity demanded to a change in price. It is calculated as the percentage change in quantity demanded divided by the percentage change in price.

The **price elasticity of demand** measures the responsiveness or sensitivity of the quantity demanded of a particular product to changes in its price. As a figure, the price elasticity of demand shows the percentage change in the quantity of a good demanded resulting from a one per cent increase in its price. For example, we know that for most goods, a fall in price will cause an increase in quantity demanded, but if that increase in quantity demanded is proportionately greater than the fall in price, then we would say that demand is very responsive to a price change, and thus demand is said to be **relatively elastic**. The opposite situation – a less than proportionate change in quantity demanded would indicate **relatively inelastic** demand. If the proportionate change in quantity demanded is the same as the proportionate change in price, demand is said to be **unit elastic**.

Elastic demand	A strong response to a change in price
Unit elastic demand	A proportional response to a price change (total amount spent by consumers remains unchanged)
Inelastic demand	A weak response to a price change

The importance of price elasticity of demand

A knowledge of price elasticity of demand is important to business firms and to the government. **Business firms** need to understand price elasticity of demand for the goods they sell in order to decide on their optimal pricing strategy. If demand was relatively elastic, the firm would know that lowering the price would greatly expand the volume of sales, thus increasing total revenue. On the other hand, if demand was relatively inelastic, the firm could increase the price, which would also lead to an increase in total revenue, since the reduction in sales would be less than the price increase. Awareness of the elasticity of demand in different price ranges is important for determining the best pricing strategy for a firm and in deciding whether or not to change prices. To that extent, businesses often engage in statistical market research in order to determine consumer preferences, and in particular the price elasticity of the demand for their product.

The **government** needs to understand price elasticity of demand when pricing the goods and services that it provides for the community (such as public transport fares). Further, it also needs to be able to predict the effects of changes in the level of any indirect taxes, such as sales taxes, excise duties and special levies that it imposes on goods such as alcohol, tobacco products and petrol. These taxes and charges raise the price of the goods affected, and the government needs to be able to gauge the responsiveness of demand in order to accurately estimate the amount of revenue they will raise.

This relationship explains why governments tend to charge indirect taxes, such as excise duties, on those goods that have a relatively inelastic demand, including alcohol, petrol and tobacco products. On the other hand, if the government were to impose an excise duty on a good for which demand is relatively price elastic, the increase in price caused by the tax would lead to a more than proportionate drop in sales. Because the introduction of the excise tax results in reduced sales, governments may raise a lower-than-expected amount of revenue when they impose an excise tax on a good that has a higher price elasticity.

Measuring price elasticity of demand

The **total outlay method** is a way to calculate the price elasticity of demand by looking at the effect of changes in price on the revenue earned by the producer. If price and revenue move in the same direction, demand is inelastic; if price and revenue move in the opposite direction, demand is elastic; and if revenue remains unchanged in response to a price change, demand is unit elastic.

There are a number of ways of determining the price elasticity of demand. A simple way of measuring the price elasticity is to look at the effect of changes in price on the total revenue earned by the producer, known as the **total outlay method**. The total outlay method is the simplest way of telling whether demand is relatively elastic, relatively inelastic or unitary elastic to price changes.

The information contained in figure 6.6 can be used to help demonstrate how price elasticity of demand can be determined using this method. Total outlay is found by multiplying the price by the quantity that would be demanded at that price. In effect, the total outlay (or total expenditure) by consumers on a certain product is equivalent to the total revenue sellers of the product would receive at that price.

Price $	Quantity demanded (units)	Total outlay (price x quantity)	Elasticity
5	50	250	inelastic
6	45	270	inelastic
7	40	280	unit elastic
8	35	280	elastic
9	30	270	elastic
10	25	250	

Figure 6.6 – Measuring the elasticity of demand: total outlay method

If total outlay moves in the same direction as the price change, demand in that price range would be relatively inelastic:

- At a price of $5, consumers demand 50 units, therefore total outlay is $250.
- When the price rises to $6, demand falls to 45 units, and total outlay increases to $270.
- Total outlay has moved in the same direction as the price change – the price increase would lead to an increase in total revenue for firms. Therefore, demand is said to be relatively inelastic over this price range.

If total outlay moves in the opposite direction to the price change, demand in that price range would be relatively elastic:

- At a price of $8, consumers demand 35 units and therefore total outlay is $280.
- When the price rises to $9, demand falls to 30 units, and total outlay decreases to $270.
- Total outlay has moved in the opposite direction to the price change – the quantity demanded is highly responsive to price changes. Therefore, demand is said to be relatively elastic over this price range.

If total outlay remains the same following a price change, then demand would be unit elastic:

- At a price of $7, consumers demand 40 units, and therefore total outlay is $280.
- When the price rises to $8, demand falls to 35 units, but total outlay remains the same at $280.
- Total outlay has remained the same and therefore demand has unit elasticity over this price range.

Elasticity and total outlays

Price ↑ Revenue ↑ = Inelastic

Price ↑ Revenue ↓ = Elastic

Price ↑ Revenue – = Unit elastic

Price elasticity and the slope of a demand curve

The slope of the demand curve should not be used as a measure of the price elasticity of demand. In fact, as the previous example demonstrates, even with a linear (or straight) demand curve, which has a constant slope, the price elasticity of demand will vary as one moves down the curve. In the upper part of the curve (where prices are high) demand will be relatively elastic (quantity demanded is highly responsive to price changes), whereas at low price levels, demand will be relatively inelastic.

We can illustrate this point in figure 6.7 by showing three demand curves with the same slope, but with different positions from the origin.

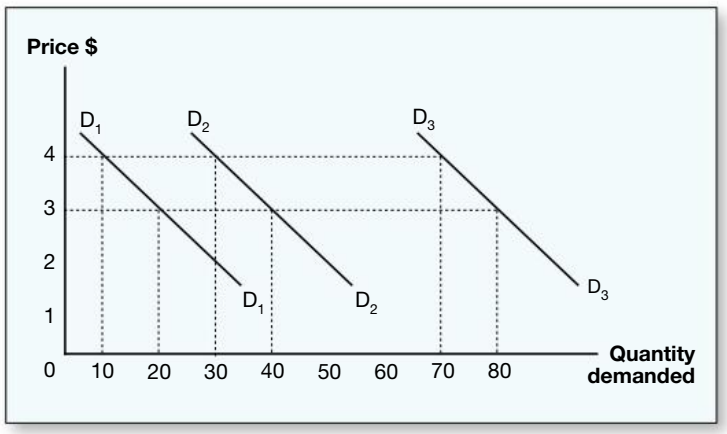


Figure 6.7 – The slope of the demand curve and elasticity

Using the total outlay method for determining elasticity of demand, figure 6.7 reveals:

- Consider demand curve D_1D_1. When the price falls from \$4 to \$3, the quantity demanded rises from 10 to 20, causing total outlay to increase from \$40 to \$60. As total outlay moves in the opposite direction to the price change, demand is relatively elastic.
- Consider demand curve D_2D_2. When the price falls from \$4 to \$3, the quantity demanded rises from 30 to 40, but total outlay remains the same at \$120. Because total outlay remains the same following the price change, demand has unit elasticity.
- Consider demand curve D_3D_3. When the price falls from \$4 to \$3, the quantity demanded rises from 70 to 80, causing total outlay to fall from \$280 to \$240. As total outlay moves in the same direction as the price change, demand is relatively inelastic.

We can also recognise two extremes of elasticity of demand – **perfectly elastic demand** and **perfectly inelastic demand**. These two extreme circumstances are the only ones where looking at the slope of the demand curve is sufficient to determine the price elasticity of demand through the entire curve.

Perfectly elastic demand

When demand is perfectly elastic, the demand curve is a horizontal straight line as shown in figure 6.8 on page 90.

When demand is perfectly elastic, consumers will demand an infinite (unlimited) quantity at a certain price, but nothing at all at a price above this. As no such situation exists in reality, this situation can be regarded as merely theoretical.

However, when we consider the situation of an **individual seller**, the demand curve that he or she is facing may be considered almost perfectly elastic under certain circumstances. If the individual seller were in a perfectly competitive market – a market situation with many buyers and sellers, all selling a product that was basically the same – then the demand

curve faced by the individual seller would be almost perfectly elastic. No individual seller would be able to charge a higher price, since he or she would lose all customers to the others selling identical products.

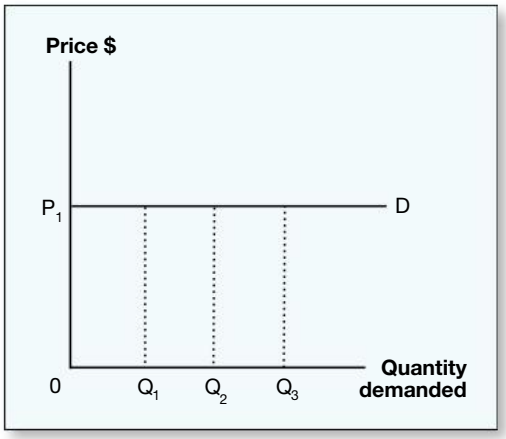


Figure 6.8 – Perfectly elastic demand

Consider the following example. An apple grower sells apples, along with many other apple growers, at a fruit and vegetable market. The grower can sell the entire load at the going market price. If the grower tries to sell at a price above that of the other growers, no one will buy the apples. No grower will sell apples at a price below the other growers, because they can sell them all at the higher market price and make more money. Therefore, from the point of view of the individual seller, the demand curve for the product is perfectly elastic at the going market price.

Perfectly inelastic demand

Perfectly inelastic demand is where consumers are willing to pay any price in order to obtain a given quantity of a good or service. This situation can be represented by a vertical demand curve.

When demand is perfectly inelastic, the demand curve is a vertical straight line. This is shown in figure 6.9, which shows that consumers are willing to pay any price in order to obtain a given quantity of a good. Again, it would be very difficult to satisfy these conditions for any market as a whole. It could, however, apply to some products over a given range of prices. For example, persons with a life-threatening disease that can only be treated with a particular drug would be willing to pay almost any price to obtain it. It is often argued that governments should regulate such markets, in order to prevent the exploitation of vulnerable consumers.



Figure 6.9 – Perfectly inelastic demand

reviewquestions

1 Describe what is meant by *relatively elastic demand* and *relatively inelastic demand*.
2 Identify ONE good or service that might be close to perfectly elastic demand and ONE good or service that might be close to perfectly inelastic demand.

6.5 Factors affecting elasticity of demand

The price elasticity of demand for any good can be affected by one or more of five main factors:

Whether the good is a luxury or a necessity

Goods and services regarded as necessities for daily life, such as bread or milk, have a relatively inelastic demand – even if there is an increase in price, the quantity demanded will not fall to a great extent. On the other hand, price elasticity of demand would be expected to be higher for products that may be regarded as luxuries, such as dining out in expensive restaurants.

Whether the good has any close substitutes

Goods and services with close substitutes, such as different brands of breakfast cereal, tend to have highly elastic demand. If the price of one brand of cereal increases, then demand is likely to contract more than proportionately, since people would simply switch to another brand that they perceive to be equally good. Goods and services with few or no close substitutes, such as the local water supply, would have an inelastic demand – even if price increases, people cannot switch to another product, so demand will not fall greatly.

The expenditure on the product as a proportion of income

Goods and services that take up a very small proportion of a person's income, such as disposable lighters, cheap pens or chewing gum, would have a lower price elasticity of demand, whereas the demand for more expensive items would tend to be more elastic. For example, most people would not refuse to buy chewing gum because its price increased by 10 per cent, but they may well decide not to buy a new car that has had a 10 per cent price rise.

The length of time subsequent to a price change

When the price of a certain product increases, the quantity demanded may not initially respond greatly, as consumers take time to become aware and adjust to the price change. If the price has increased, consumers will take some time to seek out alternatives, and in particular, identify substitute products, which will make demand more responsive. Similarly, if the price of the product has fallen, it will take time for consumers to become aware that it is now relatively cheaper compared to its substitutes. They switch towards the cheaper product and demand becomes more responsive.

The ways that consumers respond to a price change may also depend on whether the good in question is durable or not. After an initial price change, durable goods tend to have a more elastic demand than non-durable goods. For example, a rise in price of new cars would initially tend to encourage people to repair rather than replace their existing cars, so demand would be highly elastic. With time, however, the elasticity would decline, as old cars have to be replaced at some point.

Whether a good is habit-forming (addictive) or not

Goods that tend to be habit-forming, like cigarettes and alcoholic beverages, tend to have a relatively inelastic demand. People who regularly drink alcohol and smoke cigarettes tend to continue with the same habits, even following price increases.

reviewquestions

1 Explain how the elasticity of demand changes over time.

2 Outline THREE characteristics of a product with relatively inelastic demand.

3 Considering the factors influencing the price elasticity of demand, analyse the elasticity for the following goods and services:

- laptop computers
- drinking water
- petrol
- hotel accommodation.

chapter summary

1. **Demand** is the quantity of a particular good or service that consumers are willing and able to purchase at various price levels, at a given point in time.
2. The **law of demand** states that as the price of a good increases, the quantity demanded will decrease.
3. The demand for a good depends on a number of factors: the price of the good itself, the price of other goods and services, expected future prices, consumer preferences, level of income, size of the population and age distribution.
4. In economic analysis, the ***ceteris paribus* assumption** states that all factors (apart from the one under analysis) remain constant.
5. Movements along the demand curve are caused by changes in price and are called **expansions** or **contractions** in demand. All other factors cause shifts of the demand curve. These are called an **increase** or **decrease** in demand.
6. The **price elasticity of demand** measures the responsiveness or sensitivity of quantity demanded due to changes in price. The more elastic the demand, the greater its response to a change in price.
7. Demand elasticity varies from **perfectly elastic** (a change in price will totally eliminate demand for the good), to **perfectly inelastic** (a change in price has no effect on quantity demanded).
8. Business firms and governments need to understand price elasticity of demand so they can set prices and taxes that maximise their respective revenues.
9. The **total outlay method** measures price elasticity of demand by examining changes in the total revenue earned by the producer. If price increases and total outlay also increases, this is called inelastic demand. If price increases and total outlay decreases, this is called elastic demand. If price changes have no impact on total outlay, this is called unit elastic demand.
10. Factors that affect the elasticity of demand include the type of good, the existence of substitutes, the proportion of income spent on the good, the length of time since a price change and whether the product is habit forming or addictive.

chapter review

1 Define what is meant by *market demand*.

2 Explain the meaning and cause of:

a) a contraction in demand

b) an expansion in demand.

3 From the following demand schedule, plot the market demand curve for apples, and explain the relationship that exists between price and the quantity demanded.

Price	Quantity demanded (hundreds of kg)
1	175
2	140
3	105
4	70
5	35

4 Explain (using diagrams) what is meant by:

a) an increase in demand

b) a decrease in demand.

5 Draw a two-column table. On one side, show the factors that can cause an increase in demand, and on the other, the factors that can cause a decrease.

6 Explain what is meant by *price elasticity of demand*.

7 When using the total outlay method for measuring elasticity of demand, state the relationship that must exist between a price change and total outlay when:

a) demand is elastic

b) demand is inelastic

c) demand is unit elastic.

8 Use a diagram to demonstrate:

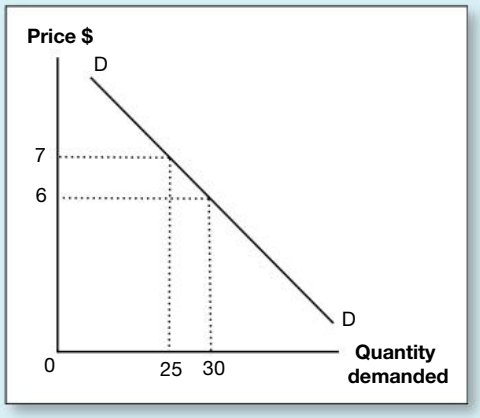
a) perfectly elastic demand

b) perfectly inelastic demand.

Give examples of market situations that might satisfy each condition.

chapterreview

9 Consider the following demand curve:



Using the total outlay method, determine the elasticity of demand over the price range $6 to $7. Explain your answer.

10 Draw a table with two columns as follows, and summarise the factors affecting price elasticity of demand.

Characteristics of goods with **elastic** demand	Characteristics of goods with **inelastic** demand

Extended response

Explain what is meant by *price elasticity of demand*. Describe how we can measure the price elasticity of demand. Explain why an understanding of elasticity of demand is important to both business firms and the government.

7 Supply

7.1 Factors affecting market supply

7.2 Movements along the supply curve

7.3 Shifts of the supply curve

7.4 Price elasticity of supply

7.5 Factors affecting elasticity of supply

In chapter 6, we studied the factors influencing consumer preferences and the determination of market demand. In this chapter, our focus shifts to the other side of the market exchange relating to production – the supply of goods and services by business firms. In the modern market economy, firms are the core unit of production that determine how the demands of the household sector are met. Just as the examination of demand focused on consumer behaviour, our examination of supply will focus on the behaviour of firms.

Supply is the quantity of a good or service that all firms in a particular industry are willing and able to offer for sale at different price levels, at a given point in time. This essentially represents the **market supply** of a particular product, which is the sum of the **individual firm supplies** of individual producers at the various price levels.

7.1 Factors affecting market supply

The main factors affecting market supply include:

The price of the good or service itself

The market price of the good or service will influence the producer's ability and willingness to supply it. For example, if the price were too low, some producers would not be able to cover their costs of production and would not supply the item.

The expectations of suppliers about the **future price of a good or service** also influences the level of supply. If the supplier believes the price will rise in the future, perhaps due to an increase in demand resulting from changing consumer tastes, supply of the good or service will increase. This is due to the possibility of increased profits arising from supply of the good. The reverse is true if future prices are expected to fall.

The price of other goods or services

The quantity of a good or service supplied at any time will be affected by the prices of other goods and services. For example, if the price of good X remained the same, while the price of good Y increased, it would become more profitable to produce good Y. Therefore, firms may be less willing to supply good X and more willing to start producing and supplying good Y.

The state of technology

Improvements in technology lower production costs and allow more firms to supply more goods at a given price. They also allow firms to adjust production runs to quickly accommodate changing demand patterns. For example, the use of automated production-line techniques in the motor vehicle industry has greatly reduced production costs and enabled producers to increase supply.



Changes in the cost of factors of production

The costs of factors of production are among the most important influences on the ability of firms to supply products in the marketplace. Any fall in the cost of factors of production would allow firms to supply more of a particular good, whereas any rise in factor costs would make it more difficult for firms to maintain present supply. A rise in the price of a factor of production would often lead to a decrease in supply of those goods and services whose production was heavily reliant on that factor input.

For example, if the major Hollywood production studios that supply cinemas with movies decided to increase their prices sharply, they might force smaller, less profitable cinemas out of business. This would lower market supply of movies to consumers, since there would be fewer places to go to see movies.

The quantity of the good available

The actual quantity of the good available is an overall limiting factor that affects supply. For example, the supply of original paintings by the late Australian artist Arthur Boyd is limited. Similarly, the quantity of the rare metal iridium that can be supplied is ultimately determined by the known reserves of iridium.

In many industries, the **number of suppliers** also affects the quantity of the good or service available. As more suppliers enter an industry, supply increases, and vice versa. For example, the supply of electric vehicles available on the market has gradually increased as more suppliers have entered this market.

Climatic and seasonal influence

Changes in climatic conditions and seasons will obviously affect agricultural production. For example, an extended period of drought would cause the supply of most agricultural products to decline.

reviewquestions

1 Outline how an increase in the level of wages in the economy might affect market supply.

2 Describe TWO factors that might cause an increase in market supply.

7.2 Movements along the supply curve

In the analysis that follows, we will examine the response of supply to price changes, while assuming that all the other possible influences remain constant.

Changes in price: movements along the supply curve

Assuming that all other factors that could influence supply, apart from price, remain constant, we can construct a **supply schedule**. It shows the quantity of a good that will be supplied over a range of prices, at a given point in time. Figure 7.1 shows the weekly market supply of shoes over a given price range. The market supply schedule would be derived from the summation of all the supply schedules of the individual firms that operate in the industry. The supply schedule demonstrates the relationship between price and quantity supplied as stated by the law of supply. According to the **law of supply**, as the price of a certain product rises, the quantity supplied by producers will rise. This occurs for two reasons:

Price ($)	Quantity supplied (pair of shoes)
100	200
80	160
60	120
40	80
20	40

Figure 7.1 – Market supply schedule: shoes

- For firms already in the industry, producing the good becomes more profitable, so they increase their production of that good.
- The higher price also makes producing this good more profitable for other businesses, which will attract new firms to the industry. This will also cause an increase in the quantity supplied.

The supply curve

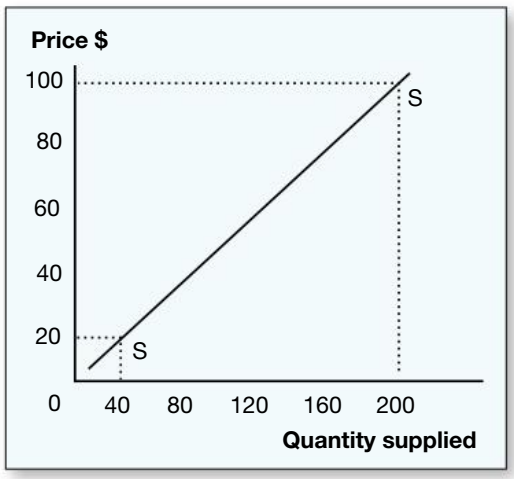


Figure 7.2 – The supply curve: shoes

The **supply curve** is the graphical representation of the supply schedule, depicted in figure 7.2, where we plot price on the vertical axis and quantity supplied on the horizontal axis.

The typical supply curve slopes **upwards from left to right**, portraying the same relationship between price and quantity supplied as the law of supply (more is supplied at a higher price and less at a lower price). For example, at price $20 only 40 pairs of shoes are supplied, but at price $100, suppliers are willing and able to put 200 pairs of shoes on the market.

Assuming all other factors remain constant, any change in the price of a good will lead to a change in the quantity supplied in the same direction as the price change.

As a result of a price change, there is movement along the supply curve, which we refer to as **expansions** and **contractions** of supply. These are shown in figure 7.3 overleaf.

Contraction of supply is when a decrease in the price of a good or service causes a decrease in quantity supplied. It is shown by a downward movement along the supply curve.

Expansion of supply is when an increase in the price of a good or service causes an increase in quantity supplied. It is shown by an upward movement along the supply curve.

From the diagram:

- A **contraction** in supply occurs when a decrease in price from $0P_1$ to $0P_2$ causes the quantity supplied to fall from $0Q_1$ to $0Q_2$.
- An **expansion** in supply occurs when an increase in price from $0P_1$ to $0P_3$ causes the quantity supplied to rise from $0Q_1$ to $0Q_3$.

Only a change in the price of the good itself will lead to movements along the existing supply curve (that is, expansions and contractions in supply).

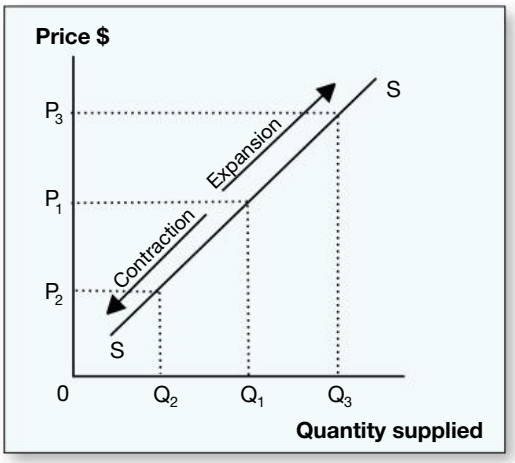


Figure 7.3 – Expansions and contractions in supply

reviewquestions

1 Explain why the supply curve slopes upwards from left to right.

2 Using a diagram, identify the movement along the supply curve caused by:

a) a decrease in price
b) an increase in quantity supplied
c) an increase in price.

7.3 Shifts of the supply curve

Having looked at price, we can now turn our attention to the other factors that can influence supply. Again, when we consider the effect of a change in one of these factors, we use the *ceteris paribus* assumption. In other words, we assume that all other factors that could influence supply, apart from the one under consideration, remain constant.

A change in any one of the factors, other than the price of the good itself, will lead to a shift of the entire supply curve for the product. These shifts are referred to as **increases** and **decreases** in supply and are brought about by changes in conditions for the business firm, and not price changes.

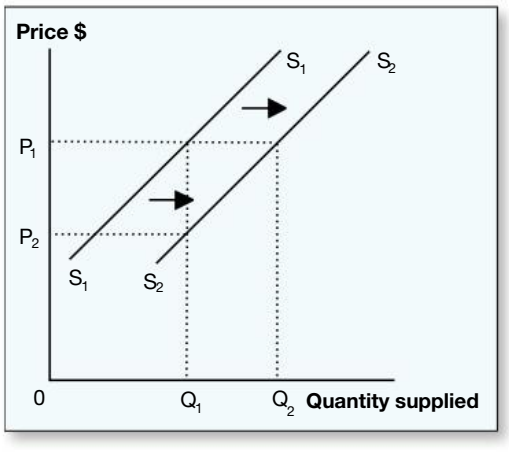


Figure 7.4 – Increase in supply

Increases in supply

A movement in the supply curve to the **right** is called an **increase in supply**. This is shown in figure 7.4.

Because the change in supply is not due to a price change, we can make the following observations:

- First, an increase in supply means that firms are willing and able to supply more of a product at each price level than before. At price $0P_1$, firms originally supplied $0Q_1$ goods. However, following an increase in supply (shift in the supply curve from S_1S_1 to S_2S_2) firms can now supply more of the good ($0Q_2$) at the same price.

- Second, an increase in supply also means that firms are willing to supply a given quantity at a lower price than before. Originally, firms were only willing to supply quantity $0Q_1$ at the price $0P_1$. However, following the increase in supply, firms are now prepared to supply the same quantity $0Q_1$ at the lower price $0P_2$.

Decreases in supply

Movement in the supply curve to the **left** is called a **decrease in supply**. This is shown in figure 7.5.

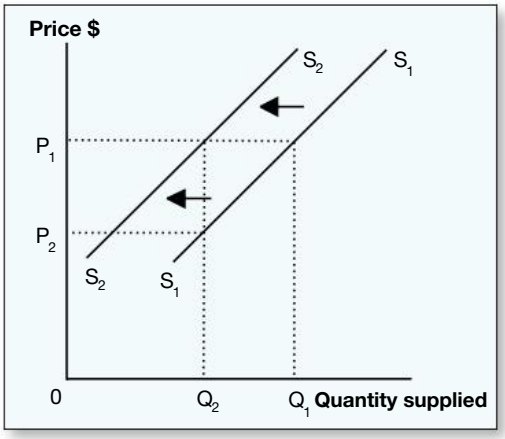


Figure 7.5 – Decrease in supply

Again, because the change in supply is not due to a price change, we can make the following observations:

- First, a decrease in supply means that firms are willing and able to supply less of a good at each price level than before. At price $0P_1$, firms originally supplied the quantity $0Q_1$ of the product. However, following the decrease in supply (shift in the supply curve from S_1S_1 to S_2S_2), firms now supply less of the product ($0Q_2$) at the same price.
- Second, a decrease in supply also means that firms are only willing and able to supply a given quantity at a higher price than before. Originally, firms were supplying a quantity $0Q_2$ at the lower price $0P_2$. However, following the decrease in supply, firms are now only prepared to supply $0Q_2$ at the higher price of $0P_1$.

Factors that cause shifts in the supply curve

Any factor other than a change in the price of the product itself that will cause the supply of a good to be greater or less than it was previously will cause a shift in the supply curve. These can be briefly summarised as follows:

FACTORS CAUSING AN INCREASE OR DECREASE IN SUPPLY

Increase

- A fall in the price of other goods, which makes production of other goods less profitable
- An improvement in the technology used in the production process
- A fall in the cost of factors of production, such as labour or capital
- An increase in the quantity of resources available to be used in production
- Climatic conditions or seasonal changes that are more favourable to the production process.

Decrease

- A rise in the price of other goods
- A certain technology no longer being available (which is highly unlikely)
- A rise in the cost of factors of production
- A decrease in the quantity of resources available
- Regulations relating to health and safety (for example COVID-19 social distancing rules restricting the number of people allowed inside premises such as a cinema or restaurant at any one time)
- Climatic conditions or seasonal changes that are less favourable to the production of a particular good.

reviewquestions

1 Distinguish between an increase in supply and an expansion in supply.
2 Outline THREE factors that could cause a decrease in supply.
3 Outline the likely effect of the following on market supply:
a) an increase in the price of substitute goods
b) a rise in the productivity of labour
c) an improvement in production technology
d) tougher government regulation of the sale of a good or service.

7.4 Price elasticity of supply

The idea of price elasticity applies to supply in a similar way than it does to demand.

Price elasticity of supply measures the responsiveness of quantity supplied to a change in price. It is calculated as the percentage change in quantity supplied divided by the percentage change in price.

The **price elasticity of supply** measures the responsiveness of the quantity supplied of a product to changes in price. Specifically, the price elasticity of supply is the percentage change in the quantity supplied caused by a one per cent change in price. For example, we know that for most goods, a rise in price will cause an expansion in supply, which means that for most goods the price elasticity of supply is positive. However, if the rise in quantity supplied is proportionately greater than the increase in price, then we could say that supply is very responsive to a price change, and thus **relatively elastic**. The opposite situation – a less-than-proportionate change in quantity supplied – would indicate **relatively inelastic** supply. If quantity supplied rises by the same proportion as the price increase, supply is **unit elastic**.

Price elasticity and the slope of the supply curve

We can recognise two extremes of elasticity of supply – **perfectly elastic supply** and **perfectly inelastic supply**. Each will be examined in turn:

Perfectly elastic supply

Perfectly elastic supply is where producers are willing to supply an infinite quantity of a good or service at a particular price but nothing at all at a price below this. This situation can be represented by a horizontal supply curve.

When supply is perfectly elastic, the supply curve is a horizontal straight line, as shown in figure 7.6.

Figure 7.6 reveals that at price 0P, suppliers would supply an infinite quantity of the good, whereas below that price they would not be willing to supply any. In reality, this is a highly unlikely situation.

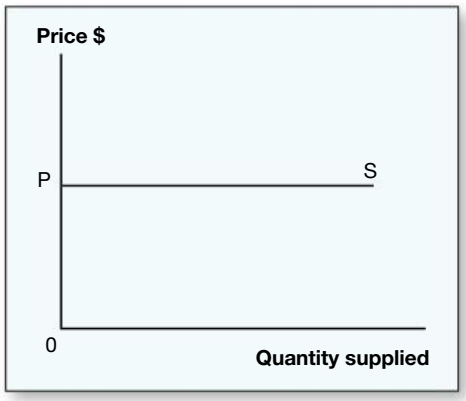


Figure 7.6 – Perfectly elastic supply

Perfectly inelastic supply

Perfectly inelastic supply is where producers are willing to supply a given quantity of a good or service regardless of price. This situation can be represented by a vertical supply curve.

When supply is perfectly inelastic, the supply curve is a vertical straight line, as shown in figure 7.7.

Figure 7.7 reveals that the quantity supplied is fixed at 0Q regardless of the price. The supply of a unique piece of art may be perfectly inelastic – if only one exists, then the supply is fixed at one regardless of the price.

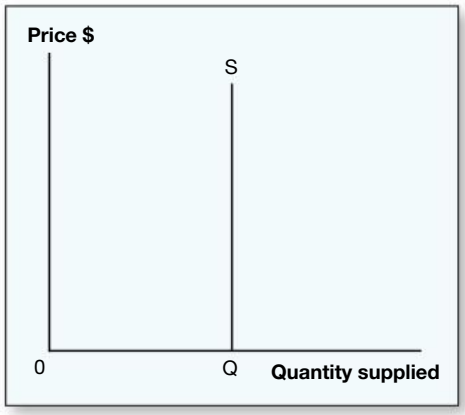


Figure 7.7 – Perfectly inelastic supply

Between these two theoretical extremes of perfectly elastic and inelastic supply, there are many possible variations in the shape of the supply curve. As is the case with demand, the slope of the curve will not necessarily give a true indication of elasticity of supply.

reviewquestions

1 Distinguish between relatively elastic supply and relatively inelastic supply.
2 Identify TWO examples of goods with relatively inelastic supply, and TWO examples of goods that might have perfectly inelastic supply.

7.5 Factors affecting elasticity of supply

There are a number of factors that can affect the responsiveness of supply to price changes. They can be summarised as follows:

Time lags after a price change

Generally speaking, the greater the amount of time that producers have to respond to a price change, the more elastic the supply for the product in question. Following a price increase, producers are restricted in their attempts to increase production in the short run. In the time **immediately** after the price change, the supply of most products would be virtually perfectly inelastic, because producers cannot increase any of their inputs. All the producer can do is try to increase production with existing workers and equipment by working them harder. In the short run, producers can vary some of the inputs to the production process (such as the number of workers they employ, or the quantity of raw materials) so they can respond to price changes more readily. Therefore, in the **short run**, the price elasticity of supply increases, although it is still likely to be relatively inelastic. In the **long run**, however, producers can increase any of the inputs, including the size of the factory and the amount of machinery, and thus facilitate a greater increase in production in response to a price change, making supply relatively price elastic.

The ability to hold and store stock

It is possible to store some goods and not offer them for sale when there is a downturn in market conditions and the price falls. This stock of goods, known as **inventory**, can be offered for sale when prices rise again. Obviously, the ability to hold stock will affect the ease with which producers can respond to price changes. As a general rule, the easier it is to hold stock, the more elastic the supply. To a large degree, this will depend on the nature of the good itself. For example, highly perishable items such as fresh fruit and vegetables are more difficult to hold in stock (and therefore their supply may be relatively inelastic), whereas durable goods such as furniture are easier to store, making supply more elastic.

Inventory is the total stock of goods and services held by a firm at a particular point in time, which is intended for sale to consumers.

Excess capacity

Excess capacity exists when a firm is not using its existing resources to their full capacity. Supply will be elastic when firms have excess capacity because they can respond quickly to any price increase by simply using their existing resources more intensively. For example, a firm operating its plant and machinery at only half capacity could double its output very quickly in response to a price increase. On the other hand, supply will tend to be inelastic when resources are already being used at full capacity.

review questions

1 Explain how the elasticity of supply changes over time after a change in price.

2 Outline how an increase in the ability to store stock would affect the elasticity of supply.

chapter summary

1 **Supply** is the quantity of a particular good or service that producers are willing and able to supply at various price levels, at a given point in time.

2 Individual supply refers to the supplies of individual producers at various price levels. Market supply is the supply of the entire industry at various price levels.

3 The **law of supply** states that as the price of a good increases, the quantity supplied will increase.

4 The supply of a good depends on a number of factors: the price of the good itself, the price of other goods and services, the state of technology, changes in the cost of factors of production, the quantity of the good available and climatic and seasonal influences.

5 The higher the price of a good, the greater the willingness of producers to supply that good, which will lead to an expansion in supply.

6 Movements along the supply curve are caused by changes in price and are called **expansions** or **contractions** in supply. All other factors cause shifts in the supply curve. These are called an **increase** or **decrease** in supply.

7 The price elasticity of supply measures the responsiveness or sensitivity of quantity supplied due to changes in price. The more elastic the supply, the greater its response to a change in price.

8 Supply elasticity varies from **perfectly elastic** (a change in price will totally remove supply for the good) to **perfectly inelastic** (a change in price has no effect on quantity supplied).

9 Factors that affect the elasticity of supply include the time lags after a price change, the ability to hold and store stock, and excess capacity.

10 Supply will be more elastic if a firm has more time to respond to a price change, the ability to store stock, or the ability to increase production with existing facilities (excess capacity).

chapter review

1 Define what is meant by *market supply*.

2 Explain, using diagrams, the meaning and cause of:

a) a contraction in supply

b) an expansion in supply.

3 Using a diagram, demonstrate an expansion and a contraction in supply.

4 From the following supply schedule, plot the market supply curve for sunglasses, and explain the relationship that exists between price and the quantity supplied.

Price ($)	2	4	6	8	10	12
Quantity ('000)	0	20	40	60	80	100

5 Explain (using diagrams) what is meant by:

a) an increase in supply

b) a decrease in supply.

6 Draw up a table with two columns, and summarise the factors that can cause an increase and decrease in supply:

Factors that can cause an **increase** in supply	Factors that can cause a **decrease** in supply

7 Explain the term *price elasticity of supply*.

8 Explain what is meant by the terms *perfectly elastic supply* and *perfectly inelastic supply*. Use diagrams to illustrate your answer.

chapterreview

9 Draw a table with two columns, and summarise the factors affecting price elasticity of supply.

Factors causing supply to be **elastic**	Factors causing supply to be **inelastic**

10 Classify the following products according to their supply elasticity:

a) fresh flowers

b) furniture from a firm with excess capacity

c) bottles of 25-year-old whiskey.

Extended response

a) Explain the term *market supply*. Compare a movement along a supply curve to a shift of the supply curve. Distinguish between the factors that may cause expansions and contractions, as well as increases and decreases in supply. Use diagrams to illustrate your answer.

b) Outline what is meant by *price elasticity of supply*. Discuss the factors affecting price elasticity of supply for a business firm. Explain why an understanding of elasticity of supply is important to both business firms and the government.

Market Equilibrium 8

8.1 The concept of market equilibrium
8.2 Establishing market equilibrium
8.3 Changes in equilibrium
8.4 The role of the market
8.5 Government intervention in the marketplace
8.6 Competition and market power

8.1 The concept of market equilibrium

The previous two chapters examined in detail how demand and supply operate in a market. This chapter brings those two sides together, explaining how a market economy determines how much of a good or service is produced and at what price it is sold.

The following analysis makes two important assumptions: that we have pure competition in the marketplace; and that there is no government intervention. This concept of pure competition simply means that no participant in the market has the power to influence market outcomes directly, such as by setting prices. The concepts of competition and market power will be examined in more detail in section 8.6.

Our focus is now on how the **price mechanism** determines the equilibrium in the market, as shown in figure 8.1. The price mechanism is the interplay of the forces of supply and demand, which determine the prices at which commodities will be bought and sold in the market.

Price mechanism is the process by which the forces of supply and demand interact to determine the market price at which goods and services are sold and the quantity produced.

Market equilibrium is the situation where, at a certain price level, the quantity supplied and the quantity demanded of a particular commodity are equal. This means that the market clears (there is no excess supply or demand), and there is no tendency for change in either price or quantity.



Figure 8.1 – The functioning of the market

8.2 Establishing market equilibrium

Equilibrium is achieved in an individual market when any consumer who is willing to pay the market price for a good or service is satisfied, and any producer who offers their goods or services at the market price is able to sell their product. It occurs when quantity demanded is equal to quantity supplied, that is, when the market clears.

Market **equilibrium** occurs where the demand and supply curves intersect – the point where the quantity demanded is exactly equal to the quantity supplied. Figures 8.2 and 8.3 are used to demonstrate how a market reaches the equilibrium position.

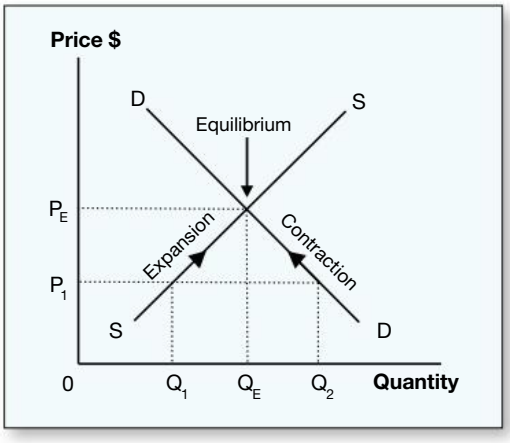


Figure 8.2 – Excess demand

Figure 8.2 reveals that at price $0P_1$, the quantity demanded ($0Q_2$) exceeds the quantity supplied ($0Q_1$). Competition among buyers for the limited quantity of goods available means that consumers will start bidding up the price. The rise in the price results in an expansion in supply and a contraction in demand (movement along the curves towards the equilibrium point). This will continue to occur as long as there is **excess demand**, until we eventually reach the intersection of the supply and demand curves, where the price is $0P_E$ and the quantity supplied ($0Q_E$) exactly equals the quantity demanded by consumers. We say that the market clears (no excess supply or demand) at the price $0P_E$ – the equilibrium or market-clearing price.

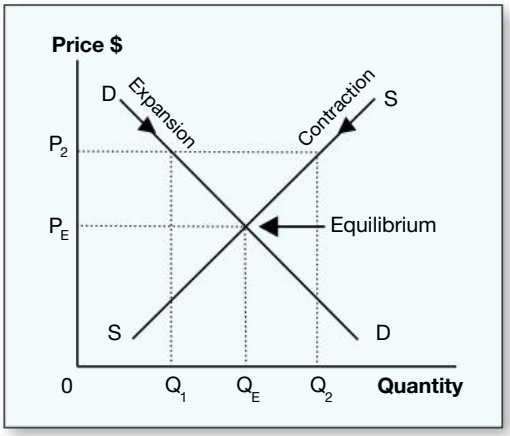


Figure 8.3 – Excess supply

In figure 8.3, at price $0P_2$, the quantity supplied ($0Q_2$) exceeds the quantity demanded ($0Q_1$). Thus we have a situation of **excess supply**, or a glut in the market. In order to remove the **excess supply**, sellers will offer to sell at a lower price. The fall in the price results in an expansion in demand and a contraction in supply (movement along the curves towards the equilibrium point). This will continue to occur as long as there is excess supply, until we eventually reach the intersection of supply and demand where, at price $0P_E$, the market clears – the quantities supplied and demanded are equal (at $0Q_E$).

This is the price mechanism in action – the market forces of supply and demand interacting to bring about the equilibrium price that clears the market and eliminates any excess supply or demand. At the equilibrium point, there is no tendency to change. In this way, it is said that the market mechanism achieves consistency between the plans and outcomes for consumers and producers without any explicit coordination.

Market equilibrium occurs when:

1. quantity demanded = quantity supplied
2. the market clears
3. there is no tendency to change.

reviewquestions

1. Explain how prices are determined in a market with pure competition.
2. If price is set below equilibrium, explain how the market will reach equilibrium.

8.3 Changes in equilibrium

The equilibrium price and quantity can be changed by any circumstances that lead to a shift in either or both the supply and demand curves. Shifts in the supply and demand curves are caused by changes in the conditions behind supply and demand – not a change in the price of the good itself.

We now focus on exactly what happens to equilibrium when we have an increase in demand (a shift in the demand curve to the right), as well as other possible changes to equilibrium.

How an increase in demand can change equilibrium

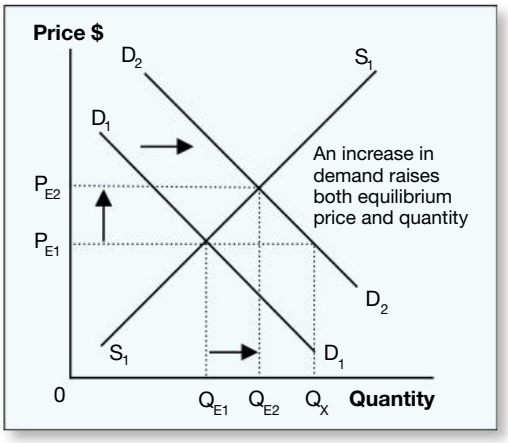


Figure 8.4 – An increase in demand

An increase in demand means that more of a good will be demanded at any given price. For example, on a rainy day, the demand for umbrellas increases so that more consumers are willing to buy umbrellas at any given price. This causes a shift in the demand curve to the right, as shown in figure 8.4.

In figure 8.4, because the demand curve shifts to the right (from D_1D_1 to D_2D_2), consumers demand more umbrellas at the old equilibrium price ($0P_{E1}$). At this price, the quantity demanded ($0Q_X$) exceeds the quantity supplied ($0Q_{E1}$). Competition among buyers for the limited quantity of umbrellas will force the price up, causing an expansion in supply (movement along the supply curve to the right). This will continue to occur until the market clears again at a new equilibrium price ($0P_{E2}$) and quantity ($0Q_{E2}$).

Therefore, an increase in demand raises both equilibrium price and equilibrium quantity.

A summary of other conditions that can change equilibrium

The following symbols apply to figures 8.5, 8.6 and 8.7:

- S_1S_1 and D_1D_1 = the original supply and demand curves
- S_2S_2 and D_2D_2 = the new supply and demand curves
- P_{E1} and Q_{E1} = the original equilibrium price and quantity
- P_{E2} and Q_{E2} = the new equilibrium price and quantity

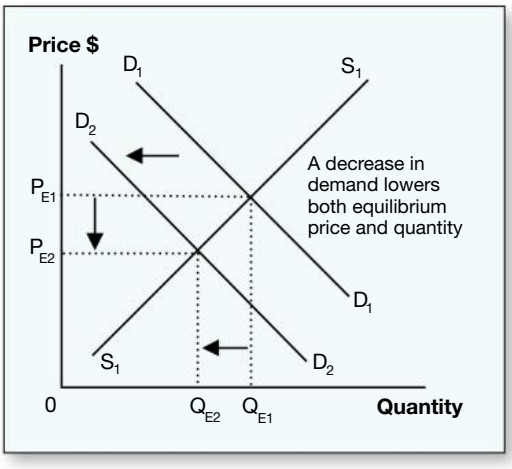


Figure 8.5 – A decrease in demand

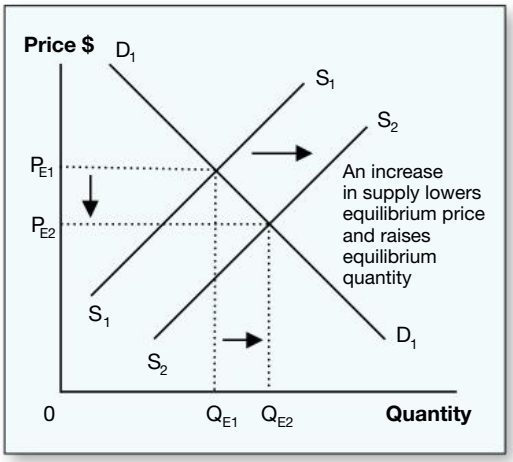


Figure 8.6 – An increase in supply

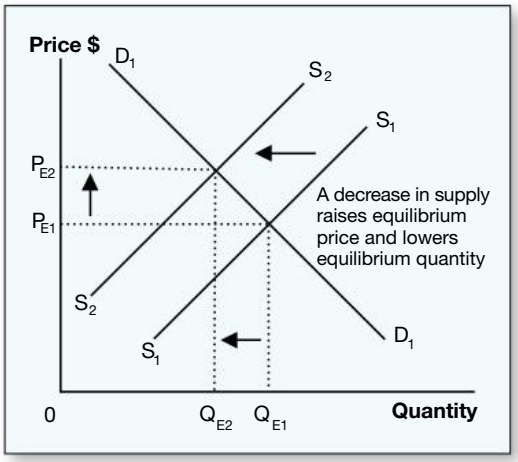


Figure 8.7 – A decrease in supply

reviewquestions

1 Using diagrams, illustrate the change in equilibrium price and quantity caused by a decrease in demand and an increase in supply.

2 Outline the effect on market equilibrium caused by:

a) a reduction in the cost of production

b) an increase in the price of complementary goods.

8.4 The role of the market

In a market economy, the price mechanism plays the most important role in determining the solutions to the **economic problem**. The price determined in the market conveys important information that helps provide answers to questions about the production, distribution and exchange of goods and services in the economy.

Product market is the interaction of demand for and supply of the outputs of production, that is, goods and services.

The price mechanism attempts to solve the economic problem in **product markets** for goods and services. The demand curve represents the wants of individuals in the economy, and the supply curve represents the production of firms with limited resources. The interaction of demand and supply determines a price and quantity that best satisfies individual wants with the limited resources available to firms, giving a solution to the economic problem facing all economies.

Producers will only produce those goods and services for which there is consumer demand – in other words, where consumers are willing and able to buy the product at a certain price. Producers allocate resources in this way because there is a higher opportunity cost in producing other goods when the price of product X rises. The question of the quantity of goods and services produced and sold is also determined through the interaction of supply and demand. Increasing demand for product X will be translated into a higher market price, which will be a signal for producers to reallocate resources away from other areas of production, in order to produce more of product X. In this way, information about tastes and preferences is conveyed between consumers and producers in the economy through relative price changes and without any central coordination or need to obtain such information directly from consumers.

The price mechanism also plays a central role in the markets for the factors of production, or **factor markets**. Demand and supply forces in factor markets determine the price paid for the factors of production and thus the share of total output that is received by individuals. Those individuals who possess resources (including skills) or produce goods and services that are scarce and in high demand will command higher incomes and a greater proportion of total output.

Factor market is a market for any input into the production process, including land, labour, capital and enterprise.

It is said that the market mechanism also ensures **allocative efficiency** in the economy. In the examples we considered earlier, the demand curve gave us an indication of the value that consumers place on a certain product, while the supply curve gave us an indication of producers' costs in supplying that product. The market mechanism ensures that equilibrium is reached at the intersection of those two curves. This means that production continues to increase until the point where the value to consumers of the last good produced is equal to the cost to producers.

Allocative efficiency refers to the economy's ability to allocate resources to satisfy consumer wants.

The price mechanism is efficient because:

Any consumer willing to pay the market price for a good or service will be satisfied.



Any producer offering goods or services at the market price will be able to sell all they produce.

Competition among producers also ensures that they are responsive to consumer demand and that they attempt to minimise their costs of production in order to remain competitive in the market and maintain their profitability. This ensures that the most cost-efficient methods of production are used.

reviewquestions

1 Explain how the market ensures allocative efficiency in product and factor markets.
2 Outline the benefits of competition between firms in a market economy.

8.5 Government intervention in the marketplace

Although markets can be effective at resolving the basic issues of what and how much to produce, this is not the end of the story. Left to operate by itself, the market can still create unsatisfactory outcomes. The market price for goods and services in product markets (or for the factors of production in factor markets) may be considered to be too high or too low. The equilibrium quantity that results from the free interplay of demand and supply may also be considered too high or too low – and some goods and services may not be produced at all. When markets do not produce the desired outcomes it is called **market failure**. This occurs because the price mechanism takes account of the private costs and benefits of production (that is, to producers and consumers) but does not take into account social costs and benefits (that are borne and enjoyed by the whole of society). When this occurs, governments may intervene in the market.

Market failure occurs when the price mechanism takes into account private benefits and costs of production to consumers and producers, but it fails to take into account indirect costs such as damage to the environment.

Figure 8.8 represents market failure using a typical demand and supply diagram. It shows that the price mechanism, through the interaction of demand and the producer's supply curve, will result in the market price and quantity levels. Society's supply curve, however, which takes into account all costs of production (including environmental and social costs), lies above the producer's supply curve. The socially optimum price level is above the market price (indicating that the price mechanism undervalues the natural environment), and the socially optimum quantity is below the market level (indicating that market forces result in the overuse of natural resources).

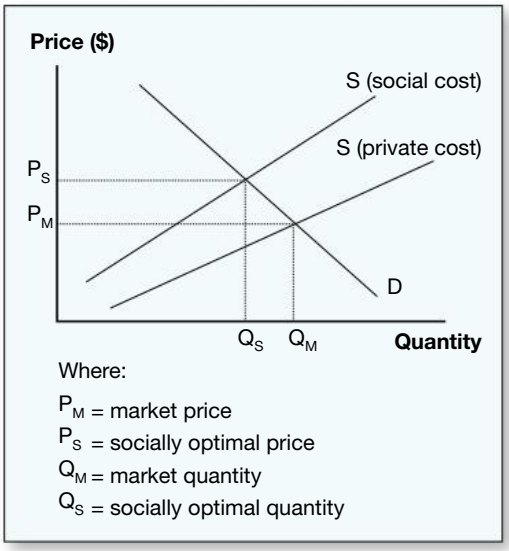


Figure 8.8 – Market failure

Price intervention

The government may feel that the market-determined price for some commodities (for instance the cost of train or bus travel) is too high, or that the market-determined price of some items (such as unskilled labour) is too low. Therefore, the government may intervene in the marketplace in order to impose **price ceilings** (the maximum price that can be charged for a particular commodity) or **price floors** (the minimum price that can be charged for a particular commodity). The main reason for influencing prices in this way is to affect the **distribution of income**. Price ceilings will redistribute money from sellers to buyers, whereas price floors will redistribute money from buyers to sellers.

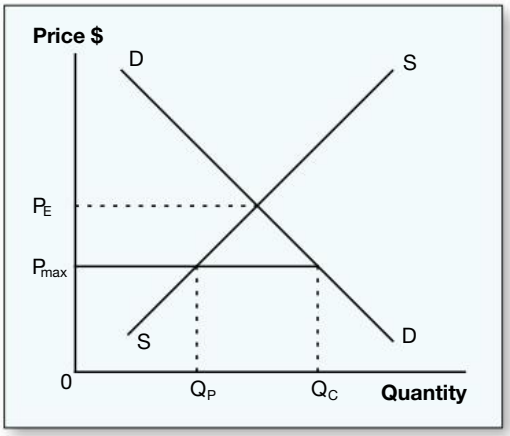


Figure 8.9 – Price mechanism with a price ceiling

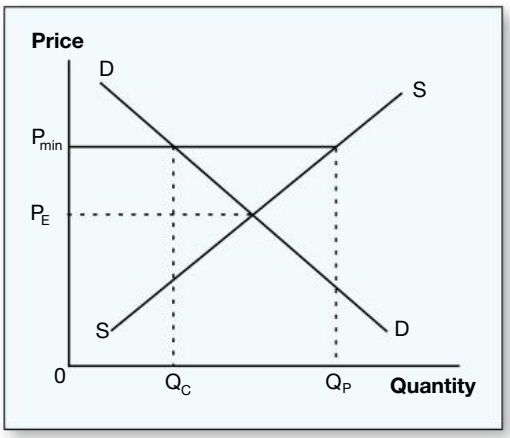


Figure 8.10 – Price mechanism with a price floor

Consider the market for a basic necessity, such as bread, in figure 8.9. The free-market outcome would be to produce up to the point where the supply and demand curves intersect and charge the equilibrium price P_E. If the government considers P_E to be excessively high, it may impose a price ceiling at P_{max} – the maximum price that can be charged for bread. At P_{max}, producers would be willing to produce $0Q_P$ while consumers demand $0Q_C$. Therefore, there is disequilibrium, with excess demand for bread of Q_PQ_C.

In figure 8.10, on the other hand, the government may consider that the market-determined price for wheat (a commodity that is an important source of income for many farmers) is too low and may therefore impose a price floor at P_{min} above the market clearing price of P_E. Again, while this would lead to an increase in the price of wheat, the market will be in disequilibrium, with an excess supply of wheat of Q_CQ_P.

The problem in both of the above cases is that intervention by the government led to **market disequilibrium**. In the first case, there was an under-production of bread, while in the second case there was over-production of wheat. Because of these problems, in recent decades governments have turned to more sophisticated means of intervention in the market.

Quantity intervention

The quantity of some goods and services provided by the market may be too high or too low because individual business firms and individual consumers often do not consider the social costs and benefits of the production and consumption of certain goods and services. Therefore, such social costs and benefits, also referred to as **externalities**, are not taken into account in the operation of the price mechanism. For instance, in the process of production, individual producers consider the obvious costs they incur in order to supply the product, including the cost of labour, raw materials and electricity, but they do not consider the social costs (or **negative externalities**) of the production process, including health risks, pollution and environmental damage. In these situations, the government can artificially restrict production levels through laws (such as issuing safety regulations or pollution emission permits). Alternatively, the government may impose **taxes** on businesses, which increase their production costs and reduce production levels. Making the individual business pay for the social costs created by production is known as internalising the externality.

Similarly, it can be argued that individual consumers do not consider the social benefits (or **positive externalities**) that come with their individual consumption of some goods and services, such as museums, public parks, art galleries and public transport. The government may intervene in order to encourage the provision of these **merit goods** and services that have positive externalities, through subsidies to consumers (or producers) to lower prices and increase consumption.

Merit goods are goods that are not produced in sufficient quantity by the private sector because private individuals do not place sufficient value on those goods, that is, they involve positive externalities that are not fully enjoyed by the individual consumer. Merit goods include education and health care.

Some goods and services will not be provided by individual firms at all, because once provided, producers would not be able to exclude those who are unwilling to pay from using and obtaining the benefits of those **public goods**. Examples include national defence, the police service, public roads and cleaning up waterways. Everyone may benefit from the security provided by defence forces, but they would be unlikely to contribute voluntarily (since they get the benefit of the defence forces' protection of their country whether or not they pay). For this reason, the government intervenes to supply these items and finances them with its tax revenue. These problems are summarised in figure 8.11.

Public goods are goods that private firms are unwilling to supply, as they are not able to restrict usage and benefits to those willing to pay for the good. Because of this, governments should provide these goods.

PROBLEM	GOVERNMENT ACTION	OUTCOME
Market price too high	Price ceiling	Reduces price, quantity shortage [disequilibrium]
Market price too low	Price floor	Increases price, quantity excess [disequilibrium]
Market quantity too high [negative externalities]	Taxes	Increases equilibrium price, reduces equilibrium quantity
Market quantity too low [positive externalities]	Subsidies	Reduces equilibrium price, increases equilibrium quantity
Market does not provide good or service [public goods]	Government provides good or service	Government must collect taxation revenue to finance its supply of public goods

Figure 8.11 – Summary of government intervention in the marketplace

reviewquestions

1 Identify TWO examples each of goods and services that you think should have a price ceiling and TWO examples of goods and services that you think should have a price floor. Justify your choices.

2 Outline TWO examples of products with negative externalities and propose a possible form of government intervention to reduce the quantity supplied and consumed in the market.

3 Discuss the potential reasons for government intervention in the following sectors:

a) higher education b) postal services c) waste removal.

8.6 Competition and market power

In our analysis so far, we have assumed that there is a large number of firms in each industry – so large, in fact, that no individual firm has the ability to raise its prices without losing all of its customers to its competitors. In this situation – known as pure competition (sometimes also described as perfect competition) – no firm has the **market power** to be able to raise prices above the competitive equilibrium. In reality, no such situation exists (although some industries, such as fresh food, might come close). In most industries, firms enjoy some degree of market power, which results in a **higher equilibrium price** (and **lower equilibrium quantity**) than the equilibrium price and quantity levels that would result under pure competition. The degree of competition in an industry is primarily determined by the **market structure**, which refers to the number and relative size of the firms within an industry, the nature of the product being sold, and the ease with which new firms can enter into that industry. These structures and their characteristics are summarised in figure 8.12 and figure 8.13 (on page 114).

Pure competition	A theoretical model of perfect competition
Monopolistic competition	Many small firms in the industry
Oligopoly	A small number of large firms dominate the industry
Monopoly	Only one producer in the industry

Figure 8.12 – Four main market structures

Pure competition

Firms operating under **pure competition** are faced with the following market conditions:

- There are many small buyers and none of them are sufficiently large enough to be able to affect the market price (for example, by arranging bulk buying discounts).
- The products sold by all firms are homogeneous (all firms sell the same product). Buyers and sellers all know that the product is the same, and they also know the prices at which the products are being offered for sale throughout the market.
- Buyers do not incur any cost for moving from one supplier to another.
- There are no barriers to new firms entering or existing firms leaving the market.
- Sellers can sell as much of their product as they like, at the market price.

Under these market conditions, firms are **price takers** – they must simply accept the market price determined by the forces of supply and demand. They can sell as much as they want at that price. If they try to sell above it, no one will buy their product, because buyers can get exactly the same product at the lower market price elsewhere (since they

know the market price and there is no cost of moving from one producer to another). They will not sell at a price below the market price since this would not be profit-maximising, as they can sell the same amount at a higher price. Advertising by firms in this situation would be a waste of money, as it would not help them sell any more of their product. Pure competition is, however, really only a theoretical model, and it is hard to identify a real-life example of pure competition.

Monopoly

A **monopoly** can be regarded as the opposite of pure competition. It is characterised by the following conditions:

- There is only one firm selling the product, and there is no market competition at all.
- The product sold has no close substitutes.
- There are significant barriers to entry, and this effectively prevents any potential competitors from entering the market.

Under these conditions, the monopolist has great control over the market price. Unlike the pure competitor, the monopolist is a **price setter** and can set the price of the product in order to maximise profit. Advertising by monopolists may be used simply to maintain product image, since they do not have to worry about winning customers away from competitors. There are few remaining monopolies in Australia, although the market for water supply is one such example.

If a product were to be produced by a monopolist rather than under pure competition, the monopolist would restrict the output and raise the price. In general, as the level of competition within a market increases, prices are likely to fall and output increase.

The remaining two market structures – monopolistic competition and oligopoly – are instances of **imperfect competition**, since both have more than one firm competing in the market, but they do not face the conditions of pure competition.

Monopolistic competition

Monopolistic competition is a form of imperfect competition and is characterised by the following conditions:

- There are a large number of relatively small firms.
- The products sold in the market are similar, but not identical. The firms engage in **product differentiation** (they package and present their products so that they appear different from those of their competitors).
- The fact that the products are differentiated gives firms some degree of price-setting power.
- There are some small barriers to entry for new firms entering the market, including the fact that existing firms have loyal customers who, through product differentiation, consider that their firm supplies the best products (this is referred to as **brand loyalty**).

Product differentiation is when firms try to make their good or service look different from competitors' (such as through packaging or product image) to increase brand loyalty and give the firm some degree of price-setting power.

Through product differentiation, the firm operating under conditions of monopolistic competition has some control over the price of its product. However, the firm does not have the market power of the monopolist, as it is aware that there are many close substitutes for its product and that competition is fierce. Advertising would play an important role in attracting new customers and maintaining existing ones. Examples of the types of firms operating under monopolistic competition are restaurants and hairdressers.

Oligopoly

The most common market structure in most of Australia's large industries is **oligopoly**. Oligopoly is also a form of imperfect competition and is characterised by the following market conditions:

- There are only a few relatively large firms, each of which has a significant share of the market.
- They sell similar but differentiated products.
- There are significant barriers to entry, and this generally accounts for the fact that there are only a few firms in the industry.

The oligopolist firm constantly monitors the behaviour of the other rival firms in the industry. It must consider very carefully the reactions of its competitors whenever it decides to change its pricing or output policies. For example, if an oligopolist firm lowered its price in an attempt to undercut its rivals, this could start a price-cutting war that would cause profits to drop dramatically for all firms in the industry. For this reason, oligopolists tend to compete through advertising campaigns promoting their products, rather than by price cutting. Examples of oligopolies in Australia are:

- supermarkets, dominated by Woolworths and Coles
- airlines, dominated by Qantas and Virgin Australia
- banking, dominated by the Commonwealth Bank, NAB, Westpac and ANZ.

Market structure	Number and size of firms	Product characteristics	Barriers to entry	Examples
Pure competition ■■■■■■	many firms, very small	homogeneous product	no barriers to entry	fruit & vegetables, fish markets
Monopoly ■	one firm only, generally large	no close substitutes	extremely high barriers to entry	water supply
Monopolistic competition ■▲◆●★✻	many firms, relatively small	differentiated products	relatively easy entry	motels, restaurants
Oligopoly ■●▲	a few, relatively large firms	usually differentiated products	high barriers to entry	supermarkets, banks, oil companies, airlines

Figure 8.13 – Four main market structures

reviewquestions

1 Distinguish between *pure competition* and *monopolistic competition*.
2 Outline the degree of price-setting power in each of the four main market structures.
3 Choose an industry in Australia and examine the nature of competition through an analysis of:
   a) the number and size of firms in the industry
   b) the degree of product differentiation between firms in the industry
   c) the barriers to entry for potential firms to the industry.

chapter summary

1 **Market equilibrium** is the situation where, at a certain price, the quantity supplied and the quantity demanded are equal. Markets always tend towards equilibrium, and if **excess demand** or **excess supply** exists, the market will bid the price up or down until the equilibrium price is reached.

2 After a change in demand or supply, the market will move to a new equilibrium through the same process.

3 The price mechanism is said to be **efficient** because any consumer who is willing to pay the market price for a good or service will be satisfied, and any producer offering their goods and services at the market price will be able to sell all they produce.

4 The government can intervene in the market by setting a maximum price (**price ceiling**) or a minimum price (**price floor**).

5 **Market failure** occurs when there are costs and benefits of production not reflected in the demand and supply curves of individuals. The government may tax firms or industries whose production processes result in negative externalities, such as pollution. The government may subsidise the production of merit goods (which have positive externalities), such as museums, art galleries or public transport.

