

**SACE TWO**

# **ECONOMICS**

**WORKBOOK  
FIRST EDITION**

**NEIL WEBSTER**



## THE AUTHOR

**Neil Webster** B.A. Dip T(SEC.)

Neil has taught Economics with over 30 years experience and has previously published material on this subject. His experience includes:

- positions of President and Treasurer of the Economics Teachers' Society of SA
- SACE Board curriculum writing
- over 10 years SACE Stage 2 Economics examination marking
- preparation of SACE resources for Economics teachers

## ACKNOWLEDGMENTS

I would like to thank a number of people who have contributed to this book

- Simon Kneebone for his brilliant cartoons
- Irene Webster for her patient support
- Sam Webster for his technical assistance
- Colleagues Di Averis, Anne Bitter, Wendy Jacobs, Viv Lackey, Christine Leane, Robyn Walter, Arch Volkhardt and Alan Wilkins for their checking and suggestions
- John Trentelman for generous sharing of his book
- Laura Deane for her professional editing
- Year 12 Walford economics classes for their valuable feedback
- Chris Burrows, Bernadetta Chaustowski and Alice Speirs for sustained, patient and crucial proofreading and suggestions

## PUBLISHING INFORMATION

This Workbook is part of the Essentials series, designed to support the teaching of SACE Stage 1 and 2 subjects in South Australia. It is specially designed to meet the requirements of the SACE Stage 2 Economics.

**The Essentials Education series is published by**

**Adelaide Tuition Centre,**

**21 Fourth Street, Bowden 5007.**

**TELEPHONE (08) 8241 5568**

**FACSIMILE (08) 8241 5597**

*Essentialseducation.com.au*

### **LIBRARY CATALOGUE:**

**Webster; Neil**

1. Economics - 2. Essentials Workbook

**ISBN - 978-1-925505-42-9**

First Edition 2021.

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## How to use this book

This book is written specifically for the revised SACE Stage 2 Economics course, ready for teaching and learning from the 2021 academic year.

- Chapter 1 is an introduction to how economists view the world and their particular language but does not form part of the core.
- Chapters 2, 3, 4, 5 and 6 are aspects of microeconomics and macroeconomics and are core learning and teaching, with the exception of most of chapter 4.4. The only parts of 4.4 required are “Determination of the exchange rate” and “Effects of change in the exchange rate”.
- Chapters 7 and 8 provide explanation and detail for two of the contexts listed in the subject outline that may “form the basis for teachers to design scenarios for enquiry”.

Teachers and students of year 12 economics, I wish you enjoyment and success in your study and teaching. I also welcome your feedback.

# Topic summaries

## Key Area 1: The Economic Problem

### Topic 1: Identifying the Economic Problem

- A fundamental concept in economics is the economic problem – the problem that human wants are unlimited but the resources available to satisfy those wants are limited. The problem is global because all people are faced with it. Since it is not possible to satisfy all wants, choices must be made. Making a choice involves opportunity cost. Students investigate the economic problem, wants, resources, choice, and opportunity cost, and use the production possibility frontier model to illustrate the economic problem, choice, opportunity cost, and efficiency.
- As a result of the economic problem, societies are faced with making choices about what goods and services are to be produced from scarce resources; the way in which these goods and services are to be produced; and the distribution of these goods and services to members of society. Society uses an economic system to answer the following questions:
  - What to produce?
  - How to produce?
  - For whom are goods and services produced?
- Students investigate the traditional, planned, and market economic systems to understand and evaluate how these systems deal with the questions of what, how, and for whom. They develop an awareness that economic systems change over time and are always in transition. Students should have a basic understanding of the causes and effects of major system change, including the transition from planned to market systems.

Source: SACE Economics Subject Outline [www.sace.sa.edu.au](http://www.sace.sa.edu.au)

## Key Area 2: Microeconomics

### Topic 2: The Price Mechanism

- Students analyse the interaction between consumers and producers in a market, and the way in which this can be illustrated in demand and supply diagrams. They use supply and demand curves to identify the effects on price, quantity traded, and equilibrium price and quantities.
- Students develop an understanding of the concept of price elasticity of demand and the price elasticity of supply. Students predict the pricing behaviour of producers, using the total revenue method.