6 **Public goods** will not be provided by individual firms because they are unable to exclude those who are unwilling to pay for them. The government provides public goods, such as national defence, and raises taxation revenue to finance them.

7 **Pure competition** is a market structure where there are many buyers and sellers producing homogeneous goods or services.

8 **Monopolistic competition** is a market structure where there are many small firms, with differentiated products and each with some degree of market power.

9 **Oligopoly** is a market structure where a few large firms dominate the industry, with differentiated products and high barriers to entry into the industry.

10 **Monopoly** is a market structure where there is one large firm producing a unique product, with very high barriers to entry into the industry.

chapterreview

1 Define what is meant by the *price mechanism*.

2 Describe what is meant by *market equilibrium*.

3 With the aid of a diagram, explain how market forces of supply and demand will establish an equilibrium price and quantity.

4 Explain why markets are said to achieve *allocative efficiency*.

5 Define what is meant by a *price ceiling*, and identify the circumstances in which a government would use a price ceiling.

6 Define what is meant by a *price floor*, and identify the circumstances in which a government would use a price floor.

7 Explain what is meant by the term *market failure*, and distinguish between positive and negative *externalities*.

8 Briefly outline the main characteristics of each of the four market structures.

9 Explain what is meant by the term *product differentiation* and why it is important to a firm operating under conditions of monopolistic competition.

10 Classify each of the following industries as either pure competition, monopolistic competition, oligopoly or monopoly:

a) manufacturers of electric vehicles

b) the fish market in Sydney, where many producers sell seafood and consumers perceive that all the seafood is of the same quality

c) the market for developing websites, where many companies compete to sell their services

d) Australia's banking sector

e) Thai restaurants in Sydney

f) the market for personal delivery of ordinary letters.

Extended response

Define what is meant by *market equilibrium*. With the aid of diagrams, explain how market forces determine equilibrium price and quantity. Discuss the reasons for and methods of government intervention in markets.

TOPIC 4

LABOUR MARKETS

Issues

By the end of Topic 4, you will be able to examine the following economic issues:

- Analyse the factors that create differences in incomes from work
- Compare and contrast wage and non-wage outcomes for individuals in different occupational groups
- Examine the relationship between work and the quality of life
- Analyse the arguments for and against a more equitable distribution of income from work
- Assess the impact of labour market trends on individuals
- Investigate the reasons for gender differences in labour market outcomes
- Investigate recent trends in unemployment in Australia
- Compare and contrast unemployment levels in different parts of Australia
- Predict impacts on society and the economy of changes to the nature of work and the workforce.

Focus

The focus of this topic is an examination of a factor market – the market for labour resources. The contemporary institutions and outcomes of the labour market are key elements.

Skills

Topic 4 skills questions can ask you to:

- compare and contrast the labour market with product markets
- research an outcome of the contemporary Australian labour market
- work in groups to investigate the efficiency and equity of labour market outcomes.

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Topic 4

Introduction

In the first three topics of this book we have examined how the market economy operates, looking at the role of consumers and business and how demand and supply interact to produce market equilibrium. In the next two sections we examine two markets that are particularly important to our economy – the labour and financial markets.

The labour market is one of the most complex sectors of the market economy. It has a very direct impact on our lives because each of us participate in it, and so much of our life is spent "selling" our "labour resources" at work. The operation of the labour market determines how easy it is to find education, training and work; how much we get paid; the conditions under which we work; and, for businesses, how they can use labour most efficiently in their operations. Understanding how labour markets function is crucial to understanding the operation of a market economy.

Chapter 9 examines how the labour market, in its simplest form, can be viewed as the interaction of supply and demand for labour, which is a factor of production. In one sense, the labour market is just like any other part of the market economy. Employees "sell" their labour and employers "buy" hours of labour from employees. The price of labour (wage levels) and the quantity of labour (employment levels) are determined by the interaction of the forces of demand and supply, combined with any other factors that influence this process, such as government regulations and the skills and training required for specific jobs.

Chapter 10 analyses the two main outcomes of the labour market: wage levels and employment patterns. It also highlights the differences between the labour market and other markets for goods and services. We look at the factors that can influence wage levels, such as occupation, age, gender and cultural background, and consider the impacts of income inequality on society. Chapter 10 concludes with a review of employment patterns, such as unemployment and the movement away from full-time work.

Chapter 11 examines the influence of institutions in Australia's labour market, including trade unions, employer associations, industrial tribunals and governments. While institutions have historically played a major role in influencing wage levels and work patterns, this has declined over time to allow the market forces of employers and employees to work out their own work and pay arrangements with much less intervention from government.

Labour Demand and Supply

9

9.1 The demand for labour

9.2 The supply of labour

9.3 The Australian workforce

9.4 Extension: labour market equilibrium

The **labour market** is a crucial part of a market economy. It involves the interaction between individuals seeking employment to earn income, and employers who want to find workers with the most appropriate skills for the production process. If a labour market does not function well, it will significantly constrain the economy's ability to grow. Labour is critical for businesses to operate, and for individuals to find work and a stable income. In this chapter, we will build our understanding of the labour market from the ground up by looking at the factors that determine an individual firm's demand for labour – in effect, a microeconomic approach.

A **labour market** is where individuals seeking employment interact with employers who want to obtain the most appropriate labour skills for their production process.

In reality, an economy does not just have a single labour market. Instead, there are many distinct labour markets – a labour market for each individual firm and industry, as well as a labour market for local areas and occupations. Similarly, there is no single price for labour. Instead, each individual labour market will have its own labour market outcomes, both in terms of wage levels and employment opportunities. Conditions in one labour market may vary significantly from conditions in another. This explains why there may be a shortage of workers with specific skills that are in high demand, such as software engineers, while the economy overall still has many unemployed people. In the labour market for software engineers, the demand for labour may exceed supply, while at the same time the overall supply of labour across the economy may exceed demand. Despite all these distinct labour markets, for simplicity, economists often still refer to "the labour market" as if it is one single market (and this chapter follows that convention).

9.1 The demand for labour

Firms demand labour by offering wages, just as consumers demand goods and services by offering to pay a price in product markets. However, the demand for labour differs from consumer demand for goods and services because the demand for labour is a **derived demand**. The demand for labour is derived from the demand for goods and services within the economy. When consumers demand higher levels of goods and services, firms are forced to increase their level of output to meet the higher demand.



This means that the firms must hire more labour to help produce more, increasing labour demand. In other words, labour is demanded only because it is needed for the firm to produce goods and services and make a profit.

Like the demand curves we have previously seen, the demand for labour is a downward-sloping curve. In other words, as the price of labour (wages) falls, an individual firm will employ more labour. The factors that determine how much labour a firm will demand at any specific price, and how it will respond to changing economic conditions, are examined below.

The output of the firm

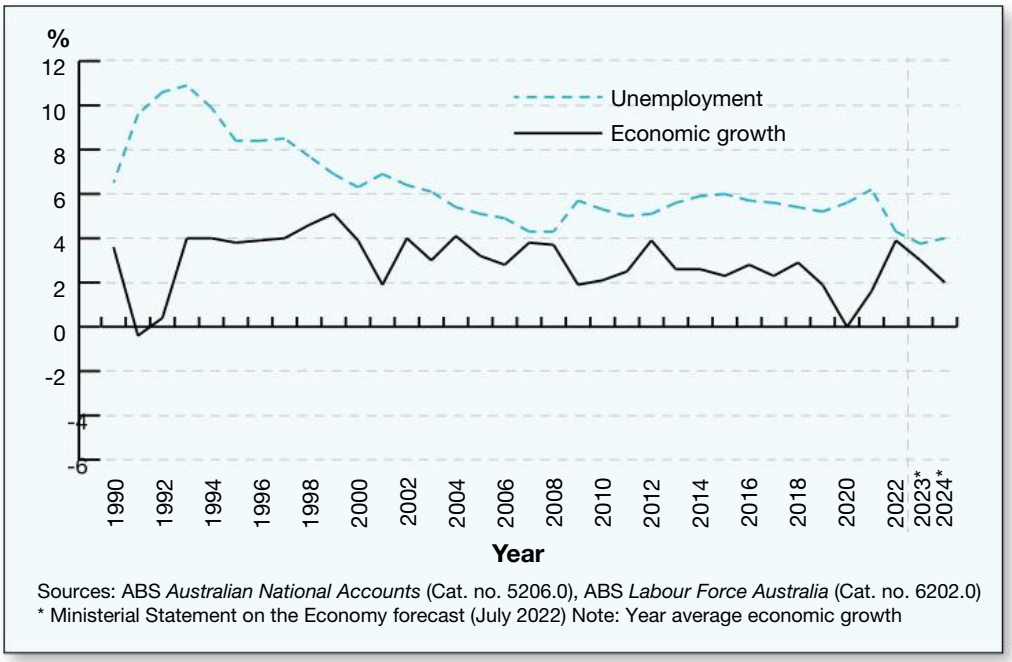
Because the demand for labour is a derived demand, the single most significant influence on a firm's demand for labour is its level of output. If a firm is experiencing higher sales, it will increase production and therefore increase demand for labour.

Many factors will, in turn, influence the level of a firm's output, the most important of which are general economic conditions, the pattern of consumer demand and the demand for the goods and services that the individual firm produces.

General economic conditions (aggregate demand)

Aggregate demand refers to the total demand for goods and services within the economy. Components of aggregate demand are: consumption (C); investment (I); government spending (G); and net exports (X–M).

When the economy is enjoying strong growth, a firm is more likely to enjoy higher sales and will therefore need more employees. The demand for labour will reflect changes in the business cycle, as shown in figure 9.1. Only a few firms benefit from an economic downturn and actually employ more people in bad economic conditions (such as a discount retailer or an accountancy practice that specialised in company liquidations or personal bankruptcies).



Sources: ABS *Australian National Accounts* (Cat. no. 5206.0), ABS *Labour Force Australia* (Cat. no. 6202.0)
* Ministerial Statement on the Economy forecast (July 2022) Note: Year average economic growth

Figure 9.1 – Unemployment and economic growth since 1990

However, changes in economic activity do not always lead to immediate changes in the level of employment – there is always a time lag between firms observing a pick-up in the level of demand and raising their demand for labour. One of the reasons for this is the fact that firms tend to operate with excess capacity. Firms do not always fully utilise their resources and tend to hoard labour to avoid having to train new staff when production picks up. When aggregate demand increases, firms can satisfy the higher demand, at least in the short run, by using their existing labour and capital resources more efficiently and intensively. For example, the firm may ask its workers to work overtime, in return for a higher hourly wage.

During a fall in the level of aggregate demand, businesses will usually delay making staff redundant, in the hope that conditions improve soon (and to avoid the significant costs and risks of needing to find new staff when the economy recovers). Firms generally only retrench workers when they face a *sustained* deterioration in economic conditions. The COVID-19 recession was unusual in that businesses were forced to suspend economic activity as part of the public health policy response to the pandemic, which meant that many businesses moved to reduce staff immediately. As a result, the Government provided a wage subsidy requiring employers not to lay off staff.

In addition, employees and employers sometimes sign contracts that restrict the ability of firms to retrench workers. The employer may have promised to keep a person in employment for a specified period, or the contract may require the employer to pay a penalty (for example, three months' pay) if the contract is terminated early. These provisions may deter the employer from retrenching workers until the term of the contract expires.

Conditions in the firm's industry

Labour is a derived demand; any changes in the pattern of consumer demand will obviously affect the pattern of demand for labour. Therefore, a change in consumer tastes and preferences for different goods and services will see a change in the allocation of labour between different industries. Further, a particular industry's barriers to entry, the level of regulation or price competition can also affect the demand for labour. The demand for labour will increase in industries that see an increase in the demand for their products, and decrease in those experiencing lower consumer demand. One recent example of this is the increase in employment in the information and communications technology (ICT) industry. The ICT sector is expected to employ 1.2 million Australians by 2027, according to Deloitte Access Economics. This is more than three times as many as were employed in the industry 20 years before, reflecting the growth in demand for technological goods and services.

The demand for an individual firm's products

A firm's output is ultimately determined by its effectiveness in selling its goods and services in the marketplace. This is determined by factors such as the quality of its products, the reputation and size of the firm, its customer service and its marketing efforts. Even in a situation where there is an overall decline in the demand in an industry in which a firm operates, it is still possible for that firm to achieve growth in output if it can increase its market share.

The productivity of labour

Apart from determining its overall level of output, a firm must also determine how it will organise its production. This will often involve choices between using labour more intensively in production, or relying more heavily on technology and automated processes. The productivity of labour and overall labour costs, in comparison to the cost of other inputs such as capital, will determine the extent to which a firm uses labour in its production.

The **productivity of labour** can be defined as the output per unit of labour per unit of time:

$$\text{Labour productivity} = \frac{\text{Total output}}{\text{Labour input}}$$

In a general sense, labour productivity depends upon the quality of the workforce, including its overall level of education, skill, health and motivation. It also depends on how efficiently labour can be combined with other factors of production in the production process. It is possible for the workforce to become more productive simply through

investment in technology (capital) and without any actual improvement in the skills or work patterns of employees. This could occur because the investment in technology has allowed more to be produced for each hour of labour input.

An increase in labour productivity will have either a positive or negative impact on the demand for labour. In the short run, higher labour productivity means that a fixed number of workers will be producing more goods and services – therefore the output of a firm will be rising without the firm having to increase the number of workers. The overall effect of an increase in productivity on the demand for labour in the short term will depend on the current level of aggregate demand.

- If aggregate demand is rising, there is higher demand for goods and services. If aggregate demand is rising at a faster rate than the increase in productivity, the higher demand will be greater than the higher production generated by the existing workers. Businesses will increase demand for labour to meet the higher level of aggregate demand in a firm or economy.
- If aggregate demand is unchanged, but labour productivity is rising, the existing workers will be producing more goods and services, but there won't be any higher demand in the economy. This means that businesses will have excess capacity and will not need any more labour. Demand for labour would decline because the higher productivity means that businesses can cut back on workers and still produce the same output as they did before.
- If aggregate demand is falling, but labour productivity is rising, demand for labour will fall even more. Although existing workers will be producing more output, there will be less demand for that output in the economy. If businesses wish to maintain their profits, they will have to lower their demand for labour.

In the long run, however, higher labour productivity will make labour a more attractive input to production than the other factors of production. For example, a firm may decide that it will shift towards labour-intensive production methods because labour is more productive than capital (or capital is too expensive). Higher labour productivity should increase labour demand in the long term as firms substitute labour for other factors of production (such as capital). If, on the other hand, the productivity of labour is lower than improvements in technology and capital, labour demand might decline. New technologies improve the efficiency of capital investment and create cheaper alternative production methods, which might allow some firms to reduce their demand for labour while their output levels remain the same or even increase.

The cost of other inputs

Capital is the manufactured products used to produce goods and services, commonly described as "the produced means of production".

When a firm considers how to combine the different inputs in the production process, it often has a range of options for how it combines labour and **capital**. If introducing new technologies can produce overall cost reductions, then firms will use more capital (technology) inputs in the production process, and less labour. Likewise, if labour costs fall, firms may shift back towards a greater use of labour relative to capital in production. In determining the ratio of labour to capital, firms attempt to measure the full cost of labour against the full cost of capital investment over time. In effect, capital is a substitute for labour; changes in the price of capital have a similar effect on the demand for labour as a change in the price of any substitute good has on a demand curve. A firm's demand for labour will be more elastic – that is, it will respond more sharply to price changes – when:

- It is easy to substitute between labour and capital.
- Labour costs are a relatively high proportion of its total costs.
- It is more difficult for the firm to pass on increased labour costs in the form of higher prices to consumers.

Given that firms can substitute between labour and capital in production, they will want to compare the cost of labour against the cost of capital. In comparing labour costs to the costs of other inputs, it is important to remember that the cost of labour for employers does not just reflect wage rates; it also includes other labour on-costs. These are the additional costs of employing labour and include long service leave entitlements, sick leave, holiday pay, workers' compensation, payroll tax, fringe benefits tax and superannuation. All other things being equal, the demand curve for labour reflects the fact that businesses will employ more labour when the cost of labour declines and less labour when the cost of labour increases.

The cost of capital is represented by a number of factors. The most important is the interest rate, as it represents the cost of borrowing funds to purchase new capital equipment (if these funds were borrowed from overseas, changes in exchange rates would also impact upon the cost of these funds). The interest rate also represents an opportunity cost if the firm is using its own funds to finance capital expenditures – it could be earning returns on its funds rather than investing them back into its own business operations. Further considerations in determining the cost of capital include the structure of the tax system, including any special tax allowances that might encourage greater business investment. Whenever it becomes cheaper to use capital rather than employ labour, employers may decide to substitute capital for labour and the demand for labour would fall, and vice versa.

Choosing between labour and capital is not the only consideration for a firm in determining its demand for labour within Australia. Equally, a firm might consider the option of shifting some of its operations overseas, especially if labour costs are lower elsewhere. It is now increasingly easy for firms to set up operations in foreign countries, or to engage overseas contractors to manufacture goods or provide services from offshore. Therefore, the demand for labour in certain industries in Australia will be influenced by the cost and productivity of foreign labour as well. If a firm is facing cost pressures at home, it might close down its local operations and shift its production overseas if labour there is cheaper. For instance, during recent decades, most Australian clothes manufacturers have moved their manufacturing operations from Australia to lower-cost economies such as China and Indonesia, where labour is much cheaper. More recently, some firms in services industries such as banking, insurance and telecommunications have shifted customer services such as call centres and back-office information processing to other countries, such as India and the Philippines.

FACTORS INFLUENCING LABOUR DEMAND

Output factors	**Output factors**
• General economic conditions	• Productivity of labour versus other inputs
• Conditions in the firm's industry	• Cost of labour versus other inputs
• Demand for an individual firm's	• Cost of labour versus cost of foreign labour

reviewquestions

1 Explain what is meant by *derived demand* in relation to demand for labour.

2 Outline how economic conditions affect the demand for labour.

3 Discuss the impact of the following changes on the demand for labour in Australia:

a) the introduction of driverless cars

b) rising labour productivity combined with falling economic activity

c) an increase in overseas wage levels.

9.2 The supply of labour

In studying the labour market, we tend to focus more on the demand for labour than on the supply. This reflects a general assumption that there is an adequate supply of labour but not enough demand. However, this assumption may not always be valid. The populations of industrialised nations are growing older, and with lower birth rates than in previous generations, there may be a shortage of skilled labour over the next two or three decades. For that reason, governments have begun to pay greater attention to measures that may increase the supply of labour over time.

Individuals supply labour when they are ready and willing to work in the labour market. Like an ordinary supply curve, the labour supply curve is upward sloping, since the higher the wage, the more individuals will be ready and willing to work. In most product markets it is the firms that supply the product, and the individuals who demand it for consumption. The labour market is the reverse of this, and individuals make up the supply of labour, while firms make up the demand for labour.

Pay levels

The wage or salary paid to employees (the price paid for labour) is an important determinant of the supply of labour for any individual firm or industry. In general, the higher the wage or salary offered, the more people will be prepared to sacrifice their leisure time and supply their labour. Other non-wage and salary incentives may be included in an employee's remuneration package, such as the use of a company car and extra superannuation benefits, which would also influence one's willingness to supply labour to a particular firm or industry.

Working conditions

Attractive working conditions encourage a higher supply of labour to a workplace, whereas unattractive working conditions would discourage workers from joining that workplace. Firms and industries that offer employees more flexible working hours, the opportunity to work from home, generous holiday leave entitlements and a pleasant working environment will tend to attract more labour than those that do not.

Some jobs offer the opportunity to travel and experience different cultures, which may be more attractive to some people than a well-paid job. Other jobs may provide excellent training opportunities and experience, which may be a high priority for younger employees. Some jobs may offer more meaningful work or a higher level of job satisfaction, which may attract workers even if these jobs do not pay high salaries. One change that was accelerated by the COVID-19 pandemic is increased flexibility of working hours and location, because of employees' desire for increased remote working, which can eliminate commuting time and help employees to balance family responsibilities better.

Education, skills and experience requirements

Human capital is the total sum of the knowledge, skills, training and experience of workers that contributes to the process of production. It reflects the "quality" of a labour force and it is the main influence on productivity growth.

The education, skill and experience requirements for some types of jobs can limit the supply of labour. These are all elements of **human capital**, and a country with relatively high levels of human capital is more likely to achieve low unemployment. Because the acquisition of education, skills and experience requires considerable time, sacrifice and effort, there may be a lower supply of labour to those firms and industries that require a higher level of education, skills or experience. In addition, changes in the availability of education and training (such as through government scholarships or subsidies for course fees) will also influence the skill levels in the workforce.

The mobility of labour

The supply of labour will be affected by its responsiveness to changes in the demand for labour in different areas and industries. There are two types of labour mobility – occupational mobility and geographical mobility.

Occupational mobility refers to the ability of labour to move between different occupations in response to wage differentials and employment opportunities. The degree of occupational mobility mainly depends on the education and skills required for a particular occupation, as well as the time taken to gain those credentials. As the skills required for a particular occupation increase, it generally becomes more difficult for labour to move into that occupation in response to improved wage or job opportunities. This is because of the time and effort needed to acquire the new skills. For example, it would be difficult for a motor mechanic to become a veterinary surgeon, but it would be relatively easy to become a bar attendant.

Geographical mobility refers to the ability of labour to move between different locations in response to improved wage differentials and employment opportunities. Factors that limit geographical mobility of labour include:

- the costs of relocating, including travel, transportation and real estate costs
- the personal upheaval associated with moving, such as breaking ties with family and friends and children changing schools.

Therefore, those jobs and occupations that require workers to relocate to more distant locations, with fewer educational and entertainment opportunities, will receive a lower supply of labour. As a result, employers in remote locations (such as specialist doctors in regional areas, or solar plant engineers in western New South Wales) may need to offer higher wages to attract workers.

The labour force (or workforce) participation rate

The above-mentioned factors will all have an impact on the proportion of the population that decides to supply its labour – known as the labour force participation rate. In Australia, anyone age 15 or over is a potential participant in the workforce (even though technically the **working-age population** is defined as people between the ages of 15 and 64). People may decide not to participate in the **labour force** (or workforce) because they want to undertake further study, take care of family, or concentrate on leisure activities, or because they think they are unlikely to find a job or would rather rely on other forms of income. The labour force participation rate can be defined as the percentage of the civilian population aged 15 years and over who are in the workforce (that is, either working or actively seeking work).

Working-age population is the number of people in an economy who are at least age 15 (the working age).

Labour force consists of all the employed and unemployed persons in the country at any given time. Also known as the workforce.

$$\text{Labour force participation rate (\%)} = \frac{\text{Labour force}}{\text{Population aged 15 or over}} \times \frac{100}{1}$$

Figure 9.2 reveals the following trends in the labour force participation rate in Australia:

- The overall participation rate has risen slowly over the past three decades, from slightly below 61 per cent for much of the 1980s and 1990s to the record high of 66.8 per cent achieved in 2022.
- There have been significant changes to the male and female participation rates. The male participation rate dropped considerably from over 80 per cent in the early 1970s to 69 per cent by 2019–20 (but increased to 71.2 per cent in 2021–22). The labour force participation rate for females has shown a strong upward trend, driven particularly by the increasing participation of married women in the workforce. Participation rates of both men and women changed dramatically in the 1970s and 1980s but have plateaued in the past decade.

Year	Males (%)	Females (%)	All persons (%)
1969–70	83.2	39.1	61.0
1974–75	81.4	43.1	62.0
1979–80	78.3	44.1	61.0
1984–85	75.8	45.6	60.5
1989–90	75.5	51.8	63.5
1994–95	73.7	53.1	63.2
1999–00	72.1	54.1	62.9
2004–05	71.7	56.4	63.9
2009–10	72.2	58.5	65.3
2014–15	71.0	58.7	64.7
2019–20	69.1	59.0	64.0
2020–21	70.9	61.4	66.2
2021–22	71.2	62.5	66.8

Source: ABS *Labour Force Australia* (Cat. no. 6202.0)

Figure 9.2 – Labour force participation rate since 1970

There are a number of both long- and short-term factors that influence the participation rate, including:

- In the short term, the **state of the economy** will tend to be the most important influence. The participation rate is said to be pro-cyclical. In other words, in times of prosperity and economic growth, people will be more inclined to actively seek work, since there are better prospects of finding a job. In times of recession, on the other hand, people are less optimistic about job prospects and therefore less inclined to actively seek work. The fall in the participation rate in 2019–20 shown in figure 9.2 reflects the impact of the COVID-19 recession, which resulted in large numbers of people giving up on looking for work. However, the rebound in 2020–21 highlights how economic conditions can change quickly.
- Trends in the **ageing of the population** and the age of retirement are long-term influences on participation rates. The Government's *2021 Intergenerational Report* projected a decline in the participation rate from a record of 66.3 in March 2021 to 63.6 per cent by 2060–61, reflecting the impact of the ageing of the population. Participation rates among the population aged 15–64 are expected to rise slightly from 79.6 per cent in 2021 to 81 per cent in 2060, as more people live longer, delay retirement and jobs grow in less labour-intensive service-based industries. However, the overall participation rate will decrease as the proportion of the population over 65 increases, with the majority of them in retirement.
- Recent generations have seen a sustained increase in the participation of women in the workforce. This reflects several factors, including changing **social attitudes**, increased childcare support, lower fertility rates and increases in the age at which women qualify for the age pension. An increase in female participation in the workforce was the primary cause of a rise in the participation rate to record levels in 2022, and further increases are expected in the years ahead.
- Increased **school retention rates** due to the growing tendency for young people to remain at school longer, as well as seek further full-time tertiary education, mean that people tend to join the workforce later in life. According to OECD data in 2019, the proportion of Australians with a university degree has risen from 36 per cent in the generation that is now aged 55–64 to 55 per cent for people now aged 25–34. Further OECD data from 2020 reported that overall, 55 per cent of Australians aged between 25 and 64 have obtained some level of post-secondary-school qualification. This is up from 32 per cent in 2005 and above the OECD average of 46 per cent.

Other factors

The supply of labour may also be affected by government policy decisions or the collective action of those providing labour within an industry.

- Throughout its history, Australia has filled gaps in its labour market through immigration. Australia's immigration policies are heavily weighted towards skilled migrants. According to the 2020–21 Migration Program Report by the Department of Home Affairs, more than half of all adult newcomers under Australia's migration program were given entry on the basis of their skills (79,620 out of 157,052). Skilled migrants enter because they have skills that are in short supply in Australia. Around 30 per cent or 23,503 of skilled migrants were individually sponsored by employers in 2020–21.
- Professional associations such as the Law Society, the Australian Medical Association and Engineers Australia impose standards of education, continuing training and professional conduct on their members, and this tends to restrict the supply of labour to these occupations. In the past, some unions pressured employers to hire only union members (although this has been prohibited for many years).

- The Government can also limit the supply of labour to particular occupations by imposing certain qualification and licence restrictions. For example, builders must satisfy certain competency standards in order to obtain a builder's licence.

A more detailed discussion of how labour demand and supply interact to achieve equilibrium in the labour market is included as an extension in section 9.4.

reviewquestions

1 Outline the impact of an increase in wages on the supply of labour.
2 Explain the effect of a decrease in economic growth and the availability of jobs on the labour force participation rate.
3 Distinguish between occupational and geographic mobility.

9.3 The Australian workforce

The workforce can be defined as that section of the population 15 years of age and above who are either working or actively seeking work. Figure 9.3 shows the relationship between the population in work, the workforce, the civilian population aged 15 and over and the overall population.

Unemployment refers to a situation where individuals want to work but are unable to find a job, and as a result labour resources in an economy are not utilised.

The workforce can be divided into two categories, the employed and the unemployed. A person is defined as being employed if they have one or more hours of work per week. A person is defined as unemployed if they are currently available for work, are actively seeking work, and are unable to find it.

From an economic point of view, two aspects of the workforce are important – its size and quality. The bigger the workforce, the greater the contribution it can make to the production of goods and services. However, of equal importance is the quality of this labour. A well-educated, highly skilled, healthy workforce is much more productive than one that lacks these characteristics. The size and quality of the workforce are affected by three main factors – the size of the population, the age distribution within that population and educational patterns.

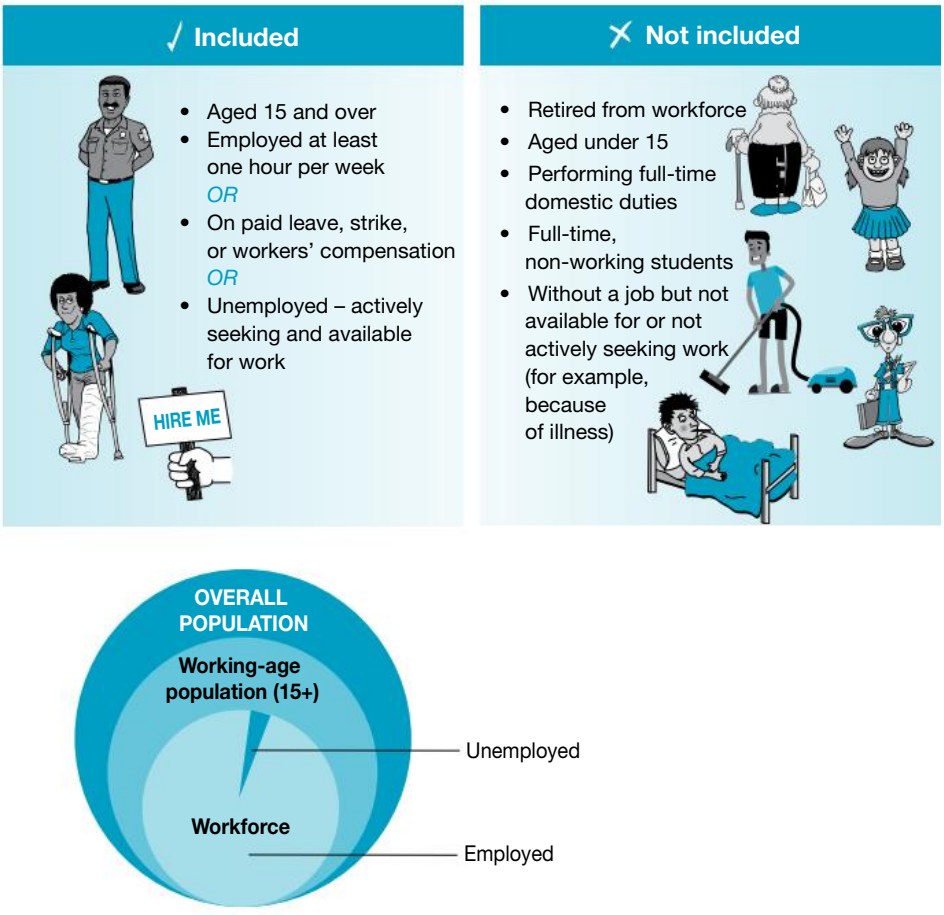


Figure 9.3 – Australia's workforce

Population size

The size of our population gives us a starting point for determining the size of the workforce, because it sets the limit to which the workforce can grow. The larger the total population, the greater the potential workforce. Over time, a nation's population tends to increase. Population growth is influenced by two factors – **natural increase** and **net migration**.

Natural increase refers to the excess of births over deaths in the population, taken over a period of one year. Net migration refers to the excess of permanent new arrivals to our country over permanent departures, over a period of one year.

The demographic statistics presented in figure 9.4 show that over the past few decades Australia's natural increase has declined. The rate of natural increase declined to a level of just under 0.6 per cent of the population per year at the start of this decade. This has been a result of families having fewer children, influenced by couples marrying at a later age than in previous generations, and both spouses remaining in full-time work.

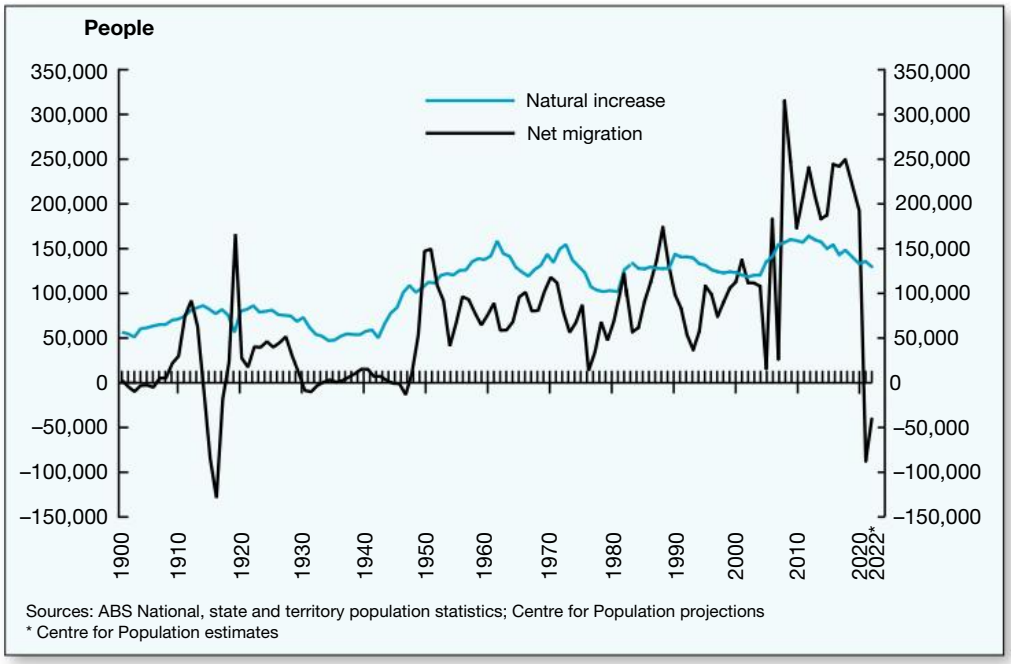


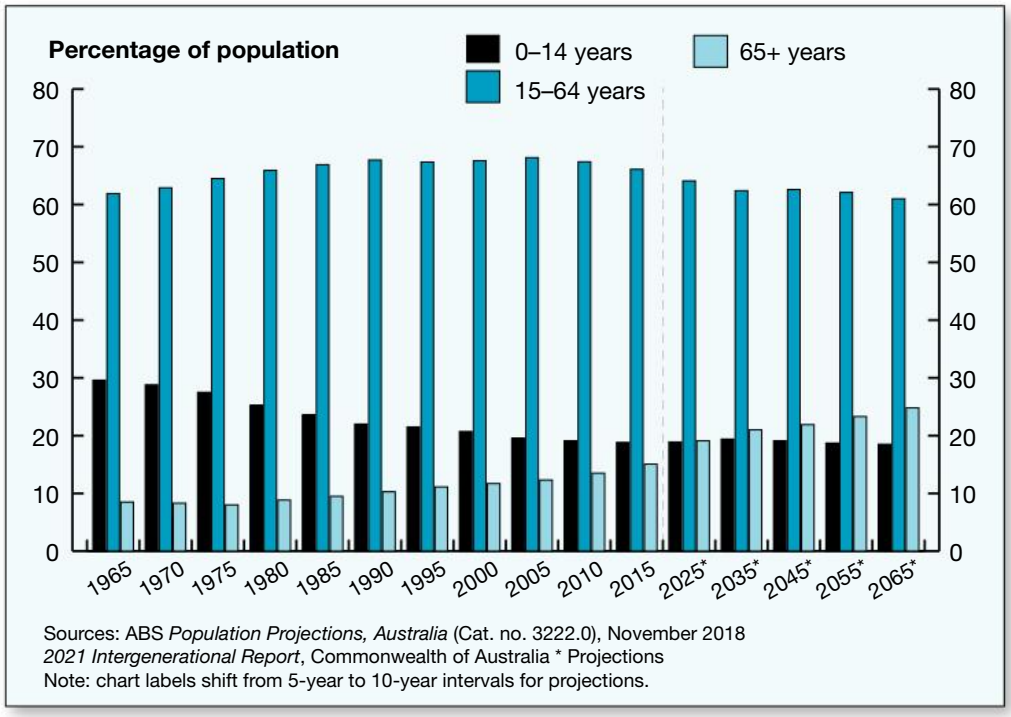
Figure 9.4 – Population growth in Australia since 1903

Net migration has made an important contribution to the increase in Australia's population, accounting for approximately 40 per cent of our total population growth since World War II. The rate of net migration fluctuates considerably, and it is strongly influenced by the level of economic activity. In times of depressed economic activity and high unemployment levels, the Government usually reduces the migration intake to ease pressure on the labour market. Following the outbreak of the COVID-19 pandemic in 2020, which effectively stopped non-citizens from arriving in Australia, the net migration level in 2020–21 was negative for the first time since World War II. The long-term effect of the slowdown in immigration is that Australia's population by 2060 is expected to reach 39 million, reflecting a downward revision from a previous expectation of 40 million. Slower population growth is significant because it will result in a slower rate of economic growth in the long run. Conversely, in times of strong economic growth, when there are shortages in the labour market and good job prospects, governments have tended to raise Australia's migration quotas. A recent example of this was when the Albanese Government responded to widespread labour shortages in September 2022 by increasing annual migration to around 200,000 per year.

Age distribution

Australia's workforce mostly comprises people in the 15–65 age group. Children under 15 are at school, while most people tend to retire around the age of 65, even though there is no compulsory retirement age. Obviously, the greater the proportion of the population in the 15–65 age group, the greater the potential for a larger workforce.

Figure 9.5 shows age distribution trends and predictions for Australia. The proportion of the population in the 15–65 age group is declining, as those born in the post-war "baby boom" move into retirement. One of the most significant changes in the Australian population in recent decades is the growing number of people in older age brackets, such as those aged over 65. Between 1991 and 2021, the median age rose from 32 to 38 years. The ageing of the population is a phenomenon that has been observed in many industrialised economies as a result of declining birth rates and an increasing life expectancy (due to higher living and health standards). This is a problem because, in the medium to long term, the potential size of the workforce is lower while it needs to support a growing population of aged people.



Sources: ABS *Population Projections, Australia* (Cat. no. 3222.0), November 2018
2021 Intergenerational Report, Commonwealth of Australia * Projections
Note: chart labels shift from 5-year to 10-year intervals for projections.

Figure 9.5 – The age distribution of Australia's population

Ageing population?
Send them back to work!

A growing number of voices are calling on governments and employers to encourage older Australians to stay in the workforce, in response to the ageing of the Australian population. The National Seniors Productive Ageing Centre, the National Seniors Association, the National Advisory Committee on Ageing, and the Commonwealth Government have all raised similar concerns as fears grow that Australia's ageing population could result in a labour crisis within a decade. While the size of the Australian workforce grew by 2,266,000 during the 2000s decade, the workforce is expected to grow by just 190,000 during the 2020s decade. At current rates, Australia's workforce will be growing at less than one-tenth of its growth rate in the recent past. This will exacerbate the imbalance between working and retired Australians and could lead to skill shortages in certain industries.

> *The ratio of working-age people to those over 65 is known as the old-age dependency ratio. In 1981–82, for every person aged over 65, there were 6.6 working-age people. In 2019–20, for every person aged over 65, there were 4.0 working-age people. This ratio is projected to fall further – by 2060–61, for every person aged over 65, there will only be 2.7 working-age people...*
>
> *The falling old-age dependency ratio presents challenges for Australia's long-term economic growth and fiscal outlook. A working-age person's taxes will be required to support a greater number of people aged over 65.*
>
> *– Australian Government's 2021 Intergenerational Report, Commonwealth of Australia.*

The Federal Government is attempting to address the challenge of demographic changes through measures that increase the participation rate in the long run. In 2014, the Government announced a long-term plan to lift the qualifying age for the pension (often called the retirement age) to 70 by 2035, building on the increase from 65 to 67 announced in 2009. This was intended to encourage older workers to remain in the workforce for longer. However, this was unpopular, and the plan was abandoned in 2018, only four years after the Morrison Government had announced it.

Education patterns

Education outcomes are the most important factor influencing the quality of a nation's workforce. Figure 9.6 shows that individuals who acquire skills through years of training and studying benefit through higher earnings. The figure shows that, compared to a person who did not complete high school, someone with a postgraduate degree will on average earn around twice as much. Across OECD countries in 2021, unemployment rates among people who did not complete high school were more than 5 percentage points higher on average than people who completed some form of tertiary education.

Today's Australians spend more years in education than previous generations. According to the ABS, the proportion of 20–64 year olds with some form of post-school qualification has risen from 55.8 per cent in 2004 to 69 per cent in 2021. Whereas a majority of students once left school before even finishing Year 12, that is now true for only 17 per cent of students.

Australia's spending on education is slightly above average by international standards. The OECD's *Education at a Glance 2021* reported that overall spending on education in Australia was 5.9 per cent of GDP. This is higher than the OECD average of 4.8 per cent. One way in which Australia differs from other countries is the extent of private funding to cover the costs of education. In 2018, a third of total education spending was privately funded in Australia, a larger share than any other OECD country.

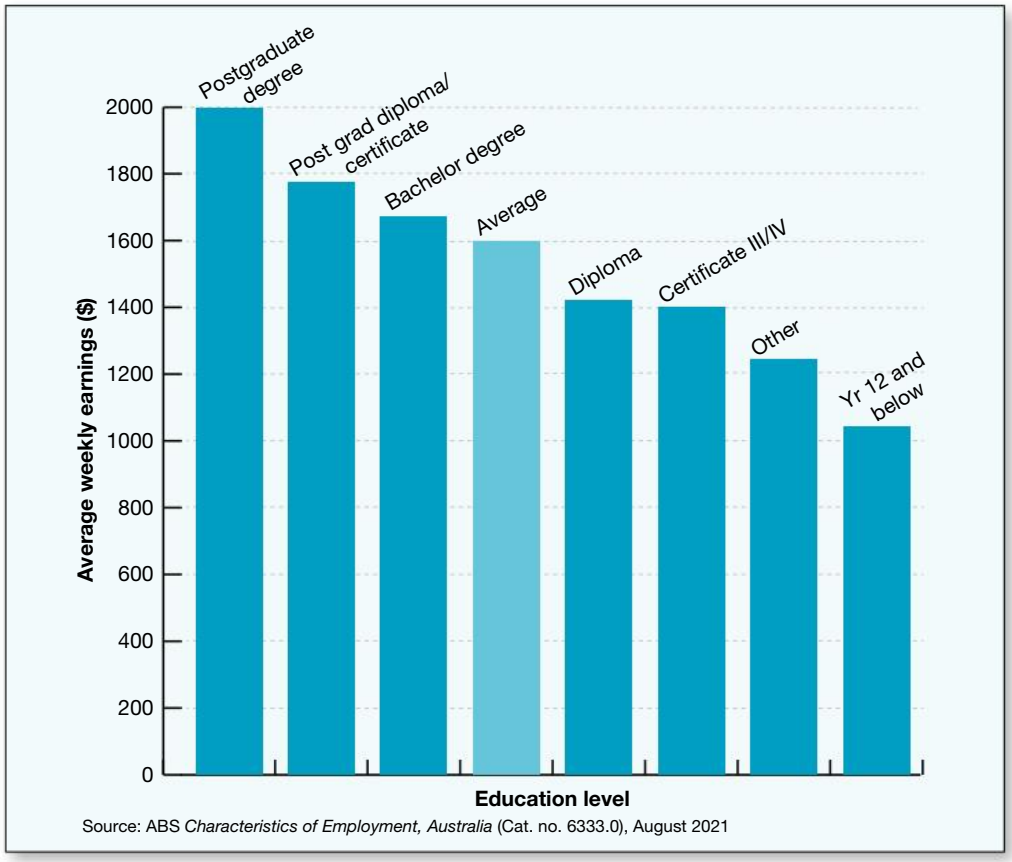


Figure 9.6 – Impact of educational attainment on income

reviewquestions

1 Identify the impact of lower net migration on population size.
2 Examine the impact of an ageing population on Australia's future labour force.
3 Compare the funding for education in Australia with other advanced economies.

9.4 Extension: labour market equilibrium

We have noted that labour markets are more complex than most other markets. The labour market does not function as a perfectly competitive market, in which the free interplay of supply and demand determines the price and quantity outcome for labour. This is largely because of the role that various institutions play in the labour market. However, before we examine the institutional features of the Australian labour market, this section outlines a theoretical view of how equilibrium in the labour market would be achieved under conditions of perfect competition. (*This material goes beyond what is required in the syllabus but helps to explain exactly how the labour market fits in with our analysis of other markets.*)

Determining equilibrium

Generally speaking, the usual supply and demand principles apply to labour (figure 9.7).

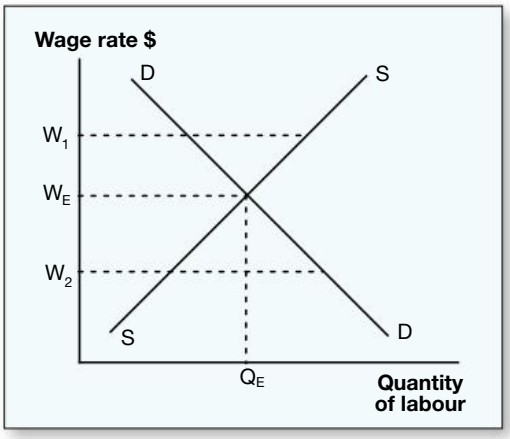


Figure 9.7 – Equilibrium in the labour market

- The **supply curve** slopes upwards from left to right – as the wage rate increases, people will be more willing to supply their labour. It is assumed in traditional economic analysis that in deciding whether and how much to work, individuals weigh the **utility** or **satisfaction** they derive from **leisure** (which includes all non-working activities such as rest, recreation and education) and the satisfaction they derive from the **real income** they would earn to spend on consumption if they got a job (or worked longer hours). As the wage rate increases, the opportunity cost of leisure rises and working is more attractive – people will substitute leisure for work and work more. However, as the wage rate becomes higher, workers can also achieve the same level of income by working less. So at high wage rates, labour supply declines as the wage rate increases, which means that the labour supply curve is **backward bending**. Nevertheless, most economists would agree that the supply of labour does not change significantly when there are changes in the wage rate. In other words, labour supply is regarded as relatively wage-inelastic (however, this is not represented in the simplified figure provided).
- The **demand curve** slopes downwards from left to right. With other factors of production constant, according to the **law of diminishing marginal returns**, each extra worker will contribute less to total production than the previous worker. A profit-maximising firm will only employ the extra worker if they pay him or her a wage rate that is lower than marginal revenue earned from their production. Therefore, as the wage rate declines, the demand for workers by firms will increase – for this reason, the labour demand curve is downward sloping.
- **Equilibrium** is achieved at the intersection of the supply and demand curves – the equilibrium wage rate occurs where the quantity of labour supplied is exactly equal to the quantity of labour demanded by firms.

At any wage rate above W_E (for example, W_1) the quantity of labour supplied exceeds the quantity demanded and unemployment exists. In such a situation, the unemployed would presumably offer to work at a lower wage, thus bidding down the wage rate, forcing it down to its equilibrium level. At any wage rate below W_E (for example, W_2) the quantity demanded for labour exceeds the quantity supplied, and firms competing for labour will force the wage rate up to W_E.

Changes in equilibrium

Any changes in the conditions that determine the supply and demand for labour will bring about changes in the wage rate and the quantity of labour employed. These changes can be shown in a diagram as shifts in the supply and demand curves.

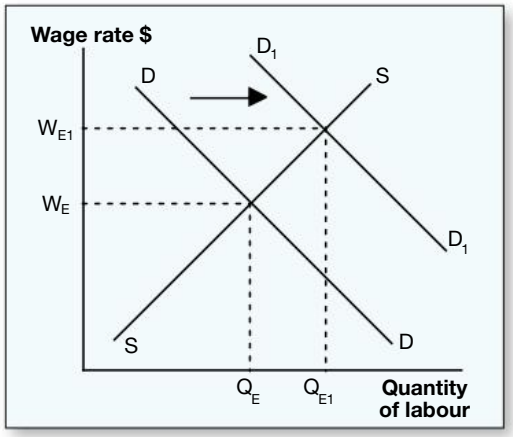


Figure 9.8 – An increase in the demand for labour

Figure 9.8 demonstrates the effect of an increase in demand (that is, a shift in the demand curve to the right).

A likely scenario to explain figure 9.8 might be that the ageing of the population would see an increase in demand for aged care nursing, increasing the demand for health workers. This would shift the demand curve for labour to the right (from DD to D_1D_1), causing an increase in the wage rate (from W_E to W_{E1}) and an increase in the level of employment (from Q_E to Q_{E1}).

It is clear that it can be very difficult to isolate the relative importance of the factors that can influence the demand for labour and thus the level of employment. What we can say with some degree of certainty is:

- The overall demand for labour is most heavily influenced by the level of aggregate demand in the economy (the level of economic activity).
- An increase in the productivity of labour will have a positive influence on the demand for labour, provided it is accompanied by rising aggregate demand.
- A change in the relative costs of capital and labour will influence the demand for labour, but that influence can be overshadowed by changes in the level of economic activity. It is usually the case that persistent declines in labour productivity and rises in the relative cost of labour will create long-term incentives for firms to substitute labour for capital.
- In reality, there are many interrelated labour markets in an economy, and the degree to which people can move between labour markets (for example, the market for airline pilots and the market for bus drivers) depends on their skill levels and the requirements for each occupation. Those labour markets that require high-level skills, such as medical specialists and scientific research, are more closed (and have more inelastic supply curves) than those requiring lower-level skills.

reviewquestions

1 Outline how wages are determined in the labour market.

2 Using diagrams, outline the likely change in wage levels from the following changes:

a) the reduction in demand for journalists, due to the decline of newspaper publishing

b) people choosing to substitute more leisure time for work.

chapter summary

1 The demand for labour is a **derived demand** because the number of employees required by a business firm is determined by the level of output of the business.

2 The main factors affecting labour demand include the output of the individual firm, general economic conditions, the productivity of labour and costs of other inputs.

3 The supply of labour depends on pay levels, working conditions, skill and education requirements, the participation rate and the mobility of labour.

4 The mobility of labour can be divided into two categories: **occupational mobility**, which refers to the ability of labour to move between different occupations, and **geographical mobility**, the ability of labour to move between different locations.

5 The **productivity of labour** can be defined as the output per unit of labour per unit of time.

6 **Unemployment** consists of all persons aged 15 and above who are currently available for work and are actively seeking work, but have not yet found work.

7 The size of the **workforce** depends on the overall size of the population, the age distribution and the labour force participation rate.

8 The **participation rate** is the percentage of the working-age population who are working or actively seeking work. The participation rate has reached record levels recently, due in particular to rising female participation rates, but with an ageing population it is expected to decline in coming years.

9 In the long run, a nation's economic growth and living standards are substantially determined by population growth, productivity growth and the participation rate.

10 The main factors influencing the quality of the workforce are levels of training and education, literacy levels and work experience.

chapter review

1 Explain why it might be said that there is more than one labour market.

2 Explain what is meant by the statement that *labour is a derived demand*.

3 Discuss how an increase in the level of economic activity would lead to an increase in the demand for labour.

4 Explain what is meant by the *productivity of labour*.

5 State the circumstances under which an increase in the productivity of labour would lead to:

a) an increase in the demand for labour

b) a decrease in the demand for labour.

6 Examine how a firm's demand for labour would respond to the following events:

a) a reduction in the cost of 5G network technology for a telecommunications firm

b) a boost to sales after a successful marketing campaign

c) a new national online database that makes it easier to find skilled workers

d) an increase in the cost of labour in New Zealand.

7 Explain what is meant by the substitution of capital for labour. Identify the circumstances under which this would occur.

8 Account for why the labour force participation rate is important to the economy.

9 Identify who of the following would be included in the measurement of the Australian workforce:

a) a 41-year-old designer who works from home, sewing facemasks and selling them via Etsy and eBay

b) a 53-year-old bus driver who left her job to look after her mother who has a serious illness

c) a 35-year-old unemployed person who is available for work and actively seeking work

d) a 16-year-old school student who works on weekends at a café.

10 Explain how the labour market is similar to and different from markets for consumer goods and services.

Extended response

Analyse how changes in consumer tastes, productivity levels, workforce participation rates and the ageing of the population affect supply and demand in the labour market.

10 Labour Market Outcomes

10.1 Wage outcomes

10.2 Trends in the distribution of income from work

10.3 Non-wage outcomes

10.4 The costs and benefits of inequality

10.5 Unemployment

10.6 The movement away from full-time work

10.1 Wage outcomes

Having looked at the basic demand and supply forces that operate in the labour market, we can now examine what outcomes the labour market produces. In the product markets for goods and services that we studied earlier, the market outcomes were an equilibrium of price and quantity. Likewise, our analysis of labour market outcomes will focus on the price of labour (such as wage levels and non-wage benefits of employment) and the quantity of labour (such as job growth, unemployment levels and hours worked by employees). In examining these outcomes we confront difficult choices about how we balance the competing goals of fairness and efficiency in the labour market.

Wages and salaries are the most important source of income for Australian households. The major source of income for 62 per cent of Australian households is wages and salaries, while 22 per cent rely chiefly on government pensions and allowances. Smaller numbers rely on income from superannuation (6 per cent), dividends from investments (4 per cent), or income from owning an unincorporated business (3 per cent). Those who rely on government pensions and allowances have incomes on average less than one-third of incomes from private sources. Overall, wage outcomes produced by the labour market have more influence on how income is distributed throughout the Australian community than any other factor.

There are several ways of measuring wage outcomes and comparing them across different categories. In the following section we look at broad measures of wage outcomes and then examine how wages differ amongst working people in Australia.

Average weekly earnings

A good starting point for our analysis of wage outcomes is to look at changes in **average total earnings for all employees**, which measures the average weekly gross rate of pay (that is, pay before tax) to all employees, both in full-time and part-time employment, including any payment for overtime. In 2022, the average total earnings of all employees was $1345 per week. Figure 10.1 shows that average total earnings grew at an average annual rate of 2.8 per cent during the decade to 2020, compared to 4.2 per cent in the decade to 2010.

However, looking at changes in **nominal** (or money) **wages** does not tell us whether people are better off because they do not take into account changes in price levels that might be occurring at the same time.

Nominal wage is the pay received by employees in dollar terms for their contribution to the production process, not adjusted for inflation.

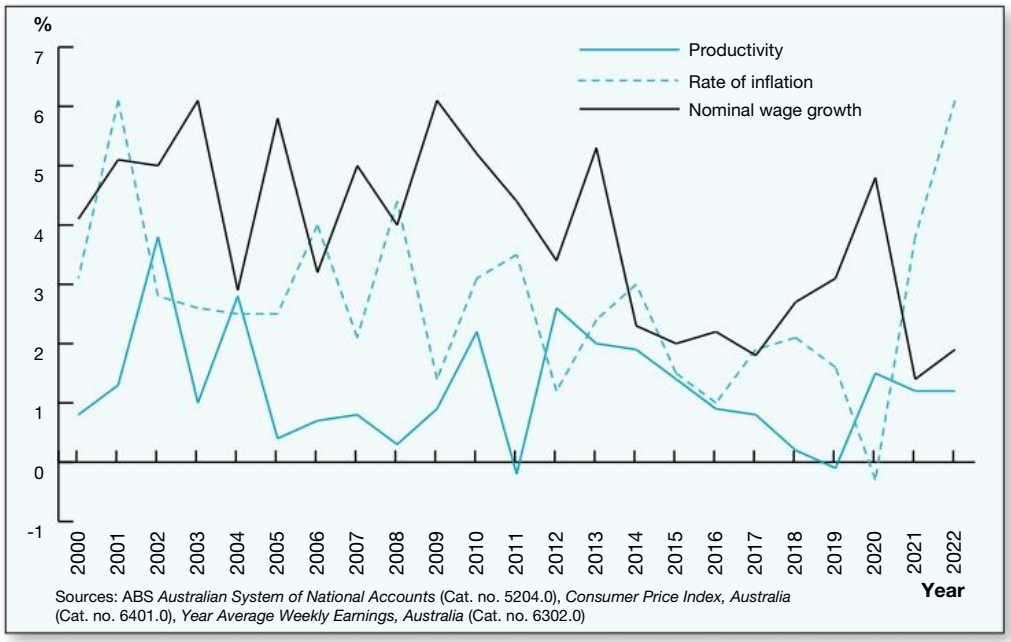
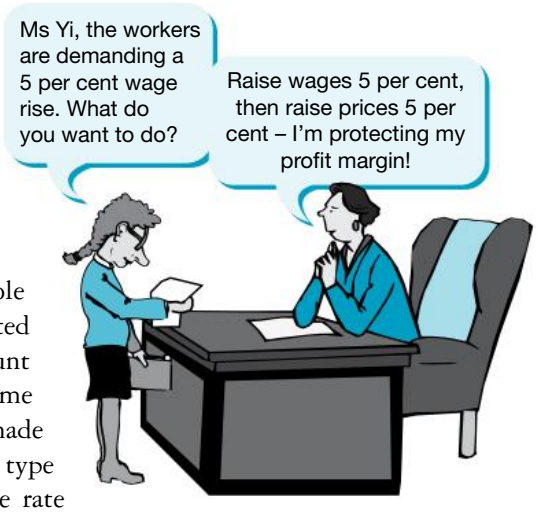


Figure 10.1 – Changes in nominal wages, inflation and productivity

To see whether people are better off over time, we must look at changes in **real wages,** which are a measure of the actual purchasing power of nominal wages (that is, money wages adjusted for any increase in the level of inflation). Figure 10.1 reveals that in most years, the percentage increase in nominal wages is greater than the percentage increase in the general price level (measuring wages as the change in average weekly ordinary time earnings for full-time workers). In other words, real wages have generally been rising. However, there are some years when the growth of money wages is outstripped by the rate of growth of prices, such as in 2021 and 2022, when supply disruptions due to the COVID-19 pandemic and Russia's invasion of Ukraine contributed to major supply disruptions globally.

Real wage is a measure of the actual purchasing power of money wages (that is, nominal wages adjusted for the effects of inflation).

Employers can afford higher real wages if there are also strong increases in productivity. If the growth in real wages is higher than productivity growth, **real labour costs** will rise and this will eat into the employer's profits. Equally, when wages growth is below the sum of inflation and productivity growth, real labour costs will fall and profits will expand. If real labour costs are rising, in order to protect profit levels employers may choose to employ less labour and use more technology in production, leading to a higher rate of unemployment (as labour would be pricing itself out of a job). In most years, the percentage change in nominal wages has been less than the combined percentage change in prices and labour productivity (this means that real labour costs have been falling). However in occasional years, such as between 2018 and 2020, wages growth can be above the sum of inflation and productivity growth.



Differences in wage outcomes

So far we have only examined wage outcomes at the level of the whole economy. We have looked at the overall movement in wage rates as reflected by the changes in average weekly earnings without taking into account wage rate differences between various occupations, and within the same occupations. In this section, we are reminded that the labour market is made up of a number of many different micro-markets – a market for each type of occupation and even for each individual enterprise – and that wage rate differentials occur between these markets.

Wage differentials between different occupations

Different occupations require different levels of education and skills. Workers fall into occupational groups that do not compete with each other (such as architects, carpenters, clerical assistants and engineers), and the wage differentials between them reflect the different levels of education and skills required to perform the jobs. In the labour market, people generally receive greater rewards for working in occupations that require a higher level of skill and a longer period of training. People will generally not spend time and money acquiring education and skills unless they are confident that their occupation will either result in higher wages, or provide some other benefit, such as a more satisfying job.

Some occupations, by their nature, involve working conditions that are less appealing than others (for example, they are dangerous, dirty or involve irregular hours). People who work in these occupations quite often get paid a higher wage rate as compensation for those poorer working conditions. A handful of roles – such as being the CEO of a large company – receive dramatically higher pay. A survey published in 2022 by the Australian Council of Superannuation Investors found that the median pay for CEOs of Australia's top 100 publicly listed companies was $4.2 million per year in 2020–21, which was 45 times average full-time wages for Australian workers.

Occupational mobility (the ease with which labour can move from one occupation to another) will also influence occupational wage rates. Where occupational mobility is high, the supply of labour to that occupation is always likely to be high, and there is less need for employers to raise wages to attract labour. On the other hand, when occupational mobility is restricted, labour supply is less abundant, and wage rates tend to be higher. For example, highly specialised occupations such as veterinary surgeons, accountants and lawyers experience limited occupational mobility because it takes a long time to learn the skills to be able to move into these occupations.

Managers	$1850
Professionals	$1600
Technicians and trades workers	$1200
Machinery operators and drivers	$1200
All employees	$1200
Clerical and administrative workers	$1105
Labourers	$800
Community and personal service workers	$798
Sales workers	$675

Source: ABS *Characteristics of Employment, Australia* (Cat. no. 6333, Table 4)

Figure 10.2 – Median weekly income by occupation, 2021

Figure 10.2 indicates that:

- Income distribution is markedly unequal across the eight major occupation groups.
- The highest-paid group were managers, with a median weekly income of $1850 per week. This reflects the higher level of experience required in these occupations.
- The lowest-paid group were sales workers, with a median wage of around $675 per week. This is due to the lower level of skills and training required for these occupations and the higher level of occupational mobility for these jobs.

Wage differentials in the same occupation

Wages also differ markedly for workers in the same occupation, reflecting the various degrees of experience. More experienced workers are generally considered to be more valuable and are quite often paid more. Likewise, workers with higher qualifications are generally paid more.

Geographic mobility (the ease with which labour can move from one area to another) will influence wage rates within the same occupation. For example, employers find it difficult to attract labour to isolated locations and generally have to pay higher wages to do so. Therefore, a similarly qualified worker may be paid a higher wage rate in order to be attracted to work in a more distant location, such as Broken Hill, than if they were to work in an area like Sydney, where the supply of all types of labour is plentiful. This has been seen in the recovery period from the COVID-19 pandemic, with Australia in 2022 experiencing the second-largest labour shortages among OECD economies. In regional

areas, even with higher wages the shortage of workers resulted in farmers planting fewer crops, restaurants closing and employers making arrangements to "share" workers. The shortage of workers is partly blamed on Australia also having a shortage of visa processing, resulting in long delays in overseas workers securing the right to work in Australia.

The **productivity of labour** will influence wage rates paid. Under enterprise bargaining, employees often gain higher wages at the individual enterprise level in exchange for taking steps to increase their productivity.

Labour productivity refers to the quantity of output produced in a production process per unit of labour per unit of time.

The **capacity of the firm to pay** also influences wage outcomes. Some firms are more profitable and have a greater capacity to pay higher wages. For instance, firms that have market power and, therefore, the ability to set prices and earn higher profits would be able to pay higher wages compared with firms that face greater competition in their product markets.

Age

Income varies over the course of life, although it tends to remain highest between the ages of 25 and 64 – the main years of a person's working life. Figure 10.3 indicates that the 35–44 age bracket earns the highest median income per week ($1495) while the 15–19 age bracket earns the lowest ($258), followed by those aged between 20 and 24 ($800). There is less variation in income levels if we only look at full-time workers, where median weekly earnings are at their lowest at $750 for the 15–19 age bracket and peak at $1189 in the 35–44 bracket. Overall, figure 10.3 shows that income levels are generally lower in the earlier years of working life (since people have less education and experience and hold lower-paying jobs). Similarly, income levels decline as people get older and need to rely on age pensions or other forms of retirement income.

Age groups	15–19	20–24	25–34	35–44	45–54	55–59	60–64	65 and over
Weekly income ($)	258	800	1200	1495	1418	1367	1200	1000
Source: ABS *Characteristics of Employment, Australia* (Cat. no. 6333, Table 2)								

Figure 10.3 – Median weekly income by age, 2021

Gender

Discrimination by employers against certain groups in our society means that people in some groups have fewer job opportunities and less access to higher-paid jobs, leading to lower earnings. Groups that have traditionally suffered from discrimination include women, Indigenous Australians and people who have immigrated to Australia.

Gender-based discrimination is highlighted in the difference between male and female earnings. Since 1969, Australia's employment laws have recognised the principle of **equal pay for equal work**. However, this principle alone fails to correct the imbalance between men's and women's wages, as many women are forced to reduce their paid work hours because they fulfil other roles, such as child-rearing, for which they are not paid. As a result, a second principle of **equal pay for work of equal value** emerged, requiring that remuneration should take account of both the quality and the quantity of work. The evidence nevertheless suggests that women still experience some forms of discrimination, particularly in terms of the highest-paid jobs or positions. In this sense women are said to face a "glass ceiling" in employment – an invisible, rather than a formal, barrier that makes it harder for women to gain access to the top paying positions. The presence of such a barrier is reflected by the substantial difference in average weekly earnings between males and females shown in figure 10.4.