Source: SACE Economics Subject Outline [www.sace.sa.edu.au](http://www.sace.sa.edu.au)

### Topic 3: Markets in Practice

- Market structures affect the economic outcomes for producers and consumers. Students investigate the features of the following market structures: perfect competition, monopolistic competition, oligopoly, and monopoly. (Note that knowledge of cost and revenue curves is not required.)
- Students evaluate market structures in terms of meeting the needs of consumers and producers, using criteria that include price, choice, quality, efficiency, profitability, and the use of new technology.
- Students investigate the effects of market failure on consumers and producers, including the undersupply of goods and the impact of uncompetitive markets, externalities, and asymmetric information. Students evaluate measures to redress undesirable market outcomes.
- Students analyse and evaluate the consequences of the following government interventions on markets, including consumer and producer surplus and deadweight loss:
  - price ceilings
  - price floors
  - subsidies and
  - tax.
- Students develop an understanding of the duopoly market structure through a basic study of game theory. Game theory is a way of understanding how people interact based on the constraints that limit their actions, motives and beliefs about what others will do. They solve simple 2 x 2 games, and explore and understand the concepts of Nash equilibrium, pay-off and preferences.

Source: SACE Economics Subject Outline [www.sace.sa.edu.au](http://www.sace.sa.edu.au)

## Key Area 3: Macroeconomics

### Topic 4: Macroeconomic Objectives and Their Measurement

Students develop an understanding of macroeconomic objectives, their measurements and recent trends. The macroeconomic objectives are:

- **Full employment of labour**
  - The notion of full employment
  - Indicators of unemployment, including the unemployment rate and the participation rate
  - The causes of unemployment, including cyclical, structural, frictional, and seasonal causes
  - Changing employment trends, including casualisation and part-time work
  - The effects of unemployment on the economy and the individual
- **Price stability**
  - The notion of price stability
  - An indicator of price stability: the percentage change in the consumer price index (note that details of the construction of the consumer price index are not required)
  - The causes of inflation
  - The effects of inflation on the economy and the individual
- **Economic growth**
  - The notion of economic growth
  - An indicator of economic growth: the percentage change in real gross domestic product (GDP)
  - An overview of the production, expenditure, and income methods of calculating GDP
  - The effects of economic growth on the economy and the individual
- **External balance**
  - The notion of external balance
  - The structure of the current account
  - The impact of capital flows
  - Indicators of external balance
    - » the exchange rate and its determination
    - » the current account deficit as a percentage of real GDP
    - » overseas debt as a percentage of real GDP
  - The causes of external imbalance
  - The effects of external imbalance on the economy and the individual

Source: SACE Economics Subject Outline [www.sace.sa.edu.au](http://www.sace.sa.edu.au)

### Topic 5: Determination of Output and Price Level

- Students apply their understanding of indicators to determine the phase of the business cycle that an economy is in.
- Students use the five-sector circular flow model to understand the relationship between different sectors of the economy.
- Students analyse the effects of leakages and injections on the level of income and expenditure in an economy. They evaluate the significance and impact of the expenditure multiplier as well as changes to the exchange rate.
- Students analyse the potential cause and effect of changes in the aggregate demand and aggregate supply in the AD-AS model. They evaluate the impact of these changes against the macroeconomic objectives.
- Students analyse the aggregate demand–aggregate supply (AD-AS) model (including both short-run and long-run aggregate supply curves) to identify equilibrium in the model and determine output and price level.

Source: SACE Economics Subject Outline [www.sace.sa.edu.au](http://www.sace.sa.edu.au)

### Topic 6: Economic Policy

Students explore the policies that governments and central banks use to meet macroeconomic objectives in different phases of the business cycle. They evaluate the intended and unintended consequences of these policies against the macroeconomic objectives and the business cycle. They evaluate the appropriate policy combination to manage the economy effectively.