Year	Males $	Females $
1990	520	345
1995	623	420
2000	784	516
2005	955	640
2010	1227	819
2011	1267	849
2012	1285	823
2013	1357	850
2014	1365	882
2015	1370	907
2016	1395	925
2017	1417	946
2018	1445	976
2019	1476	1011
2020	1538	1084
2021	1555	1070
2022	1587	1116
Source: ABS *Average Weekly Earnings, Australia* (Cat. no. 6302, Table 2)		

Figure 10.4 – Average weekly total earnings, all employees

Figure 10.4 shows that in 2022, the average weekly earnings of women were only 70 per cent that of men, and only half of the gap can be explained by the greater proportion of women in part-time work. Part of the remaining difference in the earnings of males and females can be explained by human capital factors – due to past attitudes about the role of women in society, females had fewer opportunities to acquire education, skills and qualifications. However, even taking into account those differences in skills and qualifications, females earn less than males in many similar jobs. The gender pay

gap is researched by the Australian Government's Workplace Gender Equality Agency (WGEA), which calculated in 2021 that men earn an average of 14.1 per cent more than women in the same full-time occupations. Although the gender pay gap has fallen since 2014 (when it was 19 per cent), it has been lower in the past than it is now. This suggests that there is embedded discrimination in the labour market because females with similar skills and experience continue to receive lower incomes than their male counterparts. The 2022 report *She's Price(d)less: The Economics of the Gender Pay Gap* by KPMG, the WGEA and the Diversity Council of Australia quantified the various factors that contribute to why women are paid less than men. The report found that women are on average paid $2.56 less per hour than men. As figure 10.5 shows, the three factors contributing most to the gender pay gap are discrimination, interruptions in working life (usually because of caring for children) and working in lower-paid "segregated" industries with high rates of female employment.

Factor	Percentage effect (%)			Monetary equivalent per hour ($)		
	2014	2017	2020	2014	2017	2020
Gender discrimination	29	39	36	0.9	1	0.91
Years not working (interruption)	23	25	20	0.71	0.64	0.51
Occupation-based segregation	20	8	4	0.6	0.2	0.1
Industry-based segregation	11	9	20	0.33	0.23	0.5
Part-time employment	6	7	11	0.19	0.19	0.27
Unpaid care and work	6	7	2	0.18	0.18	0.06
Age (years)	5	3	9	0.14	0.08	0.23
Tenure with current employer	1	1	1	0.02	0.03	0.03
Working in government or NGO	–1	1	–2	–0.02	0.02	–0.05
COVID-19 paid leave	N/A	N/A	–0.3	N/A	N/A	0.01

Source: KPMG, Workplace Gender Equality Agency, Diversity Council of Australia. *She's Price(d)less: The Economics of the Gender Pay Gap* 2016, 2019 and 2022

Figure 10.5 Causes of the gender pay gap, 2014–20

Migrant status and cultural background

Another influence on labour market outcomes is the migration and cultural background of individuals. Around one-third of Australian workers were born overseas (4.5 million out of a total working population of 13.5 million in 2022), of whom almost 1.4 million migrated to Australia within the previous decade.

Annual income ($)	All Australians	Migrant Australians	Skilled migrants
Average income	49,075	48,398	55,443
Managers	69,100	61,775	67,607
Professionals	71,353	74,865	79,051
Technicians and trades workers	53,629	51,514	54,679
Sales workers	27,319	25,204	26,133
Labourers	33,076	29,933	32,287

Source: ABS *Personal Income of Migrants, Australia* (Cat. no. 3418.0)

Figure 10.6 Average income levels for migrants and non-migrants in Australia

Figure 10.6 shows data on the incomes of migrant and non-migrant taxpayers in Australia, which forms part of an analysis released by the Australian Bureau of Statistics in 2015. Note in particular:

- Overall, the average income of Australian workers with a migrant background is just 1 per cent less than the national average for Australian workers. This suggests that immigrants integrate into the workforce more quickly than in most other countries – on average, the gap between average pay and that of immigrant workers is 13 per cent

in high-income countries, according to the International Labour Organisation. It is also because Australia's migration program specifically targets skilled workers, who are relatively well paid.

- Those who came to Australia as skilled migrants earn an average of $55,443, which is well above the national average. This reflects the fact that skilled migrants have higher levels of skills than the average of the Australian workforce (unsurprisingly, since they are being recruited to Australia for exactly that reason). Skilled migration now comprises most immigration to Australia, having grown from 20 per cent of total immigration in the early 1990s to nearly 70 per cent by 2019 (although it fell sharply during the COVID-19 pandemic).
- A comparison of incomes by occupation shows that in the highest-paying occupational categories, such as managers and professionals, workers with a migrant background earn more than average taxpayers. This again is a reflection of the fact that Australia recruits many highly qualified workers from overseas. However, in the lowest-paying occupational categories, such as labourers and sales workers, Australian-born workers are more highly paid than workers from a migrant background. Because these are occupations with lower skill levels and therefore less rewards for those skills, even workers in this group who have come to Australia through the skilled migrant program earn less than Australian-born workers.
- Other data suggests that workers who have most recently migrated to Australia tend to have lower income levels than those who have been in Australia longer, but incomes tend to rise relatively quickly towards average levels.

Similar conclusions have been reached in other studies of the impact of migration and cultural background on labour market incomes. A 2016 study published in the *International Migration* journal, *Native-immigrant Wage Gap across Occupations: Evidence from Australia,* found that although workers who have migrated to Australia earn higher incomes, they actually receive lower rewards for their education than Australian-born workers. This appears to be explained by having weaker English language proficiency, rather than discrimination. Previous research has also found that a migrant who has an English-speaking background is likely to earn an above-average income (while a migrant from a non-English speaking background is likely to earn a below-average income). Workers whose background involved speaking English earn an extra 10 per cent, according to the study.

Overall, Australian research suggests that wage outcomes for migrants to Australia eventually conform to the average for all Australians. Where there are worse outcomes for some migrants, they are more likely to be the result of a lack of English language proficiency or skills than discrimination. In this respect, Australia is different from other Western countries, such as the United States and several European economies, where there are stronger links between migrant and ethnic background and a sustained experience of lower wages and higher unemployment.

Indigenous Australians (Aboriginal and Torres Strait Islander peoples), however, have longer-term and higher levels of disadvantage. Indigenous Australians represent around 3.8 per cent of Australia's population (although this varies regionally, with Indigenous Australians making up 31 per cent of the Northern Territory population). Median weekly personal income for Indigenous Australians aged over 15 was 33 per cent lower than non-Indigenous Australians, according to the ABS in 2019 ($623 per week compared with $935 per week). Indigenous Australians are also less likely to earn a high income, with just 27 per cent earning a household income in excess of $1000 per week, in comparison to 46 per cent of the general population. Further, approximately 37 per cent of Indigenous people were in the lowest income quintile in 2019. Conversely, just 9 per cent of Indigenous Australians were in the highest income quintile (the 20 per cent of Australians with the highest incomes).

reviewquestions

1 Outline the impact of the following changes on real wages:
   a) nominal wages rise faster than inflation
   b) nominal wages rise more slowly than inflation
   c) nominal wages and inflation rise at the same rate.
2 Account for the differences in wages outcomes between occupations.
3 Choose ONE group in Australian society that tends to be adversely affected by income inequality:
   a) Compare their wage outcomes with the average for other groups and with the rest of Australia.
   b) Discuss possible reasons for their disadvantage.
   c) Suggest ways in which the government could intervene to reduce such inequality.

10.2 Trends in the distribution of income from work

During the past three decades, the Australian labour market has undergone dramatic changes that have altered the way in which people receive their wage increases. In the 1980s, employees generally had their wages determined through an industrial "award" that was decided centrally by a government-appointed industrial tribunal (the predecessor of what is now the **Fair Work Commission**). This meant that differences in wage outcomes both between and within occupations were smaller. However, the shift towards **enterprise bargaining** since the early 1990s – where employers and employees negotiate wage increases at the workplace level – has led to much greater differences in wage outcomes for both different industries and individuals.

Enterprise bargaining refers to negotiations between employers and employees (or their representatives) about pay and work conditions at the level of the individual firm.

At an economy-wide level, this has contributed to changes in **income distribution** between sections of the community. However, as highlighted by figure 10.7, relative household incomes have only changed slightly since the mid-1990s. This reflects the fact that increased family benefits for lower-income earners have offset increased wage differentials.

Income distribution refers to the way in which an economy's income is spread among the members of different social and socio-economic groups.

Quintile	Share of disposable income (%)						
	1995–96	1999–00	2005–06	2009–10	2015–16	2017–18	2019–20
Lowest quintile	8.1	7.7	7.8	7.4	7.7	7.5	7.4
Second quintile	13.0	12.6	12.7	12.4	12.5	12.5	12.6
Third quintile	17.7	17.7	17.4	17.0	17.0	17.0	17.2
Fourth quintile	23.9	23.7	23.0	23.0	23.0	22.7	23.0
Highest quintile	37.3	38.7	39.2	40.2	39.8	40.4	39.8

Source: ABS *Household Income and Income Distribution* (Cat. no. 6523.0, Table 1).
Note that statistics are not released for every financial year and statistical changes mean that statistics since 2007–08 are not directly comparable to previous statistics.

Figure 10.7 – Gross weekly individual income quintiles

Figure 10.7 shows the proportion of total income that is received by each income quintile over time (that is, five equal-sized income groups ranked from lowest to highest). It reveals that:

- There is considerable inequality in the distribution of income in Australia, which has grown slightly over the past decade.

- The top 20 per cent of income recipients accounted for almost 40 per cent of total income. Further, they had average weekly incomes over five times higher than the average of the bottom quintile.
- The share of total income accruing to the bottom 40 per cent of income recipients has remained relatively constant in recent years.
- Over the two decades between 2000 and 2020, the highest-income earners have gained an extra percentage point of the income share while the share of almost every other group has shrunk. The highest-income earners have gained income share at the expense of the middle quintiles.

Different wage outcomes across different industries are also the result of changes in the structure of the economy. Emerging industries that require skilled labour (which may be in short supply) are likely to pay higher wages than declining industries that are experiencing lower profits and falling demand for their goods and services.

Income distribution within occupations

In addition to the increasing gaps in earnings between occupations and social groups, recent years have seen an increase in the dispersion of earnings within occupations and among employees with the same skill levels or educational qualifications. The shift away from centralised wage determination since the early 1990s has contributed to this outcome, although the trend was already evident during the 1980s. Another contributing factor is the declining level of union membership in Australia. Higher rates of union membership tend to create more similar wage outcomes for workers doing similar jobs in different firms and industries, but as the role of unions has declined, there has been greater variation in wage levels within industries.

reviewquestions

1 Describe the recent trends in the distribution of income in Australia.
2 Assess the impact of enterprise bargaining on the distribution of income.

10.3 Non-wage outcomes

In addition to their ordinary and overtime payments, employees receive additional benefits such as sick leave, holiday leave, **superannuation** and other fringe benefits. These are known as **non-wage outcomes**. While these are of significant value to the employee and represent a significant cost to the employer, they do not appear in the average weekly earnings statistics.

Superannuation is a form of saving that individuals cannot access until they reach retirement age.

There is no single measure of non-wage outcomes for employees, because many cannot be quantified in dollar terms. Non-wage outcomes can vary substantially from one workplace to another. In some industries, workers often earn far more than their regular wage because of substantial non-wage allowances.

Non-wage outcomes are the benefits that many employees receive in addition to their ordinary and overtime payments, such as sick leave, superannuation, a company car, study leave or arrangements for employees to work from home for part of the week.

Several types of non-wage outcomes exist:

- Salary packaging: This involves wages being supplemented with other benefits such as a company car, a laptop computer, subsidised child care, gym membership and other types of assistance from their employer.
- Bonus cash payments on top of an employee's normal wage: These payments are normally made as a performance bonus, either based on the company's profit performance or the employee's individual work performance.
- Improving flexibility for employees in their work patterns: This might include allowing time for study leave, extra parental leave, leave to look after a sick family

member, allowing extended leave without pay and allowing employees to share jobs. One of the longer-term results of the COVID-19 pandemic, which at one stage saw around one-third of employees globally working from home, is the increase in flexible work practices, with many more people working remotely and from home, and more employees living a long distance from their workplace.

reviewquestions

1 Distinguish between wage and non-wage outcomes.
2 Identify THREE occupations where bonus payments are commonly used.

WORK AND QUALITY OF LIFE

Work is not only a source of income for individuals, it is also a major influence on an individual's quality of life because it makes people feel productive and valued by society. Working provides people with social interaction; fellow workers are not just colleagues, they can also be friends, neighbours, sporting team members, and members of a local community. Social studies of work in Australia and overseas have consistently found a strong link between secure employment and individual happiness or wellbeing.

One source of ongoing information about work and personal satisfaction is the Australian Unity Wellbeing Index, which has been published regularly since 2002. It has consistently found that on average, people who are employed have a significantly greater "wellbeing index" than those who are unemployed (77 compared to 57 in 2021). However, when people's work hours become too long, their wellbeing declines. It has also found that wellbeing for those in full-time study is almost identical to those in full-time work, but people who are retired generally report a greater sense of wellbeing than those who are in work (78 compared to 71). The highest level of work-related satisfaction was recorded by people who work as unpaid volunteers (for example, for a charity) on a part-time basis (79), although full-time volunteers also have greater wellbeing than full-time workers.

A 2017 report by Bankwest and Curtin University further investigated the relationship between employment and satisfaction, finding that 29 per cent of Australians were "very satisfied" with their overall work. Results indicated the least satisfied employees were Millennial and Generation Z workers and, generally, women were happier with their jobs than men. Across different sectors, the workers with the highest job satisfaction were those in the agriculture and arts industries.

A survey of Australians conducted by PricewaterhouseCoopers in 2021, a year into the COVID-19 pandemic, found that around three in four workers prefer a mix of online and in-person work, valuing the flexibility of working from home. Many, however, fear the impact of technology and artificial intelligence: 56 per cent of Australians believe long-term job security will remain lower as a result of the COVID-19 pandemic, and 32 per cent worry that their own job could become obsolete.

10.4 The costs and benefits of inequality

There are advantages and disadvantages associated with an inequitable distribution of income. However, in general, inequality has economic benefits but social costs.

At one end of the spectrum, some economists argue that inequality is a natural consequence of the free market functioning effectively, since each individual receives a share of income according to their marginal productivity. In addition, they contend that inequality has the advantage of creating and strengthening individuals' incentives and increasing their share of output. In other words, inequality encourages people to work harder to improve their position in the distribution of income.

At the other end of the spectrum, some economists emphasise the social costs associated with inequality. They argue that the system of free-market capitalism divides society into an upper class, a middle class, a working class and an "underclass", and that those in the underclass have limited opportunities to fulfil their potential because of barriers to participating in education, work and social life.

Economic benefits of inequality

Income inequality can lead to an increase in the productive capacity of resources and thus an increase in real GDP per capita. Economic benefits are mainly derived from the **incentive effects** of inequality.

Inequality encourages the labour force to increase education and skill levels

If those with higher qualifications and skills reap higher income rewards, new entrants and existing participants in the labour force will be encouraged to improve their education and skill levels. Therefore, so long as low-income recipients can afford to pay for education and training, income inequality encourages an increase in the quality of the labour force.

Inequality encourages the labour force to work longer and harder

The potential to earn higher incomes produces an incentive for workers to work longer hours or to work overtime, which may enhance economic growth. However, workers will only be willing to give up leisure in order to work longer hours when they feel the extra income is more valuable than their leisure time.

In addition, if increased output is rewarded through higher pay, this encourages improved labour productivity.

Inequality makes the labour force more mobile

The use of higher incomes can act as an incentive to encourage labour to move to where it is most needed. A more mobile labour force will lead to a more efficient allocation of resources and a higher rate of economic growth.

Inequality encourages entrepreneurs to accept risks more readily

The prospect of considerable income rewards accruing to entrepreneurs is necessary to encourage them to undertake investment. Unless entrepreneurs received an extra reward for risk taking, there would be fewer entrepreneurs and businesses, a lower rate of economic growth, fewer jobs and a reduced productive capacity in the economy.

Inequality creates the potential for higher savings and capital formation

There is a strong relationship between income and saving levels. The higher the income an individual earns, the greater the proportion of income that will be saved; likewise, the lower the income, the lower the proportion of savings. In theory, greater income inequality

should encourage increased savings in the economy because of the greater number of higher-income earners. Increased savings should reduce Australia's reliance upon foreign capital by providing domestic funds for investment.

Economic costs of inequality

Inequality reduces overall utility

Inequality in the distribution of income reduces the total utility, or satisfaction, in society. This is because people on higher incomes gain less utility from an increase in income than people on lower incomes. This is explained by the principle of diminishing marginal utility: as more of a good is consumed it will provide progressively less utility to the consumer. This means that an extra $1 of income is worth more to a lower-income earner than to a higher-income earner. A more equitable distribution of income would therefore increase total utility (in other words, create a greater overall level of satisfaction in society). However, it is necessary to bear in mind that it is extremely difficult to measure relative utilities accurately.

Inequality can reduce economic growth

High levels of inequality will tend to slow down the rate of economic growth in an economy. One reason is because low-income earners spend a higher proportion of their income and therefore contribute to growth. Another reason is that more unequal societies undermine educational opportunities for children from the poorest backgrounds, resulting in a less productive and less skilled workforce. Conversely, by reducing inequality and distributing the benefits of economic growth, economies should be able to strengthen their growth rate.

Inequality reduces consumption and investment

Low-income earners spend a higher proportion of their income than richer people, since the cost of basic essentials such as housing and food takes a higher proportion of their income. A higher level of income inequality will therefore mean that less income will go towards consumption. This in turn leads to lower economic activity, employment, investment and living standards.

Inequality creates conspicuous consumption

Some economists argue that inequality in the distribution of income creates a "leisure class" consisting of the higher-income earners in society. The leisure class puts a large proportion of their money towards "conspicuous consumption", which is the consumption of expensive goods and services, such as designer-label clothes and accessories, purely for the purpose of displaying wealth and status. This can contribute towards a culture where individuals' sense of their own worth depends on their level of wealth compared to others.

Inequality creates poverty and social problems

Inequality in income distribution causes relative poverty. Poverty contributes to the development of an underclass of low-income earners, who have limited access to educational opportunities and can suffer health and other disadvantages that may reduce labour force participation and create a self-perpetuating cycle of disadvantage. This reduces educational opportunities and lowers self-esteem, which over time may result in people not working to their full capacity or not working at all.

Inequality increases the cost of welfare support

Governments provide safety net income support for people out of work, the aged and people with disabilities. This places demands on government revenue, as a large number of people on low incomes may require government assistance.

Social benefits of inequality

In theory, inequality should have a social benefit if individuals' incomes genuinely reflected their relative productivity. In those circumstances, people would be rewarded for their enterprise and effort, and this would provide an incentive for individuals to work harder and more productively, and acquire new skills and knowledge, knowing that their effort would be rewarded.

However, since the economic system that determines the distribution of income and wealth does not give everyone the same level of opportunity to acquire knowledge and skills, the distribution of income does not accurately reflect the productivity levels or work effort of individuals.

Inequality of opportunity exists in Australia due to several factors:

- Existing inequality in the distribution of income and wealth tends to perpetuate inequality of opportunity. For instance, higher-income earners generally have access to better educational opportunities, making it more likely that they will gain admission to university courses, allowing them to take up higher-paid occupations.
- Not everyone has the same mental and physical attributes and the same potential with regard to the acquisition of income and wealth. For example, some people are more talented at manual work, which tends to lead to lower paying jobs than jobs that require analytical skills.
- People who acquire wealth through inheritance have a much greater opportunity to build up their wealth through investments, as opposed to those that start with no wealth.
- People may not have access to the same networks of people that may lead to new opportunities. For example, new migrants are likely to find it difficult to access social and business networks. This inequality can be especially difficult to overcome because many of the barriers to opportunities are informal barriers (for example, businesspeople may prefer to do business with people who went to their school or have a similar social background, because they feel more comfortable with such people – this will informally exclude other people).

Given the problem of inequality of opportunity, it is generally agreed that the social benefits associated with inequality are very limited.

Social costs of inequality

The three main social costs of inequality are social class divisions, poverty and lower levels of wellbeing.

Wellbeing

Research undertaken by The Equality Trust in the UK suggests that in advanced economies, social problems such as mental illness, crime, lower levels of life expectancy and lower levels of social mobility are all more related to a country's level of inequality than changes in the level of national income. *The Spirit Level*, a book published in 2009 by Richard Wilkinson and Kate Pickett, analysed data from economies with different distributions of income across the industrialised world. They concluded that the best long-term strategy to reduce social problems, such as high rates of crime and imprisonment, chronic health problems and low levels of trust within society, is not to focus on increasing economic growth, but to focus on reducing inequality.

Social class divisions

Differences in income and wealth contribute to divisions within societies between lower- and higher-income groups. One of the main ways that economists, sociologists and historians have analysed these differences is through the lens of social class, with societies divided into working class, middle class and upper class groups. Social class differences become entrenched when people with different income levels become isolated from each other, while people of similar income levels cluster in the same suburbs, attend the same schools, and mix with each other but not with those from different backgrounds. Entrenched class divisions can limit opportunities for individuals and limit social mobility between classes.

Poverty

Inequality results in higher levels of poverty. Many Australians live in relative poverty. Poverty tends to trap families into a vicious cycle of low incomes and limited economic opportunities. High poverty levels also tend to be associated with increased levels of crime, suicide, worse health outcomes and reduced life expectancy.

reviewquestions

1 Explain how reducing inequality might increase economic growth.
2 Outline the major social and economic costs and benefits of inequality.

extensionquestion

In his famous 1971 book *A Theory of Justice*, philosopher John Rawls argues a perspective on income distribution that became widely accepted during the late twentieth century. Rawls argued that the fairest way to identify what level of inequality should be permissible in a society is to put individuals under a "veil of ignorance"– that is, by asking them how they would like society to be structured if they did not know where they would sit on the social and economic hierarchy. In other words, he would ask that if you were about to be born into a random family, what kind of income distribution would you want in Australia? Would you want a substantial gap between rich and poor and risk being born into a low-income family, or would you prefer to have a smaller gap and be born into a high-income family that wasn't much better off than a low-income family?

Considering this perspective, identify the groups in society that tend to argue that inequality is an "inevitable part of any society". Which groups advocate a lower level of income inequality?

10.5 Unemployment

Unemployment refers to a situation where individuals want to work but are unable to find a job, and as a result labour resources in an economy are not utilised.

One of the highest priorities of all policies affecting the labour market is to reduce **unemployment**. To be classified as unemployed, a person must be over the age of 15, be without a job, or have been let go from a job without pay, but be actively seeking full-time or part-time work. "Actively seeking work" means more than just looking through the "positions vacant" section of the classified advertisements in newspapers – the person must be willing to apply for jobs, attend job interviews and be able to start work if asked to do so. To be classed as actively seeking work, a person without a job should satisfy any one of a number of criteria, such as:

- regularly checking advertisements from different sources for available jobs

- being willing to respond to job advertisements, apply for jobs with employers and attend interviews
- be registered with any employment placement provider that is a member of Workforce Australia Online, the government-funded employment services platform.

The Australian Bureau of Statistics (ABS) defines the **unemployment rate** (also known as the **level of unemployment**) as the number of unemployed persons expressed as a percentage of the total labour force.

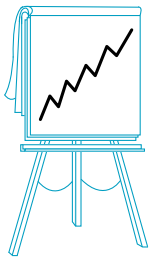
$$\text{Unemployment rate (\%)} = \frac{\text{Number of persons unemployed}}{\text{Total labour force}} \times \frac{100}{1}$$

For example, if the size of the labour force was 10 million, and the number of persons **classified as unemployed** was 1 million, then the unemployment rate would be 10 per cent.

Types of unemployment

Although it is common to speak of a level of unemployment in the economy, in reality there are many different types of unemployment, each reflecting a different cause. Some types of unemployment have a cyclical cause, and they increase or decrease according to fluctuations in the business cycle – these include cyclical unemployment and hidden unemployment. Unemployment can also arise as a result of changes in the structure of the economy – structural unemployment and long-term unemployment are examples. Finally, there are some types of unemployment that have causes separate from the economy – these include seasonal, frictional and hard-core unemployment.

Cyclical unemployment



Cyclical unemployment is caused by a downturn in the business cycle. It occurs because the demand for labour is a derived demand. When there is a downturn in the business cycle, demand for goods and services falls. Firms are forced to cut back production and will lay off some workers in order to maintain their profit levels.

Cyclical unemployment will be reduced when there is an upturn in the business cycle. Aggregate demand rises, increasing demand for a firm's goods and services, and so firms will increase their demand for labour in order to increase their production levels. As demand for labour increases, more jobs become available and the level of unemployment falls.

Structural unemployment



Structural unemployment occurs because of a mismatch between the skills demanded by employers and those possessed by unemployed people. Restructuring of the economy from old industries to emerging industries and the introduction of new technology will usually increase the level of structural unemployment. Those workers who were laid off in the declining old industries may find that their particular skills are not appropriate in newer industries where the type of skills required may be different. So even if the unemployed person wants to work, and the firms in the new industry require more labour, the mismatch of skills means that the structurally unemployed cannot find work.

Long-term unemployment



To be classified as long-term unemployed, an individual must have been unemployed for a period of 12 months or more. Generally, the longer a person is out of work, the harder it becomes for them to get a job. The long-term unemployed may have started out originally as cyclically unemployed persons. An economic downturn may have caused a person to lose their job. However, during an economic recovery the economy may not

grow quickly enough to eliminate all cyclical unemployment, and some people may find themselves unemployed for more than 12 months. After a long period of unemployment, a person may lose their job-related skills, while employers will also be more reluctant to hire someone who has been out of work for a long time.

Seasonal unemployment



Seasonal unemployment occurs because of the seasonal nature of some jobs (that is, changes in the labour market that occur regularly each year, independent of the business cycle). Examples include tourist-related jobs and jobs associated with holiday seasons, such as plump older men working as shopping centre Santa Clauses at Christmas. Seasonal unemployment also rises during the December–March period of each year when new school leavers are seeking jobs and enter the labour force.

Frictional unemployment



Frictional unemployment occurs as people change jobs, moving from one job to another. It usually takes some time to move between jobs as individuals must search for employment opportunities, attend job interviews and complete any administrative details. There will always be a small level of frictional unemployment in the labour market, although improving the efficiency of job placement services can reduce the level of frictional unemployment.

Hard-core unemployment



Hard-core unemployment refers to those individuals who might be considered unsuitable for work because of personal reasons such as mental illness, physical disabilities or drug addiction.

Hidden unemployment



Hidden unemployment refers to those individuals who are not counted in the official unemployment figures because they have given up actively seeking work or have gone back to school. Hidden unemployment usually rises during a prolonged economic downturn. Slower growth in aggregate demand means that the prospects of finding a job are very low, and some individuals become discouraged from continuing to seek work. Since the hidden unemployed are no longer actively seeking work, they are not officially unemployed, but they are still considered to be a part of the unemployment problem since they would work if labour market conditions were better. A rise in hidden unemployment will be reflected in a fall in the labour force participation rate rather than as an increase in the official unemployment rate.

Underemployment



Individuals who have part-time or casual jobs but would like to work more hours per week are said to be underemployed. Technically, these workers are not unemployed. However, they are a significant problem in the labour market since they represent under-utilised labour resources – the workers are ready and willing to work more hours, but the conditions in the labour market mean that they cannot. Estimates of the level of underemployment in Australia have risen significantly in recent decades, as an increasing share of jobs have been created on a part-time or casual basis. (This is discussed in more detail in section 10.6).

Recent unemployment trends

For the past four decades, unemployment has been a significant economic policy challenge in Australia. As shown in figure 10.8, Australia experienced a sharp upward trend in the average level of unemployment between the 1970s and 1990s. After recording very

low unemployment rates in the 1960s and early 1970s, a severe **recession** in the early 1990s caused Australia's rate of unemployment to peak at 10.7 per cent – the highest level since the Great Depression – and averaged 8.6 per cent for the 1990s decade. The recession caused aggregate demand to collapse, bringing about cutbacks in production and the closure of many firms, which led to the shedding of labour and an increase in unemployment.

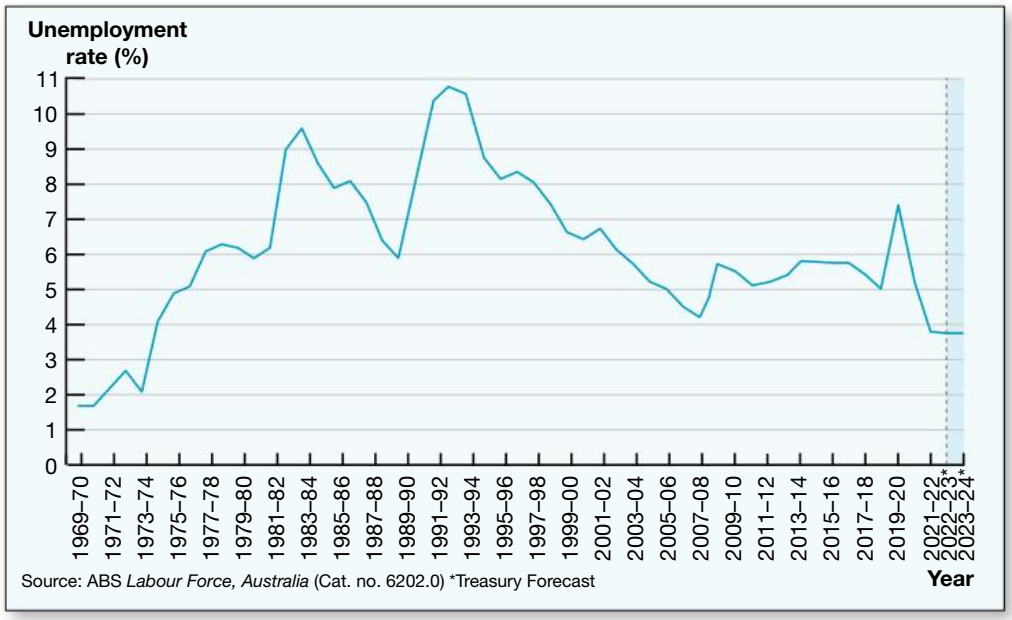


Figure 10.8 – Unemployment in Australia

Adding to the unemployment problem during the early 1990s was **structural change** and **microeconomic reform**. Many people who had lost their jobs in declining industries during the recession were unable to obtain new jobs created in emerging industries because the job vacancies often required higher or different skills.

Structural change refers to the process by which the pattern of production in an economy is altered over time, and certain products, processes of production, and even industries disappear, while others emerge.

There was a gradual downward trend in unemployment for the 15 years from 1993 to 2008, when it fell to 4 per cent, its lowest level since 1974. Conditions changed suddenly in 2008 as the global financial crisis triggered a worldwide recession, but in Australia the increase in unemployment was much milder than in most advanced economies. Unemployment rose by almost 2 per cent during 2008–09, but a quick economic recovery saw unemployment return to 5 per cent by 2010.

In the decade to 2020, Australia's unemployment rate generally remained between 5 and 6 per cent, roughly on a par with the OECD average of 5.3 per cent in 2019 but above the United States (3.6 per cent) and New Zealand (3.9 per cent). However, labour market conditions changed dramatically in 2020 with the onset of the COVID-19 pandemic, which led to shutdowns of businesses and a sudden surge in unemployment. Australia's unemployment rate did not rise to the extent of other countries – peaking at 7.5 per cent compared to 15 per cent in the United States – as the Government provided a temporary wage subsidy for around 3.5 million workers. As in other countries, the unemployment rate recovered quickly, falling below 5 per cent in 2021 and to 3.4 per cent in July 2022, which was significantly below the OECD average.

Unemployment and geography

We gain a better insight into the unemployment problem by contrasting the unemployment rates in different parts of Australia. Figure 10.9 shows the differences between the unemployment experiences of individual states and territories. Australia's economy has significant regional diversity, and labour market conditions can differ significantly, both within states and between them. Unemployment levels are closely related to economic growth, and in the unique circumstances of a health pandemic, the spread of the disease within specific geographic areas. States where growth is high (such as NSW, which has undertaken a large amount of public infrastructure investment in recent years) record lower rates of unemployment than the national average. Those states that are experiencing slower growth (such as Tasmania and South Australia) record higher unemployment rates than the national average. By examining state and regional trends in unemployment, policymakers can better understand the wider structural adjustments taking place in the economy.

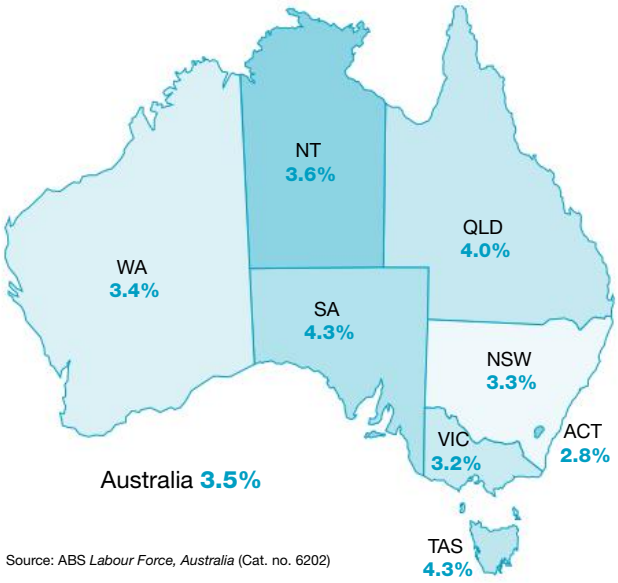


Figure 10.9 – Unemployment in Australia, July 2022

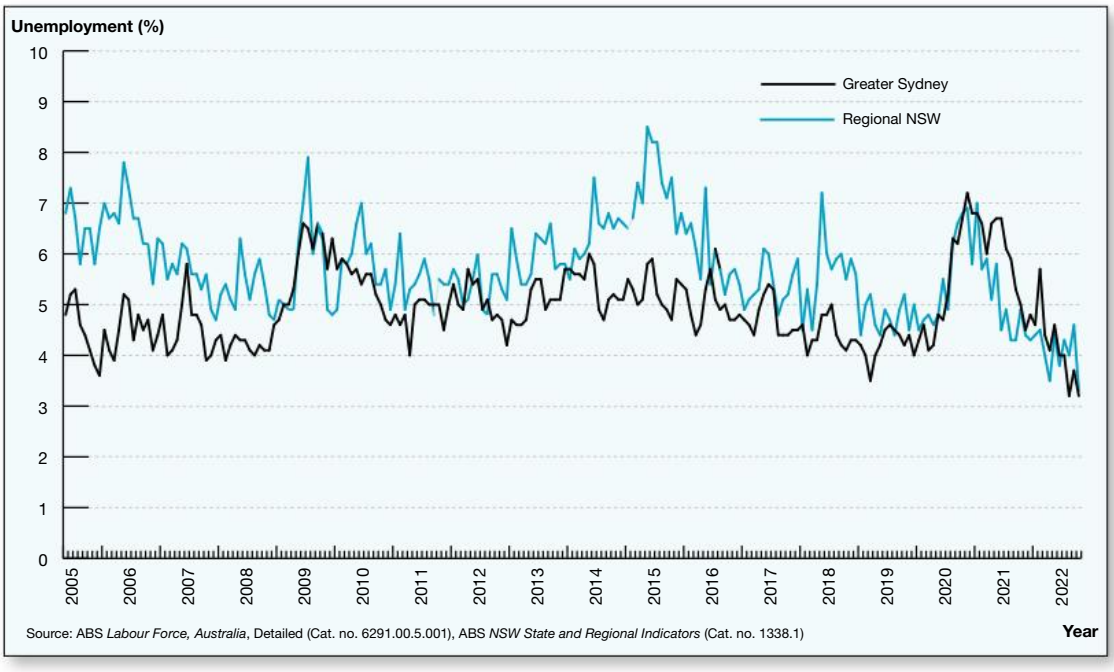


Figure 10.10 – Greater Sydney and regional NSW unemployment

There are large differences in unemployment rates within states – within cities, and between **cities, regions and remote areas**. Figure 10.10 shows regional areas of Australia often tend to have a higher level of unemployment than metropolitan areas. However, 2020, 2021 and 2022 show a reversal in this pattern as the COVID-19 pandemic had a more severe impact in major cities.

reviewquestions

1 Outline the major types of unemployment.
2 Account for recent trends in Australia's unemployment rate.
3 Propose TWO reasons for differences in unemployment between states.

10.6 The movement away from full-time work

The labour market has been undergoing substantial change over recent years as a result of changes in business practices, economic conditions and government policies. The most clearly defined change in work practices is the shift away from full-time work towards work arrangements that give businesses more flexibility. This includes part-time employment, casual jobs, outsourcing, individual contracts and sub-contracting.

Part-time employment

Part-time employed is defined by the ABS as those employees regularly working less than 35 hours per week. Casual employment occurs when employees have occasional working hours but do not follow any set pattern. Casual employees tend to be the most insecure because they do not have any certainty about whether they will have work in the future.

The proportion of employees working part-time has grown dramatically over recent decades. A comparison of OECD countries has shown that Australia has the fifth-highest rate of part-time employment in the industrialised world (seen in figure 10.11) at 25.5 per cent, compared to an average of 16.7 per cent across the OECD. In recent decades, Australia has also experienced a large increase in casual employment (known as the "**casualisation" of work**).

Casualisation of work refers to the growth of casual employment (and the relative decline of full-time permanent jobs) as a proportion of the total workforce.

Several factors help to explain this shift. Some employees prefer part-time work, allowing them flexibility to balance other responsibilities such as family commitments. A much higher proportion of women than men are in part-time work (44 per cent of employed women compared to only 19 per cent of employed men), reflecting several factors, including the fact that more women carry a greater share than men of child-raising and caring responsibilities. The option of part-time work has been made easier by cloud-based information systems and broadband making it possible for some employees to work part-time from home.

However, for others, part-time or casual work is the choice of their employer and not their own. Employers have greater flexibility in managing labour costs with employees who are not employed on a full-time basis. During busier times, they can increase hours for their staff and they do not face extra overtime costs or the costs of hiring additional staff. In addition, employing workers on a casual or part-time basis may help them to avoid some of the responsibilities they have to full-time workers, such as granting holiday leave, long service leave, sick pay entitlements and redundancy pay if they no longer have work for the employee.

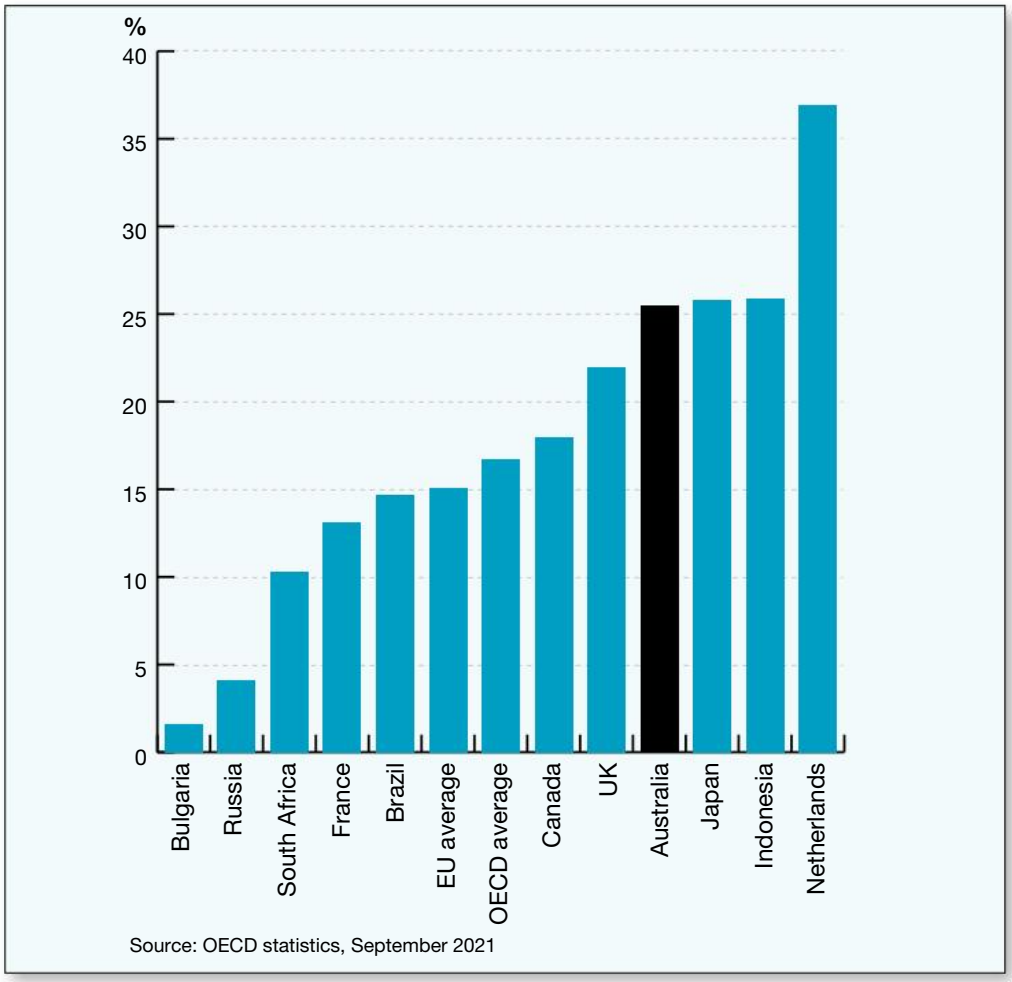


Figure 10.11 – Part-time employment as a proportion of total employment

Changing employment structures

Another trend seen in recent years is the shift away from direct employment arrangements towards the use of contractors, outsourcing and sub-contracting arrangements. The main purpose of these more flexible and less secure work arrangement is to allow businesses to change their staffing levels more easily and more often, as business conditions change.

Firms engaging **contractors** pay them to provide a specific service for the business, such as specialised consulting advice, or work that is intended for a limited period of time. Arrangements with contractors are different from employment arrangements in that they are governed by commercial law rather than employment law. In theory, contractors are intended to have greater control over how they provide their services. However, contractors are often not genuinely in control. For example, labour market experts debate the extent to which businesses such as Uber, Deliveroo and Amazon, which require individuals to use and service their own vehicle for transporting passengers, food and parcels on a per-kilometre or per-assignment basis, are acting as employers or just as contractors. These arrangements have been frequently challenged in courts and tribunals in recent years.

Another development related to the growth of employment contracts is the practice of outsourcing. **Outsourcing** (also known as **sub-contracting**, or contracting out) occurs when an organisation pays another business to perform a function that it does not regard as a core part of its business focus. For example, governments now outsource most of their information technology operations, leaving most computer operations performed by government in the hands of private companies. This includes data processing of social security claims, medical claims and taxation returns. Outsourcing aims to improve efficiency because it allows a business or government agency to focus on its areas of specialisation

while leaving other companies who specialise in other functions to do those tasks. However, it also tends to create shorter-term employment arrangements, because workers usually work on short-term contracts, and they are actually employed by a different organisation.

These changing employment structures allow firms to have the benefit of staff without the obligations that go with normal employment arrangements, such as paying award wages, workers' compensation, superannuation and leave entitlements. The flexibility of these work arrangements may be beneficial for some employees, but for others who are "permanent casuals" it can simply result in less job security and lower incomes. For employers, there are also some downsides with having fewer employees and more contractors in a workplace. Those downsides include a loss of staff loyalty to the business, a higher rate of staff turnover, and a less experienced and possibly less highly skilled workforce. Further, it is not always the case that contractors cost less than employees, as firms usually have to pay a higher hourly rate for contractors and outsourced employees in order to reflect the costs that the firm is no longer paying directly. Sometimes the consequences of casualisation are unpredictable. For example, one of the reasons for the spread of COVID-19 through aged care homes during the pandemic was that even though care homes have predictable staffing needs, they often employ staff on casual shifts or through agencies. As a result, staff often work across multiple facilities to earn an adequate income. During the pandemic, this accelerated the spread of disease as staff carried the infection from one care home to another.

CASUALISATION OF WORK

Advantages

- Flexibility for employers to change staffing levels as business demands change
- Employers may avoid paying some non-wage costs such as penalty rates or redundancy entitlements
- Flexibility for employees with family or other commitments.

Disadvantages

- Less job security
- More difficult for employees to plan for the future, obtain home loans, etc., without secure income
- Less staff loyalty and less development of workforce skills.

reviewquestions

1 Distinguish between part-time and casual employment.

2 Account for recent trends in the shift away from full-time work in Australia.

researchactivity

Research ONE of the following labour market outcomes:

- wage outcomes for all persons
- the distribution of income from work
- non-wage outcomes
- unemployment levels
- casualisation of work
- changes in employment structures.

Write a two-page report on your findings, examining recent trends in the labour market outcome, reasons for these trends and what, if any, role the government has played in influencing the labour market outcome.

chapter summary

1 At the economy-wide level, the growth in average total earnings for all employees gives the best indication of wage trends.

2 From the firm's perspective, labour costs increase if the growth of **nominal wages** is faster than increases in inflation and productivity combined.

3 **Wage outcomes** differ according to occupational groups, age, gender and cultural background.

4 In recent years, the wage gap between those workers who rely on award wage increases and those who are able to negotiate agreements through enterprise bargaining has increased.

5 **Non-wage outcomes** refer to financial benefits other than wages (such as performance bonuses, commissions, company share issues) and features of working conditions such as flexible working arrangements.

6 **Enterprise bargaining** has produced stable and moderate increases in wages since its introduction in the early 1990s, but it has also contributed to greater inequality in the distribution of income from work.

7 **Unemployment** is defined as all those over 15 years of age, without a job, or let go from a job without pay, but actively seeking work. There are many types of unemployment, including cyclical, structural, long-term, seasonal, frictional, hard core, hidden and underemployment.

8 The **long-term unemployed** are those who have been unemployed for a year or longer. Around one-sixth of unemployed people are long-term unemployed.

9 Recent years have witnessed a shift away from full-time to part-time, casual and contract-based employment. These forms of employment give greater flexibility to employers in how they manage their workforce.

10 Another significant trend is the growth of **outsourcing** and **sub-contracting**, where organisations pay a private sector company or an individual to do non-core functions. These jobs are normally contract based (that is, they only last for a limited time period) because the jobs only exist while the firm or individual still has a contract to work for the other organisation.

chapter review

1 Define *real wages* and explain how they are determined.

2 Define *wage inequality*. Explain why we experience wage inequality:

a) between different occupations

b) within the same occupation

c) between different groups in our society (give examples).

3 Outline TWO factors that help explain why, on average, women receive lower pay than men.

4 Outline how age can influence income levels. Examine whether or not you think this is an indication of discrimination.

5 Explain why some industries pay workers doing the same tasks less than other industries. Provide an example of a lower-paying industry.

6 Explain what is meant by non-wage outcomes in the economy. Identify the occupations in which these outcomes might be most significant.

7 Explain how the Australian Bureau of Statistics defines unemployment. Identify TWO dimensions to the unemployment problem that are not reflected in the official measure.

8 Briefly describe the following terms:

a) cyclical unemployment

b) structural unemployment

c) hidden unemployment

d) long-term unemployment.

9 Explain how unemployment levels may be influenced by local or regional factors in different parts of Australia.

10 Analyse why there has been a shift away from full-time towards part-time employment in recent decades.

Extended response

Outline the difference between wage and non-wage outcomes. Examine the factors that influence wage outcomes for employees. Analyse the arguments for and against a more equitable distribution of income from work.

11 The Changing Australian Labour Market

11.1 The role of trade unions

11.2 The role of employer associations

11.3 Australia's current industrial relations framework

The relationship between employers and employees – the forces that demand labour, and those that supply it – is a crucial part of how an economy functions. To employees who supply labour, the price of labour is their source of income, and they naturally want the highest wage possible. To employers who demand labour, wage rates are a cost of production, and they want wages kept low. The relationship between employees and employers is known as **workplace relations** or **industrial relations**, and economists frequently talk of the workplace relations system, or the industrial relations system. **The industrial relations system** involves the laws, institutions and processes established to resolve the conflict between employers and employees. In effect, the industrial relations system sets the rules for how the labour market operates. This chapter examines the structure of the industrial relations system and the roles played by the representatives of employers and employees in the labour market.

The industrial relations system (or workplace relations system) involves the laws, institutions and processes established to manage the relationship between employers and employees. The structure of the industrial relations system determines the process of wage determination and conflict resolution in the Australian labour market.

Over the past century, Australia has developed a unique industrial relations system. For many years the majority of workers belonged to a union and Australia had established safeguards aimed to prevent employers from misusing their power over workers. Throughout the twentieth century, Australia maintained a system of special tribunals to make decisions about wage movements and to help resolve industrial disputes. More recently, the role of these institutions has been reduced, and greater emphasis has been placed on employers and employees negotiating pay and work conditions.

Like consumer markets (where goods and services are purchased), the labour market operates through the interaction of the forces of supply and demand. Like those markets, it is not perfectly competitive and the market does not always deliver the best outcomes. The labour market also differs due to many institutional forces that affect the operation of the free market in order to improve labour market outcomes, such as guaranteeing minimum wage levels. Four important institutional forces affecting labour markets will be examined in this chapter – trade unions, employer associations, industrial tribunals and the government.

11.1 The role of trade unions

A **trade union** is an association of workers that aims to advance the interests of its members by improving their wages and working conditions. The main role for unions is to represent their members' interests by negotiating wage increases, but unions also play a role in presenting employees' interests in such issues as training, safety in the workplace,

and organisational changes such as company restructures. Unions have been an important part of labour markets since the nineteenth century. Unions are usually based on particular occupations, industries, firms or a mixture of these.

- **Occupational unions** (also known as craft unions): These unions draw their members from persons who possess a particular occupational skill, or range of skills, regardless of the industry or firm in which they work (for example, the Electrical Trades Union or the Australian Medical Association).
- **Industry-based unions**: These unions cover workers in a particular industry, regardless of the type of work that they do (for example, the Australian Meat Industry Employees Union and the Finance Sector Union).
- **Enterprise-based unions**: These unions represent only the workers of one specific enterprise. This kind of union is very rare, although past government policies have tried to encourage the creation of enterprise-based unions.
- **General unions:** General unions cover a whole range of workers with many different skills across various industries (for example, the Australian Workers' Union and the Construction, Forestry, Mining and Energy Union).

Most unions are affiliated with the **Australian Council of Trade Unions (ACTU)**. The ACTU was formed in 1927, and it is the national voice of the trade union movement. The ACTU has several roles today: coordinating union activities across Australia, including wage claims and industrial action; conducting campaigns and research; and providing input to government policies.



Sources: ABS *Characteristics of Employment, Australia* (Cat. no. 6333), *Trade union membership* (Cat. no. 6335)

Figure 11.1 – Trade union membership since 1991

Like most other advanced economies, Australia has experienced a large fall in trade union membership in recent decades. During the postwar era when there were large workforces in factories and manual work, most belonged to a union. At the peak of union membership in the mid-1970s, 55 per cent of workers were union members, but by 2020, union membership had declined to just 14 per cent of the workforce (see figure 11.1). The education and training industry has the highest level of union membership (31 per cent), while the agriculture industry has the lowest (2 per cent). Union membership among older workers is also much higher than among younger workers (for example, it is 23 per cent among 55–59-year-old workers but only 6 per cent among 20–24-year-olds).



Visit the website of the Australian Council of Trade Unions at **www.actu.org.au**. It contains useful information about the latest developments in industrial relations in Australia from the perspective of unions.

Choose a recent campaign of the ACTU. Identify the key demands being made by the ACTU, what action it took, and the likely economic impact if employers implemented the ACTU claim fully.

There are a number of factors that have contributed to this decline in union membership, including:

- **Changes to wage determination**: The movement away from centralised wage determination to enterprise bargaining has reduced the influence of unions over wage outcomes.
- **Changes within industries**: The industries that have experienced the greatest growth in recent years do not have a history of high levels of union membership – this is true of business services, domestic services and retail trade sectors. Equally, sectors with traditionally high levels of union membership, such as manufacturing and government-owned businesses, have shrunk as a share of total employment.
- **Changes in the nature of employment**: Union membership has always been highest among permanent full-time workers, but the proportion of full-time workers in the workplace has fallen in recent decades. The fastest employment growth has occurred in casual and part-time employment (and "gig economy" work), but these have lower levels of union membership (8 and 12 per cent respectively) compared to full time work (15 per cent).

The role of unions in the labour market

Unions can influence the labour market in a variety of ways. The most important role of unions is in bargaining for increased wage outcomes. By coordinating the bargaining power of individual employees, unions are able to strengthen employees' bargaining power and achieve higher wages.

Representing employee interests

Unions also play a broader role in influencing labour market outcomes by representing the interests of individual employees (for example, through legal assistance and advice) and providing a collective voice for workers when management is implementing organisational changes, as well as in issues that affect workers, such as providing better access to training and education, improving safety standards in the workplace, making it easier to combine work and family responsibilities, and changes in work structures.

Exercising their bargaining power in negotiations with employers

When employees act alone against an employer (for example, by threatening to go on strike), they are unlikely to have any substantial influence on the employer because they have limited bargaining power, and individual employees are generally easy to replace. However, if employees join together (for example, by all threatening to go on strike), they have significant power because it is very difficult to replace an entire workforce. This is why unions can play an important role in industrial relations. Through their collective bargaining strength, unions can negotiate a higher wage rate than market forces might normally determine (as shown in figure 11.2). Research has shown that in 15 out of 19 industries, union members are, on average, better paid than non-union members, by margins of up to 50 per cent. However, higher unionisation levels do not directly contribute to higher wages, according to the conclusions of a 2019 Research Discussion Paper by the Reserve Bank of Australia. One explanation for this is that union members often have more advanced skills, which usually leads to higher income (see chapter 9). Overall, union members in Australia receive hourly wages that are 20 per cent higher on average.

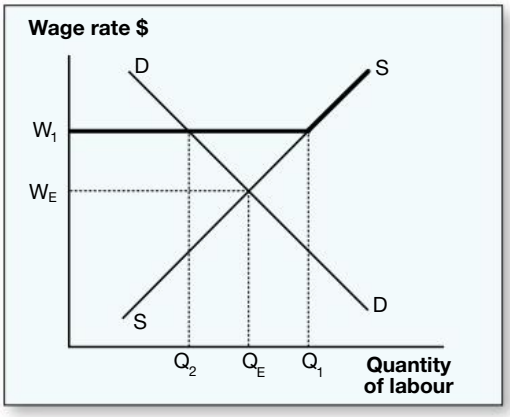


Figure 11.2 – Effect of bargaining power

Do higher minimum wages always mean higher unemployment?



Governments, employers and unions often argue about the impact of minimum wage rises on the level of unemployment. Unions argue that wage rises for low-income earners boost consumer spending and therefore boost economic growth. Employers argue that wage rises will make employees too expensive and will therefore lead to higher unemployment. Economists generally argue that wages growth should not exceed the sum of inflation plus productivity growth. In reality, the major cause of changes in the level of unemployment has been the ups and downs of the business cycle, not the pay rates of specific industries and occupations. One explanation for this phenomenon relates to our discussion of the price elasticity of demand in chapter 5 – that is, the responsiveness of demand to changes in price, or in the case of the labour market, the responsiveness of labour demand to changes in wages.

Australia's experience in the past two decades has shown that it is possible to reduce unemployment at the same time as awarding moderate increases to the minimum wage. However, whenever unemployment rises, there is always some debate about the level of minimum wages. For example, Australia's minimum wage levels were frozen in 2009 during the height of the global financial crisis. The effect of this decision was that, given the impact of inflation, workers experienced a reduction in their real wages. After the economy returned to stronger growth, the Fair Work Commission minimum wages panel awarded modest real wage increases each year between 2010 and 2020, arguing that this was affordable and was not in conflict with the goals of lower unemployment and sustaining low inflation (even in the context of the COVID-19 recession in 2020). In 2022, with unemployment at a historic low of 3.5 per cent, the Fair Work Commission awarded a large annual increase to the minimum wage (5.2 per cent) to help sustain the real wages of low-paid workers in the face of a sharp rise in inflation.

Economists hold differing views on the relationship between minimum wages and unemployment, but in recent years there has been a shift among central banks and institutions such as the International Monetary Fund towards believing that in current conditions, many economies would benefit from higher wage growth. They argue that higher minimum wages will result in increased household spending and increased economic activity, and therefore more jobs. This is because the demand for labour is a derived demand – that is, it is based on consumer demand for goods and services. Therefore, while higher wages will increase production costs for an individual firm, possibly reducing that firm's demand for labour, those higher wages will also increase the purchasing power of consumers, and by increasing demand for the output of businesses, higher wages may actually increase labour demand.

If strong unions convince employers to pay a higher-than-equilibrium wage rate (that is, a wage rate of W_1 rather than W_E in figure 11.2), they actually change the shape of the supply curve (from SS to W_1S). However, at the higher wage rate, the quantity of labour supplied (Q_1) will exceed the quantity of labour demanded (Q_2), and employment will also be less than the original equilibrium quantity (Q_E). In other words, excessive wage demands in one industry may contribute to a higher level of unemployment by pricing labour out of a job. Therefore, when unions bargain with employers for wage adjustments, they may face a trade-off between achieving a higher wage rate and maintaining current levels of employment.

Restricting the supply of labour

Unions with very high membership levels can also restrict the supply of labour to a firm or industry on an ongoing basis, thus bringing about an increase in the wage rate (shown in figure 11.3). Measures that might reduce the supply of labour include restrictions on hiring employees (for example, doctors' professional associations often oppose admission of overseas-trained doctors to work in Australia, which results in reduced supply of labour

and higher pay for doctors in Australia). Unions may also restrict the supply of labour by demanding that employers only hire members of their union or association, or only provide a licence to work for their members. This approach has been used by professional groups such as the NSW Law Society. However, these types of restrictions are less common nowadays, as most forms of compulsory union or association membership are now prohibited.

Restricting labour supply shifts the supply curve to the left (from SS to S_1S_1) and increases the wage rate (from W_E to W_{E1}), but it also reduces the quantity of labour employed (falling from Q_E to Q_{E1}).

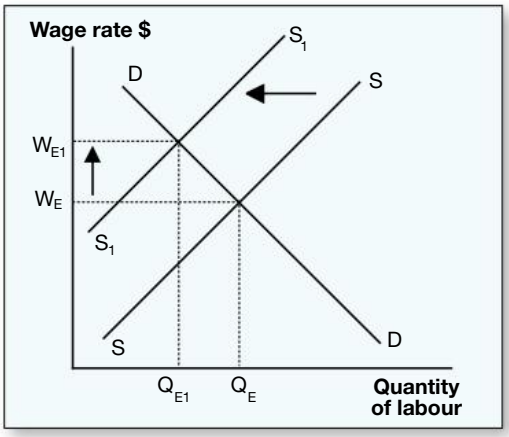


Figure 11.3 – The effect of restricting the supply of labour

reviewquestions

1 Describe the role of a trade union.
2 Explain why union membership has declined during recent decades.
3 Briefly outline how unions can influence labour market outcomes by:
   a) restricting the supply of labour
   b) exercising their bargaining power.

11.2 The role of employer associations

Just as labour organises itself through unions, employers form their own organisations. However, although larger employers have greater financial resources than unions, employers are generally not as well coordinated as employees because employers already have greater bargaining power without needing to coordinate their efforts, and also, in many instances, they are in direct competition with each other. Larger employers mostly deal with unions directly rather than going through an employer association.

Employer associations typically operate as sector based or general business lobby groups that represent business interests on economic policy issues such as taxation, regulations and industrial relations. In relation to the labour market, they play two main roles:

- They represent and promote the interests of their members by lobbying the government on industrial relations policies.
- They assist employers in managing industrial relations issues, such as by representing their members in the various industrial tribunals set up to settle industrial disputes.

At a federal level, the three most important employer associations are the Business Council of Australia (BCA), the Australian Industry Group and the Australian Chamber of Commerce and Industry (ACCI). These associations provide a national voice for employers and play an important role in the debate over industrial relations policy changes. This was seen at the Jobs and Skills Summit in September 2022, where the Government agreed to review aspects of the workplace bargaining system in response to agreement among employer and union groups on the need for changes.

For more information on employer associations, visit the following websites:

Australian Industry Group: **www.aigroup.com.au**

Australian Chamber of Commerce and Industry: **www.acci.asn.au**

Business Council of Australia: **www.bca.com.au**.

A range of employer organisations also exist in major industries, such as the National Farmers Federation (NFF), the Housing Industry Association and the Minerals Council of Australia. These organisations represent the specific industry concerns of members. They are involved in wage negotiations and represent employers in specific industrial disputes within their industries.

The role of employer associations in the labour market

Individual companies are generally more important than employer associations in influencing wage outcomes. Larger businesses generally have the expertise and resources to negotiate wages with unions directly (if their workers are represented by unions), and employers mostly do not coordinate those negotiations with each other.

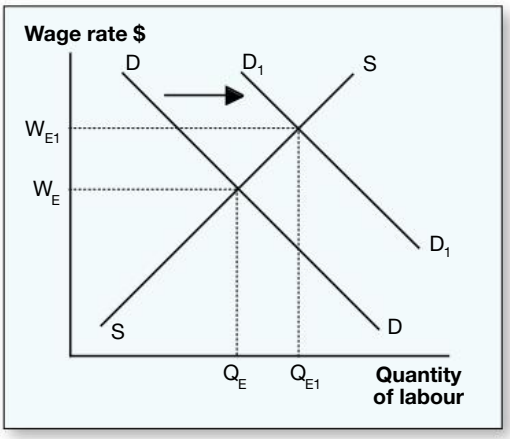


Figure 11.4 – Effect of industry protection on the labour market

On some occasions, however, the actions of employer associations have been of benefit to both employers and employees. Through lobbying the government for protection from foreign competition, for tax exemptions, or for industry assistance, employer associations have, in the past, been able to secure a larger share of the domestic market for Australian producers. As shown in figure 11.4, this would increase the demand for labour (shift the demand curve to the right, from DD to D_1D_1), causing an increase in the wage rate (from W_E to W_{E1}) and an increase in the employment of labour (from Q_E to Q_{E1}). However, such demands by industry associations have been less successful in recent years, as governments have cut back sharply on protection levels and industry assistance. Economists generally believe that even if industry assistance helps one sector, it will hurt others and have a negative effect on employment levels in the long run.

THE MAIN ROLES THAT EMPLOYER ORGANISATIONS NOW PLAY IN THE LABOUR MARKET

- assisting members in negotiating wage agreements with employees
- in some instances, negotiating wage agreements that might cover a large number of their members (although wage agreements are generally focused on individual enterprises rather than sectors, there are conditions under which multi-employer agreements can be negotiated)
- providing advice, training and direct assistance to employers
- lobbying the government for changes to government policies, especially relating to industrial relations and skills training
- representing employers' interests in any hearings in industrial tribunals.

reviewquestions

1 Describe the role of an employer association.

2 Explain how employer associations may influence labour market outcomes.

11.3 Australia's current industrial relations framework

Australia's industrial relations framework has gradually evolved during the past three decades from a highly centralised system of wage determination towards one that allows more room for wage levels and work arrangements to be negotiated at the level of the individual firm. This has allowed wages and working conditions to take into account the specific characteristics of the workplace. Australia's industrial relations system is governed by the *Fair Work Act 2009*.

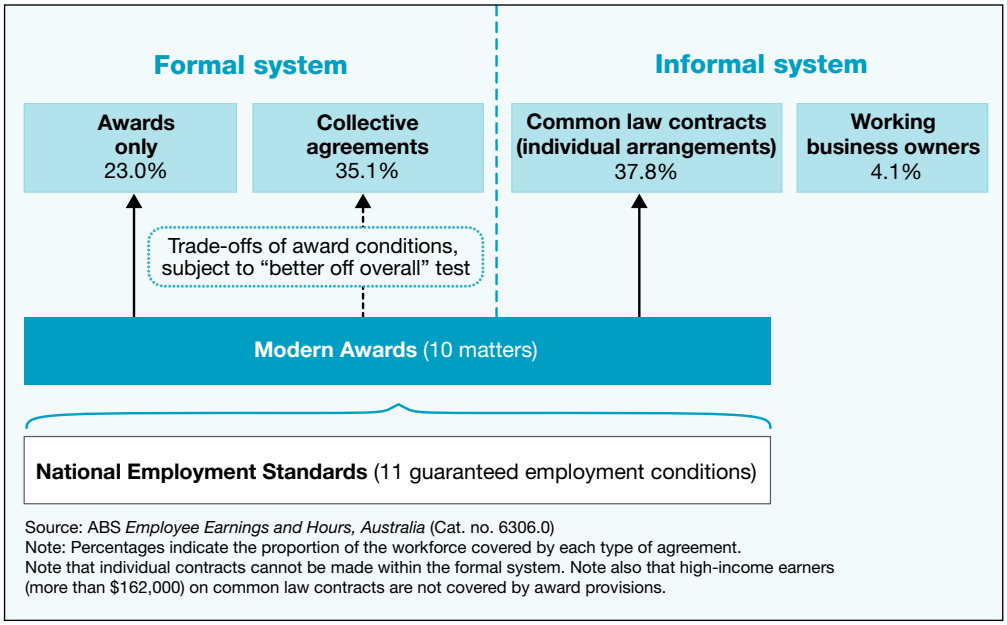
The Fair Work system establishes three main streams in the labour market that determine the pay and conditions of employees – modern awards, collective agreements (also known as enterprise agreements) and individual agreements (also known as common law contracts). The system is overseen by the **Fair Work Commission**, which sets minimum standards, including the minimum wage, and helps resolve disputes.

Fair Work Commission is the government agency that regulates industrial relations in Australia. It combines the functions of an industrial tribunal (such as the Industrial Relations Commission) with a role of education and promotion of enterprise bargaining.

Minimum employment standards

Australian employees have 11 guaranteed employment conditions, which are set out in law through a document called the **National Employment Standards**. These provisions include:

- **Maximum weekly hours of work:** A full-time employee's hours of work must not exceed 38 hours per week, plus reasonable additional hours of work.
- **Right to request flexible working arrangements:** Parents or carers may request a change in working arrangements to assist them in caring for a child. Employers can only refuse on "reasonable business grounds" and must justify their actions in writing.
- **Leave:** Employees have the right to paid annual leave, long service leave, sick or carer's leave, public holidays and compassionate leave. They further have the right to unpaid family and domestic violence leave, volunteering in emergency management, and 12 months' parental leave.
- **Notice of termination and redundancy pay:** Employers are required to give between one and four weeks' notice of a job termination, determined by how long a person has been employed. Further, in most circumstances workers are entitled to redundancy pay, determined by the duration of their employment.



Source: ABS *Employee Earnings and Hours, Australia* (Cat. no. 6306.0)
Note: Percentages indicate the proportion of the workforce covered by each type of agreement.
Note that individual contracts cannot be made within the formal system. Note also that high-income earners (more than $162,000) on common law contracts are not covered by award provisions.

Figure 11.5 – The workplace relations framework

In 2022, the Albanese Government announced the expansion of the NES to include provisions relating to superannuation (the Superannuation Guarantee and protection from underpayments) and up to 10 days' paid leave for victims of domestic violence.

In addition, a **national minimum wage** provides a safety net for any employee not covered by an award. A specialist Minimum Wage Panel within the Fair Work Commission is responsible for setting the national minimum wage annually.

Awards

Awards establish the minimum wage and working conditions for employees.

Awards are a set of pay and conditions that are specific to an employee's work or industry sector (such as a shop assistant or a construction industry worker). Awards provide a safety net of minimum wages and conditions. Many employers pay above award wage rates, but awards set the absolute minimum rates of pay and entitlements. Instead of having a single minimum wage rate, Australia has different minimum pay rates in 154 different awards for different occupations and industries (for example, the Fitness Industry Award). The Fair Work Commission sets these minimum award wage rates and casual loadings. Around 23 per cent of workers have their pay set directly through award rates, and many other employees on individual arrangements have "award-based" pay arrangements (that is, their pay is set directly or indirectly through awards).

Awards extend the protections of the National Employment Standards, with provisions tailored to the needs of the specific industry or occupation. These may include types of employment; arrangements for when work is performed; overtime and penalty rates; annualised wage or salary arrangements; allowances; leave-related matters; superannuation; and procedures for consultation, representation and dispute settlement.

Enterprise agreements

The most common method of wage determination in the formal industrial relations system is a workplace agreement that is negotiated collectively through enterprise bargaining between an employer (or employers) and employees, usually represented by unions. These agreements are known as enterprise agreements (also known as collective agreements), and they cover around 35 per cent of employees.

As a minimum, all agreements must comply with the National Employment Standards and cannot offer pay rates below that mandated by the equivalent award. Workplace agreements must also pass the **"Better Off Overall Test" (BOOT)**, requiring that the employees be made better off overall by an agreement compared to an applicable award. This test is administered by the Fair Work Commission. In 2022, the Albanese Government announced plans to make the BOOT more flexible, in response to agreement on the need for changes from both employers and unions.

Collective enterprise agreements usually cover all of the workers up to management level in a company or workplace. Unions usually negotiate these agreements on behalf of all the employees in a workplace, even though in most workplaces less than half of the employees belong to the union. Collective agreements normally cover issues such as wage increases, loadings for additional work hours, changes to workplace practices and other changes that are intended to increase productivity. Wage increases under collective agreements have declined from an average of around 4 per cent (from 1991 to 2015) to just 2.6 per cent between 2015 and 2021.

Figure 11.5 shows how the National Employment Standards and modern awards together provide the basis for the three main ways of determining pay and conditions for employees.

Common law contracts (individual arrangements)

Individual employment contracts have always been an important part of wage determination in Australia. Under the *Fair Work Act*, there is only one type of individual contract in the industrial relations system, and this is known as a **common law contract**.

Common law contracts (also known as unregistered individual agreements) are not part of the formal industrial relations system, but they comply with all of the minimum standards in the system and apply to around 38 per cent of the workforce.

Historically, most individual contracts have been common law contracts, and they remain overwhelmingly the most common form of individual employment arrangements, especially in small businesses. Common law contracts are simple agreements that are often just a few pages long. Essentially, they involve add-ons to relevant awards. They cannot offer pay rates and conditions that are below the rate that would be paid by the equivalent award. The exception to this rule is when they offer high rates of pay above $162,000, in which case, the award requirements do not apply, and the common law contract effectively can replace the award. Common law contracts are generally enforced through ordinary law courts, rather than through industrial tribunals, which usually involves greater expense for employees and employers. One form of common law contract that has become more common in recent years is the short-term work contract – in particular, contracts under which workers are employed by a labour hire company that sells their labour hire services to another company.

Breaking the rules: MasterChef judge in wage scandal

Economists generally assume that the rules in Australia's industrial relations framework are followed – but a series of wage-theft scandals across a number of industries suggests many employers are underpaying staff by millions of dollars. A notable example from the fast food industry came in 2019, when it was revealed that MasterChef judge George Calombaris's restaurant business, the Made Group, had underpaid 515 workers $7.8 million. The TEN Network then announced that Calombaris would not return as a judge on MasterChef, and his restaurant business later collapsed.

"Wage theft" appears to be widespread in the restaurant and fast food industry, which employs around 750,000 Australians. During recent years the *Sydney Morning Herald* has alleged underpayments by numerous employers, including many of Sydney's most prominent restaurant owners. The Fair Work Ombudsman, Sandra Parker, noted in 2019 that more infringements of the law have been found in the fast food, restaurant and cafe industry than any other sector. In fact, the FWO has issued more than six times as many infringement notices to this sector than the next-worst industry.

The fast food and restaurant industry is not the only sector with a record of underpaying workers. The convenience store chain 7-Eleven has had a string of fines and court prosecutions for underpaying wages, in some instances also involving the creation of false employment records and paying employees less than half the minimum rate of pay. Since 2019–20, many businesses have conducted payroll audits which found that staff were underpaid almost $600 million at Woolworths, $75 million at health and aged care firm BUPA, and $13 million at the University of Sydney.

Common to many of these industry sectors is a higher number of casual workers who are more easily exploited because they are younger, do not belong to a union, and are often in Australia on work visas.

reviewquestions

1. Outline the main ways in which employees' wages and conditions are determined in Australia.
2. Explain the difference between a collective agreement and an individual contract.
3. Discuss how different methods of setting pay within Australia's industrial framework affect wage outcomes in Australia.

chapter summary

1 The **industrial relations system** consists of the laws, institutions and processes established to resolve conflicts between employers and employees.

2 The three types of institutions that play a role in the industrial relations system are trade unions, employer associations and governments (including through industrial tribunals such as the Fair Work Commission).

3 A **trade union** is an association of employees that represents the interests of its members, particularly relating to pay and working conditions.

4 Trade unions attempt to strengthen the bargaining power of employees by negotiating on behalf of all workers in a workplace and, in some circumstances, using the threat of going on strike in order to win their demands for improved pay and conditions.

5 An **employer association** is an organisation of employers that represents their interests, in particular by helping employers to manage their relationships with employees and unions.

6 The minimum standards for pay and conditions in Australia are established by a combination of 11 **National Employment Standards** and a system of **awards** specific to individual industries or occupations.

7 **Minimum wages** in Australia are adjusted each year by a specialist minimum wage panel within the **Fair Work Commission**, which takes into account a range of economic and social factors in making a decision on increasing minimum wage levels.

8 The most common agreement for setting wage outcomes is an **enterprise agreement**. Under enterprise agreements, wage increases are normally negotiated between employers and groups of employees, usually represented by unions.

9 Another common method for setting wages is through a **common law agreement**, an individual contract that adds to an award. Common law contracts are often informal arrangements, and they are widespread in small businesses. They cannot reduce the award entitlements of workers (unless they pay a very high salary, exceeding $162,000).

10 The industrial relations system has changed from a highly centralised system to a decentralised system, with most wage outcomes now determined through bargaining – either collective bargaining agreements or individual contracts.

chapterreview

1 Describe the three main institutional forces affecting Australian labour markets.

2 Explain what is meant by a *trade union*. Outline the three types of trade unions in Australia, and give an example of each.

3 Explain how membership of a trade union may influence an employee's wage outcomes.

4 Outline the role of employer associations in Australia's labour market.

5 Explain how minimum pay rates and conditions are set in Australia.

6 Define what is meant by an *award*, and explain how awards are determined in Australia.

7 Explain what is meant by *enterprise bargaining*. Explain the role of enterprise bargaining under our present wage determination system.

8 Describe how workers who have not negotiated an enterprise bargaining agreement can still secure a wage increase.

9 Explain what is meant by a *common law employment contract*.

10 Discuss the extent to which our present wage determination system encourages direct bargaining between employers and employees.

Extended response

Explain how wages are currently determined in Australia. Describe how the current industrial framework combines the goals of equity and efficiency in labour market outcomes.

TOPIC 5

FINANCIAL MARKETS

Issues

By the end of Topic 5, you will be able to examine the following economic issues:

- Examine the contribution of financial markets to the economic welfare of individuals and firms
- Investigate the extent of competition in financial markets
- Discuss the need for regulation in financial markets.

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Focus

The focus of this topic is the operation of financial markets in Australia, the contemporary institutions and the controls existing in the market which influence market outcomes. The different types of markets and the influence of the Reserve Bank of Australia on interest rates are of central concern.

Skills

Topic 5 skills questions can ask you to:

- compare and contrast financial markets with product markets
- explain the role of institutions in the operation of financial markets
- analyse the impact of financial innovations on individuals and the economy
- work in groups to investigate the economic role of the superannuation industry
- analyse the factors that influence the level of interest rates
- predict trends in interest rates in hypothetical situations.

Topic 5

Introduction

The financial market, like the labour market, is an integral part of any economy. Banks, money, interest rates and the share market are all part of our daily lives, yet few people understand the complex inner workings of the financial system.

Financial markets share many similarities with other markets. Financial products and services are created and then offered for sale, with prices based on the interaction of demand and supply. Yet, as with the labour market, the financial market differs from other markets in significant ways, and it also has large impacts on our economy and society. This is largely why the financial market is subject to greater degrees of government control than many other markets.

Financial markets play a key role in the economy, primarily by facilitating savings and investment, with the latter being a key driver of economic growth. Without the institutions that make up financial markets, we would have no safe way of deferring (or bringing forward) consumption and no way of obtaining extra funds for investment. For this reason, one of the most important foundations for economic development is well-developed financial markets.

The other important reason for studying financial markets is that they have a significant effect on the lives of most Australians. Every day, we deal with banks and other financial institutions, and these have a profound influence over how we act and interact in the economy. Just think of the way home loan rates, interest payments and bank fees affect most Australians.

Understanding how financial markets work also prepares us for Topic 6, the final section of the Year 11 Course, which looks at the role of governments in the economy. Financial markets give governments one of their tools for influencing the economy, known as monetary policy. Monetary policy has considerable influence over the economy's growth, inflation and unemployment rates. It is therefore highly significant for our study of economics. As you cover the next two chapters, also think about how governments may use the financial system to achieve different economic outcomes.

Chapter 12 reviews the types of financial markets and financial market products and the role they play in modern market economies. We examine the role of the share market; how it acts as a bridge between companies and investors and gives individuals a chance to share in the success of Australian businesses. Chapter 12 also discusses the role of financial market regulation to ensure the stability of the financial system.

Chapter 13 provides a detailed explanation of the role of the money market and the influences on its key participants: borrowers and lenders. We look at the role of money in the economy, the influence of interest rates on the economy, and how the Reserve Bank of Australia influences interest rates.

Types of Financial Markets 12

12.1 The role of financial markets in the economy
12.2 Primary and secondary financial markets
12.3 Financial market products
12.4 The share market
12.5 Domestic and global markets
12.6 Regulation of financial markets

12.1 The role of financial markets in the economy

Financial markets play a crucial role in the operation of modern economies. Financial markets provide products that provide returns for households and businesses that have excess funds and make funds available to those who need additional money for consumption or investment. Not only is the financial services industry one of the largest industries in Australia, but its actions also influence all other industries because many businesses rely on financing in some capacity.

Simple economic models generally frame individuals as the net savers in the economy and businesses as the net borrowers that borrow from them. This can be a reasonable starting point from which to learn how financial markets work. However, reality is much more complicated than this. Savings come from all parts of the economy, as well as overseas, just as all sectors of the economy, including individuals, borrow funds.

Financial intermediaries are firms that hold the accumulated funds (savings) of individuals or firms as deposits, and then make loans to other firms or individuals who can make use of them. In essence, financial intermediaries create a bridge between the savers and borrowers in the economy.

SOURCES OF SAVINGS:

- The proportion of household income that is not spent on consumer goods is saved.
- Businesses can save by not distributing all of their profits to their owners. The funds that are not distributed can be supplied to financial markets until needed.
- When the government budgets for a surplus (that is, current revenue is greater than its expenditure), it accumulates savings.
- There are also foreign pools of savings supplied by individuals, firms and governments from other countries that Australians can borrow from.

REASONS FOR BORROWING:

- Consumers borrow when their demand for goods and services exceeds their current capacity to pay for them. For example, many consumers borrow to purchase houses and expensive consumer durables, such as cars.
- Entrepreneurs and business managers borrow to fund the operation or expansion of their businesses.
- The government becomes a borrower of funds when it budgets for a deficit (when its current expenditure is greater than its current revenue).
- Australian financial institutions can lend money overseas to borrowers. (While this does occur, in overall terms Australia borrows far more from overseas countries than it lends, that is, Australia is a net borrower in the global financial system.)

Financial markets are also the **factor markets for capital** in the economy. Capital is required by businesses as an input into the production process, so that the goods and services required to satisfy society's wants can be produced. Financial markets provide an efficient process by which income that is not expended immediately can still contribute to the present level of aggregate demand by allowing others to borrow the surplus for immediate consumption and investment.

Financial markets have become more important for the economy since the financial sector was deregulated in the early 1980s. A typical "credit supply shock" where businesses report difficulty obtaining finance, will result in a reduction in the economy's output of 0.33 per cent (or $7 billion), according to research conducted by the Reserve Bank of Australia in 2012. The global financial crisis in 2009 was so severe that the reduction in GDP caused by the credit crunch was estimated by the RBA as 1 per cent of GDP, or around $20 billion based on current numbers. The significance of financial markets is evident in the nature of the RBA's research more generally; between 2011 and 2018, around 30 per cent of the RBA's public research papers focused on financial markets, money or the payments system, compared to around 10 per cent in 2000 to 2007. As we look at financial markets in this chapter, we will consider the links between financial markets and the broader economy.

reviewquestions

1 Outline the advantages of having financial intermediaries in an economy.
2 Identify THREE major expenses you are likely to incur over the next 20 years of your life that may require you to borrow money.

12.2 Primary and secondary financial markets

Traditionally, most consumers only saved money through financial institutions (such as banks) and only a small proportion invested in more sophisticated financial instruments (such as shares, investment funds and superannuation). Since the early 1990s, however, this has changed dramatically. Australia now has one of the highest levels of share ownership in the industrialised world, with around 35 per cent of the adult population owning shares (or other financial products bought through a financial exchange) in 2020. At the same time, the growth of world financial markets has increased the variety of financial instruments available to the average individual. Once, consumers went to their local bank branch for their financial decisions; now, it is possible for consumers never to even enter a bank branch in their lives.

Australia's **financial sector** consists of a wide range of financial institutions. It employs around 600,000 people directly and provides many different financial services, including home mortgages, credit cards, personal loans, superannuation management, insurance and investment products. The financial sector has been one of the fastest growing areas of the economy in recent years, with the finance and insurance industry contributing around $160 billion (or 8 per cent) to Australia's Gross Domestic Product in 2021–22.

Financial markets are commonly divided into two main types, shown in figure 12.1.

- **Primary financial markets** facilitate the creation of financial assets, known as **securities**, that can be sold into the economy. If a business wants to raise funds, it can either borrow money by issuing debt securities or expand the ownership of the company by selling new shares. In a primary market, the money received from investors goes directly to the company. Westpac issuing new shares to the public is an example of a primary market transaction.
- **Secondary financial markets** involve transactions with financial assets that have already been issued on a primary market some time in the past. In other words, no new financial asset is created; instead the ownership of an existing financial asset is transferred from one individual or business to another. Most financial market transactions are conducted on secondary markets. Companies whose securities are traded on the secondary markets do not receive any money from these transactions.

Securities are any form of financial instrument, including shares and bonds, that provides the holder of that instrument with a claim over real assets or a future income stream.

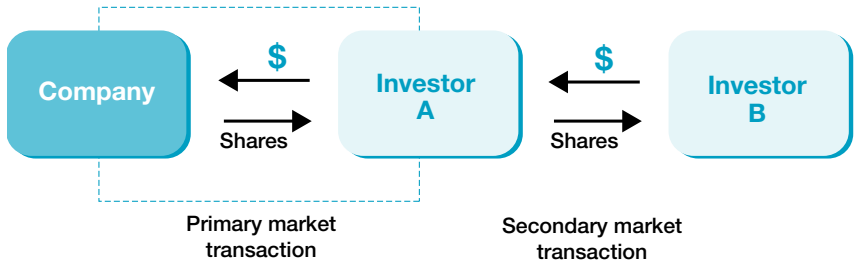


Figure 12.1 – Primary and secondary markets

It is important to remember that a market does not always need a physical location. The majority of trade that occurs on the **Australian Securities Exchange (ASX)** – the largest primary and secondary financial market in Australia – occurs over a set of interconnected computer systems. The amount of activity that occurs in financial markets will depend largely on the general state of the economy and the strength of different industries and firms.

Australian Securities Exchange (ASX) is the major share market in Australia, where the purchase and sale of most shares in public companies occurs. The share market brings together people wishing to buy and sell shares to allow transactions to occur.

The main financial markets that exist in economies across the world are:

The share or equity market	where ownership shares in companies are issued or exchanged
The debt market	where debt securities (such as bonds) are exchanged, or cash is lent and borrowed
The derivatives market	where people buy and sell financial assets that are based on the value of other financial assets
The foreign exchange market	where financial assets defined in one country's currency are exchanged for assets defined in another country's currency.

In various ways, all financial intermediaries perform the same basic function – they channel the excess savings (from the **net savers**) in the economy to those who wish to borrow funds (the **net borrowers**).

Financial intermediaries can be classified as either banks (which can hold deposits on behalf of savers) and non-financial intermediaries (which legally cannot hold deposits).

Historically, banks and non-banks were distinct entities that provided different financial services. However, more recently, the difference between banks and non-banks has broken down. Many services offered by banks are now being offered by other financial institutions, and banks are also now offering a range of products (such as insurance, superannuation funds and investment options) that were previously outside a bank's domain. Changes and innovations in how different financial intermediaries provide financial services to the economy can pose challenges to financial regulators that try to ensure that financial markets continue to function well.

Banks remain the largest and most important part of the financial sector. They generally offer a comprehensive range of financial services, including accepting deposits (savings), making advances (loans), issuing credit cards, arranging overseas payments and collection of funds, providing safe-deposit facilities, offering financial advice and arranging for external fund managers to invest an individual's savings. However, lending from non-bank lenders, including fintech companies, continues to grow in prominence in Australia.

OTHER FINANCIAL INSTITUTIONS

- **Finance companies** obtain most of their funds by borrowing from the general public, through the issue of debt securities, or from banks like non-financial businesses. The funds are then loaned out to other households or businesses at higher rates of interest so that they can make a profit. **Fintechs** are a relatively new and growing type of finance company that use technology to make more efficient lending decisions. For example, some have developed automated loan assessment processes that do not rely on humans making decisions. Some finance companies focus on offering home loans to individuals.
- **Investment banks** generally borrow on a short-term basis from companies with surplus funds, and lend these funds to other large companies (for business expansion purposes) and government agencies. They also provide financial advisory services to large companies on issues such as takeovers or issuing securities, and also trade securities and other assets on their own accounts for profit.
- **Credit unions** are non-profit, cooperative organisations whose members belong to a particular trade, industry, profession, or live in a particular area. People can deposit or borrow money, with any profits returned to members.
- **Permanent building societies** accept deposits from the public and provide funds mainly for home loans. They can also offer other personal and business loans, although their interest rate structure is controlled to some degree by state governments.
- **Superannuation funds** receive the contributions of employees and employers and invest them in financial assets in order to provide retirement income for the contributors. Since the introduction of compulsory superannuation in the early 1990s, the superannuation sector has grown to become a major part of the financial sector.

Fintech is a type of financial services business that uses digital technologies such as artificial intelligence or blockchain to increase efficiency or deliver new services.

reviewquestions

1 Outline the difference between primary and secondary markets for shares.
2 Identify THREE examples of financial intermediaries in the Australian financial market.

12.3 Financial market products

There are a variety of financial market products in the economy to meet the various needs of lenders and borrowers. They vary in risk, return and liquidity.

Consumer credit allows consumers to purchase consumer goods and services in advance of actual payment. In other words, consumer credit enables individuals to tap into future streams of income that they are likely to receive in order to fund consumption in the present. The most common type of consumer credit is **credit cards**. Credit cards allow consumers to purchase goods and repay their borrowings with interest at a later date. Credit cards are offered by banks, credit unions, and, more recently, by non-financial corporations such as Woolworths, in conjunction with credit card companies such as Mastercard and Visa. Other credit card companies such as American Express and Diners Club offer credit cards independently of other financial institutions. The other major form of consumer credit is personal loans offered by banks and credit unions. These are charged at a higher rate of interest than housing loans. Personal loans generally have a high interest rate of around 5–10 per cent, and credit card rates generally are around 15–20 per cent. Differences in interest rates charged on different financial products largely reflect differences in the risk to the ultimate lender that the borrower will not be able to pay them back. The total value of consumer credit in Australia in mid-2022 was around $140 billion. Buy-now-pay-later schemes, such as Afterpay, have similar properties to personal loans and can be thought of as another type of consumer credit.

Credit is the loans extended to individuals, businesses and governments for spending on consumption and investment. Credit constitutes assets for financial intermediaries that they derive income from and liabilities for the individuals and businesses that borrow the funds.

HOW COMPETITIVE ARE AUSTRALIA'S FINANCIAL MARKETS?

Successful economies depend on a competitive financial system to transform savings into productive investment. In general, increased competition in financial markets will improve the allocation of resources in the economy and make it easier for firms to raise funds. This, in turn, will contribute to higher levels of investment, economic growth and improved standards of living.

Australia has large and sophisticated financial markets. In 2022, Australia's stock market had a total value (market capitalisation) of around $2.5 trillion and an annual turnover of around $2 trillion. The value of daily transactions of Australian foreign exchange markets averaged US$150 billion in April 2022, and the Australian dollar is the fifth-most traded currency in the world. In addition, Australia has one of the largest funds management industry in the world, with around $4.3 trillion in assets as of June 2022.

Australia's banking sector is highly concentrated, with the largest banks (ANZ, Commonwealth Bank, National Australia Bank and Westpac) dominating the markets for deposits, home loans, and other lending. The major banks accounted for around 75 per cent of all outstanding housing loans and over 80 per cent of all outstanding loans to small businesses in 2022. This is among the highest levels of market concentration in the developed world. While foreign banks and other finance companies have increased their shares of lending in some market segments, they remain small players in the Australian market in relative terms. With large market shares, the major banks wield significant market and pricing power. As a result, they are highly profitable and have been able to charge higher interest rate margins compared to banks in other advanced economies.

Market concentration increased in the years following the global financial crisis because it has been more difficult for finance companies to access credit to lend to customers. Most affected have been finance companies that originate mortgages, which before 2008 were a strong competitive force in the home loan sector. There was also further consolidation among banks, with the Commonwealth Bank buying BankWest and St George merging with Westpac. Since 1999 the number of authorised deposit-taking institutions (that is, banks, credit unions and building societies) in Australia has halved. In 2022, Australia's fourth-largest bank (Australia and New Zealand Banking Group) agreed to purchase Australia's ninth-largest bank (Suncorp Bank). If regulators give the purchase the green light to proceed, it will further consolidate Australia's banking industry.

Governments often face pressure to increase competition in the banking sector because of perceptions that banks are making excessive profits and are "ripping off" households and small businesses with interest rate margins and other fees and charges. The increased consolidation of banking in Australia has increased this pressure. Governments have tried to introduce competitive pressures by implementing policies to make it easier to switch between banks, introducing a ban on mortgage exit fees and imposing a duty on financial advisers to put the interests of their clients first in order to encourage greater competition in the banking sector. The Productivity Commission in a 2018 report called for policies that lower barriers to entry for new participants seeking to enter markets and regulatory reforms. Following the report, APRA issued new banking licences to four new "challenger" banks: Judo, Volt, Xinja and 86 400. Initially, there were high hopes that these banks would gain market share from the long-standing incumbents and promote healthier competition. However, by 2022, two of these banks had collapsed (Xinja and Volt), while 86 400 was purchased by National Australia Bank. Only Judo has successfully carved out a foothold by specialising in lending funds to smaller businesses. These developments suggest that the barriers to entry for new banks may still be too high.

Housing loans are offered by banks, as well as non-bank financial institutions (such as Resimac Group). These are long-term loans used to purchase property, and they require periodic repayments with interest. Competition in the home loan market has fallen since the global financial crisis in 2008, which resulted in traditional banks taking over many non-bank lenders. Housing loan rates are typically two to three per cent higher than the Reserve Bank cash rate. In mid-2022, Australian households had outstanding borrowings of over $1.4 trillion for the purpose of owner-occupied housing (that is, mortgages for individuals buying houses and apartments to live in rather than rent out as an investment).

Business loans are a form of debt that allows businesses to invest in their business operations, such as with new technology or expanded office space. Rates on loans to small- and medium-sized businesses are typically higher than the rates on housing loans because mortgages are typically "secured" by the property they are used to purchase. This means that lenders can sell the property in situations when the borrowers default on their debt to offset losses on the loan, so these loans are not as risky to provide. Large corporations typically pay similar rates to housing loans, whereas small businesses may pay as much as five per cent more. Partly this reflects the greater risks associated with lending to small business (they are more likely to default on their loan obligations). Small businesses typically borrow funds from finance companies and banks. Larger companies borrow from investment banks as well. Australian businesses had over $1.1 trillion in debt outstanding in mid-2022.

Short-term money markets bring together people and businesses with temporary shortages or surpluses of funds. Those with surplus funds, such as banks, issue various forms of debt securities (such as bank bills or promissory notes) to those in need of funds. These debt securities all have a maturity date of less than one year.

Bonds are a written record of a debt. The borrower sells a bond in return for a loan. The holder of a bond receives interest payments and the final repayment. Bonds can be sold in secondary financial markets.

Bonds (sometimes referred to as fixed-income securities) are longer-term securities for which lenders receive regular fixed payments (known as **coupon payments**) from the issuing institution, and receive the principal value of the debt (known as the **face value** of the bond) at the end of the bond period (known as the **date of maturity**). Bonds are

What is a bond?

A bond is a special type of loan taken out by governments and large companies. Also known as a debt security, a bond is a written financial document "issued" by the borrower to the lender, an individual or company, who is known as the "bondholder". The initial price of the bond, written on the document, is the size of the loan, known as the face value of the bond. The bondholder is entitled to a fixed stream of income payments (known as coupon payments), which are like interest repayments, and to the repayment of the initial loan amount when the bond "matures". Bonds can be bought and sold in a secondary market known as the bond market. The rate of financial return on a bond, known as its "yield", is calculated by dividing the coupon payment by the bond price.

For example, a large company might issue a 10-year corporate bond of $1,000,000 with annual coupons of $50,000 which is sold for $1,000,000.

This means that every year the bondholder receives a payment (coupon) of $50,000, or five per cent. At the end of 10 years (the maturity period), the bondholder gets back $1,000,000 (the face value).

The yield on this loan is five per cent ($50,000/$1,000,000). However, the yield on this bond may change if the general level of interest rates in the economy also changes. Generally, if interest rates across the economy increase, then the yield on a bond will also increase (because any buyers of bonds will now demand more compensation for their loans). Since the amount of coupon payment is fixed, this higher yield will be reflected in a lower price for the bond. A fall in interest rates across the economy will result in a fall in the yield of a bond and hence a higher price. After it has been issued, therefore, the price of a bond will fluctuate according to changes in the level of interest rates.

issued by the government and a small number of large companies and banks. The value of Commonwealth bonds on issue fell during the 1990s and 2000s until the global recession prompted a large increase in government borrowings in 2008. In mid-2022, the outstanding value of government bonds issued in Australia was around $880 billion, whilst corporate bonds outstanding amounted to nearly $600 billion.

Financial futures and options are contracts to trade in financial instruments (such as shares or bonds) at a later date for a certain price. Futures markets allow investors to protect themselves against adverse movements in interest rates, currency fluctuations or share prices by agreeing on a price and currency at which to buy or sell the financial product now, even though they do not have to make the transaction until a later date. Options give their holder the right to make such a transaction, but not the obligation, that is, they can choose to complete the transaction or they can choose not to and let the option expire.

The foreign exchange or forex market is the market for buying and selling of foreign currencies. Just as individuals require foreign currencies when they go on holiday, investors and businesses require foreign currencies when they do business with people overseas. The forex market provides a market for people to buy and sell currencies, and it operates 24 hours a day.

SUPERANNUATION

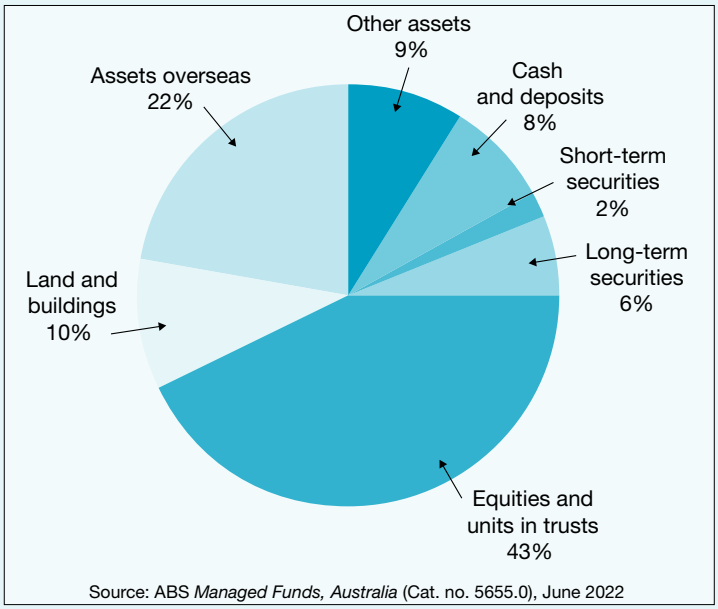
Since the early 1990s, Australian employers have been obliged to pay contributions into each of their employees' superannuation accounts. Superannuation funds invest these contributions into a range of financial products, including shares and bonds in Australia and overseas. When employees retire, these funds become available as retirement income – either through regular payments, or through a single lump sum.

Superannuation is also important to Australia's financial markets. With around $4.3 trillion under management, Australia has the fourth-largest funds management industry in the world – a remarkable feature of a relatively small economy with around 26 million people.

Superannuation plays several important roles in the Australian economy. It is an important source of retirement income when people finish their working lives. The superannuation system allows more people to indirectly own shares and participate in more sophisticated parts of the finance sector (with higher returns) than simply depositing money in a savings bank. The growth of superannuation therefore reduces pressure on the government to provide an income for retired Australians. For this reason, the superannuation guarantee is being gradually increased until it reaches 12 per cent in 2025, with a rate of 11 per cent applying for the 2023–24 financial year.

The large pool of finance made available through superannuation also plays an important role in promoting growth in the economy. Money held in superannuation funds can be loaned to financial institutions and in doing so help them them provide loans to households (such as mortgages) and businesses. Superannuation funds may also be directly invested in new share issuances by businesses that are used by businesses to purchase more capital.

Changes in superannuation can have significant impacts on the rest of the economy. Since a large amount of superannuation is invested in shares, changes to the share market are the main driver of superannuation balances. The importance of superannuation to employees and businesses also explains why the superannuation industry is regulated by the government through the Australian Prudential Regulation Authority (APRA).



Source: ABS *Managed Funds, Australia* (Cat. no. 5655.0), June 2022

Figure 12.2 – Asset allocation of domestic managed fund institutions

reviewquestions

1 Outline the basic features of loans and bonds.
2 Investigate the level of competition in Australia's financial markets.
3 Discuss which financial products might be required in the following circumstances and what financial institutions might be involved:
   a) A parent is slightly low on cash at Christmas but still wants to buy a range of presents for the family.
   b) National Australia Bank needs to borrow $10 million for 72 hours.
   c) A small business wants to finance the purchase of a new company car.

12.4 The share market

A share is a type of financial asset that provides an individual with ownership over part of a business or company.

The share market is the financial market in which investors buy and sell **shares**, which are financial assets that give their owner part-ownership of a company. The share market plays an important role in the Australian economy because businesses can sell shares in their companies to raise funds needed for growth, and individuals or other businesses can gain returns on their surplus funds. Around 35 per cent of Australians owned shares in 2020 (or other financial products purchased through an exchange). Many people take an interest in the stockmarket and trade in shares online, with the hope of making profits.

The share market is the demand and supply of ownership of public companies.



For a firm to issue shares, it must be a company – that is, it must be *incorporated*. An incorporated business is one that is recognised as a separate legal entity from those individuals who own or manage the business. This means that it has *limited liability*, so if the business fails the individuals who operate the business are protected from the risk of bankruptcy. The people who own shares in a company are known as shareholders.

Incorporated companies can be either public or private. A **public company** is one whose shares are not subject to any transfer restrictions (beyond those established by government regulation), and therefore the company's shares can be traded freely on the share market. By contrast, a **private company** is one that restricts ownership of shares to only a few individuals and places restrictions on share transfers so that ownership cannot be freely bought or sold between individuals (we sometimes refer to these companies as being Proprietary Limited, which is abbreviated to Pty Ltd). The share market deals only with the trade in shares of public companies.

A **public company** is an entity whose shares are traded freely on the share market and are not subject to any restrictions on being transferred to other parties.

The share market brings together buyers and sellers in a medium of exchange. Most share transactions take place through a market facilitator known as a stock exchange. In many ways, the stock exchange is simply the manifestation of the market, with buyers and sellers coming together in one place at one time for trade in a range of securities, such as shares. It is important to note that the share market is not a physical location. Shares are mostly traded through computer networks and over the Internet, increasing the speed, efficiency and accessibility of the market.

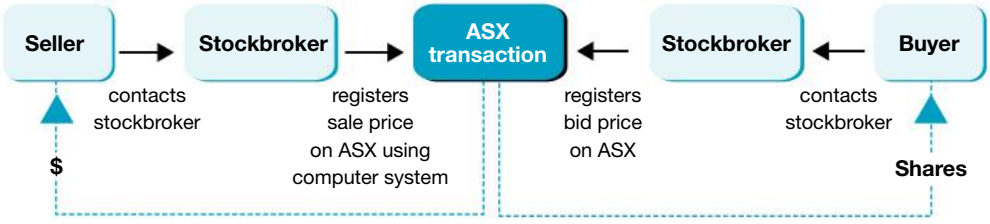


Figure 12.3 – Share market transactions

The largest share market in Australia is the Australian Securities Exchange (ASX). The ASX provides a regulated environment for investors to buy and sell shares, by matching sellers who have a desired selling price with buyers who are willing to pay that price. An investor willing to buy (or sell) shares must do so through a broker who is registered with the ASX. This broker can be a specialist online trading agency, such as eToro; a finance company, such as Macquarie Bank; or a person, known as a stockbroker. Online brokerages have become increasingly popular in recent years, particularly with younger people, because they provide a low cost and accessible way of trading shares.

The largest competitor to the ASX is Chi-X Australia, an alternative securities trading platform that also operates franchises in other countries as competition to the main domestic exchange. As of 2021, Chi-X accounted for around 20 per cent of the total trading volume of ASX-listed financial securities. Since Chi-X only operates a trading market, companies that want to become public in Australia must still list on the ASX.



Visit the "Market Statistics" section of the website of the Australian Securities Exchange (**www2.asx.com.au/about/market-statistics**) and identify the following:

- the number of companies listed on the ASX
- the average daily turnover of shares on the ASX
- the market capitalisation (the total value of shares) of the ASX.

Role and function

The role and function of the share market can be understood either from the perspective of the investors or shareholders, who buy and sell shares, or the companies, whose ownership is bought and sold in the share market.

The main reasons for **investors** to purchase shares are to gain a stake in any company profits and to make capital gains from increases in share prices. Owning shares also gives investors the right to vote for a company's board of directors, who appoint the company's senior managers and ultimately decide how the company will act to maximise the wealth of shareholders. This is a unique relationship, as shareholders normally only meet once a year to vote on key company matters and to voice their opinion. As such, managers have a legal duty – known as a fiduciary duty – to manage the company in a way that best serves the interests of shareholders.

As owners of the company, **shareholders** are entitled to share in the successes of the company. If the company returns a profit, a proportion of these profits may be returned to shareholders. These payments are known as **dividends**, and are awarded on a per-share basis. Most companies have autonomy to decide what fraction of their profits should be returned to shareholders. In addition, as the company grows, the value of the company increases and its share price will also increase. When this occurs, shareholders may decide to sell their shares, as they will make a profit because they will sell their shares for more than they paid for them. Such profits are called **capital gains**.

Dividends are the profit returns received by the shareholders (owners) of a business.

Capital gains are the profits made by investors who sell their shares or assets at a price above the level that they originally paid for them.

For shareholders, the possible gains from holding shares are almost limitless. If the value of their shares continues to increase, the shareholder may sell at any time to make a gain. At the same time, the risks of being a shareholder are limited. If a company loses money or closes due to business failure, shareholders only stand to lose the amount they initially invested in the shares. They are not responsible for any further debts the company may have incurred.

Many people rely on the savings that are invested in shares for income, especially in their retirement years. The share market boom of the mid-2000s increased household wealth and encouraged workers to leave the workforce before the legal retirement age. By contrast, the sharp downturn in the share market in 2008 resulted in some workers having to stay in the workforce longer to save for their retirement. Over the long run though, many shareholders have benefited noticeably from their shareholdings. According to RBA research from 2019, total yearly returns on shares (capital gains plus dividend payments) has been around 10 per cent on average over the past 100 years.

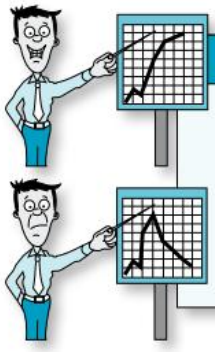
For a **company**, the share market provides an opportunity to raise new funds for investment and business growth. When a company decides to list itself on the stock exchange and offer its shares to the public for the first time it is called a **float**, or an initial public offering (IPO). Once a company has listed, it can access further equity funds at any

A **float** occurs when a company lists itself on the stock exchange and offers its shares to the general public for the first time.

time by issuing an approved prospectus for the release of new shares. However, issuing new shares reduces the control existing shareholders have over the company, as they will own a smaller proportion of the company.

The sale of new shares is a primary financial market transaction. When an existing shareholder sells their shares to another investor, this is a secondary financial market transaction. By facilitating both types of share trades, the ASX is both a primary and secondary financial market. Most trades on the Australian share market are secondary market transactions.

Changes in the share market can play an important role in determining the structure and operation of a company. A company's share price is set by the market forces of supply and demand, and it reflects factors such as confidence in management, previous earnings, expected earnings and general economic conditions. A fall in a company's share price results in a loss of value for shareholders, who will put pressure on management to improve their performance and may even vote in new management. Additionally, a low share price can expose the company to the possibility of a takeover. The relationship between share price and the interests of shareholders and managers is illustrated in figure 12.4.



	Shareholders	Management
Share price rises	Happy, as the value of their investment increases	Possible bonuses and increased job security
Share price falls	Unhappy, as the value of their investment decreases. May replace managers.	Increased pressure from shareholders and the threat of a possible takeover may lead to job insecurity

Figure 12.4 – The effect of share price movements on a company

Effect on the economy

Share market values are often a reflection of a country's economic conditions. Because market prices rise in accordance with new and better economic prospects for companies, rising share prices will generally suggest that the economy is enjoying good conditions. By contrast, an economy that is moving towards recession will have fewer economic opportunities for companies, leading to lower share prices.

The relationship between general economic conditions and share values can be seen in figure 12.5, which shows that fluctuations in the share market mirror changes in economic growth. A downturn or upturn in the share market can be measured by the **All Ordinaries Index**, which measures changes in the overall value of companies listed on the Australian Securities Exchange. By comparing the changes in the All Ordinaries Index with changes in a country's economic growth rate, we can see that the market generally rises and falls in line with a country's economic prospects. However, we can also note that the share market is much less stable than the real economy, and small changes in economic growth can contribute to enormous changes in share values.

The **All Ordinaries Index** is a stock market index measuring changes in the overall value of companies listed on the Australian Securities Exchange.

The share market also acts as a method of allocating resources to different types of production. Those companies and sectors with the best growth prospects will be able to use additional investment funds most effectively, and therefore will raise the most funds when floated. In this way, an efficient share market will raise the medium-term growth prospects of an economy. Share prices will be higher for firms in industries that shareholders expect will experience high growth. Assuming perfect market conditions, we can expect that the areas in which the share prices are higher will reflect the growth areas of the economy. This can then be a very useful guide to investment more generally.

There is, however, a major problem in using the share market as a guide to the health of the economy or as an indicator of growth industries. When we argue that the market is the barometer of the economy and a guide to allocating resources, we are assuming that all share purchases are based on the rational and well-founded confidence beliefs of shareholders.

Many share purchases, however, are **speculative** – meaning shares are bought with the intention of being resold within a short period. These investors are not buying to gain a long-term income stream from the shares, but are hoping to make short-term capital gains. The problem with this type of investment is that speculators base their investment decisions on "hype" in the market, and not on the real profitability of firms. This can lead to certain shares or industries having greatly overvalued prices, drawing further investment and leading to a misallocation of resources.

Speculation occurs when investors buy assets with the intention of reselling them for a higher price within a short period.

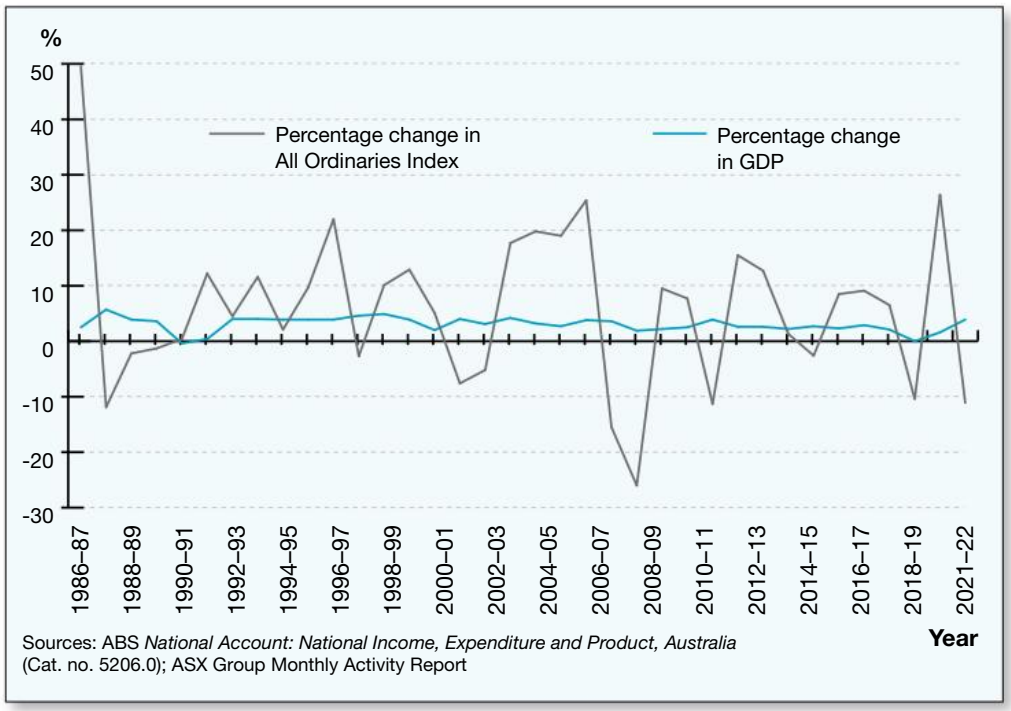


Figure 12.5 – Stock market performance and economic growth rates

As figure 12.5 shows, share prices can rise and fall sharply, and that they are far more volatile than economic growth rates. In 2020, Australia's share market experienced a sharp fall following the outbreak of the COVID-19 pandemic and Australia's first economic recession in nearly 30 years. The heightened volatility in shares attracted a lot of speculative purchases by investors, and a number of Australians took the opportunity to purchase shares for the first time. Australia's share market increased sharply in the second half of 2020 and most of 2021, as market participants responded to the successful development of vaccines and the brighter economic outlook more generally for Australia. Australian shares declined again in 2022 following Russia's invasion of Ukraine and concerns about a weakening global economy.

reviewquestions

1 Define the following terms:
- share
- public company
- dividend
- float.

2 Explain the role of the share market for individuals and businesses.

3 Discuss the effects of changes in the share market on the economy.

12.5 Domestic and global markets

Australian financial markets are integrated with global financial markets. Recent decades have seen a dramatic increase in the participation of foreign investors in Australian markets – both through increased lending to Australia and increased foreign ownership of Australian companies. Likewise, there are more opportunities for Australians to lend funds or invest in companies overseas. The integration of the Australian financial sector with global markets means that Australia is more influenced by developments in markets around the world.

Despite Australia's increased integration with global financial markets in recent decades, the vulnerability of the domestic economy to events overseas is nothing new. As a resource-rich economy, Australia has always been dependent on foreign sources of capital to finance its development, necessitating foreign participation in Australia's financial markets. Just as Australian financial markets were impacted by Russia's invasion of Ukraine in 2022 and the global financial crisis in the late 2000s, domestic markets were also impacted by the global share market crashes of 1929 and 1987, the increases in international interest rates around the world through the 1970s, and the financial crisis in East Asia in the late 1990s.

Australian financial markets have nevertheless become much more closely integrated with global markets over the past three decades. In part, this reflects developments in information and communications technology, which have lowered communications costs and increased the reliability and speed of the electronic transfer of funds. The deregulation of Australia's financial markets since the 1980s also encouraged foreign participation in domestic markets.

Foreign exchange markets enable the movement of funds around the world – if a Japanese investor could not exchange their yen for Australian dollars, they could not invest in Australian companies or loan money to Australian borrowers. Australia has been more open to foreign exchange markets since 1983, when the Australian dollar was floated and exchange controls were abolished. By mid-2022, the value of daily transactions on Australian foreign exchange markets averaged US$150 billion, around 7 per cent of the global total. The Australian dollar was the world's fifth-most traded currency worldwide.

Global debt markets are important for Australia's economic development because of its reliance on foreign borrowing. In 2022, while Australians had loaned around $1.6 trillion to foreign entities, Australia had outstanding foreign loans worth around $2.8 trillion (see figure 12.6). Australia is therefore a net borrower because it borrows more funds from overseas than it lends to foreigners. Most of these movements of funds are facilitated by Australia's four major banks, which source finance for domestic loans from overseas. Even so, foreign banks have established a stronger direct presence in Australia since they first established Australian operations in 1985.

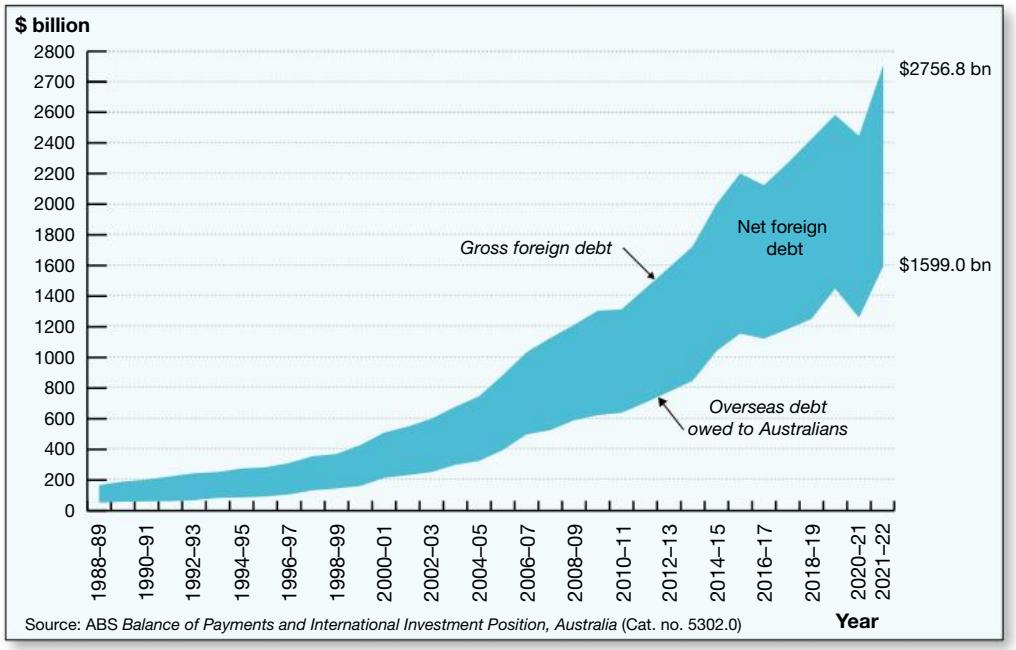


Figure 12.6 – Australia's foreign debt

Equity markets are regulated by national governments, so they exist primarily within individual countries, such as the New York Stock Exchange in the United States or the Tokyo Stock Exchange in Japan, but there are some regional stock exchanges such as Euronext. International movements of funds between equity markets are dominated by financial institutions such as banks and superannuation funds. In 2022, Australian ownership of foreign companies was around $2 trillion, while foreign ownership of Australian companies reached nearly $1.7 trillion (see figure 12.7). Australians have owned more shares in foreign companies than foreigners have owned in Australian businesses since 2013. The Australian share market is still primarily a domestic market with foreign participation, rather than a global market. It is regulated by the Australian Securities and Investment Commission, and significant purchases of Australian shares by foreigners are subject to review by the Foreign Investment Review Board.

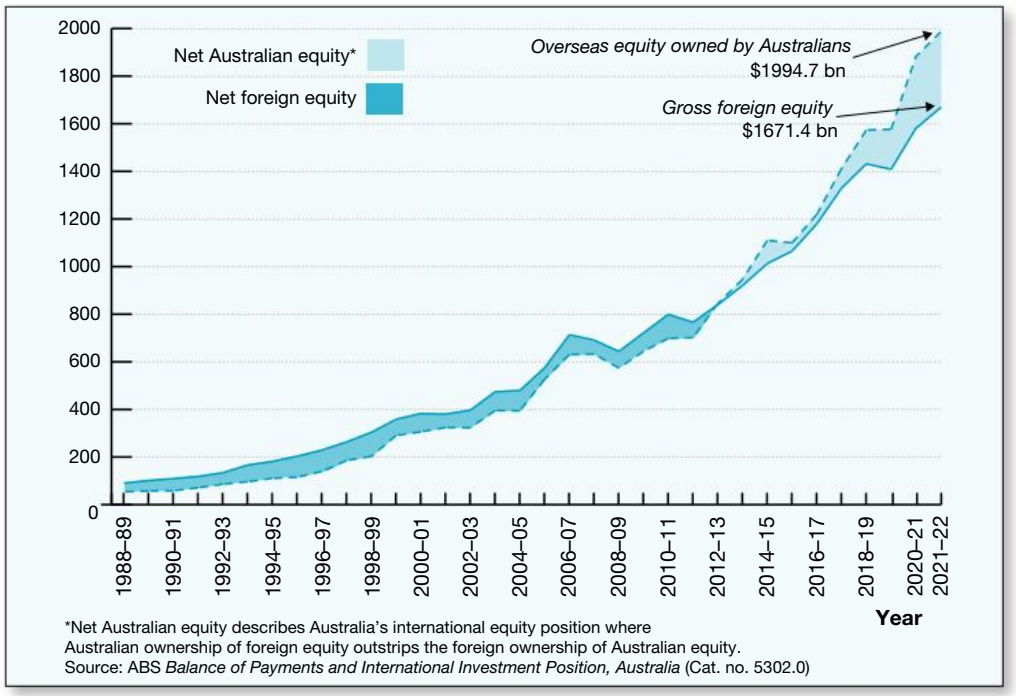


Figure 12.7 – Australia's international investment position: equity

As we shall see in the next section, regulation by governments is important for the stability and efficiency of financial markets. Global financial markets are not subject to the same level of regulation as domestic markets, but some limited functions are performed by international organisations.

- The **Bank for International Settlements** is an international organisation that helps central banks (such as the Reserve Bank of Australia) promote financial stability through appropriate market regulations. A related organisation, the **Basel Committee,** sets standards for banking regulations with the broad objective of promoting effective and uniform financial regulatory systems around the world.
- The **International Monetary Fund** oversees the general stability of the international financial system, through monitoring economies and markets and providing financial assistance to countries that are having difficulty meeting their international financial obligations.

Other organisations that coordinate approaches to financial market regulation include the **International Organisation of Securities Commission** (for share markets) and the **International Association of Insurance Supervisors** (for insurance markets).



For more information about global financial markets and their impact on economies, visit the following websites:

International Monetary Fund: **www.imf.org**

Bank for International Settlements: **www.bis.org**

The main benefit of global financial markets is that they allow Australians access to foreign capital to invest in houses and businesses. Without access to international finance, Australians would face higher borrowing costs or might not be able to access finance as easily. International financial markets also offer Australians the opportunity to invest and earn returns from businesses overseas. The main disadvantage of integration with global financial markets is that the regular disturbances in markets overseas are more quickly transmitted to Australia, especially through financial market speculation. From time to time, concerns are raised about whether Australia's deep integration with global markets might affect the Australian economy in the long term and whether Australia should impose greater controls to prevent overseas interests owning large parts of Australian industries.

reviewquestions

1. Discuss recent trends in the participation of foreigners in Australian financial markets.
2. Account for the increased integration of domestic and global financial markets.
3. State three organisations that are involved in the regulation of global financial markets.

12.6 Regulation of financial markets

Stable financial markets are critical for the functioning of the economy. If the steady flow of funds from savers to investors through financial intermediaries is affected by disturbances, it can have severe consequences for the households and businesses involved, with savings being lost and companies going bankrupt. Instability in financial markets can also undermine confidence more broadly across the economy and reduce economic growth.

Maintaining financial market stability through regulation is a key objective of government economic policy. In Australia, four government bodies have responsibility for the regulation and supervision of the financial system.

Financial market regulators	
Reserve Bank of Australia (RBA)	responsible for monetary policy, payments system regulation, providing banking services to the government, the supply of banknotes and the stability of the financial system
Australian Prudential Regulation Authority (APRA)	responsible for prudential supervision and regulation of all deposit-taking institutions, life and general insurance, and superannuation funds
Australian Securities and Investments Commission (ASIC)	responsible for corporate regulation, consumer protection and oversight of financial service products
Australian Treasury	advises the government on macroeconomic and financial stability issues as well as the legislative and regulatory framework for the financial system.

The **Council of Financial Regulators (CFR)** is a coordinating body for financial market regulation that provides for cooperation and collaboration among its four members – the RBA, APRA, ASIC and Treasury. It is an informal body that allows information sharing and coordination of advice but does not have any collective powers that are separate from the powers of the individual members. When the global financial crisis struck in 2008, the Council of Financial Regulators produced a joint Memorandum of Understanding dealing specifically with how the organisations would respond. The CFR was also critical for coordinating on financial market policies to deal with the economic and financial fallout from COVID-19. The body focused on ensuring sufficient supply of credit to households and businesses to help them avoid defaulting on loans and facilitate more consumption and investment following the worst of the pandemic.

The structure of responsibilities for financial market regulation between the four agencies has been in place since the late 1990s and was established in response to an influential inquiry known as the **Wallis Committee**. The Wallis Committee recommended significant changes to regulation to keep pace with financial sector changes, including new technologies, increased competition, and the breakdown of old distinctions between different types of institutions. These were the largest changes to financial sector regulation since the **deregulation of the financial sector** in the early to mid-1980s, which removed many government controls over the finance sector and exposed the industry to greater influence from domestic and global market forces.

The global financial crisis of the late 2000s put the adequacy of Australia's financial sector regulation under greater scrutiny. While later regulatory changes were not as wide-ranging as those implemented in other countries whose financial systems were more exposed to the impacts of the global financial crisis, some changes were made to strengthen financial market regulation in response to the crisis:

- An interim ban was imposed by ASIC on the practice of "short selling", in which a person sells a share they do not own at the time of sale and plans to buy later at a lower price (and profit from any decline in its value). This was lifted in May 2009.
- A government guarantee was given for 15 million deposit accounts (worth $800 billion at the time) in Australian-owned banks, locally incorporated subsidiaries of foreign banks, credit unions and building societies alongside a guarantee on wholesale finance issued by these same institutions. Bank deposits up to a certain value (currently $250,000 per person in any given bank) are still guaranteed by the government today.
- Australia's Future of Financial Advice reform package, which came into effect in 2013, banned financial advisers from receiving commissions and imposed a duty on them to put the interests of their clients first.

The conduct of Australia's financial system has come under increased scrutiny during the past decade. In 2014, the Financial System Inquiry, also known as the Murray Review, was conducted to assess the state of Australia's financial system. Its overarching aim was to provide recommendations on how to make Australia's financial system more robust in response to international developments, technological change and broad demographic trends such as population ageing. The final report made wide-ranging recommendations, although it did not propose radical reforms to the current system. Some of the more noteworthy recommendations were:

- increasing the amount of capital that banks must hold against their loan assets to a level in line with the safest banks in the world;
- leveling the playing field for smaller banks by making regulatory requirements more competitively neutral rather than advantaging the big banks; and
- strengthening consumer protection laws on financial products.

The increased bank capital that was built up in Australia as a result of this inquiry enabled banks to support lending to businesses during the economic downturn caused by COVID-19. With more capital, banks were better positioned to absorb loan defaults from their customers. Customers also benefited from laws banning excessive credit card surcharges since 2016 (another recommendation from the inquiry).

In 2018, the government established a Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry. The Royal Commission was set up following several high-profile bank scandals, including the alleged rigging of one of Australia's key short-term interest rate benchmarks (called the bank bill swap rate), breaches of anti-money-laundering laws, and the charging of customers for financial advice that was never provided, all by the major banks. The Commission uncovered a range of dishonest practices, including breaches of industry codes of practice, failings on contracts, and widespread mistreatment of customers. Beyond individual examples of problems, the Royal Commission found widespread governance problems at senior levels in financial institutions and revealed significant problems in how the industry was regulated by ASIC.

The Royal Commission concluded in its final report in 2019 that Australia's current laws and regulations are fairly appropriate, so it did not recommend making any sweeping legislative changes. Instead, its recommendations largely focused on ensuring that the financial regulators in Australia did a better job in enforcing those laws. A key reason why the Commission did not recommend introducing stricter laws was a concern that doing so could make it difficult for businesses to access credit and harm the economy.

Despite these recent issues, it is important to keep some perspective about Australia's financial institutions. The Australian financial system is globally regarded as efficient and well-regulated; in its 2022 Global Competitiveness Report, the Institute for Management Development (IMD) ranked Australia 10th in the world for the efficiency of its banking system and stock market as well as businesses' ability to borrow funds for investment.

The **Reserve Bank of Australia (RBA)** is Australia's central bank. Its main roles are to conduct monetary policy and oversee the stability of the financial system.

The Reserve Bank of Australia (RBA)

The **Reserve Bank of Australia** (RBA) is Australia's **central bank**. A central bank generally has the role of executing monetary policy on behalf of the government, printing banknotes and regulating a country's banking system. As such, it is different from other banks – it is not set up as a financial business with the desire to make profit, and it does not provide accounts for individual customers. Rather, its primary purpose is the overall management of the financial system in accordance with the economic objectives of the Commonwealth Government. The RBA was created in 1959 under the *Reserve Bank Act 1959*. Prior to that, limited central banking operations were conducted by the Commonwealth Bank.

According to the Reserve Bank's charter, in its conduct as Australia's central bank, the Reserve Bank is to be guided by three broad objectives: the stability of Australia's currency, the maintenance of full employment and the economic prosperity and welfare of the people of Australia. In reality, its highest priority over the past few decades has been to sustain low and stable inflation (which is typically linked to its original goal of maintaining the stability of the currency).

The functions of the Reserve Bank of Australia can be summarised as follows.

Conducting monetary policy on behalf of the government

The conduct of monetary policy is the most important ongoing responsibility of the Reserve Bank. Monetary policy can be defined as Reserve Bank actions designed to influence the cost and availability of money in the Australian economy through influencing the general level of interest rates. It is important to note that the Reserve Bank conducts monetary policy with the aim of achieving a sustained low inflation rate while encouraging economic growth. In 2022, an independent review of the RBA, focusing on its execution of monetary policy, was undertaken to ensure that monetary policy is being effectively implemented in Australia.

Financial system stability

The Reserve Bank's traditional role of prudential supervision of banks is now the responsibility of the Australian Prudential Regulation Authority (APRA). However, the RBA retains its traditional responsibility for the overall stability of the financial system. It monitors risks and developments in Australia's financial system, conducts research and provides guidance to APRA that helps APRA implement and enforce regulations. The RBA also seeks to maintain the longer-term stability of the financial system by avoiding (or at least reducing the risk of) financial crises. One example of this was the RBA's creation of an emergency funding facility in 2015 that banks can access in the event that they are desperate for cash to fund their obligations (this fund will be wound down in 2022 after having never been used). Policies like this protect the deposits of members of the public, with the aim of not having to rely on a formal government guarantee for depositors' funds. Central banks around the world have also forced banks to hold a minimum amount of their assets in a very safe or "liquid" form (although this policy was technically implemented by APRA in Australia).

Control of note issue

The Reserve Bank is the sole issuing authority for Australian currency. All Australian currency is manufactured by Note Printing Australia, which is a company wholly owned by the Reserve Bank. The volume of notes and coins on issue at any particular time will vary according to the community's demand for cash. At certain times of the year (for example, Chinese New Year and Christmas) the demand for cash will be greater than at other times, and the RBA will seek to accommodate this demand for money.

Regulation of the payments system

The Reserve Bank is responsible for the payments system. This means ensuring the efficiency of payment methods – such as credit cards, electronic cash, travellers' cheques and stored-value cards – and promoting stability in the clearing and settling of large transactions in financial markets. These functions are carried out by the Payments Systems Board within the Reserve Bank.

Banker to the banks

Banks hold exchange settlement accounts with the Reserve Bank. These accounts are used to allow banks to settle debts between themselves, as well as with the Reserve Bank, at the end of each day's trading. They can also be used by banks to buy and sell government securities from the RBA.