- **Demand management**

The definition and impact on the economy of:

- fiscal policy
- monetary policy.

- **Supply management**

The impact on the economy of reforms relating to, for example:

- competition
- the labour market
- the deregulation of industries
- the privatisation of government enterprises
- taxation.
- Students apply the aggregate demand – aggregate supply model and the circular-flow model to predict the outcome of demand and supply management policies.
- Students examine the problems that government may experience when implementing economic policy, including:
  - the conflict between macroeconomic objectives
  - the limitations of available measurement
  - the implementation and impact lags of policy
  - the need to decide on the correct policy mix and the effect of this on the economy
  - institutional and political factors
  - external influences.

Source: *SACE Economics Subject Outline* [www.sace.sa.edu.au](http://www.sace.sa.edu.au)

## Key Area 4: Globalisation

### Topic 7: Globalisation

Students investigate and evaluate:

- the arguments for and against involvement in free trade and the effects of free trade on the internal economy
- the effects of protection on the internal economy
- participation in international trade agreements (e.g. World Trade Organisation agreements) and the effects of this on the internal economy
- possible impacts of the operation of transnational corporations and the growth of capital mobility
- possible impacts of the operation of institutions, including the World Bank.

Source: *SACE Economics Subject Outline* [www.sace.sa.edu.au](http://www.sace.sa.edu.au)

## Key Area 5: Poverty and Inequality

### Topic 8: Poverty and Inequality

Students investigate and evaluate:

- the concept of ecologically sustainable development and implications for global poverty and human progress of adopting ecologically sustainable development principles
- economic and social indicators of global poverty and inequality, including gross national income and human development indices
- the causes of inequality and poverty, including population pressures; lack of investment in human and physical capital; lack of effective governance; lack of access to international markets; and social and cultural factors
- ways and means of promoting economic and human development (including population policy, access to education, capital accumulation, access to international markets, and foreign aid) through the factors of production.

Source: *SACE Economics Subject Outline* [www.sace.sa.edu.au](http://www.sace.sa.edu.au)

# Examinations

Practising on past examination papers is the best use of your time in the last few weeks before examinations start. They provide essential practice in writing answers, expressing your ideas with very economical use of words. The other valuable aspect of using past examination papers is that you will be practising on examination-style questions. By the time you get to do the examination itself, you will not be put off by the style of questions and you will be more confident because you will have ‘done it before’!

## 1. Answering examination questions

### PART A: Questions based on articles

#### 1. Introduction

Articles are chosen by examiners to provide a certain amount of information to help you, and as a basis for questions to test your knowledge and understanding of the course. The articles are not usually published articles but are written by the examiners so that they suit their purposes.

It is important to identify the topics that are relevant to the article. Read it and the questions, and then re-read the article to help with your answers. It is useful to recall definitions and other key information as you read.

Some students find it useful to re-read and highlight the key points in an article that appears complex.

Text: refer to “Economics Key Ideas SACE Stage 2 Fifth Edition” (2021) by Neil Webster, published by the Adelaide Tuition Centre, for explanations.

#### 2. Deconstructing articles and answering the questions

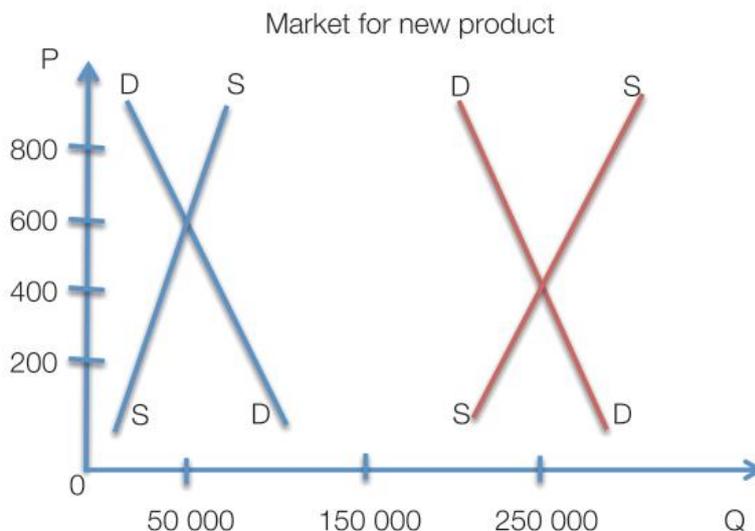
The 2011 SACE Stage 2 Economics examination Part A

##### 2011 Question 1

Refer to the following table, which shows demand and supply information for a new product.

	Equilibrium price	Equilibrium quantity
Year 1	\$600	50 000 per year
Year 2	\$400	250 000 per year

- (a) (i) The diagram below shows demand and supply conditions in year 1. Indicate on the diagram the demand and supply conditions in year 2. (1 mark)



Year 2's demand and supply curves would both be drawn to the right of year 1's to represent increases in both supply and demand. These are shown in red. This is the only change that would result in equilibrium at a lower price and a much greater quantity.

(ii) Give two reasons for the change in market conditions you have shown in part (a)(i). (2 marks)

*Reason 1:* Your first reason could explain a shift in the demand curve to the right, for example consumers got to know and like the new product.

*Reason 2:* Your second reason could explain the supply shift to the right, for example producers achieving economies of scale as they produce more.

(iii) Describe how the change in market conditions from Year 1 to Year 2 you indicated in part (a)(i) will influence the answer to the question ‘for whom are goods and services produced?’ in this economy. (1 mark)

The ‘for whom’ question is about who gets what share of the economy’s production of goods and services, and this share is determined by income. Since the quantity sold increased from 50,000 to 250,000 per year, a suggested answer is that producers of the new product have enjoyed increased sales and therefore increased revenue and income, and so they now have a greater income than before.

(b) In economic theory, which one of the following types of market economic system is most likely to exhibit innovation and flexibility that lead to the development of new products? Tick the appropriate box. (1 mark)

- Planned economies
- Market economies
- Economies in transition
- Traditional economies

Knowledge of characteristics of the three types of economic systems, lead to the answer ‘market economies’, because the other two, planned and traditional, do not have market signals of changing prices that they can respond to. Economies in transition are economies that are moving from a command to a market system, and the system is not fully formed.

## 2011 Question 2

### Markets in Practice – The Restaurant Industry

The number of restaurants in cities has grown in recent years as consumer tastes, lifestyles, and incomes change.

A feature of the restaurant industry is that businesses enter and exit frequently. Successful restaurants are able to build customer loyalty, and benefit from customer recommendations. Consumers who wish to eat at some of the more successful restaurants often need to reserve a table, weeks in advance. The popularity of some restaurants has allowed their owners to increase prices.

Although the market generally performs well, government intervention can help to fully meet the needs of both consumers and producers and to redress market failure.

(a) (i) Identify the most likely market structure of the restaurant industry

(ii) Justify your answer to part (a)(i). (1 mark each)

To identify a market structure and to justify your decision, knowledge of the features of the four market structures are used. The second paragraph, whose topic sentence begins with “A feature of ...”, is therefore the one to use. The features “enter and exit frequently”, “able to build customer loyalty”, and “allowed their owners to increase prices”, all point to monopolistic competition, and these should be used to justify the answer to part (a) (i) in part (a) (ii).

(iii) State how the market structure you identified in part (a) (i) may meet the needs of (1) consumers (2) producers. (1 mark each)

The article does not help with this question. To answer, match your knowledge of market objectives (for consumers: price, competition, efficient resource allocation, information, level of technology; and for producers: profit, technical innovation, specialisation, information) with the ability of each market form to meet these market objectives. In (1) you could outline how consumer objectives of choice or competition are met because there are many suppliers or explain that their lack of very much market power keeps their prices low. In (2) you could explain that some producers achieve good profits through successful product differentiation, or the benefit of low barriers to entry.

- (b) (i) *Explain how a restaurant's success in building customer loyalty may affect the price elasticity of demand for a meal at that restaurant. (2 marks)*

The article does not help with the answer to this question either, except for providing a market context and example. The question uses the restaurant market to test your understanding of price elasticity of demand for a restaurant meal. You need to demonstrate this understanding by referring to its definition – that is, the degree to which the quantity demanded responds to a change in price – in explaining how quantity demanded is affected by customer loyalty.