Global financial crisis

The global economy experienced its most severe financial crisis in several generations in 2008, with the overnight collapse of major financial institutions, share markets crashing around the world, economic activity collapsing into recession and many governments taking unprecedented measures to stabilise their financial systems and economies. The events of the crisis are a powerful demonstration of the impacts of financial markets on economic activity and economic policy.

The origins of the global financial crisis can be traced back to the mid-2000s in the United States, when low mortgage interest rates encouraged lending to households with a higher risk of defaulting on their mortgage. The risks of these "subprime" loans were spread through the system when investment banks created complicated financial instruments that packaged higher and lower risk loans together, and "securitised" them so they could be sold off to other investors. As interest rates increased, mortgage default rates climbed on the 15 per cent of US mortgages classified as "subprime". Financial institutions stopped doing business with each other because they could not identify how exposed each institution was to subprime loans. Markets became volatile, and access to new loans was restricted.

The crisis soon spread throughout the US financial system. The US Government was forced to take over two financial organisations, Fannie Mae and Freddie Mac, which held over half of all US mortgage loans at US$5 trillion. In 2007 and 2008, more than 25 financial institutions either collapsed or were "bailed out", including some of the biggest companies in the US, such as Bear Stearns, Lehman Brothers, Merrill Lynch, HBOS, Wachovia, Goldman Sachs, Morgan Stanley, American International Group and Washington Mutual. In February 2009, the United States enacted a massive $780 billion stimulus package to buy "troubled assets" and to restore stability to the financial system.

As the financial system fell into crisis, it had flow-on effects for the share market and broader economy. During the crisis, the United States share market lost over a third of its value, and house prices declined by almost 20 per cent. Share markets in the UK, Europe and Asia also fell sharply, with trillions of dollars being wiped off the value of companies within a few months. Financial institutions became reluctant to lend to companies or to households, undermining confidence and causing a fall in business investment and household consumption.

By restricting access to credit and influencing business and consumer confidence, developments in financial markets have a strong impact on the level of economic activity. As a result of the global financial crisis, many major countries saw their economies contract in 2008. In 2009, growth for advanced economies was -3.7 per cent and 0.7 per cent for the global economy – the first annual contraction in the global economy since the Second World War. From 2012, the role of financial markets in the global economy was again at the centre of developments, with concerns about government debt levels in Greece, some other European countries and in the United States. As they had done just four years earlier, international organisations like the IMF and G20 stepped in to prevent a more widespread financial crisis.

The global financial crisis had impacts on the Australian economy, but these were less severe than in other developed economies (partly due to sound policymaking, but also due to good fortune). While none of Australia's main financial institutions collapsed, the financial industry was restructured, with mortgage originators like Aussie Home Loans, Wizard and RAMS being bought by the traditional banks, and the merging of two of Australia's largest banks, Westpac and St George. As in other economies, Australia's share market declined, losing over one-third of its peak value in 2007. Other impacts on Australia included a slowing of house price growth, a collapse in the exchange rate from over US95 cents to US60 cents in just three months, a sharp fall in commodity prices, and a slowdown in economic growth. While Australia was insulated from the global financial crisis by better financial regulation, the Australian Government was nevertheless forced to respond with a guarantee on all bank deposits and bank borrowing from overseas to improve financial market stability, and almost $80 billion in stimulus measures to support economic activity during the downturn.

In the years before the global financial crisis, many economists had argued that financial markets were better able to regulate themselves without any government intervention. However, in the aftermath of the global recession, there was a widespread recognition that governments have a key role to play in regulating markets to underpin confidence and stability in the financial sector and the broader economy.

Responsibility for holding Australia's reserves of gold and foreign currency dealings

The RBA's reserves provide the funds that can be used to make international payments, or for Reserve Bank operations in the foreign exchange market. The RBA also oversees dealers in the foreign exchange market.

Banker and source of financial and economic advice to governments

The Reserve Bank provides banking and financial agency services to the Commonwealth Government, as well as some state governments. The government can lodge excess funds with the Reserve Bank and complete transactions on behalf of the government such as welfare and pension support payments to Australian citizens. Finally, the Reserve Bank acts as a source of financial and economic advice to the government. The Reserve Bank publishes regular assessments of the state of the economy and financial markets. Its publications are highly respected and have a significant influence on economic policymaking.

Australian Prudential Regulation Authority (APRA)

The **Australian Prudential Regulation Authority (APRA)** provides prudential regulation for all authorised deposit-taking institutions (ADIs). ADIs include banks, superannuation funds and insurance companies, credit unions and building societies. APRA has two main regulatory roles:

The **Australian Prudential Regulation Authority (APRA)** is the government body established to regulate all deposit-taking institutions, life and general insurance organisations and superannuation funds.

- APRA encourages behaviour by institutions that will ensure they are able to meet their obligations to the people who place money with them. Essentially, APRA regulates institutions to ensure that deposit-holders can take back their deposit money when they want it, that insurance companies can meet their policy obligations, and that superannuation funds perform well and can pay people who withdraw their savings. APRA requires its deposit-taking institutions to maintain certain levels of funds on hand and to manage risks according to specific financial models.
- For any ADIs, insurance companies or superannuation funds that experience financial difficulty, APRA has the role of sorting out the institution's financial position and ensuring that policy or deposit-holders receive as much of their funds as possible. This recovery role is supported by a range of investigative powers, giving APRA the right to intervene in any of its related institutions if it feels they have become financially unviable.

Australian Securities and Investments Commission (ASIC)

The **Australian Securities and Investments Commission (ASIC)** regulates Australian companies and financial markets, with the aim of protecting investors and consumers and improving the performance of the financial system. It has the power to monitor, investigate and act in situations where the integrity of the financial system has been undermined by the illegal acts of individuals or the creation of unethical investment products. ASIC also has powers to protect consumers against misleading or deceptive and unconscionable conduct affecting financial products and services.

Australian Securities and Investments Commission (ASIC) is the government body with responsibility for corporate regulation, consumer protection and the oversight of financial service products.

ASIC's role is critical to lifting the standards of corporate behaviour and maintaining confidence in financial markets. Some examples of specific offences regulated by ASIC include insider trading, where company directors use non-public information about the company to buy and sell shares on the share market to make a profit; and company executives failing to inform the market of price-sensitive information.

ASIC typically has hundreds of investigations underway at any point in time. Each year its legal actions can see individuals and companies paying fines, assets being frozen, or even people being jailed for major offences.



For more information about the regulatory framework of Australia's financial system, visit the following websites:

Reserve Bank of Australia: **www.rba.gov.au**

Australian Prudential Regulation Authority: **www.apra.gov.au**

Australian Securities and Investments Commission: **www.asic.gov.au**

Australian Treasury: **www.treasury.gov.au**

Government's financial literacy program: **www.moneysmart.gov.au**

In recent years, the scope of ASIC's role has been expanded to cover a greater amount of financial market activity. In 2009, ASIC became the national regulator for consumer credit (such as home loans, personal loans and credit cards), taking over from the states and territories. Since 2010, ASIC has increased responsibility for supervising security markets such as the Australian Securities Exchange.

ASIC's approach to financial regulation came under scrutiny during the 2018 Banking Royal Commission. Commissioner Hayne chided the regulator for trying to resolve instances of misconduct by financial institutions "by agreement" rather than enforcing the law and imposing penalties. While not fully accepting this criticism, ASIC responded to the Royal Commission's report by strengthening its approach to enforcement. In the year after the Royal Commission, it expanded its investigations, established an Office of Enforcement, increased penalties for misconduct and adopted a new philosophy of "why not litigate?"

In 2022, ASIC set out a strategic plan focused on the increased use of technology to enforce market rules. This includes greater data analysis for detecting and targeting financial scams, regulating volatile "crypto-assets", and assessing the resilience of markets and companies in the face of cyber-risks. ASIC also committed to improving sustainability-related disclosures to prevent "greenwashing", where companies falsely claim to be protecting the environment.

As powerful as ASIC's role is in setting and enforcing regulations, it is important to recognise that it is not ASIC's role to prevent investors from making losses. ASIC does not try to stop people from investing in high-risk ventures, which may end in corporate failure. ASIC also does not step in to "bail out" or prevent companies experiencing financial difficulties. While facilitating the flow of information and holding participants to standards, ASIC's role reflects a view that financial markets will be more efficient and better for investors in the long run if they operate with minimum government interference.

Australian Treasury

The **Australian Treasury** also plays an important role in the functioning of Australian financial markets. As the main source of economic policy advice to the government, the Treasury can influence how governments devise budgets, collect taxes, allocate expenditure, and implement other policies such as monetary policy, labour market policy, and market regulations. For example, the Treasury designed the JobKeeper program in 2020 that kept a number of Australians employed even as businesses were closed during the lockdowns on economic activity.

For financial market stability specifically, the Treasury provides advice to governments on regulatory settings for financial markets, corporate practices and consumer protection. During the global financial crisis in the late 2000s, the Treasury had an important role to play in keeping the government up to date on developments in Australian and overseas markets and advising on the best approach to minimising the impacts of financial market disturbances on the Australian economy. Implementing sound economic policy and prudent financial market regulations is critical for governments to maintain stability in financial markets in the long term.

reviewquestions

1. Explain the Reserve Bank's role in the Australian economy.
2. Discuss the potential importance of the Council of Financial Regulators and the Australian Treasury during a major financial crisis.
3. Using the website links in the margin, distinguish between the roles of APRA and ASIC in Australian financial markets.

chapter summary

1 **Financial markets** play an important role in allocating resources in the economy. They provide a market that bridges the gap between those with excess funds and those requiring funds. The "prices" established in financial markets include interest rates, share and bond prices, and exchange rates.

2 In **primary markets**, the issuing company directly sells new securities to investors. In **secondary markets**, investors trade second-hand (previously issued) securities with each other.

3 There are a variety of financial market products, each with its own purpose and participants. These include consumer credit, housing loans, short-term debt securities, shares, financial futures and foreign exchange.

4 There are a number of types of financial intermediaries. They can broadly be divided into **banks** and **non-bank financial institutions**, such as finance companies, merchant banks, credit unions, building societies, mortgage originators and superannuation funds.

5 The **share** market is the market for the trade in shares or equity ownership of companies. The **All Ordinaries Index** is the share market index measuring changes in the overall value of companies listed on the **Australian Securities Exchange (ASX)**.

6 Once a company has floated on the share market, it pays regular **dividends** to shareholders. Shareholders who sell their shares for more than their purchase price make a profit known as a **capital gain**.

7 The share market plays an important role in the economy by providing an income for investors and a source of finance for businesses to invest and grow. The share market is also an **indicator of economic conditions**, demonstrating the level of confidence of individuals and businesses in the economy.

8 Australia's domestic financial markets are increasingly **integrated with global financial markets**, with foreign investors being a significant source of lending for Australian individuals and businesses.

9 Financial market regulation is overseen by the **Council of Financial Regulators** which has four members: the RBA, APRA, ASIC and Treasury.

10 The **Reserve Bank of Australia** is responsible for the overall stability of the financial system. The **Australian Prudential Regulation Authority** provides prudential supervision and regulation of all deposit-taking institutions, life and general insurance companies and superannuation funds. The **Australian Securities and Investments Commission** has responsibility for corporate regulation, consumer protection and oversight of financial services.

The **Australian Treasury** also plays a role in financial markets because it is responsible for advising the government on financial stability issues, and for the legislative and regulatory framework for the financial system.

chapterreview

1 Explain what is meant by *financial markets*.

2 Distinguish between primary and secondary financial markets. Give examples of each.

3 Discuss why there are so many different financial market products in the economy, and describe the purpose served by each product identified.

4 Identify the different types of financial institutions in the Australian economy, and briefly outline the roles played by each of these institutions.

5 Discuss whether there are adequate levels of competition in Australian financial markets.

6 Describe the features of the Australian Securities Exchange and the All Ordinaries Index.

7 Explain the role of the share market in relation to:

a) shareholders

b) companies.

8 Discuss the relationship between economic conditions and share prices in an economy with reference to recent trends in Australia.

9 Examine the extent of integration between domestic and global financial markets.

10 Outline the role and function of each of these regulatory institutions:

a) Reserve Bank of Australia

b) Australian Prudential Regulation Authority

c) Australian Securities and Investments Commission

d) Australian Treasury

e) Council of Financial Regulators.

Extended response

Discuss the role of financial markets in a modern market economy. Explain the role and function of the share market and its effect on the economy.

Money and Interest Rates 13

13.1 Borrowers: the demand for funds

13.2 Factors affecting the demand for funds

13.3 Lenders: the supply of funds

13.4 Money and money supply

13.5 Interest rates

13.6 The Reserve Bank of Australia and the cash rate

Many financial markets in Australia can be thought of as money markets, where funds are bought by borrowers and sold by lenders. Just like other markets in the economy, there is demand, supply and a price. In the money market, borrowers are the "consumers" demanding funds. Lenders are the "producers" supplying funds. The price of money in the money market is the rate of interest that borrowers pay. However, unlike normal markets, the price in the money market is not achieved through the equilibrium of market forces alone, with the Reserve Bank of Australia playing a key role in influencing various interest rates in the economy.

Money is central to so many parts of the economy, such as buying goods and services, saving for retirement or investing in property and businesses. Understanding how a typical money market works is therefore critical to understanding the market economy.

13.1 Borrowers: the demand for funds

Individuals, businesses and governments borrow money for different purposes. **Individuals** borrow mostly for personal reasons. The most common form of borrowing by individuals or households is a mortgage for the purchase of a house. With a mortgage, the lending bank is given the house as security on the loan. This means that if the borrower defaults on making their repayments on the loan, the bank effectively gains the right to sell the house to regain the debt, before giving any leftover money to the borrower.

Individuals also borrow for shorter-term purposes, such as purchasing a car, international travel, or paying for an educational course. Credit cards are in a similar category but are an even shorter-term form of borrowing. These loans are mostly unsecured, which means there is no asset the financial institution can claim if the borrower defaults on the loan. This explains why loans for these purposes, particularly those attached to credit cards, have a higher interest rate relative to interest rates for mortgages.

Overall, the **business sector** accesses the most funds of any sector in the economy. Businesses need access to funds in order to expand production, invest in research and development, or complete other special projects. Businesses can do this directly by issuing shares to raise equity or debt by issuing bonds. Alternatively, this can be done indirectly by borrowing money from a financial institution such as a bank. Even if a business relies

mainly on raising funds by issuing equity or bonds, many often need to borrow money for brief periods through the course of the year in order to overcome downturns in its cash flow. For example, an agricultural business will only receive income at certain times of the year when crops have grown and can be harvested for sale. Since expenses are often relatively constant, the business may require access to an overdraft on its account or another type of loan in order to compensate for the cycles in its cash flow.

Governments also participate in financial markets as borrowers. This is sometimes done deliberately, in an effort to raise the level of economic activity. If the economy's growth rate is slow, and funds are readily available from financial markets, a government might borrow money in order to increase its spending or give tax cuts, with the aim of stimulating the economy. A recent example of this in Australia was the Federal Government borrowing money to finance the JobKeeper program that was implemented following the outbreak of COVID-19. At other times, governments may borrow simply because their spending unintentionally grows faster than their revenue. Governments will also sometimes borrow for the purpose of funding major infrastructure projects. If a government is building a road, bridge or hydroelectric power station that is likely to be in service for many decades, economists often argue that it is appropriate that governments borrow and that the asset is paid off over the lifetime of its use. In this way, the future returns from such assets can be used to cover the costs of investment.

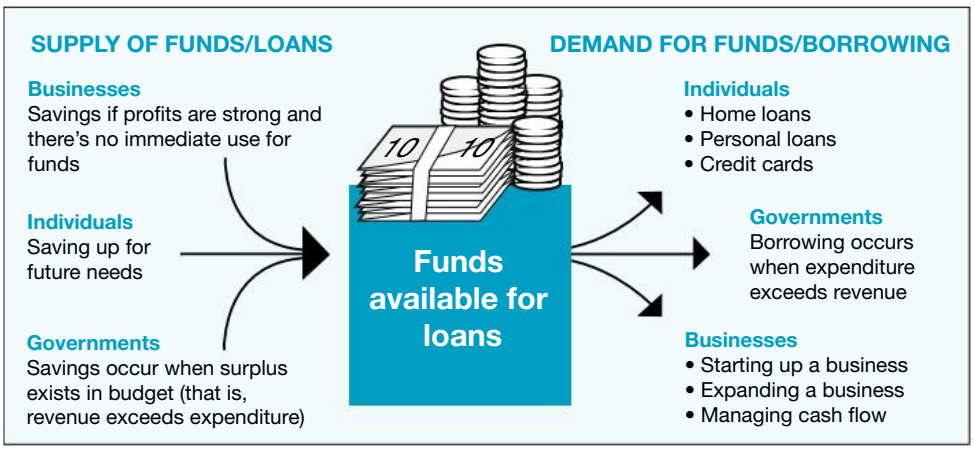


Figure 13.1 – The borrowing and lending of funds

reviewquestions

1 Describe THREE examples of loans that individuals may use to borrow money.

2 Identify the aspects of the circular flow of income that affect the demand for money.

13.2 Factors affecting the demand for funds

Individuals with surplus funds must decide what form in which they should keep those funds. The choice is to either hold them as money (currency and bank deposits) or to purchase financial assets (such as bonds or shares).

Liquidity is the ease with which a financial asset can be transformed into cash so it can be used as a medium of exchange.

The benefit of holding money is **liquidity**. This allows for the easy use of funds when necessary. The benefit of purchasing financial assets is the return you can earn by holding them. For example, owners of shares in a company can receive a proportion of the profits made by that company in the form of dividend payments. In contrast, no return is earned by holding cash. In fact, the value of cash is eroded by inflation over time, although money otherwise holds its value over time. On the other hand, financial assets carry **risks**, as their value can change depending on market conditions.

There are a number of reasons why some people prefer to hold money (or highly liquid assets) rather than invest surplus funds in financial assets that offer a return:

- **Transactions motive**: People have day-to-day transactions (purchases) for which they need to use money. This includes making regular payments for goods and services. Individuals have to hold a certain quantity of currency for carrying out day-to-day transactions, as most financial assets, such as shares, cannot be used to pay for everyday purchases.
- **Precautionary motive**: Quite apart from regular and predicable transactions, there are numerous unpredictable circumstances and emergencies (such as sickness) for which people need to have liquid funds.
- **Speculative motive**: Buying financial assets carries the possibility of making capital gains or losses. If the price or value of shares or bonds goes up, the individual makes a capital gain; if it goes down, they make a capital loss. Individuals will try to avoid capital losses, so if they expect the value of financial assets to fall, they will seek to sell their financial assets and convert them into money.

The level of demand for liquid funds (that is, money) also depends on the sophistication of the financial system, and the ease with which one can convert non-liquid assets into money.

In a very simple financial system, where banks only operate branches and passbook savings accounts (that require account holders to physically go to a bank branch to make transactions), individuals will want to hold more cash for transactions and precautionary purposes, because otherwise they cannot easily access their funds.

The enhanced operation of financial markets has meant that people find it easier to convert financial assets, such as bonds or shares, into liquid funds. This has led to a reduction in the demand for liquid funds. Individuals and businesses can confidently hold more of their savings in less liquid financial assets when the markets for these assets are deep (that is, have lots of buyers and sellers) and function more efficiently. Payments technology also affects the demand for liquidity. The current ease with which people can make electronic transactions is a key reason why many no longer carry around physical cash in their wallets.

The main opportunity cost of holding liquid funds is the forgone returns (or interest) that would have been earned by holding financial assets. As long as the benefit of holding liquidity (including lower costs for transactions and no risk of capital losses) outweighs the costs (the returns forgone), individuals will seek to hold money rather than financial assets.

Businesses face a similar trade-off when deciding whether to invest any surplus funds. In general, demand for funds by businesses will be affected by several factors. This includes the cash flow generated by business operations and whether this cash flow is sufficient to cover expenses. General economic conditions will also play a large role – when economic conditions are good, businesses are more likely to be comfortable taking on debt to fund major investments and expansion. Business lending is also sensitive to the level of interest rates, as businesses will be more likely to borrow when interest rates are low.



CASHED OUT

The use of cash and other payment methods in the economy is affected by many factors, including technology, an individual's age, and personal preferences. A report published in 2020 by the Reserve Bank of Australia found that:

- Electronic payment methods are increasingly being used as a substitute for cash: Cash was used in just 27 per cent of all transactions in 2019, down from 37 per cent in 2016, 47 per cent in 2013 and 69 per cent in 2007.
- This trend has been driven by the increased availability and convenience of electronic payment technologies (such as contactless card and mobile phone payments) that are more time efficient than cash for many transactions, as well as a shift in transactions from face-to-face interactions to online, where cash is not used.
- Cash is no longer the dominant payment for small-value transactions, since cards are being used more frequently for them (due to the greater growth of contactless card functionality). Indeed, card use dominates for all transactions over $5.
- Technological developments in payment methods have made mobile device contactless payments (using a phone or smart watch) an increasingly available option for consumers. In 2019, the RBA estimates around 10 per cent of Australians made at least one such payment, which was double the share in 2016.

The COVID-19 pandemic also accelerated the trend away from cash due to hygiene concerns and a smaller number of face-to-face purchases. This was reflected in a large fall in demand for low value banknotes ($5, $10 and $20s) in the first half of 2020. However, the RBA predicts that cash will still continue to play a role as a transaction medium, particularly as some Australians (such as the elderly, lower-income households and those who live in regional areas) still rely on cash for making payments.

While Australians have been shifting away from using cash for payments, the value of banknotes circulating in the Australian economy has continued to grow robustly. This may seem puzzling. However, RBA research in 2018 estimated that 60 to 80 per cent of all banknotes are not used for transactions. This suggests that there is still a lot of demand for liquidity in Australia beyond the transaction motive.

Household debt

The debt of the household sector in Australia was fairly stable in the 1980s and early 1990s at around 45 per cent of total household income. However, borrowing by households increased rapidly in the years that followed, reaching over 160 per cent of household income by the end of 2007. The growth in household debt slowed after the global financial crisis in the late 2000s, due to a combination of increased caution about taking on more debt and higher saving levels, but it began to increase substantially again after 2014. In mid-2022, the ratio of household debt to income was around 187 per cent, a level greater than most other advanced countries. Australian households are the second-most heavily indebted households in the world (behind Switzerland) when measured as a percentage of GDP. By far, the greatest component of this growing debt is housing-related debt, or mortgages. While high debt levels have often been considered a significant risk for the Australian economy, such concerns were put in perspective by a 2020 RBA Research Discussion Paper, *How Risky is Australian Household Debt?*, which found that the debt growth had four major causes:

- Low interest rates for almost two decades (that are still low relative to historical rates despite having increased recently). When deciding to borrow, people's main concern is how much they will have to pay back in monthly repayments. Interest rates charged by the banks for people borrowing money to purchase a home are around one-third of what they were at the end of the 1980s, meaning that households can effectively afford to borrow more.
- Financial deregulation has increased competition, which has lowered borrowing costs and increased the debt options available to homebuyers. For example, existing homeowners can now easily borrow against the value of their home if they already own it, allowing them to increase their consumption or invest in other properties.
- Rising income levels, with the Australian economy enjoying an unprecedented run of 29 years of economic growth from the early 1990s recession through to the COVID-19 recession. People with higher income can afford not only bigger loans in dollar terms but also as a percentage of their income.
- Low inflation. Australia's average annual inflation rate has been 2.4 per cent since the early 1990s, which encourages households to borrow and has increased debt levels.

The authors of the discussion paper had limited concerns at the time about Australia's household debt levels on the basis that they did not anticipate that these factors would change significantly in the foreseeable future. More recently, interest rates have increased in Australia, sparking fresh concerns about Australia's high household debt and borrowers' capacity to repay. However, the RBA remained confident in 2022 that high household debt was not a major problem, largely because many households built up considerable savings during the pandemic. Employment growth is also an important determinant of the riskiness of household debt because income from jobs is how most people repay their debt. If Australia does experience a significant recession and rise in unemployment in the future, it could result in more borrowers defaulting on their debt, which would then have knock-on effects for the real estate and other financial markets.

FINANCIAL INNOVATION

Financial innovation can affect consumers' demand for liquidity and also reshape financial markets. A key driver of innovation is new technology, which has transformed financial services. Little more than a generation ago, most transactions were in cash withdrawn over the counter of a local bank branch. The arrival of automatic teller machines (ATMs), electronic funds transfer at point of sale (EFTPOS); and online banking and online payment systems now make it largely unnecessary to carry cash or visit a bank.

Other examples of financial innovation include:

- The growth of internet-based discount stockbrokers, such as eToro and CommSec, making it cheaper and easier for small individual investors to participate in financial markets.
- The recent rise of "buy-now-pay-later" products offered by companies such as Afterpay, allowing consumers to pay for goods in instalments without a credit card or traditional loan.
- Mortgage brokers, who help individuals find the most suitable loan products, have replaced banks as the conduit to a housing loan for a large percentage of borrowers.
- Contactless payment systems, such as PayPass, allow consumers to pay without having to sign or provide a personal identification number (PIN), reducing overall transaction time by around 25 per cent compared with debit and credit cards.

- Cryptocurrencies (or digital currencies) are increasingly widely used, with a Roy Morgan survey estimating that 5 per cent of Australians held some form of digital currency in 2022. The limited acceptance of digital currencies, the instability in their value (such as for Bitcoin) and the collapse of some currencies (such as Terra in May 2022) highlight that digital currencies do not yet have all of the attributes of money. Nevertheless, in October 2022 almost half a billion dollars of value was held in Bitcoin globally. A number of central banks around the world are also currently exploring the potential of issuing a central bank digital currency (CBDC) that could emerge as a more universally trusted and stable form of money in the future, and may allow modern electronic payment systems to operate more efficiently. In particular, digital currencies in the future may mean individuals can transfer funds internationally more quickly and with much lower transaction fees compared with traditional methods. With some digital currencies, such as Bitcoin, individuals are able to transact directly with each other without the need for intermediaries such as banks.

reviewquestions

1 Discuss which motive for holding money might apply in the following circumstances:

a) A student wants to buy a laptop to conduct more economics research.

b) A farmer expects the price of Qantas shares to fall sharply next week.

c) A ski instructor is worried that he might lose his job during the summer.

2 Describe the costs and benefits of holding funds in the form of cash rather than as shares or property.

13.3 Lenders: the supply of funds

Individuals, businesses and governments participate in financial markets as lenders when they are seeking a return on their wealth.

Individuals who place deposits in financial institutions are, in effect, lending their money to that institution for the purpose of getting a return on it, as shown in figure 13.2. Individuals who hold wealth but do not wish to spend it have a range of options. Some may invest in assets, such as residential property. Others may buy shares, while those who want to avoid risk will generally place their money into an interest-bearing deposit in a financial institution.

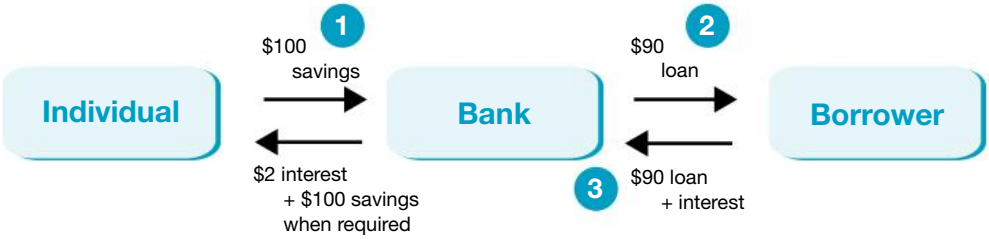


Figure 13.2 – Deposits by individuals and businesses create a supply of funds that are used by banks and other institutions as a source of funds for lending.

Businesses sometimes also participate in financial markets as lenders. A successful business may have a very strong cash flow and good profits, but it may not have immediate plans for expansion or buying out another business. In such circumstances, it may deposit its funds in a financial institution. If interest rates are at a level where maintaining deposit funds is likely to be more lucrative than investing in expanding the business, the firm is more likely to deposit the funds.

Governments can also become lenders, although historically governments have participated in financial markets mostly as borrowers. When the government is running a surplus on its budget, its revenue exceeds its spending and this allows it to either pay off outstanding debts from the past, or maintain positive financial balances (that is, loan money through the financial sector).

The **international sector** is also an important source of funds for domestic borrowers. Australia has historically had low savings rates and has relied upon overseas savings to finance domestic consumption and investment. When Australians borrow money from overseas, this is recorded as a foreign liability and must be repaid in the future. The value of Australia's net foreign debt has grown steadily over the past few decades, amounting to around $1.2 trillion in 2022. The importance of the international sector to lenders in Australia was highlighted during the global financial crisis in the late 2000s, when there was a shortage of credit internationally. Banks and other lenders in Australia were forced to raise their interest rates in excess of official increases in the cash rate by the Reserve Bank to attract overseas funds to lend to borrowers in Australia. In addition, the Australian Government provided a guarantee for all overseas borrowings by Australian banks, to reassure overseas lenders that there was no risk in lending to Australian banks.

reviewquestions

1. Outline TWO reasons that firms and individuals may have for saving.
2. Describe the factors that have led to increased levels of household debt in Australia over the past decade.
3. Give an example of a transaction in the international sector that would increase the supply of funds in Australia.

13.4 Money and money supply

Money plays a crucial role in the functioning of any modern economy. This is because money enables the markets for goods, services and the factors of production to work effectively. Using money, buyers and sellers can easily establish prices and complete transactions. Without money, buyers and sellers would have to resort to bartering, which is very inefficient and significantly restricts economic development. A stable monetary system is important for the successful performance of an economy because it will affect the ability of markets to function properly and allow the economy to grow over time. Financial market volatility, such as was experienced in many countries during the global financial crisis in 2008 and 2009, can have dramatic consequences on the level of output, employment and living standards of an individual country, a region, or even the global economy.

Money is an important component of modern economies because of its four characteristics. It is:

1. **A medium of exchange**
   Goods, services and resources are exchanged for money
2. **A measure of value**
   Money can be used to compare the relative value of goods, services and resources
3. **A store of value**
   Money can be held over time and used predictably for future exchanges of foods, services or resources
4. **A method of deferred payment**
   Money allows the development of a system of lending and borrowing

Money supply is the total amount of funds in an economy that can be used as a medium of exchange, a measure of value, a store of value and a method of deferred payment.

Most people think of money as just the notes and coins (currency) in circulation, but in economics, our major focus is on the broader concept of the **money supply** – the total amount of money in the economy that has the four characteristics above. Currency accounts for less than 5 per cent of the Reserve Bank's main definitions of the money supply. The money supply can be measured in four main ways:

- **Currency** – consists of all currency in circulation held by the general public (households and businesses).

- **M1** – consists of currency and deposits held in transactional bank accounts. This is a complete measure of the most liquid financial assets, which can be used instantaneously to complete transactions.
- **M3** – consists of M1 plus all non-transaction deposits (for example, funds held in a term deposit account that cannot be withdrawn until the term is finished) at banks. This measure is not as liquid as M1.
- **Broad money** – consists of M3 plus deposits in non-bank financial intermediaries (such as credit unions and building societies) minus their holdings of bank deposits. It is the widest definition of money in Australia (hence the name broad money).

M3 is a measure of the money supply that consists of all currency in circulation and all private sector deposits in banks.

M1 = Currency + Transactional bank deposits

M3 = M1 + Non-transactional bank deposits

- **Broad money** = M3 + NBFI deposits − NBFI deposits in banks

Another important financial aggregate measured by the Reserve Bank is **credit**. Credit specifically refers to loans that are provided by banks and other lenders to household and business borrowers. The borrowers receive money up front, while the lenders receive a credit asset, which means they have the right to receive interest payments from the borrower and the amount of money initially borrowed at the end of the loan period. The credit itself is the loan asset that banks and other lenders hold. Credit is therefore not money, but clearly is a closely related concept. Credit can be thought of as the value of total borrowing in the Australian economy by households and businesses.

reviewquestions

1 With reference to the four characteristics of money, explain the importance of money to market economies.

2 Outline the different measures of the money supply measured by the Reserve Bank of Australia.

13.5 Interest rates

Interest rates are the cost of borrowing money expressed as a percentage of the total amount borrowed.

The rate of interest is one of the most important prices in the economy. It is the price that brings about equilibrium in a financial market, where the quantity of funds supplied by lenders is equal to that demanded by borrowers. If we assume that lenders will tend to offer a higher quantity of funds as the interest rate increases, and that borrowers will tend to borrow more at lower interest rates, the role and determination of the rate of interest can be represented as in figure 13.3.

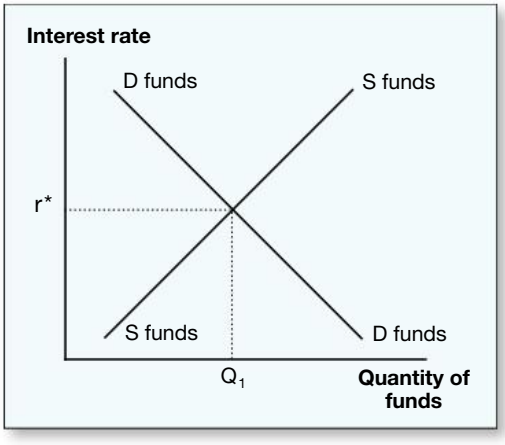


Figure 13.3 – Interest rate determination

The interest rate is the rate of return (yield) on financial assets or financial instruments, such as bonds. Therefore, in figure 13.3, the demand-for-funds curve represents the demand for money by borrowers, while the supply-of-funds curve represents the supply of credit or money by lenders. Any factor that affects the supply or demand for funds in the economy will lead to a change in the rate of interest.

In reality, financial markets do not function like product markets for goods and services, and interest rates are not determined by the normal interaction of supply and demand forces. The supply of funds (savings) tends to be unresponsive to changes in the interest rate (that is, very inelastic) and, as we shall see in section 13.6, interest rates are indirectly determined by the Reserve Bank of Australia.

Financial institutions act as borrowers of funds when they accept savings deposits, as the banks effectively use these funds to make money for themselves by lending these funds on

to other borrowers. Therefore, a rate of interest, known as a **borrowing rate**, is offered on these funds. In addition, financial institutions charge a rate of interest, known as a **lending rate**, when they make loans to their customers. These institutions are able to make a profit by charging a lending rate that exceeds their borrowing rate. The difference between these two rates is known as the **interest rate differential**, or the net interest margin.

We often distinguish between **short-term and long-term interest rates** based on the length to maturity of the financial assets or securities. For instance, when the Commonwealth Government needs to borrow funds, it can use either **short-term** securities (such as Treasury notes that are issued for terms of less than 12 months) or **long-term** securities (Treasury bonds that can be issued for 5 or 7 or 10 years). Interest rates on loans with a maturity of less than a year are known as short-term interest rates. Some instruments can have very long-term maturities – for example, mortgages for house purchases can be for up to 30 years. The interest rates on longer-term securities are not necessarily the same as interest rates on short-term securities. Longer-term securities are mostly seen as riskier (as much more can change over time) and are also less liquid (since it is more difficult to convert them into cash). As a result, the return required for these assets will usually be higher and lenders will receive a higher interest rate.

Any factor that affects the supply or demand of funds in the financial markets will also lead to a change in the equilibrium level of interest rates in the economy. Some factors that will influence the general level of interest rates include:

- The demand for capital goods (**investment**): Stronger investment demand will usually lead to higher demand for borrowing by firms seeking to finance their capital expansion, putting upward pressure on interest rates. Either an increase in the real wage rate, making capital relatively cheaper compared to labour, or an increase in the level of economic activity, where firms need to expand capacity to satisfy stronger demand, could lead to greater demand for capital goods by businesses.
- The level of **savings** in the economy: A higher level of savings means that there is an increased supply of loanable funds, which should put downward pressure on interest rates.
- The demand for **liquid funds**: If individuals in the economy have a stronger preference for highly liquid funds, they may be willing to forgo the yields (returns) from buying securities, and instead choose to hold their funds in bank deposits or in the form of currency. This would mean that the supply of loanable funds is lower and would put upward pressure on the rate of interest.
- **Inflationary expectations**: Inflation reduces the value of money and financial assets. Therefore, if inflation is expected to rise in the economy, lenders would require a higher interest rate to be paid as compensation for the loss of value of their financial assets. Therefore, even if the real rate of return on securities stays the same, higher expected inflation will lead to higher nominal interest rates in the economy.
- **Government budget**: If the government has a greater level of spending than it receives in revenue, it has a budget deficit, and is a borrower in financial markets. This can result in higher interest rates. If the government is a net lender in financial markets, this puts downward pressure on interest rates.
- **International interest rates**: In a world where capital markets are reasonably open and funds can move across national borders quite easily, the level of world interest rates has a significant impact on domestic interest rates. If the domestic rate of interest is lower relative to overseas rates, domestic lenders may seek to invest their funds overseas, to take advantage of the higher rates of return. This would reduce the supply of loanable funds domestically and put upward pressure on domestic interest rates.
- The Reserve Bank, in its conduct of **domestic market operations**, affects the supply of funds in the short-term money market in order to manage the cash rate. This has a direct influence on the returns for short-term loans, and an indirect influence on interest rates on longer-term loans.

reviewquestions

1 Distinguish between borrowing rates and lending rates and account for the difference.

2 Describe the impact of each of the following actions on interest rates in the Australian economy:

- The increasing use of contactless card payments means that consumers prefer to leave their savings in bank accounts rather than as cash.
- Interest rates in the United States increase by two percentage points.
- A slump in demand for Australian iron ore in China causes a cancellation of planned investments in the Australian mining industry.
- Individuals expect the inflation rate to double this year.

13.6 The Reserve Bank of Australia and the cash rate

The Reserve Bank of Australia, as the country's central bank, has significant influence over interest rates in the economy. This influence comes from the RBA's responsibility for directly managing the cash rate. The cash rate is the interest rate in a critically important financial market called the overnight money market – the market for very short-term loans between banks, where loans are literally made for overnight use in many cases.

The cash rate influences many other interest rates in the economy (such as rates on mortgages), and the general level of interest rates influences the overall level of economic activity. The RBA therefore uses the cash rate as a policy tool to help manage the level of economic activity in Australia – this policy is called monetary policy, which is covered in detail in the HSC Economics Course. For now, it is important to understand what the cash rate is and the mechanics of how it is determined. This will set the stage for a deeper examination of monetary policy's role in the economic policy mix next year. The mechanics of the cash rate and the overnight money market can be jointly explained by three things: 1) exchange settlement accounts, 2) the policy interest rate corridor, and 3) open market operations.

Exchange settlement accounts

Banks need to hold a certain proportion of their funds with the Reserve Bank in exchange settlement accounts (ES accounts) in order to settle payments with other banks and the Reserve Bank. For example, when a customer of ANZ uses a debit card to buy a good or service from a business that has a bank account at Westpac, funds need to flow from ANZ to Westpac to complete the transaction. Many interbank payments like this need to happen every day. These payments are made by transferring funds between banks' ES accounts. At the end of every trading day, some banks will not have enough funds in their ES accounts to satisfy all of their interbank payment obligations for that day, while other banks will have a surplus of ES funds that they do not need to hold. Some banks also choose to hold ES balances in accounts at the RBA as a way of storing value.

The overnight money market (also known as the short-term money market) is the market where banks that have a shortage of ES funds can borrow money from banks that have an excess of ES funds beyond what they need in their accounts. The market therefore enables banks to always settle their interbank payment obligations with each other. As with any other financial market, demand by borrowers and supply from lenders interact to set the market price (interest rate). For example, when the supply of funds from lenders that have excess ES balances increases, the price of borrowing this money, that is, the cash rate, will fall. But unlike in other financial markets, the RBA intervenes heavily to ensure that the actual cash rate lines up with a target that the RBA sets for it (the RBA publicly announces

what the target is every month except for January). The RBA does this using the policy rate corridor and open market operations.

The policy rate corridor

The RBA does not have the power to directly set the actual cash rate at its target. But the RBA is able to ensure that the actual cash rate can never stray far from the target because of how the RBA deals with ES funds outside of the overnight money market.

First, the RBA pays an interest rate to banks on funds held in ES accounts that is normally 0.25 percentage points below the cash rate target (for example, if the cash rate target is 1 per cent, the RBA's deposit rate is normally set to 0.75 per cent). This means that banks with excess ES balances do not have an incentive to lend funds to other banks if the actual cash rate is less than 0.25 percentage points below the target; these banks could earn greater returns by simply leaving their extra funds in their ES account. The RBA's deposit rate therefore creates a "floor" or minimum value for the cash rate.

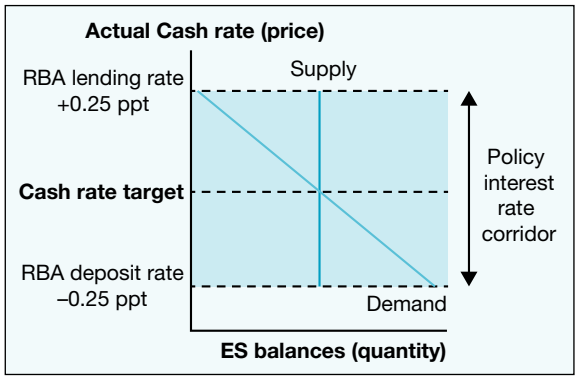


Figure 13.4 The overnight money market

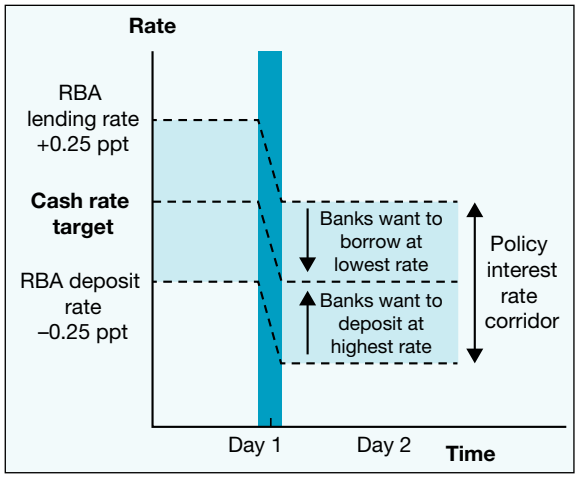


Figure 13.5 Decrease in the cash rate target

Second, the RBA is always willing to lend ES balances directly to banks outside of the overnight market. The RBA normally sets an interest rate on these loans equal to 0.25 percentage points above the cash rate target (for example, if the cash rate target is 1 per cent, the interest rate on these loans is normally set to 1.25 per cent). Banks that need to borrow ES balances are not incentivised to pay a rate higher than the RBA's lending rate in the overnight money market. If the cash rate were higher than the RBA's lending rate, banks would simply borrow ES funds directly from the RBA outside of the overnight market. The RBA's lending rate therefore creates a "ceiling" or maximum value for the cash rate.

Together, the floor created by the RBA's deposit rate and the ceiling created by the RBA's lending rate form the policy rate corridor for the cash rate. No banks, whether they have a surplus or a shortage of ES funds, have an incentive to complete transactions in the overnight money market outside of this corridor. It is called the policy rate corridor because the RBA's policy target for the cash rate is normally exactly in the middle. This ensures that the actual cash rate always closely follows the RBA's target cash rate.

The policy rate corridor is responsible for implementing changes to the RBA's cash rate target. This is because the ceiling and floor of the corridor are automatically set so that the cash rate target is in the middle of the corridor. If the RBA were to decrease the target, the floor and ceiling of the corridor would shift downwards immediately, and banks would be immediately incentivised to borrow and lend from each other within a new range that is consistent with the new cash rate target (see figure 13.5). Because of this, changes to the cash rate happen as soon as the RBA announces a change to its target – the RBA does not have to do anything extra.

Borrowers and lenders, by convention (prior to the pandemic), almost always executed trades using the cash rate target. This meant that the cash rate target and the actual cash rate were almost always the same. However, there is no technical reason why the cash rate cannot move within the corridor. In fact, following the onset of the COVID-19 pandemic the cash rate has consistently been closer to the bottom of the corridor than to the cash rate target. These lower rates have occurred because of the additional measures the Reserve Bank introduced in response to the COVID-19 pandemic (see the box later in this section). Those measures have significantly expanded the supply of ES balances that commercial banks hold in their accounts, which pushed the actual cash rate down towards bottom of the corridor (think of what happens to prices when supply increases in any market).

Domestic market operations

Demand for ES balances by banks fluctuates on a daily basis. This is especially the case on days where there are large transactions or payments in the economy, such as when the government pays social security benefits. The actual cash rate is the price at which this demand intersects with the supply of ES funds that are available. The RBA manages the level of supply of ES funds so that it meets demand at a price equal to the RBA's cash rate target. This management of supply helped keep the cash rate at its target on a daily basis prior to the pandemic. Without this intervention, the cash rate would probably have bounced around inside the policy rate corridor whenever demand fluctuated. The need for such interventions has been significantly lower than normal in recent years due to the massive increase in ES balances.

The RBA manages the supply of ES funds by conducting domestic market operations (DMO). DMO refers to the purchase and sale of financial securities by the RBA in exchange for ES balances. These purchases and sales affect the supply of ES funds because ES funds are used to actually complete these transactions. If the demand for ES funds increases, the RBA would need to increase the supply of ES funds to keep the cash rate at target, all else equal. To do this, the RBA would buy financial securities held by banks, and in exchange deposit additional funds in their exchange settlement accounts. As with any market, this would increase the supply of ES funds so that it could meet the additional demand. If the RBA needed to decrease the supply of ES funds to keep the cash rate at target (because of a decrease in demand), the RBA would sell financial securities to banks, and in exchange withdraw funds that were sitting in their exchange settlement accounts. This would decrease the supply of ES funds down to the lower level of demand.

DMO may involve either outright purchases or sales of securities, such as second-hand Commonwealth government bonds, or repurchase agreements (also called repos), where the "seller" of a bond or security effectively agrees to buy the bond or security back from the "buyer" at a later date. In practice, the RBA prefers using repos to conduct DMO because they are much more flexible instruments and can be used to manage ES supply much more precisely than outright transactions.

In summary, the RBA uses the cash rate policy corridor to implement changes to the cash rate target, and uses domestic market operations to ensure that the cash rate stays at its target every day when the demand for ES funds changes. Both features of the overnight money market allow the RBA to control the cash rate.

Why is the cash rate important?

The cash rate provides the foundation of the interest rate structure in the economy. An increase in the cash rate means that it becomes more expensive for financial institutions to obtain funds in the short-term money market. This increases the overall cost structure of borrowing, eventually flowing through to longer-term and mortgage interest rates, as banks try to maintain their profit margins. Similarly, a reduction in the cash rate lowers the cost of borrowing for banks in the short-term money market, and financial institutions then pass this cost saving on to their customers in the form of lower lending interest rates.

Changes in the general level of interest rates (caused by changes in the cash rate) impact upon the level of economic activity. If interest rates fall, this encourages consumption and investment spending, which increases the level of economic activity. If interest rates rise, this deters consumption and investment spending and reduces the overall level of economic activity.

The Reserve Bank's influence on interest rates to affect the level of economic activity is known as **monetary policy**. The Reserve Bank can either **tighten** monetary policy, by raising interest rates, or **loosen** monetary policy, by lowering interest rates. The impacts of monetary policy changes are shown in figure 13.6.

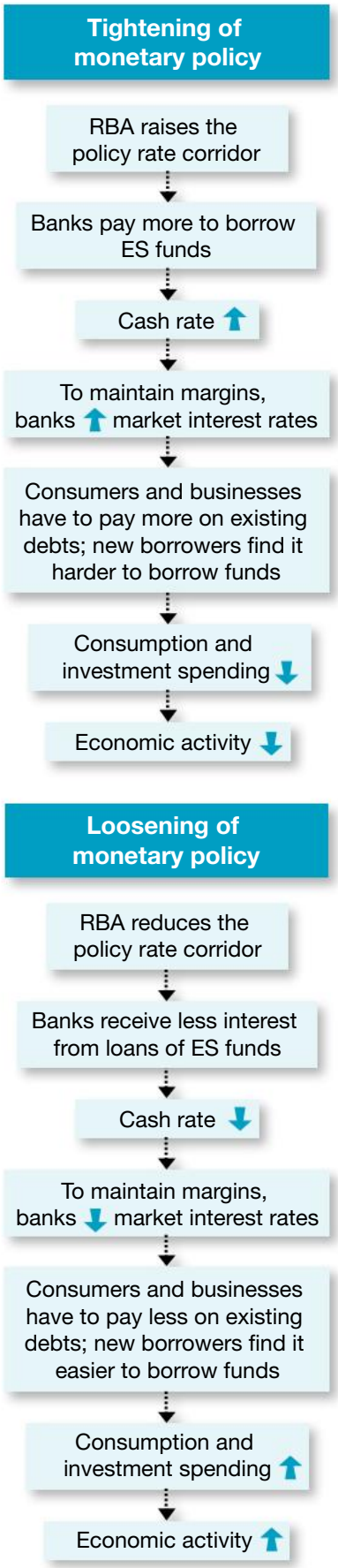


Figure 13.6 – The impact of monetary policy

WHEN THE CASH RATE IS NOT ENOUGH

The COVID-19 pandemic resulted in a very sharp (but short-lived) contraction in economic activity in Australia. To avoid a prolonged recession, and with the cash rate already at historic lows, the RBA introduced unprecedented **"unconventional" monetary policy** measures to stimulate the economy, including:

- **Asset purchases**: the RBA purchased government securities outright in the secondary market from financial institutions and paid for them by depositing newly created ES balances in their accounts (this is why asset purchases are often referred to as quantitative easing or "printing money"). The purpose of these purchases was to lower the interest rate on government bonds. Like the cash rate, the interest rates on government securities are important interest rates that influence other interest rates in the economy. Lowering them through asset purchases provided extra economic stimulus during the pandemic.
- **Forward guidance**: central banks can use official communications to shape market expectations about the future cash rate, in order to influence current interest rates on longer-term assets. Interest rates on longer-term assets are partly determined by what financial markets think the cash rate will be in future. For example, if markets think that the cash rate will be much higher in 10 years' time, interest rates on assets such as 10-year government bonds would reflect that belief. The RBA officially stated that it would leave the cash rate target where it is until the 2–3 per cent inflation target is sustainably reached. For much of 2020 and 2021, the RBA said it did not think this condition would be met until at least 2024. However, this condition was actually met in early 2022. The RBA subsequently came under strong criticism for the inaccuracy of its forward guidance.
- **More liquidity**: the RBA increased the size of its Domestic Market Operations compared to normal, and created a new funding facility called the Term Funding Facility (TFF). The TTF provided cheap additional loans to commercial banks that they could use to lend more funds to households and businesses. The TFF also included incentives for these commercial lenders to lend more money to smaller businesses, which were particularly affected by COVID-19. The TFF was closed in mid-2021 for new lending, but banks will benefit from the cheap funding it provided through to 2024. Indeed, so much liquidity was provided through these measures that the actual cash rate has been below the cash rate target for a considerable period of time. This is despite the long-established convention in financial markets that kept the actual cash rate at the target.
- **Changing the size of the corridor**: the RBA changed the structure of the policy rate corridor system. Instead of paying interest 0.25 percentage points below the cash rate target on ES balances, the RBA decided to set the corridor floor 0.10 percentage points below the cash rate target in late 2020. This enabled the RBA to lower the cash rate target further without having to worry about the risks of negative interest rates during the worst of the pandemic. As the economy emerged from the pandemic, the RBA still retained a smaller corridor floor than normal. This was to ensure that the excess exchange settlement funds created by the RBA's other unconventional measures did not make the actual cash rate too much lower than the cash rate target.

reviewquestions

1 Distinguish open market operations from the cash rate policy corridor.

2 Explain how changes in the cash rate affect financial markets and economic activity.

Web exercise

Visit the website of the Reserve Bank of Australia (www.rba.gov.au) and prepare a brief report with the following information:

- State the current level of the cash rate target.
- Identify when the RBA last adjusted the cash rate, and whether this move increased or decreased the cash rate.
- Outline TWO reasons for the RBA's most recent cash rate change.

Hint: Every time the RBA adjusts the cash rate, it issues a media release (available on the RBA's website) explaining the reasons for the move.

chapter summary

1 **Borrowers** represent the demand for funds in financial markets and include individuals borrowing for housing or consumption, businesses borrowing for investment and governments borrowing to finance budget deficits or infrastructure projects.

2 **Lenders** represent the supply of funds and consist of individuals that may have unspent income, businesses that may have unused profits, governments that may run budget surpluses and international lenders with surplus funds.

3 Individuals demand money because it is an easy form of payment for day-to-day transactions, that is, it is **liquid**, and does not carry the risk of capital losses. Individuals demand financial assets because they can earn a return (interest) and may possibly make capital gains.

4 Innovations in technology, such as an increase in the number of ATMs and increased use of credit cards, have changed the demand patterns for money. This is known as **financial innovation**.

5 **Broad money** includes all currency and all deposits in banks and non-bank financial intermediaries, minus all NBFI holdings of bank deposits.

6 Interest rates represent the cost of borrowing and the return from savings. These are called **borrowing rates** and **lending rates** respectively. The financial sector earns its income by charging a lending rate greater than the borrowing rate. The difference is often referred to as the interest rate differential.

7 The **cash rate** is the interest paid on overnight loans in the short-term money market.

8 The **policy interest rate corridor** is established by the RBA's deposit and lending rates for exchange settlement account balances. The corridor gives banks an incentive to borrow and lend in the overnight money market close to the cash rate target, and is used to implement cash rate changes – in order to influence the cash rate and the general level of interest rates.

9 **Domestic market operations** are actions by the Reserve Bank to manage the supply of funds in the overnight money market. These actions involve the purchase and sale of financial securities – either outright or through repurchase agreements.

10 A change in the **cash rate** affects the cost of short-term borrowing for financial institutions. This will flow through to market interest rates for consumers and businesses, influencing their consumption and investment decisions and therefore influencing the level of economic activity.

chapterreview

1 Outline the sources of savings in the economy.

2 Explain why an individual would borrow funds.

3 Discuss how changes in economic conditions might affect borrowers and lenders across the household, business and government sectors.

4 Identify the significance of each of the following factors for a lender of funds:

a) returns

b) risk

c) liquidity.

5 Identify the economic meaning of the following terms:

a) credit

b) currency.

6 Distinguish between the following financial aggregates measured by the Reserve Bank:

a) M3

b) broad money

c) credit.

7 Outline the factors influencing the lending and borrowing rates in the economy, and explain why these rates differ.

8 Explain the effects of the following on the level of interest rates in the Australian economy:

a) a rise in international interest rates

b) a decrease in the level of investment

c) deteriorating consumer sentiment

d) increasing inflationary expectations

e) increasing domestic savings.

9 Explain what is meant by *domestic market operations*.

10 Discuss what steps the RBA would take if it decided to use interest rates to stimulate economic activity.

Extended response

Discuss the role of borrowers, lenders and the Reserve Bank of Australia in Australian financial markets.

TOPIC 6

GOVERNMENT AND THE MARKET ECONOMY

Focus

The focus of this study is the role of government in a mixed economy. The main concepts are management of the economy, and problems and issues arising from the free operation of markets.

Issues

By the end of Topic 6, you will be able to examine the following economic issues:

- Assess the need for government intervention in a market economy
- Examine how the operation of the free market without government intervention might affect the distribution of income, quality of life of individuals and the management of the environment
- Evaluate the impact of different taxes on the distribution of income and wealth, on business and on the allocation of resources in the economy
- Evaluate the role of social welfare for an ageing population
- Investigate alternative sources of revenue for governments.

Skills

Topic 6 skills questions can ask you to:

- determine whether a specific tax is progressive, proportional or regressive
- interpret Federal Budget data
- predict the impact of a budget deficit or surplus on economic activity
- discuss how monetary and fiscal policies can be used to stabilise economic activity
- analyse the performance of government business enterprises.

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Topic 6

Introduction

Economics is a science that examines how societies attempt to solve a basic human dilemma: how we satisfy our virtually unlimited wants with the limited resources available to us. As the study and practice of economic theory has developed, especially over the past two centuries, the approach adopted to deal with this dilemma has often changed. Different ideas about how best to solve the economic problem have clashed, and these debates have spilled over from the battleground of ideas into parliaments and boardrooms, onto social media and onto the streets, often dividing political parties and dividing nations. The second half of the twentieth century was dominated by the clash of capitalism and communism, between the superpower blocs led by the United States and the Soviet Union, representing starkly different approaches to solving the economic problem. In the third decade of the twenty-first century, we still hear the echoes of the conflicts of the twentieth century, so many of which were about competing answers to the economic problem.

Yet, today there is probably more common ground between nations than ever before about solving the economic problem. Most nations adopt an approach based on the operation of markets, where the choices of individuals determine what goods and services are produced, and businesses determine how to produce those goods and services. On the surface at least, the argument for the market-based approach appears to have won the battle of ideas of the twentieth century, and almost all nations now focus on how they can make their market economy work well.

However, if we scratch beneath the surface we soon find that debates about many issues are still raging. Examples of market failure abound. Why trust the experts who support free trade and globalisation, if that only makes some richer at the expense of others? Should we really leave all of the major choices about the operation of the economy to individuals, who are only acting in their own self-interest? How do we ensure that we have things to share together as communities, like parks and facilities? How much do we need to protect people from unsafe products and dishonest business conduct? How do we deal with economic crises? And should the government be doing more, or less, to fix problems in our economy?

Studying economics allows you to understand these issues, and see how different countries find answers to these problems. Throughout the Preliminary Course, our focus is to understand the role of markets in answering the economic problem. We have looked at the detail of how they operate, and the different roles played by consumers, business, government and other organisations. We have also made some comparisons of different approaches to solving the economic problem.

Up until now, in gaining an overview of how a market economy works, this book has looked at general market principles and taken two key elements of the market economy – labour markets and financial markets – as detailed studies of how markets work. We saw that in both cases, if markets were left to themselves, they could produce some major problems – unfair pay and harsh working conditions in the labour market, and people losing their savings because of badly managed banks in financial markets. Governments intervene substantially in both types of markets in order to achieve better economic results than what would be achieved by the market alone. Opinions about the extent of government intervention in markets have changed over the years. In the late twentieth century there was a marked shift away from government intervention, but opinion has shifted back in favour of government intervention in more recent decades with the global financial crisis, the COVID-19 pandemic and accelerating climate change.

In this final section we focus specifically on the role that governments play in influencing markets.

Chapter 14 looks at some of the problems that occur when an economy relies on market forces alone to determine outcomes of production, distribution and consumption. Markets can fail by producing too much or too little of a good or service, by concentrating market power in the hands of a few firms, by causing environmental damage or by creating unfair or unstable outcomes.

Chapter 15 examines the role that governments aim to play in market economies, including an overview of the division of power between the different levels of government, the relationships between them, and the overall size of the public sector. We review the policy options available to the government to address different kinds of market failure and how this impacts upon resource allocation, income distribution and the economic performance of the Australian economy.

Chapter 16 examines some of the methods that governments use to improve market outcomes, with a particular focus on the federal government's budget. We consider how the government generates revenue, identifies its spending priorities and changes the budget outcome to achieve its objectives. Chapter 16 concludes with a discussion of the factors that influence the process of making government policy in Australia.

14 The Limits of Markets

14.1 Why governments intervene

14.2 Market failure in the provision of goods and services

14.3 Market failure in income distribution

14.4 Market failure in externalities

14.5 Market failure in the abuse of market power

14.6 Market instability: the business cycle

14.1 Why governments intervene

The free operation of market forces does not always achieve the most desirable economic and social outcomes. Under a completely free market (laissez-faire) system, some important community needs and wants may not be satisfied. Some individuals may be unable to earn enough money to live, and inequalities between people and regions may worsen. Economic activity might contribute to the spread of a deadly pandemic. At times, the market may cause economic instability. Because of these factors, the government intervenes in the market in order to achieve a better allocation of resources, a more equitable distribution of income and greater economic stability. This chapter examines the limits of the operation of the free market, while chapter 15 considers the role of government intervention.

The main point in this chapter is that markets are not perfect. They are very effective at determining what goods and services our economy produces, in what quantities and how production is organised. No other system of economic coordination has produced the level of prosperity, innovation and satisfaction of material wants that we enjoy today. But not all economic decisions can be left to market forces. Markets consider private economic interests, not broader social interests. We live in a society, not just an economy. We need governments, not only to help markets function, but to sometimes change market outcomes when they do not satisfy the wants of the public. The challenge is to find the right balance. Too much government intervention may stifle innovation, efficiency and growth. Too little may leave us exposed to instability, inequality and a lack of basic community facilities.

Market failure occurs when the price mechanism takes into account private benefits and costs of production to consumers and producers, but it fails to take into account indirect costs such as damage to the environment.

The problem that economists call **market failure** occurs because the operation of market forces creates unfavourable or inefficient outcomes. Market failure can arise in the provision of goods and services, income distribution, externalities, the abuse of market power and economic instability. Governments step in to solve problems caused by market failure.

"The COVID-19 pandemic has caused varying degrees of damage followed by diverse paths to recovery around the world … In order to restore robust growth, market forces alone are inadequate to resolve the various issues at hand. Governments must step up to fill this void and play a key role in recovery.

… Beyond the public health aspects of recovery, there are multiple roles the government can fill, especially when it comes to fixing problems that the market cannot resolve on its own.

… To name a few, beyond ensuring full employment, these include regulating externalities, promoting robust competition, guarding against exploitation, limiting market power, and providing social protection. In the countries with the most successful COVID-19 responses, government has played these roles effectively."

– Professor Joseph E. Stiglitz, 'The Proper Role of Government in the Market Economy: The Case of the Post-COVID Recovery' (Journal of Government and Economics, May 14, 2021)

14.2 Market failure in the provision of goods and services

The market may fail to provide certain necessary goods and services, or it may be more desirable that they are not provided by the private sector. Goods and services with **public good** characteristics are one such area of market failure. A public good is a good which, once provided, is difficult to prevent anyone from using, regardless of whether they pay for its use. Examples of public goods include clean air, street lighting, national defence and public parks. If it is not possible to exclude people from the benefits of these goods, it will not be possible to convince people to pay for them.

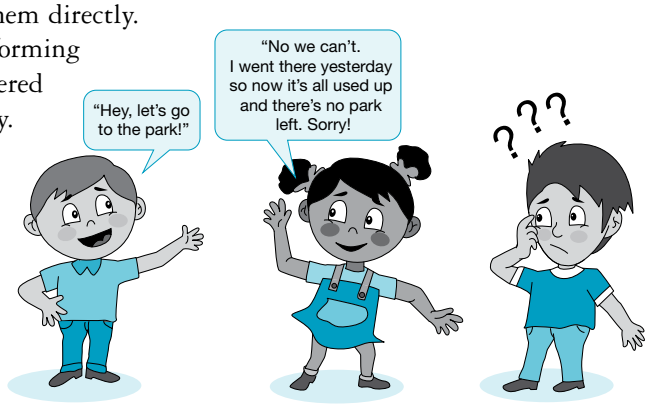
The two characteristics of public goods are that they are ***non-excludable*** and ***non-rival***.

In other words, public goods are **non-excludable** and will attract **free riders** who benefit without contributing towards their costs. Clearly, there is no incentive for firms to produce these goods if consumers will not pay for them. As a result, a free market is likely to undersupply a public good relative to demand for that good, or not supply a public good at all. For this reason, the government generally provides public goods.

Free riders are groups or individuals who benefit from a good or service without contributing to the cost of supplying the good or service. As a consequence, the good or service is likely to be under-supplied in relation to the total demand.

Public goods are also **non-rival** – that is, one person's enjoyment of a public good does not diminish the potential for others to also enjoy the good. If the government spends money on pollution controls and environmental policies to improve air quality in a city, this benefit is valuable to everyone and one person's enjoyment of clean air does not diminish the next person's. The same might be said of other public goods, such as street lighting and public broadcasting.

Markets may sometimes produce an inadequate quantity of an item, such as health care or art. These items are known as **merit goods**, because they have benefits to the community that go beyond the individual who enjoys them directly. A high-quality health care system and a place for performing arts such as the Sydney Opera House are both considered to be merit goods in that they benefit the whole society. Governments play a role in providing merit goods, either directly (through operating or funding most hospitals) or indirectly (through financial support for arts groups).



Just as the market sometimes produces too little of an item, it may also produce too much. Items that bring harm to the community are known as **demerit goods**, and these include tobacco, alcohol, addictive drugs and gambling. Because these items have negative

effects, their production and sale may be restricted (for example, a licence to sell alcohol, and fines for supplying alcohol to people under 18 years of age), heavily taxed (as with tobacco and gambling) or completely prohibited (such as dangerous illicit drugs). During the COVID-19 pandemic, for public health reasons governments imposed lockdowns and banned economic activities that involved people interacting closely, such as in restaurants and at sporting matches and entertainment venues. Events that required people to be in close contact effectively became demerit goods and services.