Customer loyalty makes those loyal customers less responsive to a change in price—or, in economics language, their price elasticity of demand is reduced—as many would probably still eat at their favourite restaurant even if the prices rose.

- (ii) *Explain how knowledge of the price elasticity of demand for a restaurant meal could help restaurant owners to decide whether to increase prices. (2 marks)*

Your study of price elasticity of demand included a way of determining whether revenue would increase or decrease if the price was changed, depending on whether price elasticity of demand for the product was relatively elastic or relatively inelastic. The Economics Subject Outline refers to this as “the revenue method”. You should explain that if demand is relatively price elastic, then an increase in price will result in a proportionately bigger decrease in the quantity demanded than the increase in price. For example, if the price were increased by 10%, quantity demanded would decrease by more than 10%, in which case the revenue (price multiplied by quantity) would decrease.

- (c) *Which one of the following would be the most likely barrier to entering the restaurant industry? Tick the appropriate box. (1 mark)*

- *High level of market concentration*
- *Anti-competitive behavior of rival businesses*
- *Advertising costs associated with establishing a new business*
- *High research and development costs*

This question is testing your knowledge of the four market structure models. You need to apply your knowledge of the characteristics of each of the monopolistic competition model. The answer is “Advertising costs ...” because the other choices are features that are not associated with monopolistic competition.

- (d) (i) *Identify one type of market failure that could be associated with the restaurant industry. (1 mark)*

Here you need to run through your memory of the types of market failure. Most students learn four – asymmetric information, under-provision of public goods, the existence of positive and negative externalities, and the impact of uncompetitive markets.

It is useful to notice that part (ii) of this question asks you to explain an example of how government intervention could redress the type of market failure you identify here. It is a good idea to take this into consideration when choosing your answer to part (i).

- (ii) *Identify and explain one type of government intervention that could redress market failure of the type you identified in part (d)(i). (2 marks)*

This part of the question examines your knowledge and understanding of how government intervenes in markets to redress market failure, as well as your ability to apply that understanding by giving a good explanation. For two marks you would need to identify a type of government intervention and then explain how it could redress the impacts of market failure.

If you named externalities in part (i), you could refer to a fine whose purpose would be to impose the cost of pollution on the producer.

If you named market power in part (i), you could explain that the Australian Competition and Consumer Commission (ACCC) plays the role of a ‘watchdog’ responsible for investigating reported breaches of the Trade Practices Act such as anti-competitive behavior.

## 2011 Question 3

## External balance—different concerns

Country A is a net importer of commodities, while Country B is a net exporter of commodities, and both countries are experiencing contrasting balance of payments issues. In recent years Country A has experienced consistent current account surpluses and Country B has experienced consistent current account deficits. Country A has been accused of fixing its currency at too low a level, to maintain a balance of trade surplus. Government officials from Country A have responded by arguing that an appreciation of its currency would have negative economic consequences not only for its own economy but also for the economies of countries from which it imports and to which it exports.

External balance statistics for Country A and Country B are given below:

Statistic	Country A	Country B
Balance on goods and services	\$8bn surplus	\$2.4bn surplus
Current account balance as a percentage of GDP	8%	-3.4%
Exchange rate	Fixed	Floating

- (a) Explain the discrepancy between Country B's current account balance as a percentage of GDP and Country B's balance on goods and services. (2 marks)

This question is testing your knowledge of the current account and its components. The final current account balance – whether a surplus or deficit – is determined by adding the balance of the components, being trade, incomes transfers and other current transfers, the last being relatively small and insignificant.

You need to first identify the discrepancy – Country B's trade surplus but current account deficit – and then explain it. A large, negative incomes balance for the period would outweigh the positive trade balance and leave an overall negative balance in the current account.