Governments provide a range of collective goods and services that benefit the whole community. For example, the government provides a defence force because national defence would not be provided by private enterprise, nor would it be desirable for it to be in private hands. Other examples of collective goods provided by government include education, health services, roads, railways, national parks and historic monuments. Not all collective goods provided by the government are public goods – for example, a public transport service is not a public good because people have to pay to use it, making it excludable.

Governments sometimes provide goods by operating as a natural monopoly. A **natural monopoly** is a market structure in which goods can be efficiently provided by only one supplier, usually because of the enormous investment in infrastructure required to supply that good. A natural monopoly occurs where it would be inefficient for competition to operate. Examples include rail networks, because of the huge investment in buying land and laying down rail track, and water and electricity distribution networks, because of the cost involved in piping water and distributing power to homes. Governments may maintain ownership or regulate monopolies because of concerns that private owners would abuse this monopoly power, leaving consumers with little choice but to pay whatever price the monopolist sets for their good or service. Governments that operate natural monopolies generally try to set a fair price that ensures consumers cover the costs of providing the good or service but are not exploited by excessive prices.

The ABC: an example of a public good

The Australian Broadcasting Corporation is one of Australia's best known and widely trusted institutions. The ABC was ranked as Australia's most popular digital news brand in 2022, measured in terms of overall monthly unique audience, both on smartphones and across all platforms. A 2022 survey also found that it was Australia's most trusted media source, and that the only institutions in Australia that are more trusted than the ABC are border security agencies, health authorities, state governments and the criminal justice system. In economic terms, the ABC is an unusual example of a public good. The ABC was founded in 1932, and it now includes four digital television channels, streaming services, four Australia-wide radio networks, 56 local radio stations and one of the country's most popular websites. The ABC's role, according to its legislation, is to provide "innovative and comprehensive broadcasting services ... that contribute to a sense of national identity and inform and entertain, and reflect the cultural diversity of the Australian community" – in other words, public good benefits.

The existence of the ABC demonstrates that media is more than just another business. It is important for democracy and good government that people can access accurate and reliable news reporting. This is expensive, and commercial broadcasting networks may be reluctant to invest the money required for investigative journalism, regional coverage and quality control.

The ABC also provides a broadcasting service throughout the entire country, including to areas where it is not profitable for commercial media to operate. For this reason, the ABC is particularly important to regional Australia, where it has 48 regional bureaus outside of capital cities. During bushfires and floods, the ABC radio network is often the only accessible source of free and reliable emergency information. The ABC invests in local drama production, and provides training for many journalists who later work in commercial broadcasting or newspapers. Overall, the ABC performs a wide range of functions that would be unlikely to happen in its absence. The national audience across the ABC's television, radio and online channels in any one week was estimated at 68 per cent of the adult population on average in 2021.

reviewquestions

1 What type of good are COVID-19 vaccines?
2 Outline the government's role in regulating natural monopolies.

14.3 Market failure in income distribution

While the market economy is generally efficient in answering the question of what and how to produce, this will often involve social costs. Left to operate without any government intervention, free markets tend to produce substantial inequality in the distribution of income. Often, this inequality will widen over time, because once people become wealthy, their wealth tends to generate more wealth. Once they own land and resources, wealthier people can earn rent and interest from their factors of production, and from the growth in the value of their investments. Similarly, those who hold wealth are likely to have the greatest opportunities for developing their skills and finding rewarding employment.

There are particular groups within Australian society that are susceptible to inequality and poverty. These **disadvantaged groups** include those with low education levels, migrants from non-English-speaking backgrounds, Indigenous Australians, people with a disability and single-parent families. In Australia, the most common form of poverty is **relative poverty**, whereas few people live in **absolute poverty**. Absolute poverty refers to a situation where individuals have only just enough income to enable them to survive, whereas relative poverty refers to the living standards of the poor in comparison with the rest of the population.

Relative poverty refers to those whose standard of living is substantially lower than the average for the economy as a whole, and is often defined as a level of income below 30 per cent of average earnings.

Inequality can easily become entrenched in a market economy. For example, a child growing up in a low-income family may not have access to the same education or job opportunities as a child in a wealthy family. Their parents may have less education and may not be as able to help with homework. Financial pressures may mean that their parents cannot afford to support them to the end of their high school education or through tertiary education, and the fear of a large student debt may deter them from further study. Without further education or training, they risk being stuck in lower-paid jobs for all of their life. This was a key concern from COVID-19 lockdowns, which forced students to suddenly shift to online study. For rural and low-income households without reliable equipment and internet, learning was much harder and the negative impacts of the lockdowns were deeper and more long-lasting.

Governments can act constructively in this situation. While they can never remove all the factors that contribute to inequality, they can improve opportunities for people in disadvantaged groups. Universal access to free education until the completion of high school, special educational assistance programs and scholarships, living allowances for students, and measures to help mature-age people enter higher education are all ways in which governments can help address the effects of income inequality. These measures can improve social mobility (that is, reduce the extent to which people who are born into a particular socio-economic class are likely to stay there all their lives).

Concern over economic inequality was a major reason why the role of governments in economies expanded greatly during the twentieth century. In the aftermath of the Depression and the Second World War, industrialised countries such as Australia established a "**welfare state**" – a comprehensive system of welfare benefits such as the age pension, unemployment benefits, free access to health care, and subsidised access to other government services such as transport and housing. The welfare state was intended to create a more equal society.

The welfare state grew throughout the second half of the twentieth century, owing to an ageing population, much higher levels of unemployment, an increase in single-parent

families and higher numbers of students in tertiary education. By the 1980s, the cost of social security programmes was rising, which attracted critics who argued the welfare system was too generous and was creating incentives to drop out of the labour market. As a result, governments began to reduce welfare benefits and imposed obligations such as applying for jobs and enroling in training in order to receive income support. Welfare benefits for out-of-work people of working age became more limited. At the same time, governments increased family benefits payments to Australian households and support for people with disabilities, while substantially increasing resources to provide for pensions, plus health and aged care, for Australia's ageing population. The government's role in redistributing income remains one of its most important functions in the economy and is the largest expense to the Australian Budget.

reviewquestions

1. Distinguish between inequality and poverty.
2. Outline methods available to the government to influence the distribution of income in the economy.
3. Explain how the free market can contribute to income inequality.

14.4 Market failure in externalities

Markets take into account the economic and social concerns of the individual sellers and buyers, but do not account for any side-effects that are not directly reflected in the price mechanism of supply and demand. In reality, an exchange in the market economy will often affect many more people than just those who are involved in a transaction. Because these consequences affect those "outside" the transaction, they are called **externalities**. Externalities are a form of market failure because they occur where the price mechanism fails to represent the true social costs or benefits of production.

Externalities are external costs and benefits that private agents in a market do not consider in their decision-making process. For example, airlines and passengers do not consider aircraft noise when negotiating airfares.

Sometimes externalities can deliver benefits to third parties, and these are called **positive externalities**. For example, if an eco-tourism business cleans up a polluted river in order to offer whitewater rafting expeditions, this will create a positive externality. All members of the public visiting the area can benefit from the cleaner water as a result. Another example is how the whole economy benefits from higher labour productivity as a result of increased completion rates for university students and for apprenticeships.

Negative externalities, on the other hand, have harmful effects on the economy and on society. Usually when we talk about negative externalities we are looking at the adverse spill-over effects that production and other economic activities have on the environment. A common form of externality is **pollution**, which occurs when the natural environment is degraded in some way. For example, a company may decide to reduce its freight costs by transporting its goods by road rather than by rail. The use of semi-trailer trucks may result in substantial damage to roads in that area and add to noise and air pollution. In turn, this may cause damage to cars because of pot holes, loose stones and increased risk of accidents; discomfort through noise levels of trucks; and respiratory problems from worsened air quality. In this situation, the company creates a negative externality, because society bears the cost of the damage to the roads, the noise and the air pollution. Environmental damage is one of the most important negative externalities of the operation of the free market.

Examples of negative externalities in Australia include:

- contribution to increased carbon dioxide and global warming caused by the burning of fossil fuels, such as from coal-fired power stations and motor vehicles
- the loss of biodiversity that occurs because of land clearing (for example, for agriculture, forestry products, or excavations made for mining operations)

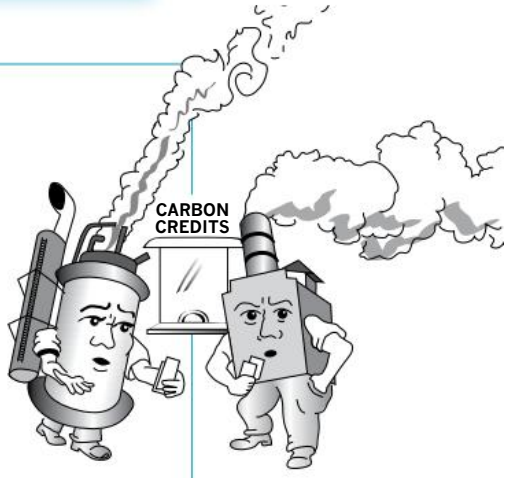
- soil erosion and increased soil salinity related to forestry and farming practices
- water pollution resulting from the discharge of chemicals and waste products into river systems related to mining and agricultural operations.

reviewquestions

1 List TWO negative externalities associated with the production or use of motor vehicles.

2 Explain how externalities arise in a market economy.

Climate change:
a negative externality



Climate change is recognised as one of the greatest long-term challenges facing the global economy. Scientists define climate change as the human activities that result in the emission of greenhouse gases such as carbon dioxide (CO_2) that lead to increases in global temperatures. Whenever fossil fuels such as coal, gas or oil are burned for electricity or transportation, they emit carbon dioxide, contributing to climate change. Other causes of climate change include deforestation and some agricultural practices and industrial processes.

According to the United Nations' Intergovernmental Panel on Climate Change, which brings together the world's leading climate scientists, average global temperatures will rise at least 1.5°C over the next 20 years. 1.5°C of global warming will lead to more intense and more regular heat waves, longer warm seasons, shorter cold seasons and increased natural disasters such as bushfires and floods. At 2°C of global warming, heat extremes will have serious large-scale impacts on agriculture and health. Negative externalities from global warming have become more visible in the past decade, with an acceleration of disastrous weather events across the world. For example, the insurance losses resulting from bushfires in the three years from 2018 to 2020 exceeded the losses in the three decades from 1981 to 2010.

Climate change is an example of a negative externality. While individuals and businesses pay the market price of energy production and other activities that produce carbon dioxide, this only reflects the private costs faced by companies in producing such energy. Individuals and businesses do not pay for the long-term cost of energy use – greenhouse gases and climate change. Because individuals do not feel the impact of their choices on climate change, they are less likely to make conscious choices to use more environmentally friendly sources of energy.

Government policies aim to ensure that externalities are reflected in the costs of specific goods and services, so that the price mechanism can reflect the true economic and social costs of production. Governments around the world have implemented policies to address climate change by intervening in the price mechanism to reflect the costs of carbon emissions.

The focus of government policies around the world is to achieve "net zero" carbon emissions by 2050 or earlier, alongside earlier targets for 2030. As part of the international Paris Agreement, the Australian Government originally committed to an emissions reduction target of 26–28 per cent on 2005 levels by 2030 before revising the target in 2022 to 43 per cent. Initiatives to achieve this target through the energy sector have proved controversial, and several policies have been announced but subsequently abandoned, including a carbon tax, a Clean Energy Target and a National Energy Guarantee. As the need for emissions reductions becomes more pressing in the 2020s, Australia is likely to see many more market interventions to address the externality of carbon emissions.

14.5 Market failure in the abuse of market power

Because of the costs involved in producing, distributing and marketing goods and services in some markets, only a minority of firms survive beyond their first few years of operation. Over time, industries often experience a process of consolidation in which fewer firms take a larger market share. This leads to imperfect competition – whether in the form of an oligopoly, monopoly or a monopolistically competitive structure. In this market situation, the market will produce a smaller quantity of goods at a higher price. For example, a monopolist will often restrict its production in order to charge a higher price and maximise its profits. Similarly, oligopolists may find that engaging in price competition is futile, since their competitors are likely to match any price cuts. Instead of reducing prices, they will compete with advertising, brand packaging and product differentiation – activities that hold little real benefit for consumers.

Firms in highly concentrated industries possess substantial market power, which makes it easier for them to exploit their customers. Some of the ways in which firms may abuse their market power include:

- **Monopolisation,** which occurs when a firm uses its dominant market position to eliminate existing competition, or prevent new firms from entering the market. For example, it might engage in temporary price cutting that is aimed at eliminating competition, rather than benefiting the consumer. The government has historically operated many monopolies in Australia in order to protect consumers from the abuse of monopoly power by private firms, such as Telstra before its privatisation.
- **Price discrimination,** which occurs when a firm sells the same type of good or service in different markets at different prices. Examples of price discrimination include supermarkets and restaurants charging higher prices in areas where tourists gather, "early-bird" pricing for event registration, and concession prices for movie tickets offered to students. In each of these examples, businesses attempt to charge different prices to different consumers according to their willingness and capacity to pay. Generally, a firm will attempt to charge higher prices to consumers that it believes have a higher willingness and ability to pay, but lower prices to consumers that it thinks are less willing and able to pay. The greater the degree of market power enjoyed by a business, the greater the ability for the firm to engage in this practice.
- **Exclusive dealing,** which occurs when a firm sets conditions for supply that exclude retailers from dealing with other competitors. Under the *Competition and Consumer Act 2010*, suppliers are prohibited from imposing on their customers an obligation not to purchase goods or services from other suppliers. This prohibition is enforced strictly by the Australian Competition and Consumer Commission (ACCC). The ACCC and the *Competition and Consumer Act* are discussed in further detail in chapter 15.
- **Collusion and market sharing,** which occur when firms get together and agree on a pricing and market-sharing arrangement (often known as a cartel) that reduces effective competition between them, and tends to inhibit the entry of new competition into the market. Cartels may attract criminal penalties under the *Competition and Consumer Act*.



Visit the website of the Australian Competition & Consumer Commission (ACCC) – the government agency whose role is to protect consumers from the abuse of market power by businesses – at **www.accc.gov.au**

Examine a recent activity of the ACCC, identifying the reasons for intervention, and the actions taken by the ACCC to address market failure.

review questions

1. Outline the impact of a firm's misuse of market power on consumers.
2. Propose TWO policies the government could use to reduce the abuse of market power by firms.

ACCC drops anchor on shipping cartel



One of the largest criminal fines ever imposed under Australia's *Competition and Consumer Act* was enforced in 2021 upon three international shipping companies that engaged in a cartel that made Australian vehicles more expensive by restricting competition on their freight to Australia.

Over more than a decade, the ACCC investigated a cartel involving several international shipping companies that transported vehicles to Australia on behalf of major automotive companies. The investigation revealed that these companies had agreed to allocate specific companies between themselves, across routes to Australia from Asia, Europe and the US, and not to compete for one another's customers. This increased freight rates, adding to the cost of cars, buses and trucks for Australian consumers.

In 2021, the last of three companies was convicted and fined for its cartel activity, bringing the total fines imposed on the cartel to $84 million. The ACCC noted that the large penalties reflected the seriousness of cartel offences, which can damage the competitiveness of the economy and result in increased prices for consumers.

14.6 Market instability: the business cycle

In examining market failure in this chapter, we have so far looked at specific problems in individual markets that operate without government intervention. The final example of market failure occurs at a much broader level, across the entire economy. This is the problem of the boom-bust behaviour of economic activity in the business cycle, shown in figure 14.1, which can create significant economic problems. The **business cycle** describes the tendency of economic growth rates in a market economy to fluctuate between boom periods of high economic growth and bust periods of harsh recession.

Business cycle refers to fluctuations in the level of economic growth due to either domestic or international factors.

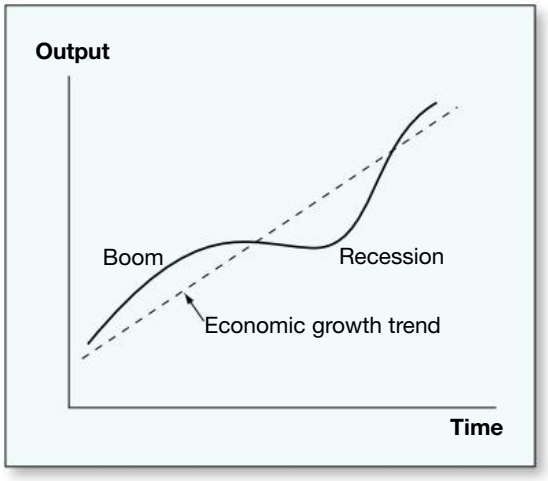


Figure 14.1 – The business cycle

Without any government intervention, a free-market economic system is likely to experience severe fluctuations in the level of economic activity, making it difficult to achieve the government's goal of sustaining economic growth. Market forces can bring on boom periods where excess demand for goods and services causes price increases (inflation),

which brings substantial economic problems. High inflation can distort business decision making, reduce consumers' purchasing power and force an increase in interest rates, which can then cause a recession – a severe downturn in the level of economic activity. Recessions increase unemployment, business failures and other economic and social problems.

In order to achieve a strong and stable level of economic growth, and at the same time minimise the harmful effects of inflation and unemployment, the government intervenes in our economy through what are known as **economic stabilisation** policies. These policies, also known as **macroeconomic policies**, include **fiscal policy** and **monetary policy**. These policies aim to help the economy maintain a sustainable rate of economic growth.

	Government **macroeconomic** policies	Government **microeconomic** policies
Influence	Entire economy	Individual firms and industries
Examples	Fiscal policy Monetary policy	Competition policy Trade policy

Figure 14.2 – Government policies

The aim of macroeconomic policy is to counterbalance the business cycle so as to stabilise the level of economic growth. During periods of excessive growth, where there is a risk of high inflation, the government tries to reduce economic activity by spending less, increasing taxation or raising interest rates. By slowing down a fast growth rate, the government aims to keep the economy growing for longer. On the other hand, if the economy is in recession, the government tries to stimulate growth with increased government spending, tax cuts and low interest rates. In this way, the government attempts to smooth fluctuations in the business cycle and promote long-term sustainable growth. Macroeconomic policy measures are therefore designed to have an impact on the economy as a whole.

The government also uses microeconomic reform policies, which are designed to improve work practices and productivity levels with structural adjustment of individual firms and industries. In the next two chapters we will examine how government policies of both types, shown in figure 14.2, operate in a market economy.

reviewquestions

1. Identify THREE economic problems associated with large fluctuations in the business cycle.
2. Distinguish between the roles of macroeconomic and microeconomic policies.
3. Explain how the government can use macroeconomic policy to stimulate the economy in a recession.

chapter summary

1 **Market failure** occurs when markets operating without government intervention produce outcomes that are inefficient, unfair or create instability. The government intervenes in the market to deal with the problems of market failure.

2 A major way in which governments deal with market failure is to provide **public goods**. These are goods that are desired by the community but will not be provided by business firms because consumers do not have to pay for these goods to receive their benefits.

3 Governments may encourage the production of **merit goods**, which are goods that will not be produced in sufficient quantity because of market imperfections. Merit goods include education and health care.

4 A **natural monopoly** may exist where it is only feasible for there to be one producer in certain markets. The government often operates or regulates these monopolies, in order to reduce the exploitation of market power.

5 A major reason for government intervention is to **redistribute income** to lower-income earners to ensure that they enjoy a reasonable standard of living.

6 **Externalities** are costs and benefits of production that are not reflected in the demand and supply forces of the market.

7 Without government intervention, firms can behave in a way that is harmful to the interests of consumers, such as by colluding to raise prices, charging excessive monopoly prices, engaging in exclusive dealing or price discrimination.

8 The government may reduce the abuse of market power through regulatory bodies such as the Australian Competition and Consumer Commission (ACCC).

9 The **business cycle** refers to the pattern of economic growth, which over time tends to fluctuate between periods of strong economic growth and recession.

10 The government can intervene in the business cycle by implementing economic stabilisation policies. These are called **macroeconomic policies**.

chapterreview

1 Define the economic meaning of *market failure*.

2 Distinguish between *public goods* and *merit goods*.

3 Explain why a market economy might fail to provide public goods without government intervention.

4 Define what is meant by a *natural monopoly*. Give some examples of natural monopolies in Australia.

5 Discuss the impact of government intervention on the distribution of income in the Australian economy.

6 Define *externalities*. Outline how the government might reduce negative externalities in the Australian economy.

7 Define each of the following types of business conduct:

a) monopolisation

b) price discrimination

c) exclusive dealing

d) collusion and market sharing.

8 Explain what is meant by the *business cycle*.

9 Examine why the fluctuations of the business cycle can have adverse effects on the economy.

10 Discuss how the government might smooth out fluctuations in the business cycle.

Extended response

Outline the limitations of the "free market". Discuss the ways that the government could intervene in the market to reduce these limitations. Assess whether the government has been successful in responding to these limitations.

The Role of Government in Australia

15

15.1 The structure of government

15.2 The public sector

15.3 The reallocation of resources

15.4 The redistribution of income

15.5 Stabilisation and sustainable growth

15.6 Public enterprises

15.7 Other roles in the economy

15.1 The structure of government

Governments intervene in the economy to improve on market outcomes, as discussed in the previous chapter. To understand the role of government in the market economy in Australia, we first need to understand how governments in Australia operate and what they do.

As figure 15.1 shows, Australia has a three-tiered structure of government:

- the **Commonwealth** (or Federal) Government, which has overall responsibility for the economy and has the most influence on economic performance
- **state** governments (plus the Australian mainland's two self-governing territories, the Australian Capital Territory and the Northern Territory), which play important roles in developing infrastructure, delivering government services (such as health and education) and fostering regional development
- **local** governments, whose role relates mainly to local planning, community facilities and roads.

Australia has had a federal system of government since it became a nation in 1901. Under the **Australian Constitution**, the central Commonwealth Government and the state governments are independent of each other, and have different roles, although they often work together. In addition, the state governments further delegate their powers to local governments, although their role is not mentioned in the Constitution.

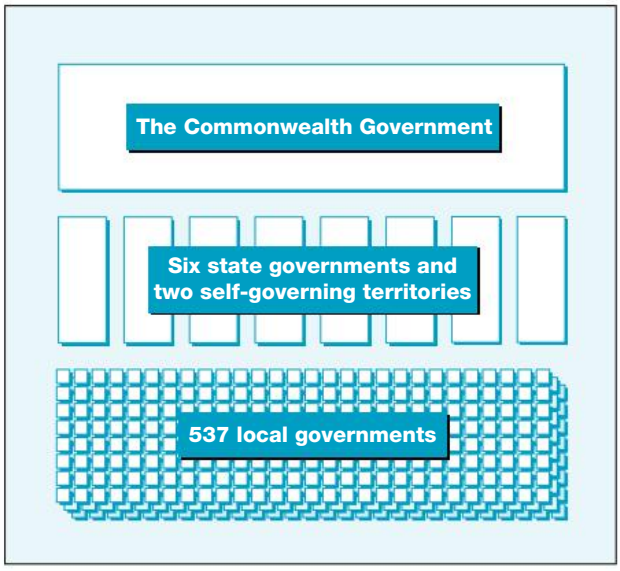
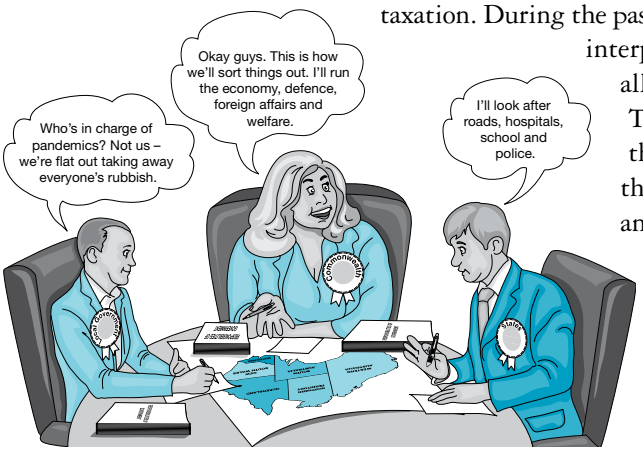


Figure 15.1 – The structure of government in Australia

The **Australian Constitution** is the document that provides the overall framework for Australia's system of democratic government and the relationship between the Commonwealth (or federal) and state governments.

The **Australian Constitution** sets out the law-making powers of the Commonwealth and state governments. It sets out the absolute limits on what governments are able to do. The Commonwealth Government is only able to act under one of what are described as constitutional "heads of power", such as the power to make laws relating to foreign affairs, defence and the currency. State governments hold all other powers that are not spelt out in the Constitution as belonging to the Commonwealth. The Commonwealth shares responsibility with the states for most economic matters, such as business regulation, taxation, health and education.

The power of the **Commonwealth Government** has gradually increased in most areas since Federation. This has reflected the evolution of Australia into a single national economy, with a national approach to economic issues such as business regulation and taxation. During the past century, the High Court has adopted an increasingly expansive interpretation of the scope of the Commonwealth's heads of power, allowing the Commonwealth to become increasingly powerful. There have been many complicated legal arguments about how the wording of the Constitution should be interpreted. Much of this debate has arisen from tensions between the Commonwealth and state governments.



Over time, states have handed more power over to the Commonwealth, but states play a very important part in government in Australia. When the Commonwealth Government wants to implement major economic changes, it often needs to secure the support of the states. Recent years have seen the Commonwealth and states engaging in extensive negotiations over energy policy, indigenous affairs, school funding and health service delivery. The main effect of constitutional constraints is that the Commonwealth Government is forced to negotiate with state and territory governments when they implement major economic reforms, and gaining support from six state governments can be difficult. The COVID-19 pandemic showed the importance of governments with different roles working together in a major crisis.

While states have a more limited role in national economic management, they have extensive responsibilities for the delivery of many government services. States operate the health system (although the Commonwealth has a major role in funding health care through the Medicare system), school education, and infrastructure such as roads, the transport system, electricity and water utilities, and regional planning. As a result, they often understand the specific needs of their cities and regions best.

The single largest source of revenue for state governments is the Goods and Services Tax, which is collected by the Commonwealth and then distributed to the states through a complex formula (the details of which are often contested). States rely on other direct grants from the Commonwealth for specific programmes (such as health) under arrangements that extend back to the Second World War, when the Commonwealth Government took over all income taxation power from the states. As a result, Australia has what economists describe as a "vertical fiscal imbalance", in which the Commonwealth has most taxation powers while the states still have many expenditure responsibilities. Apart from grants from the Commonwealth, the state governments rely on a patchwork of taxes such as payroll tax, stamp duty, licenses, and taxes on gambling and land ownership. In recent years, the NSW Government has sold or leased government assets to fund large investments in infrastructure – a program known as "asset recycling".

The major items of **expenditure** for the NSW Government are shown in figure 15.2.

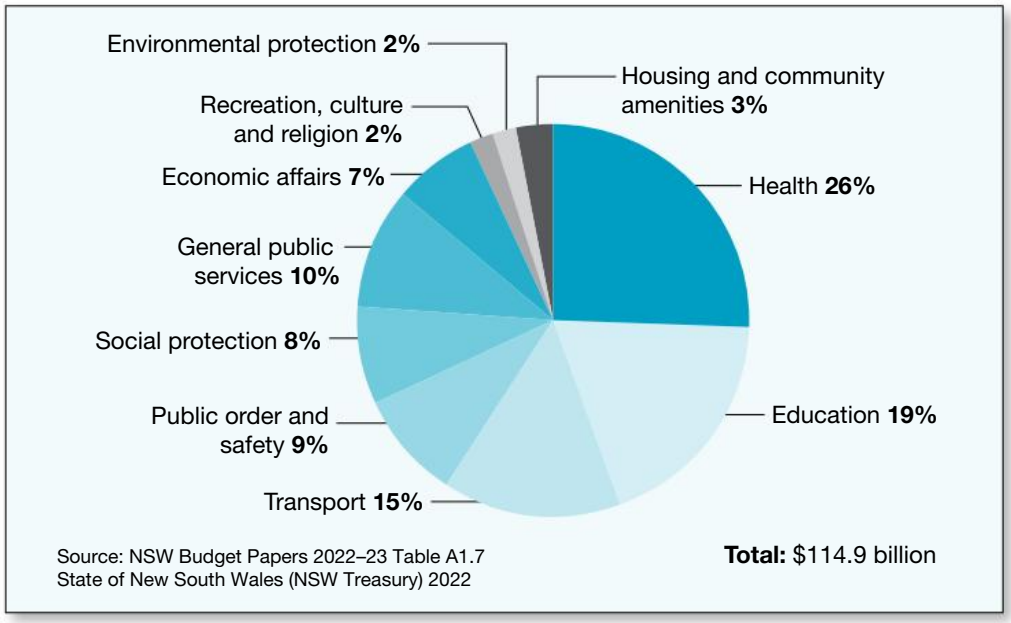


Figure 15.2 – NSW Government expenditure 2022–23

The Commonwealth is increasingly engaged in funding services that were traditionally the responsibility of state governments, such as early childhood education, school infrastructure, specific health services and road construction. The Commonwealth increased its involvement in many of these areas through the National Cabinet (formerly the Council of Australian Governments), which brings together the Commonwealth, state and territory governments. By providing more funding for these services, the Commonwealth is able to exercise more control over the policies implemented by the states. For instance, in the 2022–23 Budget the Commonwealth Government committed $1 billion for the Sydney to Newcastle rail upgrade.

Local governments are responsible for local planning and development decisions, providing some local services such as rubbish collection, road building and maintenance, and community facilities such as parks and libraries. Rates levied on local property owners are the main source of revenue for local governments, with around a quarter of funding coming from Commonwealth and state grants. Some money is also raised by fees, permits, and fines imposed by councils (for example, tree removal fees, outdoor cafe permits and parking fines).

reviewquestions

1. Outline the different responsibilities at the Commonwealth, state and local levels of government.
2. Discuss the different sources of revenue received by the Commonwealth, state and local levels of government.

15.2 The public sector

The **public sector** consists of Commonwealth, state and local governments, as well as government business enterprises such as Sydney Water, NBN Co and Australia Post. In this section we examine the size of the public sector in relation to the economy as a whole, and how this has changed over time. Two important indicators are public sector outlays (spending) as a percentage of GDP and public sector employment as a percentage of total employment.

Public sector refers to the parts of the economy that are owned or controlled by the government. It includes all tiers of the government as well as government business enterprises.

Taken as a percentage of GDP, **total public sector outlays** shows the proportion of total annual expenditure by all levels of government (Commonwealth, state and local – including public trading enterprises) compared with the expenditure for the economy as a whole. Figure 15.3 gives an indication of the change in government outlays as a percentage of GDP over the past half-century.

Year	Total public sector outlays (% GDP)
1949–50	19.9
1959–60	27.1
1969–70	30.4
1979–80	36.0
1989–90	36.0
1999–00	40.5
2009–10	43.5
2014–15	37.6
2015–16	38.3
2016–17	37.3
2017–18	36.9
2018–19	36.7
2019–20	41.1
2020–21	44.8
2021–22*	41.8
2022–23*	40.0

Note: changes in accounting conventions mean that pre-2010 data is not fully comparable.
* Estimate
Source: Budget 2022–2023 March, Budget Paper 3, Table C.7

Figure 15.3 – Public sector outlays

As shown in figure 15.3, total public sector outlays as a percentage of GDP increased in the second half of the twentieth century. Like other advanced economies, Australia's public sector grew significantly in the decades after the Second World War but then stabilised in the past two decades. Public sector outlays have averaged below 40 per cent of GDP during the past decade until the COVID-19 pandemic, when they soared to their highest level on record. Overall, the public sector in Australia is smaller than in many other industrialised countries, especially those in Europe. Public sector outlays fluctuate in response to economic conditions, but overall remained around the same level as they were two decades ago until the COVID-19 pandemic.

There have also been changes to the composition of government spending. Over time, governments have tended to spend less on infrastructure, while spending more on social welfare payments and community services such as health care. Transfer payments are the largest item, constituting around one-third of Commonwealth Government expenditure. These are funds that are transferred back to households as social welfare payments (such as pensions and family benefits), rather than being spent directly on goods and services.

Another measure of the overall size of the public sector is the **proportion of Australian employees who work in the public sector**. As figure 15.4 illustrates, employment in the public sector grew in line with public sector outlays, peaking at 25.5 per cent of the total number of workers in 1985. Employment levels in the public sector declined between 1985 and 2000, during the period of privatisation of most government businesses. Since 2000, public sector employment has stabilised at 16 per cent of the workforce. The reduction in the public sector workforce also reflects the practice of governments contracting out many of their activities to the private sector. As a result, many of the people who perform government services, such as road building, delivering job-search assistance and information technology services, are now doing these jobs as private sector contractors to the government and not as public sector employees.

Year	Public sector workers (% of total)
1965	19.6
1975	24.6
1980	24.4
1985	25.5
1990	22.0
1995	19.3
2000	16.3
2005	16.1
2010	16.8
2015	16.2
2016	16.1
2017	16.0
2018	15.8
2019	15.9
2020	16.5
2021	16.0

Sources: RBA Occ Paper No. 8; ABS *Employment and Earnings, Public Sector, Australia* (Cat. no. 6428.0), ABS *Labour Force, Australia* (Cat. no. 6202.0).

Figure 15.4 – Proportion of workers employed by the public sector

Although the proportion of Australian workers in the public sector has fallen in recent decades, the public sector's role remains far more important than it was in the first half of the last century, because of the factors discussed below.

Government's expanded role after the Second World War

In the era after the Second World War, governments in industrialised countries adopted a more active role in seeking to influence the economy's performance. This reflected the influence of the Keynesian school of economics, which was dominant between the 1940s and the 1970s. Keynesian theory argued that government spending could accelerate economic activity and help it to achieve full employment levels. However, as this school of thinking lost support, governments changed their policies. By the 1980s, governments were seeking to reduce their spending, to curb levels of taxation and borrowing from the

private sector and were seeking to reduce their spending because government spending was growing more quickly than revenue, leading to excessive borrowing from the private sector. During this time many government business enterprises were privatised.

The interventionist Keynesian model returned to prominence after two major economic shocks in recent years: the global financial crisis in 2008 and the COVID-19 pandemic in 2020. Governments worldwide, including in Australia, engaged more proactively in the economy through large short-term increases in government spending and borrowing. Governments also intervened directly in the economy, providing assistance to specific sectors, such as bailing out financial institutions during the financial crisis, and providing a temporary wage subsidy for millions of workers during the COVID-19 pandemic. In Australia's case, this rapid increase in government spending helped to avoid recession during 2008–09. Even with huge expenditures in 2020 and 2021, it was impossible to prevent COVID-19 from driving the economy into recession, but increased government spending help the economy recover quickly. Both of these events left Australia with persistent budget deficits and increased debt levels, although Australia's public debt remains below that of most other OECD economies.

Provision of government services

As the economy has grown and living standards have improved, public expectations of government have kept growing in relation to standards of health care, education and other government services. People tend to expect that governments will provide universally available community services including police, water and sewerage, roads, and recreational facilities. The public also expects to be able to interact with government agencies as simply and efficiently as in other parts of their lives, through individualised, online services. Governments are also expected to address the problems created by economic growth, including congestion, pollution and the depletion of natural resources.

The growth of social security

The development of welfare and social security programs was a major priority of Australia's first governments following the federation of Australia in 1901. Before the introduction of measures such as the age pension, widows' pensions, child support payments and unemployment benefits, many people had to rely on charity to survive. By the mid-twentieth century, Australian governments embraced the vision of creating a "welfare state", where comprehensive social security programs would support society's most needy people from childhood through to old age. The costs of these programs increased over time as life expectancy grew, the population aged and unemployment rates increased. By the 1980s, governments moved to more targeted social security programs by imposing means tests on benefits (so that wealthier people could not claim benefits). However, social security spending continues to grow, chiefly because of the rapid growth of Australia's aged population.

The size of the public sector stabilised at between 35 and 40 per cent of the economy since the 1980s until the COVID-19 recession. Many taxes have been reduced or abolished, and spending has been more constrained. Nevertheless, there are long-term pressures for increased spending on health and aged care, with an ageing population, and increased defence spending due to a changing security environment. In addition, sudden events such as financial crises and pandemics can require large-scale government responses.

reviewquestions

1 Identify TWO ways to measure the size of the public sector.

2 Account for trends in the size and composition of government spending in recent years.

15.3 The reallocation of resources

When the government reallocates resources, it changes the pattern of production in the economy. It directs resources towards the production of some goods and services that it considers desirable, and away from others that it considers less desirable. It also attempts to promote a more efficient use of scarce resources in all areas of production.

The government can affect the allocation of resources in two main ways:

- by influencing the way businesses and consumers behave in the market through taxation or spending measures
- by producing goods and services itself (for example, public goods).

In addition, the government's regulatory policies can influence resource allocation, such as by prohibiting the sale of certain goods (for example, fireworks, guns and cigarettes to people under 18).

Taxation

The main purpose of taxation is to raise revenue to allow for government spending, but taxes and charges on producers can also be used to influence the price of goods and services, and thus influence consumer demand and production. Because taxes add to costs, they can have the effect of diverting resources away from certain types of economic activity. Equally, a specially reduced rate of tax, or tax concessions, can attract resources towards a specific sector. Often, the influence of the tax system on resource allocation is indirect. By changing prices, tax policies may change the pattern of consumer demand, and indirectly change resource allocation.

Governments can use the tools of **direct** and **indirect taxation** to achieve their resource allocation goals:

- **Direct taxes** are those that are paid by the individuals or business firms on which they are levied – they cannot be passed on to someone else. Personal income tax is a direct tax, as it must be paid by the person on whom it is levied. Other direct taxes include company tax and capital gains tax.
- **Indirect taxes** are levied on individuals and business firms, but they can be passed on to someone else. An indirect tax is attached to a good or service, rather than to an individual or a company. A sales tax such as the Goods and Services Tax (GST) is an example of an indirect tax, as it is levied on the seller, but it is usually passed on to the consumer (in part or in full) in the form of a higher price.

Governments use indirect taxes and other charges on items such as tobacco and leaded petrol to divert resources away from the production of such goods. High prices on cigarettes are meant to deter people from taking up smoking and encourage smokers to quit. They also reflect the higher health care costs associated with smokers, who have a much higher likelihood of several diseases. Similarly, governments increased the price of petrol that contained lead (required for older motor vehicles) in the 1980s to encourage people to shift to more modern cars that use unleaded petrol, which has less harmful environmental consequences (leaded petrol is now banned altogether). The use of variable road pricing (charging higher road tolls during peak travel hours) is another example of using revenue collection to influence individual behaviour and reduce traffic congestion.

Encouraging private health insurance



In the late 1990s, the federal government introduced both direct and indirect taxation measures to boost Australia's declining rate of private health insurance. The purpose of this policy was to reduce pressure on the public hospital system by encouraging people to use the private health system. The cost of the private health insurance grew into a major expense over time, prompting the introduction of means testing in the early 2010s, so that higher-income earners receive a lower subsidy (or none at all).

Direct tax surcharge

Higher-income earners who do not take out private health insurance pay a surcharge on their income tax (called the Medicare Levy Surcharge). There is a 1 per cent surcharge for singles earning over $90,000, rising to 1.25 per cent for those earning above $105,000 and 1.5 per cent for those earning above $140,000. The income tax thresholds for families are twice the income level for singles.

Indirect tax rebate

Under previous arrangements, anyone subscribing to private health insurance had been eligible for a 30 per cent government tax rebate (called the Private Health Insurance rebate). In 2013, the Commonwealth Government replaced the flat 30 per cent rebate with a new income-tested system, and continues to reduce these rebates for higher-income earners over time. Singles (under 65) earning under $90,000 are eligible for a 24.6 per cent private health insurance rebate, while those earning between $90,001 and $105,000 receive a 16.4 per cent rebate, and those earning between $105,001 and $140,000 receive an 8.2 per cent rebate. Singles earning above $140,000 do not receive any private health insurance rebate.

Spending

Government spending can be used to directly reallocate resources to a particular sector of the economy, or to influence the decisions of consumers and businesses. Either way, the government is attempting to redress a failure of the market to provide an allocation of resources that fits with the community's broader needs and wants. For example, the government may provide:

- **funding** for the arts, which might otherwise be unprofitable
- **grants** for start-up businesses or new growth industries that, without a proven track record, might lack access to finance
- **subsidies** for telecommunications companies such as Telstra to provide broadband services in regional areas where those services would not be profitable
- **cash payments** to private employment search businesses, which find jobs for unemployed people.

These spending items, by themselves, may not be sufficient to substantially change the allocation of resources in the economy. They may, however, be able to affect the decisions of private businesses and consumers, who make up the majority of the Australian economy. Subsidies for venture capital investment, for example, might encourage the private sector to invest in areas with greater risk, such as developing new medicines or new technologies. Likewise, government spending may encourage consumers to buy certain goods and services by reducing an industry's costs and, therefore, reducing the prices charged to consumers.

Government provision of goods and services

Governments sometimes involve themselves directly in the production process to achieve a better allocation of resources. Governments have generally played an important role in Australia's economy, with governments providing a substantial amount of basic infrastructure such as the roads, railways, public transport systems, electricity distribution and postal and telecommunications networks.

In the mid-twentieth century, it was widely thought that governments could operate enterprises better than the private sector because they would have the interests of the wider public in mind rather than the aim of making profits. For example, the Commonwealth Bank was established in the 1930s following the Depression era, when it was felt that the self-interested behaviour of banks had worsened the Depression for many individuals. In the late 1940s, the Commonwealth Government even attempted to nationalise Australia's entire banking industry.

The National Broadband Network

Australia's National Broadband Network (NBN) is by far the most significant recent example of governments expanding into the provision of goods and services. The NBN was established in order to upgrade Australia's communications infrastructure, drive the uptake of new technologies and deliver near-universal coverage of high-speed broadband throughout Australia. By establishing a government business enterprise (NBN Co Ltd) to build the network infrastructure in 2009, Australia went against the trend towards privatisation. The Rudd Government argued that broadband infrastructure is an example of a natural monopoly like water or electricity infrastructure, as large up-front capital costs make it efficient to have only one network. It argued that without government provision, many Australians outside the major cities would not have access to high-speed broadband and would be disadvantaged as a result.

Like many areas of government intervention in the economy, the costs and benefits of the NBN were contested. The Rudd Government argued the long-term economic and social benefits of NBN would be very large – reducing communication costs, enabling new business applications, and providing better educational services and health care. However, after a review released by the Abbott Government in 2014, the NBN plan was changed to create a less comprehensive network at a lower cost, by abandoning plans to fully replace the old copper wire telecommunications network.

Critics of the NBN have argued that governments should not support specific technologies that might become outdated in the future, and that a government-owned enterprise displaces possible private sector investment in broadband infrastructure. NBN supporters argued that parts of regional Australia would never get fast broadband under a purely commercial model, and that while NBN Co operates the network, private businesses compete to sell retail services to broadband users (similar to the electricity market, where companies selling electricity to retail customers are separate from the companies that operate the electricity distribution network).

The performance of the NBN and the role of government have continued to attract controversy. The Prime Minister at that time (Malcolm Turnbull) claimed that "setting up a new government company [to build the NBN] was a big mistake … it was hugely expensive. And there are many billions of dollars wasted." Others have argued that by scaling back the more ambitious plan for the NBN, Australia was left with a slower and less reliable network than the original NBN would have provided (Australian broadband speeds were ranked 67th globally in 2022). Even so, there were more than 8.5 million active connections by 2022, and the network has resulted in faster broadband services in metropolitan and regional areas.

Through direct involvement in the market, governments were considered better able to provide important goods and services to a larger number of people at a lower price. In some cases, these businesses were monopolies; government ownership ensured that monopoly ownership did not lead to overpricing and exploiting consumers. However, in the late twentieth century, attitudes shifted and it was widely felt that governments were inefficient in operating their enterprises, and that this inefficiency increased costs for consumers. This is because government enterprises do not have strong incentives to make a profit. As a result, governments have largely sold their businesses to the private sector (known as **privatisation**) and reduced their direct involvement in the provision of goods and services. There are some exceptions to this trend, however, such as the expansion of NSW's large hydroelectric scheme, known as the Snowy Hydro 2.0. This project, costing over $5 billion, is to be built by the government-owned Snowy Hydro Ltd. Another exception seen in several European economies in 2022 was the nationalisation (governments taking ownership of private businesses) of energy companies which faced collapse after enormous increases in gas prices, following Russia's invasion of Ukraine. In this instance, government enterprises have been able to provide continuity of service and supply when private sector companies have failed.

Privatisation occurs when the government sells public trading enterprises to the private sector.

reviewquestions

1. State TWO reasons why the government might reallocate resources in the economy.
2. Outline the different methods available to the government to influence the allocation of resources in the economy.
3. Discuss the costs and benefits of the provision of goods and services by the government.

15.4 The redistribution of income

Governments intervene in the market economy to reduce the level of social inequality. With the reduction in government intervention in the economy during the globalisation era that began in the 1980s, Australia experienced an increase in income inequality, sometimes raising concerns that rising inequality could undermine the egalitarian character of Australian society – the idea that all Australians are equal and should have a "fair go". It is a generally accepted view that governments should act to create a more **equitable** distribution of income. The main way in which the government redistributes income, as shown in figure 15.5, is through the **taxation system** and **social welfare payments**.

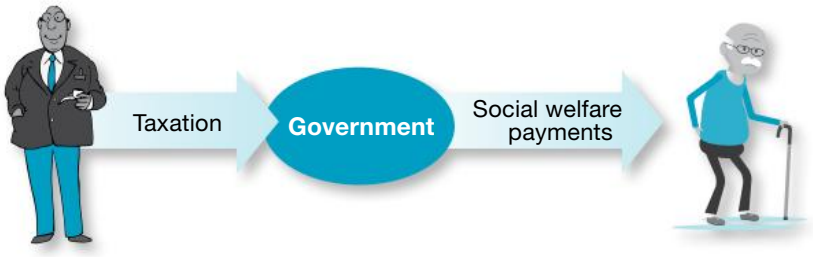


Figure 15.5 – The redistribution of income

Economists divide income earners into separate "quintiles", groups that each comprise 20 per cent of the population. Figure 15.6 shows that households in the lowest two quintiles of income distribution have their incomes increased significantly by the combination of benefits and low taxation, compared with the other quintiles.

	Average annual income ($)					
Disposable Income	**Lowest quintile ($)**	**Second quintile ($)**	**Third quintile ($)**	**Fourth quintile ($)**	**Highest quintile ($)**	**All households ($)**
Before tax and social assistance benefits	26,336	60,773	109,076	160,901	329,884	135,839
After tax and before social assistance benefits	24,731	54,331	94,788	133,674	259,033	112,077
After tax and social assistance benefits	49,580	79,004	108,506	140,364	262,443	126,906
Source: ABS *Household Income and Income Distribution*, Table 11.9 (Cat. no. 6523.0).						

Figure 15.6 – The distribution of household income in Australia

By taxing the wealthiest groups more heavily and redistributing income through social welfare payments (or benefits), inequality is dramatically reduced. Before tax and benefits, households in the highest quintile have a disposable income equal to more than 12 times that of the lowest quintile. This falls to five times that of the lowest quintile after government intervention. Figure 15.6 also shows that:

- As income rises, so too does the level of taxation (shown in the difference between before tax and after tax disposable income).
- All quintiles receive some benefits, but the lowest two quintiles receive much more.
- Income inequality (shown in the bottom row) is reduced through government intervention (in the form of taxes and benefits).

Taxation

Tax plays an important role in distributing income. Governments use taxation as a tool to redistribute income by taxing individuals at different rates. To understand this, consider the following concepts:

- **Tax base**: this is simply the items that are taxed. There are three main bases for the imposition of taxes – income, wealth and consumption. In Australia, income forms the main tax base.
- **Average rate of tax (ART)**: the proportion of *total* income earned that is paid in the form of tax.
- **Marginal rate of tax (MRT)**: the proportion of any *increase* in income that must be paid as tax. Therefore, it represents how many cents in every *extra* dollar earned that must be paid to the government.

How the average rate of tax changes as an individual's income increases indicates whether the tax is a:

- **Progressive tax**: Under a progressive tax, higher-income earners would pay a greater proportion of their income as tax than lower-income earners (that is, ART rises as an individual's income increases). Personal income tax in Australia is a progressive tax.
- **Regressive tax**: Under a regressive tax, higher-income earners would pay a smaller proportion of their income as tax than lower-income earners (that is, ART falls as an individual's income increases). The Goods and Services Tax (GST) is a regressive tax.

- **Proportional tax**: Under a proportional tax, all income earners pay the same proportion of their income as tax (that is, ART remains constant as an individual's income increases). Company tax in Australia is a proportional tax (with the exception of a slightly reduced rate for businesses with low annual turnovers).

Australia's progressive personal income taxation system – known as Pay-As-You-Go (PAYG) – is the main instrument of taxation that is used to redistribute income. Under PAYG, tax payments are regularly deducted from employees' wages. The PAYG system also requires almost immediate tax payments from self-employed persons and individuals who derive a large proportion of their income from investment. Under PAYG, tax payments are regularly deducted from employees' wages, and includes tax paid in advance by self-employed persons and individuals who derive a significant proportion of their income from investment. Figure 15.7 shows the income tax scales that apply for the 2022–23 financial year.

Taxable income ($)	Tax rate (%)
0–18,200	0
18,201–45,000	19
45,001–120,000	32.5
120,001–180,000	37
180,001 +	45

Source: Australian Taxation Office

Figure 15.7 – Personal income tax scales in 2022–23

Figure 15.7 shows that the **tax-free threshold** (the income level below which no income tax is paid) is $18,200. Anyone who earns less than $18,200 during the current financial year pays no tax at all. Those who earn more than the threshold do not pay any income tax on the first $18,200 earned.

The lowest marginal rate of tax is 19 per cent and applies to individuals who earned between $18,201 and $45,000 for the year. This means that they pay no tax on the first $18,200, and 19 cents on every dollar earned above that amount, up to $45,000.

A person earning **$35,000** per year has a marginal tax rate of 19 per cent from figure 15.8. The total tax payable by a person earning $35,000 would be calculated as follows:

Tax payable on the first $18,200 = $0

Tax payable on the next $16,800 = ($35,000 – $18,200) × 0.19

= $3192

Total tax payable = $3192

The average rate of tax for this individual is calculated as:

$$\frac{\text{Tax payable}}{\text{Total income}} \times \frac{100}{1}$$

$$= \frac{\$3192}{\$35,000} \times \frac{100}{1}$$

= 9.1%

Therefore, for someone on an annual income of $35,000, the MRT = 19 per cent and the ART = 9 per cent.



The next tax bracket covers individuals earning between $45,001 and $120,000. These people pay nothing on the first $18,200, 19 cents in the dollar on income between $18,201 and $45,000 and 32.5 cents in the dollar on income between $45,001 and $120,000.

A person earning **$70,000** per year has a marginal tax rate of 32.5 per cent. The total tax payable by a person on an annual income of $70,000 would be calculated as follows:

Tax payable on the first $18,200 = $0

Tax payable on the next $26,800 = ($45,000 – $18,200) × 0.19

= $5092

Tax payable on the next $25,000 = ($70,000 – $45,000) × 0.325

= $8125

Total tax payable = $13,217

The average rate of tax for this individual is calculated as:

$$\frac{\text{Tax payable}}{\text{Total income}} \times \frac{100}{1}$$

$$= \frac{\$12,592}{\$70,000} \times \frac{100}{1}$$

= 18.9%

Therefore, for someone on an annual income of $70,000, the MRT = 32.5 per cent and the ART = 18 per cent.



The same principles are applied when calculating tax payable in the subsequent income brackets – up to and including the top bracket (persons earning $180,001 and above) where the marginal tax rate is 45 per cent. The above examples demonstrate the progressive nature of the personal income tax system. The person on a higher income (regardless of the source of that income) pays a higher marginal and average rate of tax compared to a lower-income earner. A series of legislated tax cuts in future years are set to change these thresholds and rates, making the income tax system less progressive. Changes to tax policy introduced by the Morrison Government in 2019 legislated three changes to the tax system from July 2024: a reduction in the 32.5 per cent tax rate to 30 per cent; the abolition of the 37 per cent rate; and the $180,000 threshold being changed to $200,000.

Australia's **Goods and Services Tax** (GST) is the most important example of a regressive tax. The GST is regressive because it is charged as a percentage of the price of the good or service sold, irrespective of a person's income. Even though the GST applies at a flat rate of 10 per cent, if calculated as a percentage of an individual's income, the percentage of income paid in tax will fall as income rises. For example, an airline ticket might be priced at $200. After the introduction of the GST, the ticket now sells for $220, meaning that $20 is paid in GST by whoever buys the ticket. For someone earning $400 a week, the $20 paid in GST represents 5 per cent of their weekly income. This is much larger than the burden on someone earning $2000 a week – because $20 represents only 1 per cent of their weekly income. Even though both consumers pay the same amount of tax, the average rate of tax is much higher for the lower-income earner. This makes the GST a regressive tax.

Social welfare payments

The Commonwealth Government redistributes its taxation revenue to lower-income earners via **social welfare payments,** also known as income support payments. These payments are the other major policy instrument for reducing income inequality in Australia. Social welfare payments account for around one-third of government expenditure each year, and therefore considerably impact upon the distribution of income in the economy.

Payments are often **means tested**, which means that people on high incomes (or those with a large amount of assets) may be ineligible to receive specific benefits, highlighting the fact that social welfare payments are designed to reduce income inequality. Means-tested payments include unemployment benefits, family benefits and various pensions (such as for aged persons, people with disabilities and single parents).

The largest single area of social welfare payments is for the age pension. Most Australians rely on the age pension for financial security in their retirement, and this will continue to be the case in coming decades even though Australia has had a system of compulsory superannuation for the past three decades. Australians now enjoy close to the longest life expectancy in the world, and as a result it is projected that the proportion of Australians over the age of 65 will double between 2020 and 2061, according to the 2021 Intergenerational Report. The need to prepare for the costs of population ageing – in social welfare, health care, housing and other areas – will be a major policy challenge for governments in the coming years.

reviewquestions

1. Calculate the marginal tax rate for a person earning $100,000. Calculate this person's average rate of tax.
2. Imagine that the government introduces a new "Nostril Tax" to raise revenue. Everyone has to pay $500 per year, regardless of their income level, whether they breathe through their nose or mouth and no matter how many breaths they take. Identify what type of tax this is (progressive, proportional or regressive) and explain your answer.

15.5 Stabilisation and sustainable growth

One of the market economy's major problems is that the rate of economic growth changes from year to year, often following an economic cycle of boom and bust. Governments can play an important role in stabilising the economy and sustaining economic growth. In the long run, this will result in higher average levels of economic growth and improved living standards. Figures 15.8 and 15.9 show the impact of stabilisation policies on economic activity – reducing fluctuations in the business cycle and raising the longer-term rate of economic growth. Policies designed to smooth fluctuations in the business cycle are called **macroeconomic policies**.

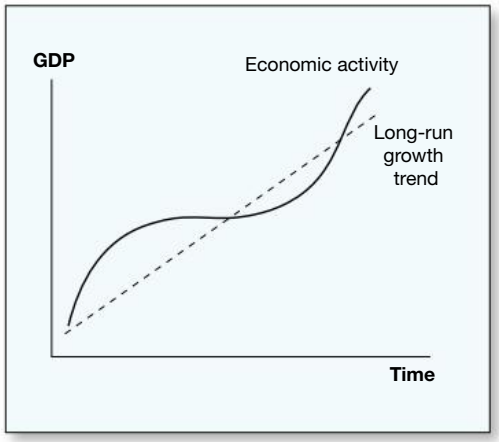


Figure 15.8 – The business cycle without stabilisation policies

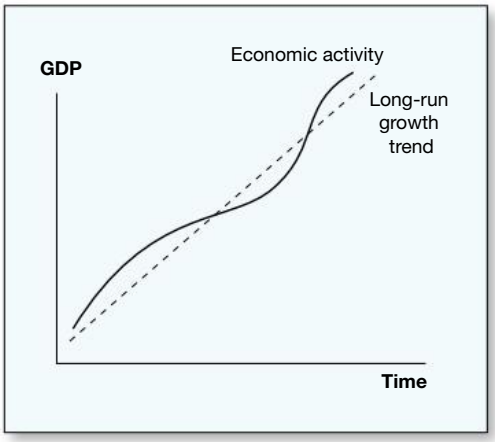


Figure 15.9 – The business cycle with stabilisation policies

There are two types of macroeconomic policies. **Monetary policy** tends to operate as the main stabilisation policy. Higher interest rates can curb excessive growth, while low interest rates tend to encourage spending and business investment, in turn lifting the growth rate. **Fiscal policy** also plays a very important role through the direct effect of the government's overall level of spending, taxing and borrowing in a year.

Monetary policy

As discussed in chapter 13, monetary policy involves action by the Reserve Bank of Australia, on behalf of the government, designed to influence the level of interest rates and the supply of money. By influencing these variables, the government is also able to influence the overall level of economic activity, inflation and unemployment.

The main instrument of monetary policy is the use of domestic market operations (DMOs), which involves the buying and selling of government securities by the Reserve Bank in order to affect the cash rate in the short-term money market and influence the level of interest rates in the economy. As the implementation of monetary policy has already been discussed, we will confine our discussion here to the impact that a tightening or loosening of monetary policy might be expected to have on the economy.

- **Tight monetary policy**: If the government wished to slow down the level of economic activity, it could do so by tightening monetary policy and putting upward pressure on interest rates. High interest rates reduce demand for money and dampen consumer and investment spending, resulting in a lower level of economic activity. This drop in aggregate demand would reduce inflationary pressures, but can lead to a rise in cyclical unemployment.
- **Loose monetary policy**: If the government wanted to increase the level of economic activity, it could do so by loosening monetary policy by putting downward pressure on interest rates. Lower interest rates would increase the demand for money and boost consumer and investment spending, resulting in a higher level of economic activity.

This rise in aggregate demand would reduce cyclical unemployment, but it might also lead to a rise in inflation.

Monetary policy can be either tightened or loosened depending on whether the government wishes to dampen or boost the level of economic activity. The effect of a change in monetary policy on the level of economic activity is not felt immediately – it can take around 6 to 18 months for its full effect to be felt in the economy.

Fiscal policy

Fiscal policy plays an important role in influencing economic growth and unemployment, especially when the economy faces a downturn (as took place with the COVID-19 pandemic in 2020 and 2021). The role of fiscal policy in influencing economic activity is examined in more detail in chapter 16.

reviewquestions

1. Outline the role of monetary policy in the Australian economy.
2. Explain how an increase in interest rates can reduce inflationary pressures in the economy.
3. Imagine that it is 2025 and you are an adviser to the Reserve Bank Governor. You have been asked to give your urgent advice on whether interest rates should be increased, decreased or left the same. Economic growth is currently low at 1 per cent, inflation is 2 per cent and falling, the Reserve Bank cash rate is low at 3 per cent and economic growth in China and the world economy remains low. Write a note of up to one page to the governor giving your advice.

15.6 Public enterprises

Public enterprises have been an important part of the role of governments throughout Australian history. However, as we saw in section 15.3, this role has changed in recent years. There has been a clear shift towards minimising the role of government in the economy, and the government's direct role in production has been substantially cut back.

Government business enterprises (GBEs) are businesses owned and managed by a government at either the Commonwealth or state level.

Many **government business enterprises (GBEs)**, which are also known as public trading enterprises (PTEs), have been sold off to the private sector through a process known as **privatisation**. Some of the major government businesses that have been privatised are Medibank Private, the Commonwealth Bank, Qantas, Federal Airports, and Telstra (by the Commonwealth Government) and the GIO, the TAB and State Bank of NSW (by the NSW State Government). In these cases, it was felt that the companies would be run more efficiently as private rather than government business enterprises.

Corporatisation occurs when the government encourages public trading enterprises to operate independently from the government as if they are private businesses in order to improve efficiency and profitability.

Most of those government-owned enterprises that have not been privatised, such as Australia Post, have undergone a process of **corporatisation**, whereby public enterprises act as private business enterprises, with independent managers that are accountable for performance and limited government involvement in business operations.

The main remaining government business enterprises include:

- Australia Post
- Australian Rail Track Corporation
- state rail, bus and ferry authorities (although these have been partially privatised in Victoria and NSW)
- state electricity authorities (although these have been privatised in some states)

- utilities such as water (and gas in some areas)
- research and development organisations such as the CSIRO
- educational institutions (though universities are increasingly operated like business enterprises).

As discussed earlier in this chapter, the National Broadband Network is an unusual example of a relatively newly established, large-sized government business enterprise.

Reforms to GBEs over the past two decades have seen significant improvements in both prices and productivity in a number of industries. Increased levels of **competition** due to the opening up of markets (such as the electricity and telecommunications industries) have seen prices fall significantly. The same is true of areas where government ownership has been reduced or eliminated. The rail freight industry has seen charges fall by almost 50 per cent, and Australia has seen call charges fall by more than a third in certain areas of the telecommunications industry. Reforms to GBEs have not always reduced prices, however; prices in the water supply, gas and urban transport sectors have risen in recent years.

Competition is the pressure on business firms in a market economy to lower prices or improve the quality of output to increase their sales of goods and services to consumers.

reviewquestions

1 Visit the website of one of the following government business enterprises. Using information from the website, outline the key functions of the GBE and analyse its performance.
   - Australia Post at www.auspost.com.au
   - NBN Co at www.nbnco.com.au
   - Sydney Water at www.sydneywater.com.au

2 Distinguish between privatisation and corporatisation.

3 Discuss the arguments for and against the privatisation of Australia Post.

15.7 Other roles in the economy

In addition to those already mentioned, governments have other, smaller functions in the economy that aim to make markets produce better outcomes in the longer term. These include ensuring a workable level of competition in the economy, protecting consumers from unfair business conduct and protecting the natural environment.



For more information on the activities of the ACCC, visit its website: **www.accc.gov.au**

Competition policy

One of the major aims of government policy relating to business firms is to ensure that markets operate efficiently. Governments aim to promote **workable competition** in Australian industry – that is, the maximum level of competition compatible with the market structures and specific conditions of an industry. Government policies assume that competition will produce a more efficient use of resources, lower production costs, lead to product innovation and lower prices for consumers.

However, the goal of increasing competition must be balanced against the goal of achieving economies of scale. Sometimes it may be necessary to have very few firms in an industry. Those firms can produce on a larger scale and achieve the lowest possible long-run average costs of production.

The appropriateness of certain market structures depends on the specific features of an industry. For example, in the motor vehicle industry, very large output is needed in order to achieve the economies of scale necessary to compete in a fiercely competitive world market.

Governments therefore encouraged greater concentration in this sector in order to help Australia's motor vehicle industry survive the pressure of overseas competition. However, these efforts were not successful and motor vehicle production in Australia ceased in 2017.

Workable competition policies attempt to achieve a situation where markets are **contestable**. This means that entry barriers to industries should be kept to a minimum by eliminating business practices that restrict potential competition. The *Competition and Consumer Act 2010* sets out a code of behaviour for firms, which outlaws certain practices that would tend to work against the idea of workable competition. The Act is administered by the **Australian Competition and Consumer Commission (ACCC)**, which monitors competition policy and upholds consumer protection legislation.

Australian Competition and Consumer Commission (ACCC) is Australia's competition watchdog, which ensures that businesses do not engage in anti-competitive behaviour.

Consumer protection

Most of the responsibility for **consumer protection** now lies with the Commonwealth Government. The most important means by which consumer interests are protected is through the *Competition and Consumer Act* and the ACCC. The aim of consumer protection legislation is to ensure fair business conduct by prohibiting practices that restrict competition and imposing penalties on firms that breach these guidelines. Some of the conduct that is prohibited includes price fixing between competitors, misleading advertising, price discrimination and mergers that will substantially reduce competition in a market.

In 2011 most of Australia's consumer protection laws were consolidated into a national system called the *Australian Consumer Law*. This replaced the *Trade Practices Act* that had been in effect since 1974, as well as state-based Fair Trading Acts. In addition to consolidating these older laws, the new legislation contains several new provisions that strengthen warranties for consumers, provide additional product safety regulations and give consumers protection from unfair contract terms.

The Commonwealth Government also exercises some influence over the pricing policies of large firms through the ACCC, although it does not directly control the specific level of prices in an industry. The ACCC has several roles:

- monitoring prices and conducting inquiries into pricing structures
- recommending changes to industries
- giving a firm or industry negative publicity where it finds there is overcharging.