- (b) Describe one possible negative and one possible positive effect of a current account deficit. (1 mark each)

*Negative:*

This question tests your knowledge of the effects of a country's external imbalance. A country with a current account deficit needs to borrow to pay for imports and income transfers to other countries.

Your answer can choose from the need to service the debt with repayments including interest, the risk of the economy not being able to pay its way, the possible loss of credit rating, the loss of some investor confidence, the threat of entering a debt cycle and policy responses that tighten local conditions such as interest rates, taxation and government spending.

*Positive:*

The positive effects are the value of the spending on imported capital goods and the value of foreign investment.

Improving an economy's stock of capital goods increases its production possibilities, its productivity and its level of technology. Foreign investment can bring development of local industries and resources, improvements in efficient production, marketing reach and expertise, and management know-how.

- (c) Evaluate the claim of government officials from Country A that an appreciation of its currency would have negative economic consequences for

- Country A's economy
- The economies from which Country A imports
- The economies of countries to which Country A exports. (6 marks)

A six-mark answer needs to not only explain and discuss the consequences of appreciation for each of the three groups given, but also evaluate the claim that they are negative.

First, explain that appreciation of Country A's exchange rate reduces export earnings and increases import spending. Further, it worsens the major macroeconomic objectives of economic growth and employment. Follow this with the simple evaluation that the consequences are indeed mostly negative.

Without repeating explanations already given in this answer, the second part of the answer could point out that economies, from which Country A now imports more, will increase their export earnings. For these countries the macroeconomic consequences will be positive.

The third part of the answer is to say that economies that buy Country A's exports will find them more expensive and so switch spending to their domestic production. This is a positive consequence for their economic growth but not for their price stability.

**2011 Question 4**

Refer to the table below, which shows changes to indicators of economic performance for a country over a 12-month period.

Indicator	Change
Dwelling approvals	Down by 12%
New car sales	Down by 5%
Household savings ratio	Up by 5%
Consumer sentiment	Down for 12 successive months
Business investment	Up by 2%
Job vacancies	Down by 2%

(a) (i) Identify one coincident indicator shown in the table above. (1 mark)

Coincident indicators are those that measure economic activity occurring at the same time as production. New car sales, job vacancies or business investment could be given in answer to this question, as these occur at about the same time as the goods are produced.

(ii) With reference to the table above, explain the likely impact of the changes in the leading indicators on aggregate demand in this country in the next period. (2 marks)

Leading indicators measure economic activity occurring before actual production and can be used to predict changes in production. Dwelling approvals, household savings ratio and consumer sentiment are leading indicators in the list. For two marks, identify these and use your powers of interpretation and analysis by explaining that fewer buildings, more household saving and less consumption spending are likely to reduce aggregate demand in the next period.

(b) (i) Define the term 'investment'. (1 mark)

Definitions have to be memorised, although word-perfect reproduction is not necessary. A correct definition of investment is spending by firms on capital goods plus any additions to stock.

(ii) Explain how an increase in business investment can affect productivity of labour. (2 marks)

Productivity of labour refers to the amount of production per unit of labour. For two marks, explain that production per unit of labour increases with investment because workers are able to produce more goods and services per hour when assisted by capital goods such as tools, equipment and machinery.

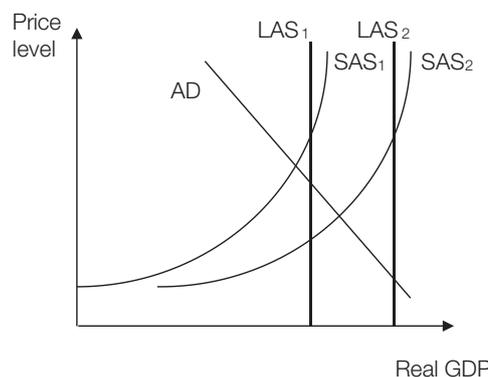
(iii) By completing the aggregate demand – aggregate supply diagrams below, show how the change in productivity of labour you explained in part (b)(ii) would affect: (2 marks)

(1) short-run aggregate supply

The question requires a graphical interpretation of the previous answer. Greater productivity will reduce production costs per unit of output at every price level, or, to explain it another way, will increase quantity supplied at every price level. Either way, increased productivity will shift the short-run aggregate supply curve to the right, to SAS<sub>2</sub> in the diagram below, to intersect the aggregate demand curve at a higher level of real GDP.