The ACCC has largely adopted a "hands-off" attitude towards industry regulation, progressively removing industries from its prices monitoring system unless there is evidence that the industry lacks an adequate level of competition. In general, most consumer protection measures occur through a "co-regulatory" mix of industry codes (enforced by industries themselves) and laws. In some cases, such as financial services, consumers have stronger protections because of the significant risks to consumers of losing large amounts of money if their finances are not protected. For example, following revelations of misconduct during the Financial Services Royal Commission, a new obligation on mortgage brokers was introduced in 2020, requiring them to act in the best interest of borrowers in relation to home loans (rather than putting their own commercial interests ahead of borrowers when advising them on mortgage loans).

Environmental protection

One of the most complex aspects of government intervention in the economy is how it deals with the impact of economic activity on the environment to ensure **environmental sustainability**. Environmental impacts have become a more significant issue for governments in recent decades, with increasing awareness of climate change and the long-term environmental impacts of economic development in industries such as mining, energy, forestry and construction. The environmental debate has also shifted towards the wider issues of land management in Australia resulting from farming activities – in particular, water shortages, soil erosion and rising salinity levels.

There are two underlying issues in the environmental debate. The first concerns the **use of renewable and non-renewable resources**. Both industrialised and developing countries are rapidly depleting the world's stocks of non-renewable resources (including non-renewable energy sources such as oil and coal, and other non-renewable resources such as the rare earth metals used in electric vehicles and smartphones). Concerns about the depletion of non-renewable energy sources such as fossil fuel have in more recent years been overtaken by concerns about the impact of using non-renewable energy sources on climate change. It is mainly out of concern for the climate, rather than concerns about the exhaustion of non-renewable resources, that governments have implemented policies to encourage renewable energy. The Government has an emission reduction target of 43 per cent by 2030 and achieving "net zero" emissions by 2050. As part of this plan, it is expected that Australia will have 82 per cent of its electricity produced from renewable sources by 2030. This target will be supported by the Rewiring the Nation Plan, which will improve the capability of the power grid to distribute renewable energy. In addition, the Government has a number of smaller policies to encourage cleaner energy such as incentives to increase the take up of electric vehicles.

Renewable resources are inputs into the production process that reproduce themselves, ensuring that present consumption of these resources does not necessarily reduce the ability of future generations to consume them (e.g. timber and fish).

Non-renewable resources are inputs to production where the stock of the resource is permanently depleted in the process of production and consumption (e.g. petroleum and coal).

The second major environmental policy concern is the extent to which the price mechanism does not reflect **externalities** involved in production – that is, the external costs and benefits of production that are not reflected on a firm's balance sheet. Externalities (previously discussed in section 8.5) often involve air and water pollution. The use of energy resources such as coal and oil leads to huge emissions of carbon dioxide, which is a gas that causes climate change. Climate change is now regarded as the greatest environmental threat in the world, with potentially devastating consequences for future generations. In addition, pollution through industrial output, toxic waste, chemical spills and untreated sewage threatens one of the most valuable resources of all – water. Both atmospheric and water pollution are extremely serious issues because their consequences cannot be contained – the whole world will experience the impact of the deterioration of the global environment.

Australia's response to climate change has been at the centre of economic debate during recent years. In 2012, the Labor Government introduced a tax on carbon emissions of $23 per tonne for the 500 Australian companies who emitted the largest amount of carbon. This carbon emissions tax was regarded as a "market-based mechanism" in that it created a price incentive for businesses to change their production processes and business operations. This tax became unpopular, was repealed by the Abbott Government in 2014, and was replaced by direct government subsidies to reduce carbon emissions.



For more information on current government policies to improve the natural environment, visit the website of the Department of Agriculture, Water and the Environment:
www.environment.gov.au

When the Albanese Labor Government was elected in 2022, it promised to move more quickly in reducing carbon emissions. It replaced the existing emission reduction target (26 to 28 per cent on 2005 levels by 2030) with a commitment to a 43 per cent reduction by 2030. A number of policies to reduce emissions were proposed, including the Safeguard Mechanism. Under this mechanism, the 215 largest polluters would be allocated a "baseline" level of emissions permits. If they emit more than permitted, they must purchase permits in the market. Over time, the baseline level of emissions would be reduced to ensure Australia can meet its emissions reduction targets.

Australia's management of its water systems has also been hotly debated during the past decade. Extended periods of drought have intensified debate over how to balance the needs of household and industrial water users across different regions, while also minimising environmental harm. In 2007, concerns around low water levels in the Murray-Darling Basin led the Commonwealth Government to create a national water management plan. In 2014, an updated Water Recovery Strategy plan was released, proposing overall cuts in water allocations from the Murray-Darling river system of 2750 billion litres. However, recent reviews found mixed results on the effectiveness of these reforms. An investigation on the ABC program *Four Corners* in 2017 also alleged widespread water theft by irrigators in northern New South Wales, involving tampering with water meters. The ongoing debate over the Murray-Darling river system has highlighted the difficulties involved in managing scarce environmental resources in Australia.

reviewquestions

1 Explain what is meant by *workable competition* and outline how the Australian Competition and Consumer Commission promotes workable competition in the economy.

2 Discuss options available to the government to influence the impact of economic activity on the environment.

chapter summary

1. The **Australian Constitution** sets out the law-making powers of the Commonwealth and state governments.
2. There are three tiers of government in Australia: Commonwealth (federal), state and local governments.
3. Throughout most of the twentieth century, the public sector's role in the economy increased as it met growing demand for government intervention.
4. The **public sector** normally constitutes around 40 per cent of the Australian economy, but only around 16 per cent of employment. The size of the public sector fluctuates in response to economic conditions.
5. The government **reallocates resources** through its mix of taxation and spending policies, which can be targeted to achieve specific goals.
6. The government **redistributes income** through a range of taxation measures and social welfare payments to people without adequate incomes.
7. A tax can be either progressive, proportional or regressive, depending on how the average rate of tax changes as an individual's income increases.
8. The government may reduce the fluctuations of the business cycle through the use of **economic stabilisation** policies, namely fiscal and monetary policies.
9. **Government business enterprises** (also known as public trading enterprises) are government-owned businesses that provide goods and services for the community. Many GBEs have been privatised during recent decades.
10. The government also pursues other economic and social objectives, including consumer and environmental protection. The main consumer protection agency is the Australian Competition and Consumer Commission.

chapterreview

1 Identify which tier of the government (local, state, Commonwealth or a mixture of these) has responsibility for each of the following areas:

a) public order and safety
b) defence
c) taxation
d) health
e) tertiary education
f) high schools
g) highways
h) customs
i) suburban streets
j) broadband networks
k) libraries
l) rubbish collection.

2 Explain how the size of the public sector can be measured in Australia.

3 Discuss how the government can use taxation and spending measures to reallocate resources in the economy.

4 Briefly explain how the government redistributes income in the economy.

5 Using the concept of the average rate of tax, distinguish between progressive, proportional and regressive tax.

6 Calculate the tax payable and average rate of tax for the following individuals:

a) Silas, who earns $74,000 per year

b) Linus, who earns $148,000 per year.

7 Define what is meant by *social welfare payments*. Give three examples of social welfare payments.

8 Summarise the main policies that are used for economic stabilisation.

9 Define what is meant by a *government business enterprise*. Give some examples of government business enterprises in the Australian economy.

10 Identify some of the other social and economic goals that the government may wish to achieve.

Extended response

Explain why a government might want to redistribute income in the economy. Describe how the government would achieve this. Identify which tier of government would be most effective in redistributing income.

Government in Action

16

16.1 The Budget

16.2 Revenue and expenditure

16.3 The impact of budget outcomes

16.4 Influences on government policies

16.1 The Budget

In the previous chapter, we reviewed the main methods that governments use to address the problems of market failure. This chapter continues with a detailed analysis of the government's most versatile tool – fiscal policy. **Fiscal policy** is a macroeconomic policy that involves the use of taxation and spending powers through the Commonwealth (or federal) Budget in order to achieve certain economic objectives. These include stabilising the level of economic activity, maintaining low inflation, reducing the level of unemployment and achieving general policy goals relating to the distribution of income and Australia's place in the global economy.

Fiscal policy is a macroeconomic policy that can influence resource allocation, redistribute income and reduce the fluctuations of the business cycle. Its instruments include government spending and taxation and the budget outcome.

The best way to understand the role of the Commonwealth Government is to examine its revenue and expenditure activities, shown in the annual Budget. The **Commonwealth Budget** is an official document that sets out the government's revenue and expenditure plans for the coming year. The Treasurer usually brings down the Budget early in May each year (though sometimes a change of government can result in an updated Budget being presented later in the year, as happened in 2022). By varying its intended expenditure (G) and revenue (T), the government can influence the overall level of economic activity and have a significant influence on the level of inflation and unemployment.

The Budget is the tool of the government for the implementation of fiscal policy. It shows the government's planned expenditure and revenue for the next financial year.

16.2 Revenue and expenditure

Commonwealth Government revenue

Figure 16.1 shows that the Commonwealth Government budgeted for revenue of $561 billion in the 2022–23 financial year. Taxation contributes almost all of the Commonwealth Government's revenue (93 per cent in 2022–23). The sources of taxation revenue are divided into direct taxes (for example, personal income tax and company tax) and indirect taxes (for example, sales taxes).

Income tax (imposed on individuals and companies)

Income tax makes up 69 per cent of total government revenue. As the name suggests, it is imposed on the incomes earned by both individuals and companies.

- **Personal income tax** makes up 48 per cent of Commonwealth Government tax revenue. Under the Pay-As-You-Go (PAYG) system, tax payments are deducted regularly from the pay cheques of wage and salary earners. Self-employed persons, and those who derive a large proportion of their income from investments, also pay income tax through this system. Personal income tax is **progressive** in nature. This means that higher income earners are taxed proportionately more than lower income earners.

2022–23 Receipts (estimated)	$ million	% of total	2022–23 Payments (estimated)	$ million	% of total
Income tax – made up of:			Social security and welfare	221,685	35.3
Individuals	270,100	48.2	Other purposes	120,685	19.2
Fringe benefits tax	3580	0.6	Health	105,754	16.8
Company tax	92,200	16.4	Education	44,788	7.1
Superannuation	15,690	2.8	Defence	38,268	6.1
Petroleum resource rent tax	2440	0.4	General public services	26,518	4.2
Total income tax	**384,010**	**68.5**	Transport and communication	18,915	3.0
Other taxes – made up of:			Other economic affairs	13,155	2.1
Sales tax*	84,530	15.1	Fuel and energy	9381	1.5
Major bank levy	1570	0.3	Housing and community amenities	8221	1.3
Agricultural levies	560	0.1	Public order and safety	7014	1.1
Excise and customs duty	42,560	7.6	Agriculture, forestry and fishing	4810	0.8
Other indirect taxes	7729	1.4	Mining, manufacturing and construction	4781	0.8
Total indirect tax receipts	**136,949**	**24.4**	Recreation and culture	4493	0.7
Total tax receipts	**520,959**	**92.9**			
Non-tax receipts	**39,988**	**7.1**			
Total receipts	**560,947**	**100.0**	**Total expenses**	**628,469**	**100.0**

Source: Budget Paper No. 1, Statement 4: Revenue, Table 4.7, page 127; Statement 5: Expenses and Net Capital Investment. Table 5.3, page 141. *Includes GST revenues allocated to state and territory governments. Figures from 2022–23 Budget brought down in March 2022.

Figure 16.1 – The Commonwealth Budget estimates 2022–23

- **Company tax** accounts for 16 per cent of government revenue, imposed at a flat rate of 30 per cent on the net profit of both private and public corporations, before any distribution is made to their shareholders (businesses with a turnover of under $50 million pay a reduced rate of 25 per cent). Businesses also pay a fringe benefits tax (contributing less than 1 per cent of government revenue) for the non-cash benefits (company cars, dining out, etc.) that they provide for their employees.
- A small proportion of income tax (around 3 per cent of government revenue) is collected through the tax on superannuation contributions. The proportion of revenue collected from the tax on superannuation contributions has grown over recent years and is likely to continue to grow in the future.

Goods and Services Tax

The Goods and Services Tax (GST) is the main indirect tax in Australia. It applies at a rate of 10 per cent to most items sold in Australia, although basic food is exempt from the GST. The Commonwealth Government's collection of the GST makes up around 15 per cent of its total tax collection. These revenues are automatically allocated to state and territory governments.

Excise and customs duties (imposed on the producers of certain goods)

Excise and customs duties are taxes based on the quantity of a product. They provide around 8 per cent of government revenue, mainly from petrol, diesel, tobacco and alcohol. All these goods have a relatively inelastic demand. This allows the government to apply a duty or excise, knowing that the subsequent increase in price will only cause a small contraction in demand.

Other tax revenue

This category accounts for around 1 per cent of government revenue, and covers a whole range of miscellaneous taxes, charges, fees and fines imposed by the government (such as fees for Australian passports).

Non-tax revenue

Non-tax revenue raises 7 per cent of total government revenue and includes profits from government enterprises, as well as interest, dividends and royalties paid to the government.

Commonwealth Government expenditure

The 2022–23 Commonwealth Budget outlined plans for the government to spend $628 billion over that financial year. The expenditure items shown in figure 16.1 highlight the key responsibilities of the Commonwealth Government. Major spending items include the following areas:

- **Social security and welfare** – the largest Commonwealth Government outlay. This category represents **transfer payments** (payments aimed at redistributing income from the taxpayers to welfare recipients, such as the elderly and unemployed).
- **Education** – the Commonwealth Government provides education funding to universities, vocational education and training providers as well as government and non-government primary and secondary schools.
- **Health** – while the delivery of healthcare services is primarily the responsibility of state and territory governments, the Commonwealth Government funds Medicare and the Pharmaceutical Benefits Scheme as well as contributing to the funding of public hospitals.
- Provision of **infrastructure** or **social overhead capital** – examples include roads, rail, ports and communications networks.
- **Protecting the environment** and **promoting ecologically sustainable development** – a small area of government expenditure, which includes investment in clean energy and low carbon emission technologies, energy efficiency measures and better management of water resources.

reviewquestions

1. Outline the main sources of government revenue and the relative importance of different types of taxation.
2. Describe the main areas of government expenditure and how they might be linked to the government's economic objectives.
3. Imagine you are an economic adviser to the Commonwealth Government. The Prime Minister wants to increase spending on public transport in major cities, but does not want to raise taxes. Identify alternative sources of revenue for the government to fund its new initiatives.

16.3 The impact of budget outcomes

Besides the individual instruments of spending and revenue collection, the overall outcome of the budget is in itself an important feature of fiscal policy. This is known as the **budget outcome** or **fiscal outcome**. The budget outcome gives an indication of the overall impact of fiscal policy on the state of the economy. There are three possible budget outcomes:

Balanced budget	Planned government revenue	=	Planned government expenditure
Budget surplus	Planned government revenue	>	Planned government expenditure
Budget deficit	Planned government revenue	<	Planned government expenditure

In chapter 3, we learnt that the government can change the level of economic activity by changing its own leakages (T) and injections (G) in the circular flow of income. This is a key principle behind government fiscal policy. The **change in the budget outcome** from one year to the next can indicate a change in government fiscal policy stance. Three stances are possible:

- **A contractionary fiscal policy stance**: With a contractionary fiscal policy, the government would be planning to increase taxation revenue or decrease government expenditure (or a combination of both), creating either a smaller deficit or larger surplus than it had previously. This should decrease the level of economic activity by dampening aggregate demand. This would also tend to reduce inflation, but it risks increasing unemployment if demand is reduced too much.
- **An expansionary fiscal policy stance**: Here the government might reduce taxation revenue or increase government expenditure (or use a combination of both), creating either a smaller surplus or bigger deficit than it had previously. Expansionary policy aims to increase the level of economic activity by stimulating aggregate demand. This should lead to a reduction in unemployment since, in order to increase production, firms must employ extra resources. However, if the economy grows too quickly inflation may rise.
- **A neutral fiscal policy stance**: This occurs when the government does not change the budget outcome from the previous year's level. Therefore, the Budget should, in general, have no overall effect on the level of aggregate demand and economic activity.

When economists describe the stance of fiscal policy being expansionary, contractionary or neutral, they are usually comparing this year's outcome to the outcome of the previous year. If, from one year to the next, we moved from a surplus to a balanced budget, it would be regarded as expansionary, as expenditure has risen in relation to revenue. Likewise, if we moved from a deficit to a balanced budget, fiscal policy would be regarded as contractionary, as expenditure has fallen in relation to revenue. This can be confusing, because if the deficit is reduced from $50 billion to $25 billion in one year, government injections are still greater than leakages (because there is a deficit), but in relative terms it is contractionary (because the deficit is $25 billion smaller than the previous year). In assessing its impact on the economy, we generally tend to pay more attention to the budget outcome relative to the previous year (that is, the budget stance), rather than the absolute figure of whether the budget is in deficit or surplus.

Automatic stabilisers

Even without deliberate decisions by the government to change its policies from one year to the next, the levels of revenue and expenditure change automatically in response to changing economic conditions. This reflects the operation of policies known as **automatic stabilisers** – policies that operate automatically to counterbalance the trend in the level of economic growth and to stabilise the economy. The two main automatic stabilisers are the progressive personal income tax system and unemployment benefits. Their operation can be illustrated by the following two situations:

Automatic stabilisers are instruments inherent in the government's budget that counterbalance economic activity. In a boom period, they decrease economic activity. In a recession, they increase economic activity. The most common examples are transfer payments and a progressive tax system.

- **An increase in the level of economic activity**: When the economy is growing, income levels increase, leading to a rise in taxation revenue for the government. Unemployment falls, reducing government expenditure on unemployment benefits. The budget outcome is a smaller deficit or bigger surplus. The automatic stabilisers would lead to an automatic contraction in aggregate demand, thus having a stabilising effect even without any deliberate government policy action.
- **A decrease in the level of economic activity**: In times of recession (such as in 2020–21 following the COVID-19 pandemic), income levels fall, leading to a fall in taxation revenue. Unemployment rises, increasing government expenditure on unemployment benefits. The budget outcome is a smaller surplus or bigger deficit, thus automatically stimulating aggregate demand even without any deliberate change in government policy.

Therefore, changes in the actual budget outcome are the result of two components – the automatic changes to government revenue and expenditure brought about by changes in the level of economic activity (also referred to as the cyclical component of the budget), and the deliberate revenue and expenditure changes initiated by the government (called the structural component of the budget). The structural component is the key driver of the government's fiscal policy stance.

reviewquestions

1. Distinguish between the *budget outcome* and the *budget stance*.
2. Explain how a slowdown in economic activity would affect the cyclical component of the budget.
3. Identify the impact that each of the following changes in fiscal policy would have on the level of economic growth.
   a) A reduction in the budget deficit from $200 billion last year to $150 billion this year
   b) An unchanged budget surplus of $20 billion last year and this year
   c) A shift from a $15 billion deficit last year to a balanced budget this year.

16.4 Influences on government policies

The process of making government policy is influenced by many participants, including businesses, community groups, lobby groups, unions and political parties. In this section, we examine some of the influences on economic policy in recent years.

Parliament and political parties



For more information about Australian politics, look at this outstanding site operated by a former Victorian High School teacher, Malcolm Farnsworth: **www.australianpolitics.com**

Also, have a look at the websites of Australia's major parties:

Australian Labor Party: **www.alp.org.au**

Liberal Party: **www.liberal.org.au**

National Party: **www.nationals.org.au**

Australian Greens: **www.greens.org.au**

In a democratic country such as Australia, economics and politics are closely related. Changes to economic policy must first be advanced by the government in power, which generally means that it must be approved by Cabinet – the committee of senior government ministers. The structure of government in Australia requires that most major policy changes must then be authorised through an Act of Parliament. While some administrative changes may not require the support of parliament, measures such as the Budget, taxation reform, industrial relations reforms and the privatisation of government businesses do require the support of parliament.

The Australian House of Representatives	
Australian Labor Party	77
Liberal/National Coalition	58
Independents	10
Australian Greens	4
Minor parties	2
Total	**151**
The Australian Senate	
Liberal/National Coalition	32
Australian Labor Party	26
Australian Greens	12
One Nation	2
Lambie Network	2
United Australia	1
Independent	1
Total	**76**

Source: Parliament of Australia

Figure 16.2 – Composition of the Australian Parliament, October 2022

For a proposed law (a Bill) to be passed through parliament, it must be supported by a majority in both the Lower House (the **House of Representatives**) and the Upper House (the **Senate**). Governments are formed from the political party or coalition that has the support of a majority of members in the 151-seat House of Representatives. Most elections result in a government holding a majority of seats in the House of Representatives, which makes it easy for it to pass legislation in the Lower House. While the 2022 election resulted in the Albanese Government being elected with a majority of 77 out of 151 seats, it also saw independent and minor party candidates win a record 16 seats. If the trend towards electing independent and minor party candidates is sustained, governments are likely to fall short of a majority in the House of Representatives more often, requiring them to win the support of other MPs to pass legislation. The Gillard Government faced this situation between 2010 and 2013, and it is the norm in many democracies around the world.

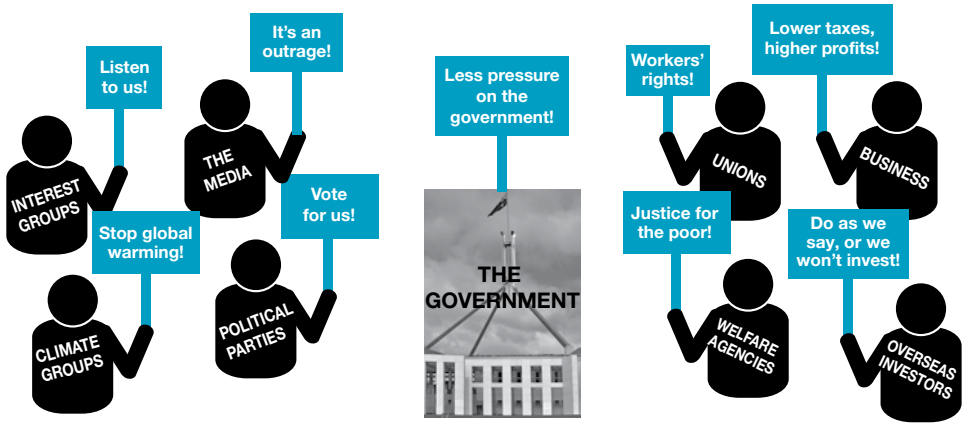
While governments have usually enjoyed majority support in the House of Representatives, it is rare for a government to enjoy a majority in the Senate. Governments are usually a few seats short of the majority required to pass their legislation in the 76-seat Senate. As a result, they need to secure the support of other senators: the Opposition, minor parties such as the Greens or independent senators. In the 2022 election, the Labor party won 26 seats, which means it did not get a majority in the Senate. In order to pass legislation, the Albanese Government must have the support of at least 13 other senators to make up a 76 seat majority. This means that it must have support from either the Opposition party, or the Australian Greens plus one other senator. It is rare for governments to enjoy a majority in the Senate. The last time this occurred was after the 2004 election when the Howard Government enjoyed a majority of one vote in the Senate.

The fact that elections do not give governments a majority in the Senate suggests that Australian voters support the role of the Senate as a balance against the power of the government. Although this slows down the process of developing legislation, it also results in a more detailed review of government policies and may curb the excesses of either of the major parties.

Governments also need to retain popular support in order to be re-elected, an issue that is always on the minds of political leaders. This requires them to work hard at explaining economic policies and convincing the public that their strategies are the most effective ones available, even if some elements of them may be unpopular. This process is often difficult because economic reform can create groups of winners and losers. This will be seen in more detail in the HSC Course, which examines Australian government economic policy and its impacts in much greater detail.

Since political parties form governments, they play a key role in the process of making economic policy. In Australia, federal and state governments are usually formed by a single political party (such as the Australian Labor Party) or a coalition of the two conservative parties, the Liberal Party and the National Party (often just known as "the Coalition Parties").

Policymaking can be a complex process



Within political parties, most decisions are made by the party leadership. Technically, policy is developed by party members through local branches and state and federal conferences. In reality, however, most policy decisions are made by elected political representatives. Although those representatives have the freedom to vote differently from their own political party in parliament, in Australia party members almost always vote with their party.

The leader of a political party is ultimately responsible for making economic policy decisions, although party leaders differ in the extent to which they involve ministers and other members of parliaments in making decisions. The process of decision-making in governments has tended to become more centralised in the Prime Minister's Office or the Premier's Office over recent decades. Decision-making power tends to rest in the hands of a small number of senior government ministers and senior public servants. Nevertheless, political parties have a significant influence over the decisions of their leader because all leaders depend upon the support of the other members of the party in order to remain the leader. Since 2010, the Prime Minister has been replaced by government MPs without an election on four occasions: 2010 (Rudd), 2013 (Gillard), 2015 (Abbott) and 2018 (Turnbull).

Business

Business groups have a significant voice in government policy decisions. In part, this reflects the fact that in a market economy, successful and growing businesses are crucial for a nation's prosperity. It also reflects the public influence that businesses can have in public debates, as well as the financial influence that businesses have over political parties. Political parties receive limited public funding to conduct election campaigns, and they now rely on large donations from businesses to fund their campaigns. Businesses are involved in lobbying governments and contribute to policymaking across a wide range of issues that may affect their activities. Political parties are sometimes accused of changing their policies because of the financial contributions of business groups. Several members of the NSW parliament have resigned because of receiving illegal campaign donations from businesses, in particular property developers (who benefit directly from government approvals for construction projects).

Businesses dedicate significant resources to lobbying governments. Australia has three peak business groups. The Business Council of Australia represents the chief executives of approximately 100 of the largest companies in Australia. The Australian Industry Group represents businesses from a wide range of industry sectors including manufacturing and information technology. The Australian Chamber of Commerce and Industry represents chambers of commerce across Australia, including smaller businesses. Some business groups represent the interests of a particular business sector, such as the Minerals Council of Australia, the Australian Bankers' Association and the Housing Industry Association.

Lobbyists generally represent individual companies and advocate for the interests of those specific firms on issues such as tax, regulation, privatisation, outsourcing of government services and spending programs. Lobbyists are often former Members of Parliament or former staff of government ministers, who understand the policymaking process and how to influence it.



For more information, visit the following websites:

The Business Council of Australia:
www.bca.com.au

Australian Industry Group:
www.aigroup.com.au

The Australian Chamber of Commerce and Industry:
www.australianchamber.com.au

Minerals Council of Australia:
www.minerals.org.au

Australian Government Register of Lobbyists:
lobbyists.ag.gov.au

Unions

Unions are amongst the largest organisations by membership in Australia. However, the influence of unions has declined as their membership has fallen from a peak of 55 per cent of the workforce in the 1970s to around 14 per cent. Unions mostly represent the interests of their members in individual workplaces, but they are also involved in consultations with governments on many policy issues. For example, the Health Services Union (HSU) is often involved in public debates on health policy as well as the role of health workers. Unions participate in public debates and sometimes issue reports on any matters that affect the interests of their members. Mostly, however, they focus on industrial relations issues.

The peak organisation in the Australian union movement is the Australian Council of Trade Unions, which coordinates campaigns and policy advocacy among unions nationally. However, important regional groups also exist, such as Unions NSW. Unions have a much greater input into the policy of Labor governments than Coalition governments and they are a major source of donations for Labor Party campaigns. They have specific interests in labour market policies, specific industry policies and measures that affect the interests of people on lower incomes.



For more information on the activities and campaigns of the union movement, visit the website of one of the following organisations:

Australian Council of Trade Unions:
www.actu.org.au
Unions NSW:
www.unionsnsw.org.au
National Tertiary Education Union:
www.nteu.org.au

Climate and environmental groups

Australia has several interest groups that advocate for action on climate change and more generally for environmental protection, including the Australian Conservation Foundation, Friends of the Earth, Greenpeace, the Wilderness Society and the World Wildlife Fund. These organisations conduct research, provide educational information and lobby governments and companies around a wide range of issues that have implications on the environment at local, national and global levels.

While groups such as Greenpeace are perhaps best known for high-profile protest tactics, such as blockading forestry workers or nuclear warships, the environmental movement has increased the profile of environmental issues for economic policymakers. Environmental concerns are given especially high priority by the Australian Greens party, which in recent years has enjoyed significant influence, particularly in the Senate, as the third largest party in Australia. Prominent Australian business leaders have also become major advocates for environmental and climate concerns in recent years.



The Australian Conservation Foundation is the peak Australian environmental group. Its website is:
www.acf.org.au

Welfare agencies

Welfare organisations seek to represent the most disadvantaged people in the community – the aged, people with disabilities, carers, unemployed people and people with low incomes. The Australian Council of Social Services (ACOSS) operates as the peak welfare lobby group. Other types of welfare groups include community legal centres and charities. Welfare groups participate in the public policy process by participation in government inquiries and by lobbying government ministers. Welfare groups can also influence the policy process by using the media to bring attention to their message and to pressure the government. For example, after the election of the Albanese Government in 2022, welfare groups led a campaign against legislated tax cuts for high-income earners going ahead in 2024–25, arguing that the funds should instead be used to increase welfare payments.



To find out more about these organisations, visit their websites:

Australian Council of Social Service (ACOSS):
www.acoss.org.au

Legal Aid NSW:
www.legalaid.nsw.gov.au

You might also like to look at charity organisations such as:

The Brotherhood of St Laurence:
www.bsl.org.au

St Vincent de Paul Society:
www.vinnies.org.au

The media

Although the media's main role is to report the news, in reality it can also influence government policies. Its role is changing with the rise of new social media and other platforms. The media's influence operates at many levels, from determining which issues will receive coverage to how issues will be presented to the public. Political leaders try to anticipate how the media will report their policies. If they think policies are likely to face heavy criticism, they may change their plans. Similarly, political leaders may pursue policies that can win positive media coverage, even if the policies are of limited benefit.

The distinction between the reporting of fact and the presentation of a writer or broadcaster's opinion is often blurred. Some popular media personalities are considered to be influential in shaping what voters think about issues and how they vote. Debate about the wider role of the media in influencing elections was reignited in 2020 when two former Prime Ministers from opposing sides of politics (Kevin Rudd and Malcolm Turnbull) launched a petition calling for a Royal Commission into Rupert Murdoch's media organisation, News Corporation, which owns over 50 per cent of Australia's print media as well as Sky News. Debate over the perceived bias of reporting in the media is a longstanding feature of Australian politics, and even the reporting of day-to-day economic news tends to differ between different media outlets.

Interest groups

People with concerns, interest or expertise relating to specific issues often form organisations to work together towards common ends. Some interest groups have a strong local focus: for example, resisting a development proposal or raising an issue of concern to a local community such as hydraulic fracking of underground gas reserves, which has become an increasingly controversial issue in many areas of rural Australia in recent years. Some interest groups are formed around specific issues, such as Amnesty International and World Wildlife Fund. Others represent a particular group in the community, such as the National Farmers' Federation, the National Union of Students and the National Roads and Motorists' Association. Some groups play a broader role across multiple issues, such as consumer group Choice (formerly known as the Australian Consumers' Association) and online activist group GetUp!.

Most major interest groups have their own websites, many of which contain information about their own policy interests and agendas:

National Roads and Motorists' Association: **www.mynrma.com.au**

NSW Aboriginal Land Council: **www.alc.org.au**

National Union of Students: **www.nus.asn.au**

Choice: **www.choice.com.au**

GetUp! **www.getup.org.au**

International influences

Since the early 1980s, international financial markets – in particular, the foreign exchange market – have emerged as a significant influence on economic policy. Governments are wary of making policy decisions that would be unpopular with international financial markets. If financial markets lose confidence in the government's economic management, they could face a fall in their exchange rate, higher interest rates on government borrowing, and negative media coverage. Economic policy is under constant scrutiny from financial markets, and this has tended to result in lower budget deficits, as well as a stronger commitment to microeconomic reform.

Financial markets may force the government to change its policies. For example, during the global financial crisis in 2008, international credit markets almost collapsed after a major international bank went bankrupt. Concerned about the risk of a severe economic collapse, governments around the world announced they would invest trillions of dollars in buying bank shares, guaranteeing bank deposits and buying securities. While this was an extreme illustration of governments responding to problems in financial markets, it demonstrates the importance of financial markets in economic policy.

As Australia has become more integrated with the global economy over recent decades, it has also made choices that in many ways have weakened the power of national governments. For example, as a member of the World Trade Organisation, Australia is not allowed to give direct assistance to exporters (although it can provide general industry assistance so long as this is not specifically targeted to businesses that are exporting).

Australian governments are also influenced by overseas policy trends, especially in other wealthy nations who are members of the Organisation for Economic Cooperation and Development (OECD). Most industrialised nations face similar economic issues to Australia, such as the challenges of globalisation, an ageing population, growing pressures on government services and pressures to reduce tax rates.

The impact of international factors on the Australian economy is examined in much greater detail in the first two topics of the Year 12 Economics Course: The Global Economy and Australia's Place in the Global Economy. See you there!

The influence of international factors is often discussed in the publications of international organisations such as:

World Trade Organisation: **www.wto.org**

International Monetary Fund: **www.imf.org**

World Bank: **www.worldbank.org**

Organisation for Economic Cooperation and Development (OECD): **www.oecd.org**

reviewquestions

1 Outline how the influence of environmental groups and businesses on the public policy process has changed in recent years.

2 Consider THREE important economic, health, education or social policy issues from recent years. Discuss the ways in which these issues reflect the strength and influence of the different groups in Australian society.

chapter summary

1 **Fiscal policy** is presented annually in the Commonwealth Budget. It sets out the government's plans for spending and collecting revenue for the year ahead.

2 A **balanced budget** is where the expected revenue and planned expenditure are equal. A surplus budget is where the expected revenue is greater than planned expenditure. A **deficit** budget is where planned expenditure exceeds expected revenue.

3 The largest component of revenue for the government is income tax, which is levied on individuals and companies.

4 The largest component of government spending is social security and welfare payments, such as assistance to the elderly, family benefits, and income support for people with disabilities and people who are unemployed.

5 The government can implement:

- an expansionary fiscal policy to boost the level of economic activity
- a contractionary fiscal policy to reduce the level of economic activity, or
- a neutral fiscal policy to maintain the current level of economic activity.

6 **Automatic stabilisers**, which include unemployment benefits and a progressive income tax system, are counter-cyclical components of fiscal policy that reduce the severity of fluctuations in the business cycle.

7 Policymaking is influenced by interest groups including businesses, unions, environmental groups and welfare agencies, which all attempt to influence the government to achieve their goals. The media is also an important influence on the process of making government policy.

8 The **Constitution** sets out the limits of the powers of the Commonwealth and state governments, and in some areas restricts how the Commonwealth Government can manage the economy.

9 Australia's parliament is divided into a Lower house (the **House of Representatives**) and an Upper house (the **Senate**). New laws must win the approval of both houses. The government cannot pass legislation in the Senate without some support from other senators, which means the government must often negotiate the details of its policies in order to get legislation passed.

10 International treaties and membership of international organisations can impose constraints on economic policymaking. For example, Australia's policy options to assist local industries are limited as a result of Australia's membership in the World Trade Organisation.

chapter review

1 Explain the three possible budget outcomes.

2 Describe the impact of the following fiscal policy stances:
   a) contractionary
   b) expansionary
   c) neutral.

3 Discuss what is meant by *automatic stabilisers* and how they operate in the following situations:
   a) recession
   b) boom.

4 Identify what proportion the following expenditure items make up as a proportion of total Commonwealth Government expenditure:
   a) defence
   b) health
   c) social security and welfare
   d) education.

5 Describe the role of the Parliament in formulating government policies.

6 Explain how political parties influence the public policymaking process and how the parties themselves decide their policies.

7 Analyse the role played by the media in policymaking in Australia. Identify a policy debate in which the media has played an important role.

8 Examine the role played by the Australian Constitution in influencing economic policy in Australia.

9 Briefly summarise how the powers of the Commonwealth Government have changed over time.

10 Assess the importance of international factors in influencing government policy in Australia.

Extended response

Explain what is meant by the *Commonwealth Budget* and discuss the factors that influence the budget outcome. Examine the role of fiscal policy in the management of the Australian economy.

Extension question

Consider a recent major economic policy decision. Assess the impact of political parties, interest groups, trade unions, business, the media and international factors in influencing the final policy outcome.

appendix A

Key Economic Skills

A.1 Introduction

A.2 Drawing and interpreting economics diagrams

A.3 Equations and calculations in economics

A.4 Interpreting economic data and information

A.1 Introduction



For further information on the Economics Syllabus and the official requirements for skills and assessments, visit the website of the NSW Education Standards Authority: **www.educationstandards.nsw.edu.au**

Economics is a subject that requires you to understand the relationships between different economic indicators, such as wage levels, prices, interest rates and consumer spending, and the role of different actors in the economy such as employees, stockbrokers, and government agencies. It is a mix of social science, with an emphasis on human activities and scientific analysis, where we can test our theories about how economies operate by analysing the relationships between different economic indicators.

Studying economics is not simply about memorising a lot of information. You also have to learn a range of skills to understand how modern economies function and to be able to predict how changes in one part of the economy can affect other parts. For this reason, **applying economic skills is central to the Year 11 Economics Course**. Each Topic of the Year 11 Course contains between two and six skills, and there are 26 skills in total for the whole course.

It is best to learn economic skills as you learn the content of the course. For this reason, each of the economic skills is listed at the beginning of each topic area in this textbook, and the skills are incorporated into the chapter material. **The aim of this chapter is to reinforce your grasp of economic skills** because of the crucial role that these skills play in economic analysis and because the skills you learn in the Year 11 Course are important building blocks for the HSC Course.

Assessment for the Year 11 Economics course is based on four skill areas. *Knowledge and understanding of course content* is worth 40 per cent of the Year 11 assessment. The other 60 per cent is divided equally between three other components – each of which you can strengthen with the material in this chapter: *stimulus-based skills* (20 per cent), *inquiry and research* (20 per cent), and *communication of economic information, ideas, and issues in appropriate forms* (20 per cent).

YEAR 11 COURSE TOPIC	SYLLABUS SKILLS
Introduction to Economics	• Construct and interpret production possibility frontiers • Distinguish between equilibrium and disequilibrium situations in the circular flow of income model • Explain how an economy might return to an equilibrium situation from a disequilibrium situation • Identify bias in media items on economic issues affecting local, state and national economies • Identify key features of an economy through analysis of a variety of information types and sources • Work effectively in groups to investigate aspects of economics and economies
Consumers and Business	• Analyse the impacts of changes in consumer income levels on the types of production within the economy • Explain the role of firms in solving the economic problem
Markets	• Graph demand and supply curves and interpret the impact on the equilibrium of changes in market forces • Analyse non-equilibrium market situations and propose solutions to them • Calculate the price elasticity of demand using the total outlay method • Work in groups to investigate and report on the nature of competition within a specific industry
Labour Markets	• Compare and contrast the labour market with product markets • Research an outcome of the contemporary Australian labour market • Work in groups to investigate the efficiency and equity of labour market outcomes
Financial Markets	• Compare and contrast financial markets with product markets • Explain the role of institutions in the operation of financial markets • Analyse the impact of financial innovations on individuals and the economy • Work in groups to investigate the economic role of the superannuation industry • Analyse the factors that influence the level of interest rates • Predict trends in interest rates in hypothetical situations
Government and the Economy	• Determine whether a specific tax is progressive, proportional or regressive • Interpret Federal Budget data • Predict the impact of a budget deficit or surplus on economic activity • Discuss how monetary and fiscal policies can be used to stabilise economic activity • Analyse the performance of government business enterprises

Source: NSW Education Standards Authority

Figure A.1 – Economic skills in the Year 11 Course



Skills are an important addition to any economist's toolkit.

Year 11 Course skills can be divided into three main areas:

- Drawing and interpreting economics diagrams
- Equations and calculations in economics
- Interpreting economic data and information.

A.2 Drawing and interpreting economics diagrams

Being able to draw and interpret diagrams is an essential skill in the Year 11 Course. Some diagrams, like supply and demand and the production possibilities frontier, are explicitly referred to in the syllabus. Other diagrams, such as those representing the labour market and market failure, are not explicitly referred to in the syllabus but are nevertheless useful for deepening your understanding of how economies operate. Some diagrams are useful for representing the macro-economy at the "big picture" level, while others are useful for analysing the microeconomic impacts of changes in specific parts of the economy.

In the Year 11 Course, the most important diagram for understanding how the economy fits together is the **Circular Flow of Income** diagram – it breaks down the economy into five sectors and looks at how money moves between individuals, firms, financial intermediaries, governments and the international sector. Most of the other diagrams used in the Year 11 Course are of a microeconomic nature. That is, they show us the relationship between specific economic variables – how does a change in X impact on Y and Z? These diagrams are useful for microeconomic analysis and predicting the future levels of different economic variables.

In this section, we review the skills of the Year 11 Course where diagrams can be used to help explain how economies operate.

Construct and interpret production possibility frontiers

The production possibility frontier demonstrated in figure A.2 shows us how economies trade off the production of one type of good or service for other goods or services – the concept of opportunity cost. The frontier cuts the *x*-axis at the maximum production level of one good, and the *y*-axis at the maximum production level of the other good. Economies producing at a point on the frontier are efficiently using all their resources of production; if they are inside the frontier, they have underemployed or under-utilised resources. The frontier shifts out with the discovery of new resources and shifts in with the depletion of resources such as the natural environment.

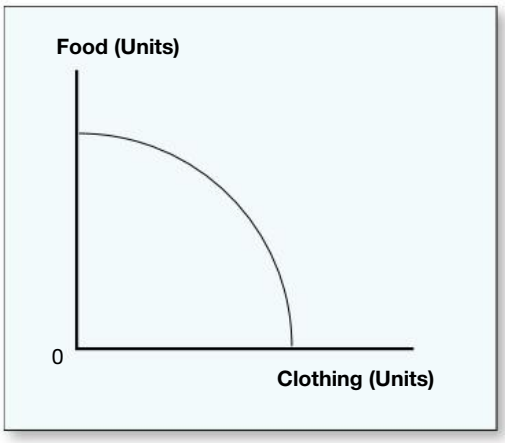


Figure A.2 – Production possibility frontier

Distinguish between equilibrium and disequilibrium situations in the circular flow of income model

The circular flow of income diagram (figure A.3) can be used to show equilibrium and disequilibrium situations in economies. If the leakages from the household sector – savings, taxation, imports – are equal to the injections into the firm sector – investment, government expenditure and exports – the economy is in equilibrium and will neither expand nor contract. If leakages are greater than injections, the economy will contract; if leakages are less than injections, the economy will expand.

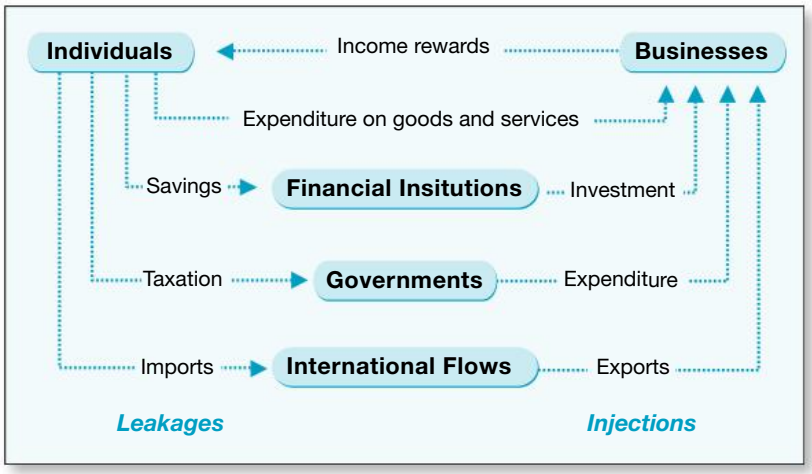


Figure A.3 – Equilibrium and the circular flow model

Graph demand and supply curves and interpret the impact on the equilibrium of changes in market forces

The basic demand and supply diagram shown in figure A.4 is **probably the most important diagram in the study of economics**. It shows how, in a market economy, changes in price ensure that the quantity demanded is exactly equal to quantity supplied – a situation known as market equilibrium. If prices are too high, and there is an excess of quantity supplied over quantity demanded, prices will fall, causing an expansion of demand and a contraction of supply. If prices are too low, and there is an excess of quantity demand over quantity supplied, prices will rise, causing an expansion of supply and a contraction of demand. An increase or decrease in demand and/or supply will cause a change in the equilibrium price and equilibrium quantity that results from the interplay of market forces. The simple demand and supply diagram is used to analyse product markets for goods and services, and factor markets for labour and capital.

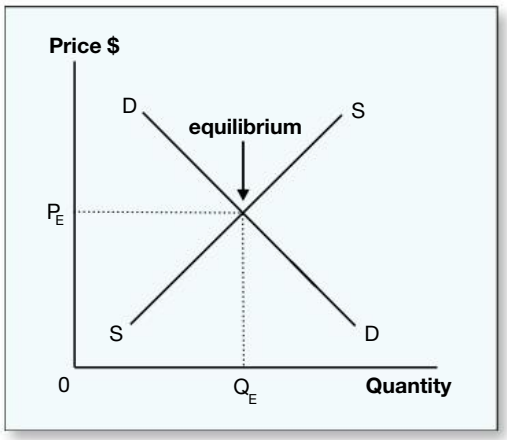


Figure A.4 – Market equilibrium

Analyse non-equilibrium market situations and propose solutions to them

Non-equilibrium market situations can arise for a number of reasons. If there is an excess of supply or demand because prices are too high or too low to clear the market, prices will adjust, causing expansions and contractions in demand or supply.

If the government has brought about a disequilibrium situation by imposing a price ceiling or price floor, which has prevented a change in price, it could respond by removing the price ceiling or price floor and allowing the market to move towards equilibrium (see figure A.5). The government can instead use taxes and subsidies to change the price and quantity levels while still ensuring that the market is in equilibrium.

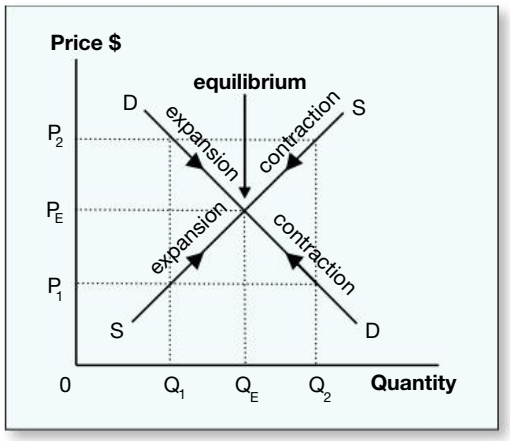


Figure A.5 – Price ceilings or price floors can cause disequilibrium

If the forces of demand and supply have produced market equilibrium but not a social equilibrium (because of positive or negative externalities), then the government can subsidise production or tax production to achieve the social equilibrium price and quantity. This type of market failure is demonstrated in figure A.6.

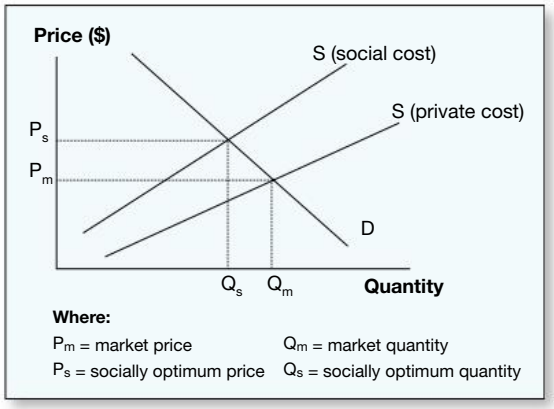


Figure A.6 – Market failure

Compare and contrast the labour market with product markets

The labour market is different from most product markets in four main ways. First, in product markets, firms supply and individuals demand goods and services. In labour markets, by contrast, individuals supply labour and firms demand labour – so their roles are reversed. Second, labour demand differs from demand for goods and services because it is a derived demand. Third, labour supply is different from supply of most goods and services because it is generally less responsive to changes in wage levels compared with prices in product markets, and its shape can be backward bending if individuals desire certain income levels, regardless of their hours of work (not shown in diagram). Finally, labour market outcomes are less likely to represent the influence of market forces alone because of the strong influence of institutional factors that affect wages such as trade unions, employer associations, industrial tribunals and governments. For example, a minimum wage will affect the operation of demand and supply forces in the labour market, as shown in figure A.7.

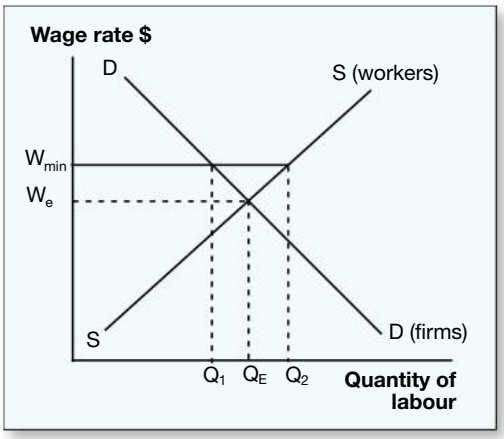


Figure A.7 – Labour market with a minimum wage

Compare and contrast financial markets with product markets

Financial markets share some similarities with product markets. Financial markets have 'buyers' who demand finance, "sellers" who supply finance, and a "price" of finance (such as interest rates, dividends and exchange rates) that influences demand and supply. Therefore, we can examine financial markets using the same demand and supply diagrams that we used for product markets. However, financial markets are different from product markets because they are also a **factor market** for capital. Therefore, the demand for finance is derived from the consumption and investment demands of individuals, businesses and governments. Additionally, financial markets are different from product markets because they tend to be more volatile, have greater impacts on other sectors of the economy, and are consequently subject to greater prudential supervision by the government and is agencies.

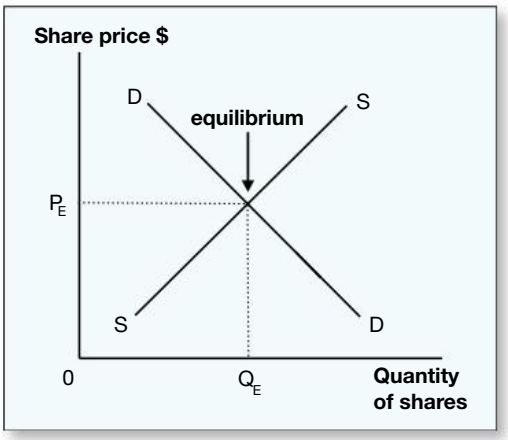


Figure A.8 – Equity market

Analyse the factors that influence the level of interest rates

Interest rates are the "price" of money in the money market. As interest rates rise, the demand for money falls because it costs individuals, businesses and governments more money to borrow funds. Interest rates tend to have little or no impact on the supply of funds (savings). In Australia, interest rates are indirectly influenced by the Reserve Bank, which sets the cash rate in the short-term money market. This can be represented in the money market diagram (figure A.9) in which the Reserve Bank can increase (or decrease) the supply of funds, shifting the S funds line to the right (or left) and therefore moving the interest rate down (or up).

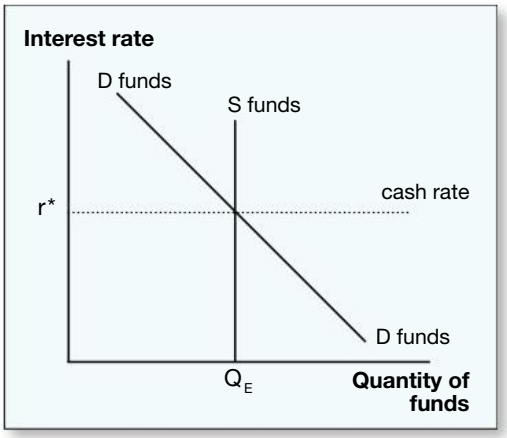


Figure A.9 – Short-term money market

Predict the impact of a budget deficit or surplus on economic activity

The circular flow of income diagram (figures A.10–A.11) can be used to show how the government's budget can affect the level of economic activity. A budget deficit will mean that government injections (expenditure) are greater than leakages (taxation), which will result in greater total income, expenditure and production – shown in the diagram as bigger flows between the different sectors of the economy. A budget surplus will mean that government injections (expenditure) are less than leakages (taxation), which will result in lower total income, expenditure and production – shown in the diagram as smaller flows between the different sectors of the economy.

Discuss how monetary and fiscal policies can be used to stabilise economic activity

The circular flow of income diagram can also be used (figures A.12–A.13) to show the impact of monetary policy on economic activity. (For fiscal policy, see the preceding explanation). Contractionary monetary policy (higher interest rates) will result in lower levels of consumption and investment, and will reduce income and production. Expansionary monetary policy (lower interest rates) will result in higher levels of consumption and investment, and will increase income and production.

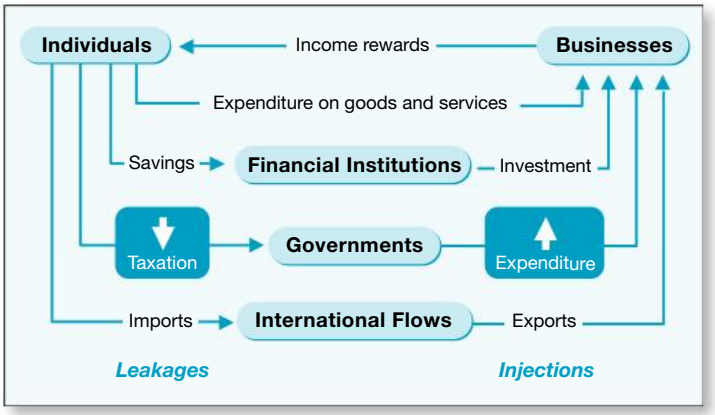


Figure A.10 – Budget deficit and higher economy activity

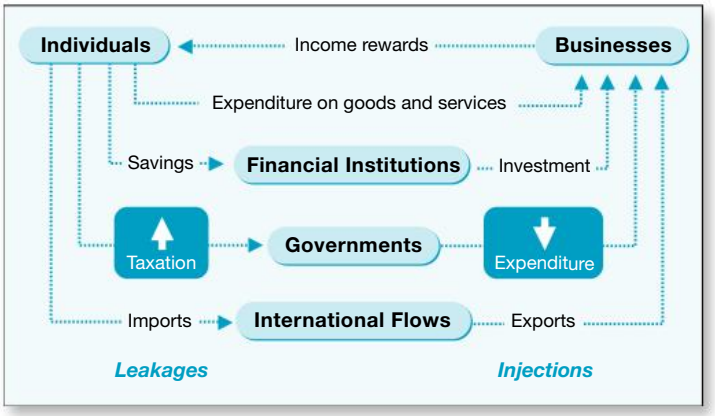


Figure A.11 – Budget surplus and lower economy activity

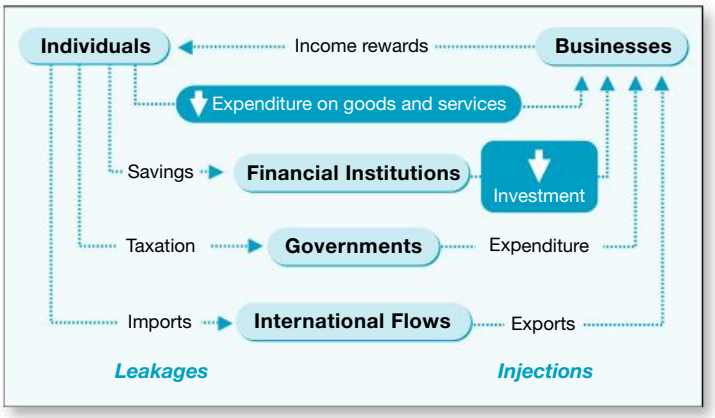


Figure A.12 – Contractionary monetary policy reduces economic activity

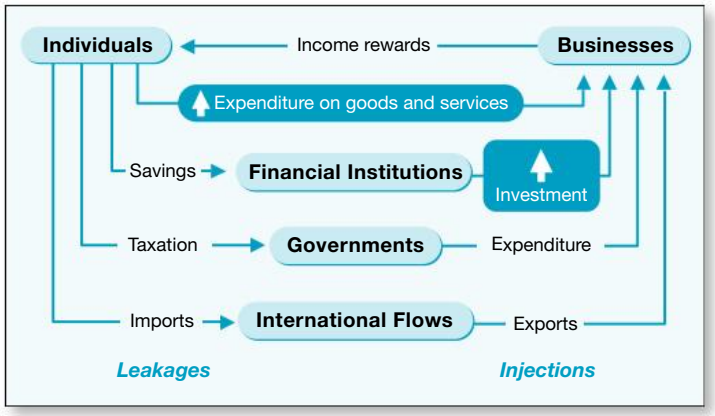


Figure A.13 – Expansionary monetary policy increases economic activity

A.3 Equations and calculations in economics

Compared with natural sciences, the "mathematical" component of economics is relatively straightforward, involving only a handful of calculations and equations. But compared with other humanities (essay writing) subjects, like history and English, studying economics does require a greater understanding of how numbers operate, or more technically, how quantitative information can be used to understand how economies operate. Equations and calculations can be used to examine the economy as a whole, such as through the circular flow of income equations, or to quantify specific economic outcomes, such as elasticity and unemployment. In this section, we review the skills of the Year 11 Course that require equations and calculations.

Distinguish between equilibrium and disequilibrium situations in the circular flow of income model

The easiest test of whether the economy as a whole is in equilibrium or not is provided by the injections and leakages equation – if total injections equal total leakages, the economy is in equilibrium; if not, the economy is in disequilibrium. Note that specific sectors of the economy need not be in equilibrium. For example, it is possible for savings to be less than investment and for the economy to still be in equilibrium, so long as another injection, such as exports, is greater than the leakage in that sector, such as imports.

Savings + Taxation + Imports = Investment + Government expenditure + Exports

S + T + M = I + G + X

Leakages = Injections

Explain how an economy might return to an equilibrium situation from a disequilibrium situation

Using the leakages and injections equations, you can identify how an economy may return to equilibrium from a disequilibrium situation. For example, if an injection such as investment increases, injections will be greater than leakages and the economy will be in disequilibrium. Higher investment will cause a rise in total expenditure, and force suppliers to run down their stocks and employ more labour in order to meet increased demand. As incomes increase, so too will taxation levels, spending on imports and savings – leaking money out of the economy. Eventually, these leakages will increase enough to equal injections and the economy will return to equilibrium, but at a higher level of income and output than before.

S + T + M = I + G + X

Calculate the price elasticity of demand using the total outlay method

Along the demand schedule, we can calculate price elasticity of demand by examining the relationship between price changes and changes in total outlay by consumers. Total outlay is simply the price multiplied by the quantity demanded at each price level. As price rises, what is happening to total outlay? If it is rising, demand is inelastic; if it is falling, demand is elastic; and if demand remains unchanged, demand is unit elastic.

Price $	Quantity demanded (units)	Total outlay (price x quantity)	Elasticity
5	50	250	inelastic
6	45	270	inelastic
7	40	280	unit elastic
8	35	280	elastic
9	30	270	elastic
10	25	250	

Elasticity and total outlays

Price ↑ Revenue ↑ = Inelastic

Price ↑ Revenue ↓ = Elastic

Price ↑ Revenue – = Unit elastic

Research an outcome of the contemporary Australian labour market

Two important labour market outcomes require a calculation. The first is the labour force participation rate, which is the total number of people employed or unemployed, divided by the working age population. The second is the unemployment rate, which is the total number unemployed, divided by the labour force. In researching labour market outcomes, you may need to calculate these percentages from raw figures.

$$\text{Labour force Participation rate (\%)} = \frac{\text{Labour force}}{\text{Working age population (15+)}} \times \frac{100}{1}$$

$$\text{Unemployment rate (\%)} = \frac{\text{Number of persons unemployed}}{\text{Total labour force}} \times \frac{100}{1}$$

Determine whether a specific tax is progressive, proportional or regressive

A tax is progressive, proportional or regressive depending on what is happening to an individual's average rate of tax (ART) as their income rises. If ART is rising, the tax is progressive; if ART is constant, the tax is proportional; if ART is falling, the tax is regressive. The average rate of tax is calculated as total tax paid divided by income. For example, personal income tax in Australia is progressive because average tax rates rise as incomes increase. The Goods and Services Tax, by contrast, is regressive because people on higher incomes spend a smaller proportion of their incomes on consumption and therefore pay a smaller proportion of their income as tax.

$$\text{Average rate of tax (\%)} = \frac{\text{Total tax paid}}{\text{Income}}$$

A.4 Interpreting economic data and information

Our study of economics would be incomplete (and fairly boring) if we only ever looked at diagrams, equations and economic theories without reference to how economies operate in the real world. Analysing the nature of economic relationships and the performance and structure of economies in the real world is central to the Year 11 Course. In broad terms, the Syllabus highlights the importance of researching information from a variety of sources; analysing, synthesising and evaluating that information; and being able to communicate economic information, ideas and issues. In the final section of this chapter, we look at the key skills in the Year 11 Syllabus that require both individual research and group work and how you can **find, interpret and explain economic data and information**.

For each of the key skills highlighted in the Year 11 Syllabus, we have identified a range of useful websites and information on how to best use them. There are six broad categories of websites that we discuss – latest news, Australian Government sites, financial institutions, community sector organisations, international organisations and educational bodies.

Identify bias in media items on economic issues affecting local, state and national economies

The websites of media organisations tend to be updated regularly, especially those that have major publications or broadcasting services. News items are usually organised by date of publication and some, like the Australian Broadcasting Corporation (ABC), have web pages that are updated round the clock with the latest breaking news. Australia's media mostly has less explicitly biased reporting than the United States and the UK (e.g. cable television networks like Fox and MSNBC in the United States, or *The Daily Mail*, *The Sun* and *The Mirror* in the UK). Nevertheless, there are several sources of bias in media reporting in Australia – including newspaper headlines (which are often misleading and sensational), selective facts (omitting other important information), the use of emotional language and imagery, and bias in opinion sections of websites or newspapers. To sharpen your skills in identifying media bias, you could choose a current economic issue in Australia and find reports relating to that issue on sites such as those below. You could consider the different ways in which the issue is presented, what facts are selected by different reporters and whether there is any bias in their reports.

Australian Broadcasting Corporation: **www.abc.net.au**

Sydney Morning Herald: **www.smh.com.au**

10 TIPS FOR RESEARCHING ECONOMIC ISSUES

1. Identify what you are looking for. If you just start surfing without a clear sense of direction you may find that hours have passed with few results.
2. Start with the official national or international organisations responsible for that issue or policy area – such as the Reserve Bank, the Treasury, the Australian Competition and Consumer Commission or the World Bank.
3. Generally, give priority to websites of well-known organisations such as government departments, international organisations, major newspapers, financial institutions, community sector organisations and educational institutions. They tend to have more reliable and up-to-date information.
4. Check out economics blogs to see if there is discussion or debate about the issue. The weekly columns of *Sydney Morning Herald* Economics Editor Ross Gittins are available at www.rossgittins.com, and Australian academic John Quiggin has a well regarded blog that includes links to many of the best blogs from around the world – see www.johnquiggin.com
5. If you are having difficulty finding general introductory information, the UK economics education website https://www.economicseducation.org/ may be a useful guide.
6. Some sites charge for access to articles or publications. For the purposes of the Year 11 Course, nothing you need to know (or probably even want to know) requires expensive material. Often you can download summaries, main features, first chapters, etc., for free, or you can sign up with a newspaper at no cost for a limited access to articles (for example, 10 per month).
7. If you find useful information, create an Economics tab in your browser and bookmark it. You might want to come back to that source in the future, but if you haven't made a note of where you discovered the information, then you might never make your way back to it.
8. Once you've identified something important, you might want to print it out. That allows you to interact with the information (highlighting and summarising) in a way that helps you retain the information.
9. If you find a good source, such as an article or report, use its bibliography or references to chase down further specific information. It might also be useful to look at similar information by a particular author who may be an expert in the area, or similar information from the same organisation such as a research centre.
10. Sometimes you don't find the material you are looking for quickly – experiment with different search terms and be patient, as your skills in searching and finding the right economics information get better with practice.

Analysis & Policy Observatory: **www.apo.org.au**

The Economist: **www.economist.com**

The Guardian: **www.theguardian.com.au**

Work effectively in groups to investigate aspects of economics and economies

Understanding the structure and performance of modern economies is a key skill of the Year 11 Course. While there are many sources of information on other economies, it is best to use data from international organisations because the information is more easily comparable to other economies and because the economic indicators they report are measured by international standards. For the most up-to-date and comprehensive statistics and reports, visit the website of the Organisation for Economic Cooperation and Development (OECD), but be prepared to only find information on high-income countries that are OECD members (and a handful of other economies). The World Bank has the greatest coverage in terms of countries, with country snapshots and information on current economic issues. The International Monetary Fund produces high quality reports about global economic conditions such as its biannual *World Economic Outlook*.

Organisation for Economic Cooperation and Development: **www.oecd.org**

World Bank: **www.worldbank.org**

International Monetary Fund: **www.imf.org**

Analyse the impacts of changes in consumer income levels on the types of production within the economy

Consumer income levels are the single most important factor influencing the total level of consumption by individuals. They are also an important factor influencing the type of goods and services individuals consume, and hence, the types of production by business firms. Higher income earners tend to have very different consumer demands compared with lower income earners. Analysis of the relationship between consumer income and expenditure patterns is rare and hard to find. It is unlikely that you will randomly stumble onto good research or a useful publication via search engines. Instead, check out the Australian Bureau of Statistics' *Household Expenditure Survey* publication, which details the expenditure habits of different income groups. Additionally, the Commonwealth Treasury produces publications about consumption and income patterns in the economy.

Australian Bureau of Statistics: **www.abs.gov.au**

Commonwealth Treasury: **www.treasury.gov.au**

Explain the role of firms in solving the economic problem

Business firms are central to solving the economic problem. While their decisions are constrained by the pattern and level of consumer demand, plus the rules and regulations set by governments, it is business firms that ultimately decide what is produced, how much is produced, how to produce and (to a lesser extent) how to distribute production. Finding information on the production of goods and services by businesses is relatively easy. The Department of Industry, Science and Resources, the associated Minister, and business groups such as the Business Council of Australia have information on the contribution of business to our economy. You might also like to visit the "about us" sections of the websites of specific businesses to learn about the contribution of firms at the micro level.

Department of Industry, Science and Resources: **www.industry.gov.au**

Business Council of Australia: **www.bca.com.au**

Work in groups to investigate and report on the nature of competition within a specific industry

The intensity of competition between firms within a particularly industry can be measured in a number of ways: the number of firms, the market share of firms, the barriers to entry and exit, and the level of product differentiation. The "market structure" of an industry is in turn influenced by the nature of the good or service, the potential or need for economies of scale, government policies and historical factors. The best starting place for choosing an industry to examine is the website of Australia's competition watchdog, the Australian Competition and Consumer Commission. Its website has information on the principles of competition and the industries or business firms it is monitoring. To examine the nature of competition between firms, you should also consult the websites of the main firms in the industry that you choose.

Australian Competition & Consumer Commission: **www.accc.gov.au**

Research an outcome of the contemporary Australian labour market

The two most important outcomes of the Australian labour market are wages and the level of unemployment. You can access labour market statistics from the website of the Australian Bureau of Statistics (ABS) – the "Key Economic Indicators" link on the Statistics page will give you headline statistics, but for further details you will need to consult the Labour Force data. The Department of Employment and Workplace Relations website has some statistics and reports about labour market outcomes. You may also consult other organisations that specialise in labour market economics. The Centre of Full Employment and Equity (at Newcastle University) focuses on unemployment. The Grattan Institute (at Melbourne University) conducts labour market research with a focus on the effects of migration.

Department of Employment and Workplace Relations: **www.dewr.gov.au**

Centre of Full Employment and Equity: **www.fullemployment.net**

Grattan Institute: **www.grattan.edu.au**

Work in groups to investigate the efficiency and equity of labour market outcomes

The challenge of finding a balance between economic efficiency and equity (or fairness) in the labour market has been an area of ongoing debate in Australia. At many times in Australia's history, debates about labour market outcomes have moved from the workplace to the political arena – and even onto the streets. In what remains one of the most contentious areas of economic policy in Australia, employer and union organisations seek to promote the interests of workers and businesses, often arguing that the "national interest" is best served by adopting their perspective on what the labour market should look like. As you examine the websites of the following labour market (or "industrial relations") organisations, try to see both sides of the argument about the efficiency and equity of Australia's labour market outcomes.

Australian Chamber of Commerce and Industry: **www.acci.asn.au**

Australian Council of Trade Unions: **www.actu.org.au**

Australian Industry Group: **aigroup.com.au**

Explain the role of institutions in the operation of financial markets

Australia's financial sector is regulated by four main organisations, and their activities are sometimes coordinated through the Council of Financial Regulators. The Reserve Bank of Australia (RBA) conducts monetary policy on behalf of the government, oversees the stability of the financial system, controls the issue of currency and regulates the payments system. The Australian Securities and Investments Commission (ASIC) is responsible for corporate regulation, consumer protection and the oversight of financial services products. The Australian Prudential Regulation Authority (APRA) is responsible for prudential supervision and regulation of all deposit-taking institutions, life and general insurance and superannuation funds. The Australian Treasury has responsibility for advising the government on financial stability issues and for the legislative and regulatory framework for the financial system. The websites of these organisations are up-to-date, highly reliable and contain lots of useful information. The "about us" sections have background information about the organisations' responsibilities and structure. You will also find information about their recent activities in financial markets, speeches by their key officials, financial market statistics, and links to their publications – all of which will help you understand the role of these organisations in financial markets.

Australian Securities & Investments Commission: **www.asic.gov.au**

Reserve Bank of Australia: **www.rba.gov.au/payments-and-infrastructure**

Australian Prudential Regulation Authority: **www.apra.gov.au**

Australian Treasury: **www.treasury.gov.au**

Analyse the impact of financial innovations on individuals and the economy

Financial innovations are improvements in the operations and efficiency of the financial sector of the economy. They include innovations such as Internet banking, mobile payments, BPay, Electronic Funds Transfer at Point of Sale (EFTPOS) and Automatic Teller Machines (ATMs). Financial innovations have influenced individual financial planning; the payments system; and financial markets, such as the share market. The Reserve Bank's website has a section on how innovations have affected the payments system (the link is on the home page). Consumer perspectives on financial sector issues can be found on the website of Choice, an independent organisation previously called the Australian Consumers' Association. The history sections (under "about us") for the Australian Securities Exchange and many commercial banks and other financial institutions detail the impact of financial innovations on the economy.

Reserve Bank of Australia: **www.rba.gov.au/payments-and-infrastructure/payments-system.html**

Choice: **www.choice.com.au**

Work in groups to investigate the economic role of the superannuation industry

Superannuation plays a critical role in the Australian economy because it is an important source of retirement income in Australia, it allows people to indirectly own shares, and it is a significant source of finance that can be used for investment by businesses in the economy. The introduction of compulsory superannuation in the early 1990s has prompted massive growth in this sector. You can investigate the role of superannuation by examining the publications of the Association of Superannuation Funds of Australia. The website

of Industry Super Funds has information about some of the largest superannuation organisations, and the APRA website has information about the regulation of superannuation.

Association of Superannuation Funds of Australia: **www.superannuation.asn.au**

Australian Prudential Regulation Authority: **www.apra.gov.au**

Industry Super Funds: **www.industrysuper.com**

Predict trends in interest rates in hypothetical situations

The Reserve Bank of Australia (RBA) indirectly sets interest rates in Australia to achieve its monetary policy goals. The primary goal of monetary policy is to achieve an inflation rate of 2–3 per cent, on average, over the course of the economic cycle. Because interest rate changes can take between six months and two years to have their full impact on inflation, the RBA's inflation target is forward-looking, which means it is mainly concerned with what the inflation rate will be in the medium term. The Reserve Bank makes interest rate decisions now based on its inflation forecasts, as well as a number of other indicators of price pressures and the general health of the economy, including wages growth, the exchange rate, economic growth and the level of unemployment. The Reserve Bank website contains information that can be used to predict future interest rate movements, including speeches on the conduct of monetary policy, statistics and graphs of key economic indicators and forecasts, and media statements outlining the Reserve Bank's rationale for recent interest rate decisions. You can also visit the websites of financial intermediaries, whose market economists produce their own economic forecasts and make their own predictions of Reserve Bank decisions regarding interest rates and monetary policy. Banks such as ANZ and Westpac Bank also provide perspectives on current economic developments.

Reserve Bank of Australia: **www.rba.gov.au**

ANZ: **https://news.anz.com/insights**

Westpac Bank: **https://www.westpac.com.au/news/**

Interpret Federal Budget data

The Federal Budget is the most important document outlining the Federal Government's fiscal policy objectives and strategy for the coming year. The Budget website contains all the relevant information – including summary documents such as the "Budget at a glance", the Budget Overview and the Treasurer's Budget Speech to Parliament. The Budget website also has the detailed Budget Papers and the Mid-Year Economic Fiscal Outlook. Economics blogs and major news sites also cover the Budget in detail. Using these documents, you should be able to interpret budget data and identify:

- the objectives of fiscal policy
- trends in the overall budget position
- whether the budget is expansionary or contractionary
- the key revenue and spending initiatives
- its likely impact on the economy.

Federal Budget: **www.budget.gov.au**

Analyse the performance of government business enterprises

Recent decades have seen a clear shift towards minimising the role of government in the economy, and the government's direct role in production has been substantially cut back. Many government business enterprises (GBEs) have been sold off to the private sector; many of those that remain are being treated as business enterprises with the dual roles of government service delivery and profit maximisation. Analysing the performance of GBEs can difficult because they often have many competing objectives and have more responsibilities than most private sector enterprises. The annual reports of GBEs like Australia Post are available from their websites, and they provide details of the their performances. The Productivity Commission, an independent government agency, also publishes occasional reports on the performance of government business enterprises.

Australia Post: **www.auspost.com.au**

Productivity Commission: **www.pc.gov.au**

Glossary

Absolute poverty refers to the condition of people with the lowest living standards in the global economy, and is measured by an income level of less than US$1.90 per day. See also, *relative poverty*.

Advanced economies refer to high-income, industrialised or developed economies. The group of advanced economies includes 35 economies across North America, Europe and the Asia-Pacific.

Aggregate demand refers to the total demand for goods and services within the economy. Components of aggregate demand are: consumption (C); investment (I); government spending (G); and net exports (X-M).

Aggregate supply refers to the total productive capacity of an economy, that is, the potential output when all factors of production are fully utilised.

Allocative efficiency refers to the economy's ability to shift resources to where they are most valued and can be used most efficiently. See also, *dynamic efficiency and technical efficiency*.

Appreciation is an increase in the value of an economy's currency in terms of another currency. See also, *depreciation*.

Arbitration is a dispute resolution process in which an industrial tribunal hands down a legally binding ruling to firms and employees. See also, *conciliation*.

ASEAN-Australia-New Zealand Free Trade Area (AANZFTA) is a regional trade agreement in effect from 2010.

ASEAN Free Trade Area (AFTA) is a regional free trade agreement signed in 1992 that now covers 10 South-east Asian economies: Singapore, Thailand, Malaysia, Philippines, Indonesia, Brunei, Vietnam, Laos, Myanmar, and Cambodia.

Asia Pacific Economic Cooperation (APEC) forum is a group of 21 Asia-Pacific economies including Australia that promotes free trade and economic integration.

Association of South-East Asian Nations (ASEAN) was established in 1967 to reduce regional tensions and to develop cooperative approaches in dealing with outside countries. Its members are: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.

Australia-India Economic Cooperation and Trade Agreement (Australia-India ECTA) is a regional free trade agreement signed in 2022.

Australia-New Zealand Closer Economic Relations Trade Agreement (ANZCERTA) is a bilateral free trade agreement between Australia and New Zealand, which came into effect in 1983.

Australia-United Kingdom Free Trade Agreement (A-UK FTA) is a free trade agreement signed in 2021.

Australia-United States Free Trade Agreement (AUSFTA) is a bilateral free trade agreement between Australia and the United States, which came into force in 2005.

Australian Competition and Consumer Commission (ACCC) is Australia's competition watchdog whose role is to enforce the *Competition and Consumer Act 2010* and ensure that businesses do not engage in anti-competitive behaviour.

Australian Council of Trade Unions (ACTU) is the peak trade union body in Australia, covering most trade unions.

Australian Prudential Regulation Authority (APRA) is the government body established to regulate all deposit-taking institutions, life and general insurance organisations and superannuation funds.

Australian Securities and Investments Commission (ASIC) is the government body with responsibility for corporate regulation, consumer protection and the oversight of financial service products.

Australian Trade and Investment Commission (Austrade) is a government organisation that assists Australian exporters to succeed in developing overseas markets.

Australian Workplace Agreements (AWAs) were a form of individual employment contracts between an

employer and an individual employee that were phased out in 2013.

Automatic stabilisers are instruments inherent in the government's budget that counterbalance economic activity. In a boom period, they decrease economic activity and, in a recession, they increase economic activity. The most common examples are transfer payments and a progressive tax system.

Average propensity to consume (APC) is the proportion of total income that is spent on consumption. See also, *marginal propensity to consume*.

Average propensity to save (APS) is the proportion of total income that is not spent, but is saved for future consumption. See also, *marginal propensity to save*.

Average rate of tax is the proportion of total income earned that is paid in the form of a tax. See also, *marginal rate of tax*.

Awards establish the minimum wage and working conditions for employees depending on their industry, occupation or workplace. Restructured and streamlined awards are known as modern awards.

B

Balance of payments is the record of the transactions between Australia and the rest of the world during a given period, consisting of the current account and the capital and financial account.

Balanced budget is the budget outcome in which the level of taxation revenue is equal to government spending.

Better off overall test (BOOT) is a test that enterprise agreements must pass in order to be approved under the *Fair Work Act*. It examines whether an employee is better off than they would be under the applicable industrial award.

Bilateral free trade agreement is an agreement between two economies to lower tariff levels and other trade barriers in order to encourage increased trade flows. See also, *multilateral free trade agreement* and *regional free trade agreement*.

Broad money is a measure of the money supply that consists of currency in circulation; all bank deposits, and deposits in non-bank financial intermediaries minus their holdings of bank deposits.

Brexit refers to the process of the United Kingdom ceasing to be a member of the European Union, which formally occurred on 31 January 2020.

Budget is the tool of the government for the exercise of fiscal policy. It shows the government's planned expenditure and revenue for the next financial year.

Budget deficit is a budget outcome in which government spending is greater than revenue.

Budget surplus is a budget outcome in which government spending is less than revenue.

Business cycle refers to fluctuations in the level of economic growth due to either domestic or international factors.

Business firm is an organisation involved in using entrepreneurial skills to combine factors of production to produce a good or service for sale..

C

Capital is the manufactured products used to produce goods and services, commonly described as "the produced means of production". See also, *labour*, *land*, *natural resources* and *enterprise*.

Capital and financial account records the borrowing, lending, sales and purchases of assets between Australia and the rest of the world. Financial inflow has the immediate effect of increasing the supply of foreign exchange to Australia whereas financial outflow reduces it.

Capital gains are the profits made by investors who sell their shares or assets at a price above the level that they originally paid for them.

Capital goods are items that have not been produced for immediate consumption but will be used for the production of other goods. See also, *consumer goods*.

Carbon tax is an environmental management policy in which businesses must pay a price for each tonne of carbon dioxide emitted through energy or industrial production process. It is designed to discourage activities that contribute to climate change.

Cartel describes a situation in which individual firms have implicitly or explicitly agreed to restrict competition, such as through agreements to fix prices, segregate the market, or limit the quantity of goods produced.

Cash rate is the interest rate paid on overnight loans in the short-term money market. See also, *interest rates*.

Casualisation of work refers to the growth of casual employment (and the relative decline of full-time permanent jobs) as a proportion of the total workforce. See also, *underemployment*.

Centralised incomes policy is a system in which a government or industrial tribunal determines wages and working conditions for all employees, regardless of which firm they work for. See also, *decentralised incomes policy*.

Centrally planned economy is an economic system whereby government planners make economic decisions and there is little scope for individual choice to influence economic outcome. See also, *market economy* and *mixed economy*.

Ceteris paribus is the concept in economics that in order to understand the relationship between two factors, we need to analyse the impact of one factor on another factor while assuming nothing else changes. It is a Latin phrase that means "other things being equal" or assuming that everything else is held constant.

Circular flow of income is a model that describes how economic activity occurs between the different groups in an economy. Saving, taxation and spending on imports represent leakages from the circular flow, that is, they decrease the level of economic activity. Investment, government spending and export revenue represent injections into the circular flow, that is, they increase the level of economic activity.

China-Australia Free Trade Agreement (ChAFTA) is a bilateral free trade agreement that entered into force in 2015.

Clean float is an exchange rate system in which the Reserve Bank does not intervene in foreign exchange markets to influence the value of the Australian dollar. See also, *dirty float* and *dirtying the float*.

Climate change is the long-term shifts in temperatures and weather patterns caused by emissions of greenhouse gases such as carbon dioxide, nitrous oxide and methane.

COAG is the Council of Australian Governments, which was the primary intergovernmental forum from 1992 to 2020. COAG was replaced by the National Federation Reform Council (NFRC) with the National Cabinet at its centre.

Collective agreement is a workplace agreement that is negotiated between an employer and a group of employees, usually through a union. See also, *enterprise bargaining*.

Collective bargaining (see *enterprise bargaining*)

Collective wants are wants of the whole community. This will depend on the preferences of the community as a whole and not individuals. In Australia, collective wants such as parks and libraries are most commonly provided by the government. See also, *public good*.

Collusion occurs when firms agree on a pricing or market sharing arrangement that reduces effective competition between them, and tends to inhibit the entry of competitors into the market.

Common Agricultural Policy is a scheme used by economies in the European Union to promote European farm production through export subsidies and restrictions on imports from economies outside the EU.

Common law contract is an individual agreement between an employer and employee that sets out pay and conditions for work. These are commonly used by small businesses and high-income earners not covered by awards. See also, *individual agreement*.

Comparative advantage is the economic principle that nations should specialise in the areas of production in which they have the lowest opportunity cost and trade with other nations, so as to maximise both nations' standards of living.

Competition is the pressure on business firms in a market economy to lower prices or improve the quality of output to increase their sales of goods and services to consumers. See also, *pure competition*.

Competitiveness (see *international competitiveness*)

Complement is a good that is used in conjunction with another good. For example, chargers would be a complement of laptops.

Conciliation is a dispute resolution process in which firms and employees meet to discuss their differences in the presence of a third party (such as from an industrial tribunal) who attempt to bring the parties to an agreement. See also, *arbitration.*

Constitution (Australian) is the document that provides the overall framework for Australia's system of democratic government and the relationship between the Commonwealth (or federal) and state governments.

Consumer goods and services are items produced for the immediate satisfaction of individual and community needs and wants. See also, *capital goods*.

Consumer Price Index (CPI) is a measure of the movement in the prices of a basket of goods and services weighted according to their significance for the average Australian household. It is used to measure inflation in Australia. See also, *inflation*.

Consumer sovereignty refers to the manner in which consumers, collectively through market demand, determine what is produced and the quantity of production.

Consumption function is a graphical representation of the relationship between income and consumption for an individual or an economy. It is usually upward sloping with a gradient less than one, and with a positive y-intercept.

Contracting out (see *outsourcing*)

Contractionary policies are government policies that attempt to reduce economic activity. Contractionary fiscal

policy would involve decreasing government spending or increasing taxation. Contractionary monetary policy would involve an increase in interest rates.

Convergence (see *international convergence*)

Corporatisation occurs when the government changes the rules around how government-owned businesses are operated so that they behave more like private sector businesses, independent from the government. See also, *privatisation*.

Cost-push inflation occurs when there is an increase in production costs (such as oil price increases or wage increases) that producers pass on in the form of higher prices thus raising the rate of inflation.

Council of Financial Regulators is a coordinating body for financial market regulation that provides for cooperation and collaboration among its four members – the Reserve Bank of Australia, the Australian Prudential Regulation Authority, the Australian Securities and Investments Commission, and the Australian Treasury.

Counter-cyclical policies are economic policies designed to smooth fluctuations in the business cycle. Macroeconomic policies such as fiscal policy and monetary policy are usually used as counter-cyclical policies.

Credit is loans to individuals, businesses and governments for spending on consumption and investment.

Crowding out effect occurs where government spending is financed through borrowing from the private sector, which puts upward pressure on interest rates and "crowds out" private sector investors that cannot borrow at the higher rates of interest.

Current account is the part of the balance of payments that shows the receipts and payments for trade in goods and services, as well as both primary and secondary income flows between Australia and the rest of the world in a given time period. These are non-reversible transactions.

Current account deficit (CAD) is recorded when the debits in the current account (imports and income payments to overseas) are greater than the credits (exports and income payments from overseas).

Cyclical unemployment refers to those persons that have become unemployed due to a downturn in the business cycle.

D

Debt servicing ratio is the proportion of export revenue that is used to make repayments on foreign debt, and is a common measure of the sustainability of Australia's foreign debt level.

Decentralised incomes policy is a system in which wages and working conditions are determined through negotiations between individual firms and their employees. See also, *centralised incomes policy*.

Demand is the quantity of a particular good or service that consumers are willing and able to purchase at various price levels, at a given point in time.

Demand-pull inflation occurs when aggregate demand or spending is growing while the economy is nearing its supply capacity, so that higher demand leads to higher prices rather than more output.

Depreciation (of capital) refers to the "wear and tear" that all capital goods experience, which causes their value to fall over time.

Depreciation is a decrease in the value of an economy's currency in terms of another currency. *See* also, *appreciation*.

Deregulation is the removal of government controls over an industry that is intended to make business more responsive to market forces.

Devaluation occurs when the government (or central bank) lowers the value of a currency that operates with a fixed exchange rate. See also, *revaluation*.

Developing economies are economies with a low level of material well-being and economic development, and which tend to have poor health and education standards, weak infrastructure and agriculture-based economies.

Diminishing marginal returns occur when a firm experiences a decline in additional output as it increases a factor of production (such as labour) while holding the amount of other factors of production constant.

Direct tax is a tax where the person upon whom a tax is levied must pay the tax because it cannot be passed onto someone else. For example, income tax. See also, *indirect tax*.

Dirty float is an exchange rate system in which the value of the currency is mainly determined by demand and supply in foreign exchange markets, but the Reserve Bank occasionally intervenes to stabilise the value of the Australian dollar during periods of excessive volatility. See also, *clean float* and *dirtying the float*.

Dirtying the float is where the Reserve Bank buys and sells Australian dollars in foreign exchange markets to influence the value of the exchange rate. See also, *clean float* and *dirtying the float*.

Diseconomies of scale (see *internal diseconomies of scale* and *external diseconomies of scale*)

Distribution of income (see *income distribution*)

Diversification occurs when a firm enters a new industry that is not directly related to its existing business operations.

Dividends are the profit returns received by the shareholders (owners) of a business. See also, *profit*.

Division of labour (see *specialisation of labour*)

Domestic Market Operations are actions by the Reserve Bank in the short-term money market to buy and sell second hand Commonwealth Government Securities in order to influence the cash rate and the general level of interest rates. See also, *monetary policy*.

Dumping is the practice of exporting goods to a country at a price lower than their selling price in their country of origin.

Dutch disease is a term that refers to high commodity export prices driving up the value of the currency, making other parts of the economy less competitive, leading to a higher current account deficit and a greater dependence on commodities. The term was coined in 1977 by *The Economist* magazine to describe the impact of gas discoveries on the economy of the Netherlands.

Dynamic efficiency refers to the economy's ability to shift resources between industries in response to changing patterns of consumer demand. See also, *allocative efficiency*, *technical efficiency*.

E

Ecologically sustainable development involves conserving and enhancing the community's resources so that ecological processes and quality of life are maintained.

Economic cost (see *opportunity cost*)

Economic development is a broad measure of welfare in a nation that includes indicators of health, education and environmental quality as well as material living standards.

Economic growth occurs when there is a sustained increase in a country's productive capacity over time. This is commonly measured by the percentage increase in real Gross Domestic Product. See also, *Gross Domestic Product*.

Economic policy mix refers to the combination of macroeconomic (fiscal and monetary) and microeconomic policies used by the government to achieve its economic objectives.

Economic problem involves the question of how to satisfy unlimited wants with limited resources.

Economies of scale (see *internal economies of scale* and *external economies of scale*)

Efficiency (see *allocative efficiency*, *technical efficiency* and *dynamic efficiency*)

Elaborately transformed manufactures (ETMs) are technologically advanced and high value-added manufacturing products, such as motor cars, that generally command high prices on international markets. See also, *simply transformed manufactures*.

Elasticity (see *price elasticity of demand*, *price elasticity of supply*)

Elasticity of demand (see *price elasticity of demand*)

Elasticity of supply (see *price elasticity of supply*)

Emerging economies are economies experiencing the fastest rates of growth in the global economy with many undergoing rapid industrialisation. The group includes China, India, Brazil, Mexico, Egypt and Poland and many other economies across Asia, Latin America, Central and Eastern Europe, the Middle East and North Africa.

Emissions trading scheme is an environmental management policy where the government sets a cap on the amount of greenhouse gas emissions, requires companies to have a permit to emit gases, and allows permits to be traded between companies, providing an incentive to reduce emissions.

Employer associations are organisations that are formed to represent the interests of businesses, especially in industrial relations and in lobbying the government.

Enterprise involves the organisation of the other factors of production to produce goods and services. The entrepreneur makes the decisions and bares the risk of the business. The return for enterprise is profit. See also, *land*, *natural resources*, *capital* and *labour*.

Enterprise agreement is a collective workplace agreement that sets out pay and conditions for employees. EAs are negotiated between an employer and a group of employees, usually through a union. See also, *collective agreement* and *enterprise bargaining*.

Enterprise bargaining refers to negotiations between employers and employees (or their representatives) about pay and work conditions at the level of the individual firm.

Environment is the surroundings or conditions in which human society lives, and includes the land, water, climate and plant and animal life.

Environmental management refers to actions to protect and enhance the natural environment, including protecting the quality of air, water and soil, preserving natural environments and biodiversity, ensuring the sustainable use of renewable and non-renewable resources, and minimising the negative environmental consequences of economic activity.

Equilibrium is achieved in an individual market when any consumer who is willing to pay the market price for a good or service is satisfied, and any producer who offers their goods or services at the market price is able to sell their produce. It occurs when quantity demanded is equal to quantity supplied, that is, when the market clears.

Equilibrium level of income refers to the level of income, output and employment at which the spending plans of the various sectors of the economy are identical to the aggregate production plans of the economy, that is, aggregate demand is identical to aggregate supply. Alternatively, it may be thought of as the level of aggregate income where total leakages from the economy are identical to the total injections into the economy.

Ethical decision-making is when business decisions about production methods, employment and other matters are made to improve outcomes for the broader society and the environment, and not simply to maximise profits for the firm.

Euro area (also known as the **eurozone**) refers to the monetary union of 19 countries of the European Union.

European Union (EU) is an economic and political association of 27 European nations that has a single market for goods, services, finance and labour.

Excess capacity refers to the situation where a firm or economy is operating below maximum potential output. This is due to unemployed or under-utilised resources, that is, the economy is producing inside its production possibility curve.

Exchange rates are the price of one currency in terms of another economy's currency.

Exchange settlement accounts are the funds held by banks with the Reserve Bank of Australia (RBA) in order to settle payments with other banks and the RBA.

Expansionary policies are policies that attempt to increase aggregate economic activity in the economy. Expansionary fiscal policy would involve increasing government spending or reducing taxation. Expansionary monetary policy would involve a reduction in the interest rates.

Exports are goods or services that are produced domestically and purchased by overseas consumers. See also, *imports*.

External diseconomies of scale are the disadvantages faced by a firm because of the growth of the industry in which the firm is operating, and are not the result of a firm changing its own scale of operations. See also, *internal diseconomies of scale*.

External economies of scale are the advantages that accrue to a firm because of the growth of the industry in which the firm is operating, and are not the result of the firm changing its own scale of operations. See also, *internal economies of scale*.

External stability is an aim of government policy that seeks to promote sustainability on the external accounts so that Australia can service its foreign liabilities in the medium to long run and avoid currency volatility.

Externalities are external costs and benefits that private agents in a market do not consider in their decision making process. For example, airlines and passengers do not consider aircraft noise when negotiating airfares. See also, *market failure*, *positive externality*, *negative externality*.

F

Factors of production are any resources that can be used in the production of goods and services. The four main types are natural resources (or land), capital, labour and enterprise.

Factor market is a market for any input into the production process, including land, labour, capital and enterprise. See also, *labour market* and *product market*.

Fair Work Commission is the government agency that regulates industrial relations in Australia. It combines the functions of an industrial tribunal (such as the Industrial Relations Commission) with a role of education and promotion of enterprise bargaining.

Fair Work Ombudsman is the government agency that investigates complaints and enforces compliance with Australia's workplace laws.

Financial aggregates are the Reserve Bank of Australia's three main indicators of the money supply – money base, M3 and broad money.

Fiscal policy is a macroeconomic policy that can influence resource allocation, redistribute income and reduce the fluctuations of the business cycle. Its instruments include government spending and taxation and the budget outcome.

Fixed exchange rate is when the value of the economy's currency is officially set by the government or the central bank.

Flexible peg is an exchange rate system in which the currency's value is fixed at a pre-announced level, but it can be changed by the central bank in response to the forces of supply and demand in foreign exchange markets.

Floating exchange rate is when the value of a economy's currency is determined by the forces of demand and supply in foreign exchange markets.

Foreign debt refers to the total level of outstanding loans owed by Australian residents to overseas residents. See also, *foreign equity*, *foreign liabilities*, *net foreign debt*.

Foreign direct investment (FDI) refers to the movement of funds between economies for the purpose of establishing a new company or buying a substantial proportion of shares in an existing company (10 per cent or more). FDI is generally considered to be a long-term investment and the investor normally intends to play a role in the management of the business.

Foreign equity is the total value of Australian assets such as land, shares and companies in foreign ownership. See also, *foreign debt*, *foreign liabilities*, *net foreign equity*.

Foreign exchange market (or forex market) refers to the market in which currencies are traded.

Foreign liabilities are Australia's total financial obligations (foreign debt plus foreign equity) to the rest of the world. See also, *net foreign liabilities*.

Free riders refers to when groups or individuals benefit from a good or service without contributing to the cost of supplying the good or service. As a consequence, the good or service is likely to be under-supplied in relation to the total demand.

Free trade is a situation where there are no artificial barriers to trade imposed by governments for the purpose of shielding domestic producers from foreign competitors.

Frictional unemployment are those who are unemployed due to time lags involved in the transition between jobs.

Full employment occurs when it is no longer possible to achieve a sustained reduction in unemployment through stronger economic growth. See also, *natural rate of unemployment*.

Future Fund is a Commonwealth Government investment account that receives the proceeds of budget surpluses and asset sales and invests them in order to generate returns to meet the Commonwealth Government's future superannuation liabilities.

G

Geographical mobility refers to the ability of labour to move between different locations to gain higher wages or improved employment opportunities.

Gini coefficient is a number between zero and one that measures the extent of income inequality in an economy. It is calculated by measuring the degree to which the Lorenz curve deviates from the line of equality. See also, *Lorenz curve*.

Global economy refers to the sum of the interactions between the economies of individual countries that are now increasingly linked together into one larger economic system.

Global financial crisis describes the period of extreme volatility on world financial markets in 2008 and 2009 that caused the deepest recession in the world economy since the Great Depression of the 1930s.

Globalisation refers to the integration between different countries and economies and the increased impact of international influences on all aspects of life and economic activity.

Goods and Services Tax (GST) is a 10 per cent sales tax imposed on most goods and services in Australia.

Government Business Enterprises (GBEs) (*see public trading enterprises*)

Government expenditure is an injection in the circular flow of income. It includes all money that the government spends to provide services such as health and education.

Government procurement refers to the policies and procedures for purchasing goods and services for the use of the government and public trading enterprises.

Gross Domestic Product (GDP) is the total market value of all final goods and services produced in an economy over a period of time. See also, *economic growth*.

Gross National Income (GNI) is the total income earned by domestically owned factors of production over a period of time. See also, *gross domestic product*.

Gross World Product (GWP) refers to the sum of total output of goods and services by all economies in the world over a period of time.

Group of Seven (G7) refers to the seven largest industrialised nations who meet annually to discuss economic and political issues and wield tremendous influence over the global economy. Its members are the US, UK, France, Germany, Italy, Canada, and Japan.

Growth (see *economic growth*)

G20 is the group of the world's 20 largest economies. It was formed in 1999 and has played an increasingly important role in addressing the reform of the global financial system and macroeconomic coordination. It incorporates the G7 economies, plus the European Union, Argentina, Australia, Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa, South Korea and Turkey.

H

Hard-core unemployment refers to long-term unemployed people who may be considered unemployable by employers because of personal circumstances such as drug use or mental or physical disabilities.

Heavily Indebted Poor Countries (HIPCs) are a group of developing countries, mostly in Africa, that suffer extreme external debt sustainability problems.

Hidden unemployment refers to those people who can be considered unemployed but do not fit the official definition of unemployment and are thus not reflected in the unemployment statistics.

Horizontal integration occurs when a firm takes over another business involved in the same kind of production, that is, one of its competitors.

House of Representatives is the main chamber of the Australian Parliament. When a party coalition has a majority of votes in the House of Representatives it forms a government under a Prime Minister who is also one of the 150 members of the House of Representatives.

Household savings is the proportion of total household disposable income not spent on consumption.

Human capital is the economic concept that the supply of labour cannot be simply measured by the size of the labour force, but also by its quality, which can be increased through education and training.

Human Development Index (HDI) is a measure of economic development devised by the United Nations Development Program. It takes into account life expectancy at birth, levels of educational attainment and material living standards (as measured by Gross National Income per capita).

Hysteresis is the process whereby unemployment in the current period results in the persistence of unemployment in future periods as unemployed people can lose their skills, job contacts and motivation to work.

Imperfect competition is any market structure that is not a perfectly competitive market, which gives individual firms the ability to influence price levels.

Imported inflation occurs when there is an increase in the price of imports, either due to inflation in the economies of our trading partners or because of a depreciation of the A$, which results in higher prices of consumer imports and imported inputs.

Imports are goods and services that are produced overseas and purchased by domestic consumers. See also, *exports*.

Income is the amount of money, or other benefits measured in money terms, which flow to individuals or households, usually for their contribution to the production process or as a direct payment from the government over a period of time.

Income distribution refers to the way in which an economy's income is spread among the members of different social and socio-economic groups.

Indirect tax is a tax that is levied on an aspect of economic activity other than a person or an organisation's income, such as sales tax. See also, *direct tax*.

Individual agreement is an agreement between an employer and individual employee that sets out pay and conditions for work. These are commonly used by small businesses and high-income earners not covered by awards. See also, *common law contract*.

Industrial dispute occurs when employers or employees take action to disrupt the production process in order to highlight a disagreement between employers and employees.

Industrial relations refers to the relationship between employers, employees, and their representatives. See also, *industrial relations system*. Also known as workplace relations.

Industrial relations system involves the laws, institutions and processes established to manage relations between employers and employees. The structure of the industrial relations system determines the process of wage determination and conflict resolution in the Australian labour market. Also known as workplace relations system.

Industrial tribunals are government agencies that oversee the industrial relations system and attempt to prevent or resolve workplace conflict between employees (usually represented by unions) and employers (sometimes represented by employer associations). Fair Work Commission is the main industrial tribunal in Australia

Industry is the collection of firms involved in making a similar range of items that usually compete with each other, such as the financial services industry or the car industry.

Industry policy involves measures to support the development of key industries and increase the competitiveness of domestic industries against foreign competitors.

Inelastic demand (see *price elasticity of demand*)

Inelastic supply (see *price elasticity of supply*)

Infant industry argument refers to the argument that newly established or "infant" industries during the early years are not competitive with established industries in other countries and may need protection from overseas competition in order to survive.

Inflation is the sustained increase in the general level of prices over a period of time, usually one year. This is commonly measured by the percentage change in the Consumer Price Index (CPI).

Inflation targeting occurs when a central bank implements monetary policy with the aim of achieving a particular level of inflation. In Australia, the Reserve Bank has an inflation target of 2-3 per cent, on average, over the course of the economic cycle.

Inflationary expectations is where inflation may be perpetuated by the expectations of workers and firms that it will occur.

Infrastructure Australia is the expert national body that advises the Government on national infrastructure planning.

Injections into the circular flow model of income are those flows of money that increase aggregate income and the general level of economic activity. The three injections are investment, government spending and exports. See also, *leakages*.

Interest is the reward to the factor of production capital for its use in the production of goods and services. See also, *wages*, *profit* and *rent*.

Interest rate differential is the difference between two interest rates, either between two economies' interest rates or between a financial institution's borrowing and lending interest rates.

Interest rates are the cost of borrowing money expressed as a percentage of the total amount borrowed.

Intermediate goods are semi-finished goods that are transformed into higher-value goods before sale to consumers (for example, steel is an intermediate good in the production of motor vehicles). See also, *capital goods* and *consumer goods and services*.

Internal diseconomies of scale are the cost disadvantages (specifically, the increase in marginal costs per unit) faced by a firm as a result of the firm expanding its scale of operations beyond a certain point. They occur when a firm's output level is above the technical optimum. See also, *external diseconomies of scale*.

Internal economies of scale are the cost saving advantages that result from a firm expanding its scale of operations. They occur when a firm's output level is below the technical optimum. See also, *external economies of scale*.

International business cycle refers to fluctuations in the level of economic activity in the global economy over time.

International competitiveness refers to the ability of an economy's exports to compete on global markets. An economy may be competitive by selling products of a higher quality or a lower price than its competitors.

International convergence refers to the increasing similarity of economic conditions in different economies during the globalisation era, in terms of economic systems, performance and structure, and living standards.

International division of labour is how the tasks in the production process are allocated to different people in different countries around the world.

International Monetary Fund (IMF) is an international agency that consists of 190 members and oversees the stability of the global financial system. The major functions of the IMF are to ensure stability of exchange rates, exchange rate adjustment and convertibility.

Investment is any current expenditure where the benefits will be obtained in the future. Most typically, this injection will involve the purchase of capital goods or the build up of stock or inventory.

J

J-curve effect is an economic concept that suggests that a depreciation of a currency will lead to a short-term deterioration of Australia's trade balance (as exporters receive lower revenue for a given quantity of exports and import spending rises for a given quantity of imports) and a long- term improvement in the trade balance as exports become more competitive and imports less competitive, so that export volumes rise and import volumes fall.

Jobactive was a federally-funded network of employment services agencies, which provided employers with recruitment assistance and helped job seekers find work. In 2022, Jobactive was replaced by Workforce Australia. See also, *Workforce Australia*.

K

Korea-Australia Free Trade Agreement (KAFTA) is a bilateral free trade agreement between Australia and Korea signed in 2014.

Kyoto Protocol is an agreement signed by 192 parties since 1997 designed to lower emissions of carbon dioxide and other greenhouse gas emissions in order to combat climate change.

L

Labour is human effort, both physical and mental, used to produce goods and services. The return for labour is wages. See also, *land*, *capital* and *enterprise*.

Labour force consists of all the employed and unemployed persons in the country at any given time. Also known as the workforce.

Labour force participation rate (LFPR) (see *participation rate*)

Labour on-costs (see *on-costs*)

Labour market is where individuals seeking employment interact with employers who want to obtain the most appropriate labour skills for their production process.

Labour market policies are microeconomic policies that are aimed at influencing the operation and outcomes in the labour market, including industrial relations policies that regulate the process of wage determination as well as training, education and job-placement programs to assist the unemployed.

Labour productivity refers to the quantity of output produced in a production process per unit of labour per unit of time. See also, *multifactor productivity*.

Land is the natural resources used to produce goods and services. The return for land is rent. See also, *capital*, *land* and *enterprise*.

Leakages are the items that remove money from the circular flow of income, decreasing aggregate income and the general level of economic activity. The three leakages are savings, taxation and imports. See also, *injections*.

Least Developed Countries (LDCs) are those economies that suffer from low living standards (as measured by GDP per capita levels less than around US$900 per year) and longer term impediments to economic development.

Liquidity is the ease with which a financial asset can be transformed into cash so it can be used as a medium of exchange.

Local content rules specify that goods must contain a minimum percentage of locally made parts to qualify for trade protection assistance.

Long-term unemployment refers to a person being unemployed for a period of one year or longer.

Lorenz curve is a graphical representation of income distribution, plotting the cumulative increase in population against the cumulative increase in income. See also, *Gini coefficient*.

M

M3 is a measure of the money supply that consists of all currency in circulation, bank deposits with the Reserve Bank and private sector deposits in banks.

Macroeconomic policies are policies that affect the economy as a whole with the aim of minimising fluctuations in the business cycle. Also referred to as demand management or counter-cyclical policies.

Malaysia-Australia Free Trade Agreement (MAFTA) is a bilateral free trade agreement between Australia and Malaysia signed in 2012.

Managed exchange rate is an exchange rate system where the value of the currency is determined or substantially influenced by central bank intervention in the foreign exchange market, but where the level of exchange is not held at a permanently fixed level.

Marginal propensity to consume (MPC) is the proportion of each extra dollar of earned income that is spent on consumption. See also, *average propensity to consume*.

Marginal propensity to save (MPS) is the proportion of each extra dollar of earned income that is not spent, but saved for future consumption. See also, *average propensity to save*.

Marginal rate of tax is the proportion of each extra dollar earned that must be paid in tax. See also, *average rate of tax*.

Market clearing occurs when there is equilibrium in the market, that is, when the demand and supply curves intersect, when quantity demanded equals quantity supplied and there is no tendency for change.

Market economy is an economic system whereby all major economic decisions are made by individuals and private firms, which are both motivated by self-interest, without government intervention. See also, *centrally planned economy* and *mixed economy*.

Market equilibrium (see *equilibrium*)

Market failure occurs when the price mechanism takes into account private benefits and costs of production to consumers and producers, but it fails to take into account indirect costs such as damage to the environment.

Market learning (also known as learning by doing) is where a business becomes more efficient at producing a particular good or service as it gains more experience producing that good or service. This will shift the business's average cost curve downwards and shift its supply curve to the right.

Merit goods are goods that are not produced in sufficient quantity by the private sector because private individuals do not place sufficient value on those goods, that is, they involve positive externalities that are not fully enjoyed by the individual consumer. Merit goods include education and health care.

Microeconomic policies are policies that are aimed at individual industries, seeking to increase aggregate supply by improving the efficiency and productivity of producers.

Migration is the movement of people between countries on a permanent or long-term basis, usually for 12 months or longer.

Microeconomics is concerned with the study of economics at the level of individual economic actors or sectors of industry.

Mixed economy is an economic system where the decisions concerning production and distribution are made by a combination of market forces and government decisions. See also, *market economy* and *centrally planned economy*.

Mobility of labour (see *geographical mobility*, *occupational mobility*)

Monetary aggregates (see *financial aggregates*)

Monetary policy is a macroeconomic policy that aims to influence the cost and supply of money in the economy in order to influence economic outcomes such as economic growth and inflation. The Reserve Bank of Australia (RBA) administers monetary policy by influencing the level of interest rates.

Monetary union is where two or more countries share a common currency.

Money is the medium of exchange in most modern economies.

Money base is a measure of the money supply that consists of all currency in circulation and all bank deposits with the Reserve Bank.

Money wage (see *nominal wage*)

Money supply is the total amount of funds in an economy that can be used as a medium of exchange, a measure of value, a store of value and a method of deferred payment. The Reserve Bank's measure of the money supply is M3.

Monopolistic competition is a market structure in which there are many sellers producing differentiated products, and there are no significant barriers to entry. This is not the same as monopoly.

Monopoly describes an industry where there is only one seller producing a unique product. There are high barriers to entry, so the monopolist has market power and can determine price or output (but not both). See also, *natural monopoly*.

Multifactor productivity refers to the quantity of output produced in a production process per combined input of labour and capital per unit of time. See also, *labour productivity*.

Multilateral free trade agreement is an agreement between a number of countries, usually in a region, to lower tariff levels and other forms of protection in order to encourage increased trade flows. See also, *bilateral free trade agreement* and *regional free trade agreement*.

Multinational corporations are firms that sell and produce goods or services in more than one country. See also, *transnational corporations*.

Multiplier is the greater than proportional increase in national income resulting from an increase in aggregate demand.

N

National competition policy is an agreement between Australia's Commonwealth and state governments signed in 1995 to encourage microeconomic reform throughout the Australian economy.

National Federation Reform Council (NFRC) is a forum including the Prime Minister, Premiers, Chief Ministers, and Treasurers, which meets to focus on priority national federation issues. The NFRC replaced the Council of Australian Governments in 2020.

National saving is the proportion of national income not spent by consumers, firms or the government.

Natural monopoly is a market situation in which only one operator can operate efficiently in an industry, usually because of extremely high barriers to entry, for example, the capital cost of a railway network.

Natural rate of unemployment refers to the level of unemployment at which there is no cyclical unemployment, that is, where the economy is at full employment. See also, *full employment*, *non-accelerating inflation rate of unemployment (NAIRU)*.

Natural resources include all the resources provided by nature that are used in the production process. These are often simply referred to as "land". The reward (return) to the owners of natural resources is called rent. See also, *land*, *capital*, *labour*, *enterprise.*

Necessities (see *needs*)

Needs are individual desires for the basic necessities of life, such as food and shelter.

Negative externality is an unintended negative outcome of an economic activity whose cost is not reflected in the operation of the price mechanism. See also, *positive externality*.

Net errors and omissions is the entry on the balance of payments that ensures that the sum of the current account and the capital and financial account equals zero.

Net foreign debt refers to the level of outstanding loans owed by Australian residents to overseas residents minus the level of outstanding loans owed by overseas residents to Australian residents. See also, *foreign debt*.

Net foreign equity is the value of Australian assets such as land, shares and companies in foreign ownership

minus the value of foreign assets in Australian ownership. See also, *foreign equity*.

Net foreign liabilities are equal to Australia's financial obligations (foreign debt plus foreign equity) to the rest of the world minus the rest of the world's financial obligations to Australia. See also, *net foreign debt* and *net foreign equity*.

Net primary income is a component on the current account of the balance of payments calculated by subtracting primary income debits from income credits. Primary income debits include interest payments, dividends and rent paid by Australians on foreign liabilities, while income credits consist of similar payments by foreigners to Australians.

Net secondary transfers is a component of the current account that includes all transactions in which products or financial services are provided without a specific good or service being provided in return. This includes items such as aid to developing nations.

Net zero emissions are achieved when anthropogenic emissions of greenhouse gases to the atmosphere are balanced globally by anthropogenic removals over a specified period – in other words, the amount of greenhouse gases that an economy produces is the same or less than the amount it removes.

Newly industrialised countries (NICs) refers to economies that experience rapid economic growth in national output over an extended period, some of which now have living standards that are similar to advanced industrialised countries.

No disadvantage test is a requirement applied to workplace agreements to ensure that employees are not made worse off under an agreement than under their applicable award. This test is now known as the Better off Overall Test (BOOT).

Nominal wage is the pay received by employees in dollar terms for their contribution to the production process, not adjusted for inflation. See also, *real wage*.

Non-accelerating inflation rate of unemployment (NAIRU) refers to the level of unemployment at which there is no cyclical unemployment, that is, where the economy is at full employment. See also, *natural rate of unemployment*.

Non-excludable goods are goods or services whose consumption cannot be restricted to those willing to pay for them, such as clean air and national defence. The private sector is generally unwilling to provide non-excludable goods because individuals may not pay for using them. See also, *free riders*, *public good*.

Non-renewable resources are inputs to production where the stock of the resource is reduced in the process of production and consumption, for example, petroleum and coal. See also, *renewable resources.*

Non-rival goods are goods and services whose consumption by one individual does not reduce the ability of other individuals to also consume the good or service. See also, *public good*.

North American Free Trade Agreement (NAFTA) was a free trade agreement between the United States, Canada and Mexico in effect from 1994 to 2020. It has been replaced by the United States-Mexico-Canada Agreement. See also, *United States-Mexico-Canada Agreement (USMCA)*

Non-wage outcomes are the benefits that many employees receive in addition to their ordinary and overtime payments, such as sick leave, superannuation, a company car, study leave or arrangements for employees to work from home for part of the week.

O

Occupational mobility refers to the ability of labour to move between different occupations to gain higher wages or improved employment opportunities.

Okun's Law explains the relationship between unemployment and economic growth, showing that to reduce unemployment, the annual rate of economic growth must exceed the sum of percentage growth in productivity *plus* increase in the size of the labour force in any one year.

Oligopoly describes a market structure consisting of a few large firms producing slightly differentiated products. There are significant barriers to entry and each firm engages in non-price competition.

On-costs are the additional costs to business of employing labour (beyond their wage rates) such as sick leave and workers' compensation.

Open Market Operations (see *Domestic Market Operations*)

Opportunity cost represents the alternative use of resources. Often referred to as the "real" cost, it represents the cost of satisfying one want over an alternative want. This is also known as economic cost.

Organisation for Economic Cooperation and Development (OECD) is an organisation of 38 developed countries that seeks to promote economic growth and free markets amongst its members.

Outsourcing occurs when an organisation pays another business to perform a function that it does not regard as a core part of its business focus. Also known as sub-contracting or contracting out.

Outlay method (see *total outlay method*)

Participation rate refers to the percentage of the population, aged 15 and over, in the labour force, that is either employed or unemployed.

Perfect competition (see *pure competition*)

Perfectly elastic demand is where consumers demand an infinite quantity of a good or service at a particular price but nothing at all at a price above this. This situation can be represented by a horizontal demand curve.

Perfectly elastic supply is where producers are willing to supply an infinite quantity of a good or service at a particular price but nothing at all at a price below this. This situation can be represented by a horizontal supply curve.

Perfectly inelastic demand is where consumers are willing to pay any price in order to obtain a given quantity of a good or service. This situation can be represented by a vertical demand curve.

Perfectly inelastic supply is where producers are willing to supply a given quantity of a good or service regardless of price. This situation can be represented by a vertical supply curve.

Phillips curve is a graphical representation of the theory that the economy faces a trade-off between low levels of inflation and low levels of unemployment.

Policy mix (see *economic policy mix*)

Portfolio investment refers to the short-term movement of funds between economies for loans or the purchase of small share holdings (less than 10 per cent of the total value of a company).

Positive externality is an unintended positive outcome of an economic activity whose value is not reflected in the operation of the price mechanism. See also, *negative externality*.

Poverty (see *absolute poverty*, *relative poverty*)

Precautionary motive is the demand for money for the purposes of unpredictable circumstances and emergencies for which people need to have liquid assets such as cash.

Price ceiling is a maximum price set by the government for which a good, service or factor of production can be sold, usually resulting in market disequilibrium as market demand will be greater than market supply.

Price discrimination is when a firm sells the same good or service in different markets (or to different consumers) at different price levels.

Price floor is a minimum price set by the government for which a good, service or factor of production can be sold, usually resulting in market disequilibrium as market supply will be greater than market demand.

Price elasticity of demand measures the responsiveness of quantity demanded to a change in price. It is calculated as the percentage change in quantity demanded divided by the percentage change in price.

Price elasticity of supply measures the responsiveness of quantity supplied to a change in price. It is calculated as the percentage change in quantity supplied divided by the percentage change in price.

Price mechanism is the process by which the forces of supply and demand interact to determine the market price at which goods and services are sold and the quantity produced.

Price stability is a goal of government economic policy seeking to restrain the growth rate of the general price level, essentially meaning low inflation.

Prices and incomes policy is a government macro-economic policy that seeks to control the growth rate of prices and/or wages and expand employment by imposing restraints on wages growth.

Primary financial markets are markets in which firms raise funds by selling financial assets, such as shares or debentures, to investors.

Private good is a good that is temporarily or permanently used up when someone consumes it and is easy to exclude people who are unwilling to pay for its benefits. See also, *public good*.

Private sector refers to those sectors of the economy that concern private individuals, that is, the household, the firm and the financial sector.

Privatisation occurs when the government sells public trading enterprises to the private sector. See also, *corporatisation*.

Product differentiation is when firms try to make their good or service look different from competitors (such as through packaging or product image) to increase brand loyalty and give the firm some degree of price setting power.

Product market is the interaction of demand for and supply of the outputs of production, that is, goods and services.

Production possibility frontier is a graphical representation of all the possible combinations of the production of two goods and services (or two types of goods and services) that the economy can produce at any given time.

Productivity refers to the quantity of goods and services the economy can produce with a given amount of inputs such as capital and labour. See also, *labour productivity* and *multifactor productivity*.

Profit is the return to the factor of production enterprise for its role in the production of goods and services. See also, *interest*, *rent* and *wages*.

Profit motive refers to the process by which a business seeks to maximise profit by using the lowest cost combination of resources and charging the highest possible price.

Progressive tax system is a tax system in which higher income earners pay proportionally more tax. As income increases, the average rate of tax increases.

Proportional tax system is a tax system in which all income earners pay proportionally the same amount of tax. The average rate of tax remains constant as income rises.

Protection refers to government policies that give domestic producers an artificial advantage over foreign competitors, such as tariffs on imported goods.

Public company is an entity whose shares are traded freely on the share market, and are not subject to any restrictions on being transferred to other parties.

Public good is an item that private firms are unwilling to supply as they are not available to restrict usage and benefits to those willing to pay for the good. Because of this, governments should provide these goods. See also, *private good*.

Public sector refers to the parts of the economy that are owned or controlled by the government. It includes all tiers of the government as well as government business enterprises.

Public sector goods are goods and services provided by the government such as train services and hospitals. See also, *public good*.

Public Trading Enterprises (PTEs) are businesses owned and managed by a government at either the Commonwealth or state level.

Purchasing power parity (PPP) states that exchange rates should adjust to equalise the price of identical goods and services in different economies throughout the world.

Pure competition describes the theoretical market structure where there are many buyers and sellers. They each sell a homogeneous product and there are no barriers to entry into the industry. They are price takers, as individually they have no power to influence price.

Q

Quality of life refers to the overall well-being of individuals within a country according to their material living standards and a range of other indicators such as education levels, environmental quality and health standards. See also, *standards of living*.

Quantitative easing involves a central bank creating new money electronically, and then injecting it into the money supply through buying assets, usually government bonds, from investors such as fund managers and banks. By increasing liquidity and lowering interest rates, quantitative easing aims to increase borrowing and stimulate economic activity in the private sector.

Quotas refer to restrictions on the amounts or values of various kinds of goods that may be imported.

R

Real Gross Domestic Product is the total value of all final goods and services produced in an economy over a period of time, adjusted for changes in the general price level.

Real cost (see *opportunity cost*)

Real wage is a measure of the actual purchasing power of money wages (that is, adjusting nominal wages for the effects of inflation). See also, *nominal wage*.

Recession is the stage of the business cycle in which there is decreasing economic activity, defined as two consecutive quarters (six months) of negative economic growth, that is, a fall in GDP.

Regional business cycles are fluctuations in the level of economic activity in a geographical region of the global economy over time.

Regional free trade agreement is a multilateral agreement between three or more economies within a geographic region to lower tariff levels and other forms of protection in order to encourage increased trade flows. See also, *bilateral free trade agreement* and *multilateral free trade agreement*.

Regressive tax system is a tax system in which lower income earners pay proportionally more tax. As income increases, the average rate of tax falls.

Regulation is the collection of government rules and institutions that influence the operation of markets and the participants in markets.

Relative poverty refers to those whose standards of living are substantially lower than the average for the economy as a whole, and is often defined as a level of income below 30 per cent of average earnings. See also, *absolute poverty*.

Renewable Energy Target (RET) is the policy to increase Australia's production of electricity from renewable energy such as solar, wind, and geothermal energy to 33,000 gigawatt hours per year by 2020. The target stays the same from 2020 to 2030, with new renewable energy power stations still able to be accredited after 2020.

Renewable resources are inputs into the production process that reproduce themselves, ensuring that present consumption of these resources does not necessarily reduce the ability of future generations to consume these resources in the future, for example, timber. See also, *non-renewable resources*.

Rent is the return to the factor of production natural resources (land) for its use in the production of goods and services. It does not just include rent from property but all income rewards derived from the productive use of natural resources. See also, *wages*, *interest* and *profit*.

Reserve assets refer to holdings of foreign currency and gold held by the Reserve Bank to use in foreign exchange markets in order to influence the value of the Australian dollar.

Reserve Bank of Australia (RBA) is Australia's central bank. Its main roles are to conduct monetary policy and oversee the stability of the financial system.

Returns to production are the payments made to factors of production to compensate for their use. The returns to production include: wages to labour, rent on land, interest on capital and profit on enterprise.

Revaluation occurs when the government, or central bank, increases the value of a currency that operates with a fixed exchange rate. See also, *devaluation*.

S

Salary (see *wages*)

Satisficing behaviour is the idea that firms will attempt to pursue a satisfactory level in all goals (profit maximisation, sales maximisation etc.) rather than maximising any single goal.

Savings represent the amount of disposable income that is not spent on consumption. Savings is a leakage from the circular flow of income, which is necessary to fund investment. The reward for savings is interest.

Seasonal unemployment affects those persons unemployed due to the seasonal nature of their work. Their jobs are only available at certain times of the year such as fruit picking or being a shopping centre Santa Claus.

Secondary financial markets are markets in which investors trade financial assets, such as shares or debentures, with other investors.

Share is a type of financial asset that provides an individual with ownership over part of a business or company.

Share market is a market for the sale of equity interests in companies.

Simply transformed manufactures (STMs) are low-value added manufacturing goods that generally command low prices on international markets, such as socks and singlets. See also, *elaborately transformed manufactures*.

Singapore-Australia Free Trade Agreement (SAFTA) is a bilateral free trade agreement between Australia and Singapore that was signed in 2003.

Social welfare payments are payments from the government to assist people with basic costs of living. A number of terms are commonly used for transfer payments including: transfer payments, government benefits, social security, income support and Centrelink payments.

Specialisation occurs when an economy concentrates on producing a particular set of goods or services in which it has a comparative advantage.

Specialisation of labour occurs when the volume of production is large enough for workers to concentrate on a particular stage of the production process.

Speculators are investors who buy or sell financial assets with the aim of making profits from short-term price movements. They are often criticised for creating excessive volatility in financial markets.

Stagflation occurs when the rate of inflation and the rate of unemployment rise simultaneously.

Standards of living refers to the material wellbeing of individuals within a country, usually measured by Gross National Income (GNI) per capita. See also, *quality of life*.

Structural change involves changes in the patterns of production that reflect changes in technology, consumer demand, global competitiveness and other factors. It results in some products, processes and even industries disappearing, while others emerge.

Structural unemployment describes those persons unemployed because of a mismatch between their skills and those skills demanded by employers. This occurs due to factors such as technological change and rapid changes in consumer demand, where labour skills cannot adapt quickly enough to such changes.

Stock exchange is an organisation that provides facilities for investors to trade shares and other financial assets. See also, *share market*.

Sub-contracting (see *outsourcing*)

Subsidies are cash payments from the government to businesses to encourage production of a good or service and influence the allocation of resources in an economy. Subsidies are often granted to businesses to help them compete with overseas produced goods and services.

Substitute is a good that consumers may choose to buy in place of another good, such as butter and margarine or tea and coffee.

Superannuation is a form of saving that individuals cannot access until they reach retirement age.

Supply is the quantity of a good or service that all firms in a particular industry are willing and able to offer for sale at different price levels, at a given point in time.

T

Tariffs are taxes on imported goods imposed for the purpose of protecting Australian industries.

Tax (see *taxation*)

Tax base is the items that are taxed by the government, such as income, wealth or consumption.

Tax-free threshold refers to the level of income below which income tax is not payable.

Taxation is a leakage from the circular flow model of income. It refers to the amount of revenue that the government obtains from different sectors and activities in the economy.

Technical efficiency is the ability of an economy to achieve the maximum level of output for a given quantity of inputs. See also, *allocative efficiency* and *dynamic efficiency*.

Technical optimum is the most efficient level of production for a firm. At this point, average costs of production are at their lowest possible level.

Technology transfer occurs when falling global barriers to trade and financial flows allow developing economies to access more advanced technology from overseas.

Terms of trade measures the relative movements in the prices of a economy's imports and exports over a period of time. The terms of trade index is calculated as export price index divided by import price index multiplied by 100.

Thailand-Australia Free Trade Agreement (TAFTA) is a bilateral free trade agreement between Australia and Thailand signed in 2003.

Total outlay method is a way to calculate the price elasticity of demand by looking at the effect of changes in price on the revenue earned by the producer. If price and revenue move in the same direction, demand is inelastic; if price and revenue move in the opposite direction, demand is elastic; and if revenue remains unchanged in response to a price change, demand is unit elastic.

Trade bloc occurs when a number of countries join together in a formal preferential trading agreement to the exclusion of other countries.

Trade liberalisation is the process of reducing tariffs, subsidies and other barriers to trade in order to encourage increased linkages between economies.

Trade union is an organisation that represents the interests of workers, primarily by seeking to improve their wages and working conditions.

Trade Weighted Index (TWI) is a measure of the value of the Australian dollar against a basket of foreign currencies of major trading partners. These currencies are weighted according to their significance to Australia's trade flows.

Tragedy of the commons refers to a situation where the failure of the market to assign costs to individuals leads to an overuse of resources such as the natural environment, which have no single owner.

Transactions motive is the demand for money for day-to-day purchases for which people need to use money.

Transfer payments (see *social welfare payments*).

Transition economies are former socialist economies that are now becoming market economies, and are concentrated in Central and Eastern Europe and Asia.

Transmission mechanism explains how changes in the stance of monetary policy pass through the economy to influence economic objectives such as inflation and economic growth.

Transnational Corporations (TNCs) are global companies that dominate global product and factor markets. TNCs have production facilities in at least two countries and are owned by residents of at least two countries.

Treasury is the Australian Government department responsible for developing fiscal policy through the Federal Budget, and advising the government on financial stability issues.

U

Underemployment refers to those persons who are working less than full time (and therefore not unemployed) but would like to work more hours.

Underlying inflation is a measure of the increase in the general price level that removes the effect of one-off or volatile price movements.

Unemployment refers to a situation where individuals want to work but are unable to find a job, and as a result labour resources in an economy are not utilised.

Unemployment rate is the number of people officially unemployed as a percentage of the labour force.

Union (see *trade union*)

Unit elasticity of demand is where a change in price causes a proportional change in quantity demanded such that total spending by consumers on a good remains unchanged.

United Nations is a global organisation of 193 member states established in 1945 with a broad agenda covering the global economy, international security, the environment, poverty and development, international law, and global health issues.

United States-Mexico-Canada Agreement (USMCA) came into effect on 1 July 2020. It is an updated version and replacement of the NAFTA. See also, *North American Free Trade Agreement (NAFTA)*.

Utility is the satisfaction or pleasure that individuals derive from the consumption of goods and services.

V

Valuation effect is where an appreciation (or depreciation) of the currency causes an immediate decrease (or increase) in the Australian dollar value of foreign debt.

Voluntary export restraints are agreements to restrict the number of exports to another country in exchange for a similar concession from the other nation.

W

Wages are the return to the factor of production labour for its use in the production of goods and services. These not only include wages but also salaries, fees, commissions and other earnings. See also, *interest*, *profit*, *rent*.

Wants are material desires of individuals that provide some pleasure when they are satisfied. This will depend on personal preferences. Wants are said to be unlimited. See also, *collective wants*.

Wage Price Index is a measure of growth in hourly rates of pay that is released quarterly by the Australian Bureau of Statistics. It is regarded as the most reliable indicator of underlying wage growth as the index is not affected by changes in bonuses or the quality or quantity of work.

Wealth is the value of the stock of assets held by individuals at a point in time.

Wealth effect occurs when an increase in the price of assets such as property and shares leads to an increase in consumption. This occurs because rising asset prices make the owners of these assets feel wealthier and so more willing to spend a greater a proportion of their income.

Welfare (see *utility*, *social welfare payments*)

Workable competition is the government's objective to achieve the maximum level of competition within an industry that is compatible with the market structure and specific conditions of the industry, that is, a situation where all markets are contestable.

Workforce (see *labour force*).

Workforce Australia is a federal government service that enables people to search for jobs and information related to employment.

Workforce participation rate (see *participation rate*)

Workplace relations system is the laws, institutions and processes established to determine wage outcomes and manage interactions between employees and employers. Also known as *industrial relations system*.

World Bank is a financial institution owned by 189 member countries that assists poorer nations with economic development through loans (often at little or no interest rates) to fund investment and reduce poverty. See also, *Heavily Indebted Poor Countries (HIPCs)*.

World Trade Organization (WTO) is an organisation of 164 member countries that implements and advances global trade agreements and resolves trade disputes between nations.

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Terms in **bold** font are key terms.

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