(2) long-run aggregate supply

Just as it will shift the production possibilities curve outward, increased productivity shifts the long-run aggregate supply curve to the right, to LAS<sub>2</sub> in the diagram below, representing a higher level of real GDP at full employment, because it increases the productive capacity of the economy.

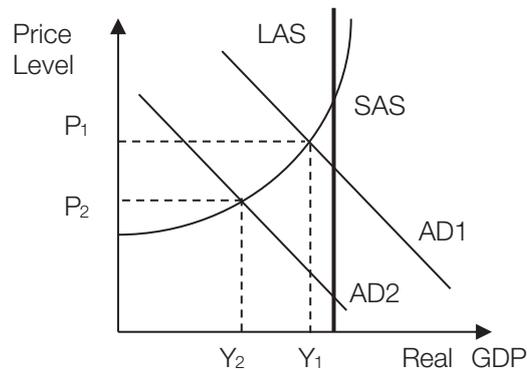


- (c) (i) Using the information for the 12-month period shown in the table on page 8, explain how consumer expenditure in this economy is likely to have changed over this period. (2 marks)

Increased household savings ratio and decreased consumer sentiment are the two factors in the table that affect consumption spending. Name these and explain how they will each cause households to reduce their spending.

- (ii) Discuss how the change in consumption expenditure you explained in part (c)(i) may affect the achievement of the macroeconomic objective of full employment. Complete the aggregate demand – aggregate supply diagram to support your answer. (3 marks)

Use your knowledge of the components of aggregate demand to explain that consumption spending will reduce it, referring to your diagram (for example “aggregate demand will reduce to  $AD_2$ ”). Explain that in response, producers will drop their prices and reduce their quantity, and so the price level and real GDP will both fall, again referring to the labels of your diagram. You will probably earn one mark for a correct, labelled diagram and two for a clear explanation.



- (d) Using the circular-flow model and the concept of the expenditure multiplier, explain the process by which an increase in investment expenditure may affect the achievement of the macroeconomic objective of economic growth. (5 marks)

You need to explain the expenditure multiplier process in terms of the circular flow of income model. Recalling the circular flow diagram, start with investment spending and explain that its first effect is to cause firms to buy resources from households, paying them in the form of income. When increased income flows to households, households spend a certain percentage of this extra income, increasing consumption expenditure. Increased consumption expenditure causes a further round of increases in the circular flow, starting a second increase in production and therefore income payments by firms to households. In this way, you are describing in words the flow of money around the circular flow diagram. Explain next that the process just described is repeated several times, increasing income each time, but by a reduced amount each time. Summarise by saying that the total increase in total spending is the sum of the original investment spending and the consumption spending induced by it. The final result is a higher level of production, and hence economic growth has occurred.

# Interpreting, planning and answering essay questions

## The 2011 SACE Stage 2 Economics examination Part B

### 2011 Question 5

'Many countries choose to use **demand management policies** in response to a **major downturn**, such as the Global Financial Crisis, but long-term economic management should also **include supply management policies**.'

Evaluate this statement with reference to examples.

### Interpreting

First, the key phrases in the essay question need to be identified and I have suggested the three printed in bold type above. Next, notice that the question requires evaluation of the statement. Your essay will evaluate the use of demand management policies to respond to a major downturn, and also evaluate the use of supply management policies to achieve the same thing, in order to decide to what extent to agree with the first part of the statement. It will be necessary to also comment on the use of these two types of policies for long-term economic management and decide whether they should both be used.

### Planning

An easy essay plan is to discuss demand management policies first, in two paragraphs, one for fiscal and one for monetary policy. Then a discussion of the use of supply management policies could follow. There is no need to discuss every type of supply management policy, just explain examples. Finally, a conclusion giving a final evaluation will give a succinct answer to the question. This plan will be laid out in the introduction.

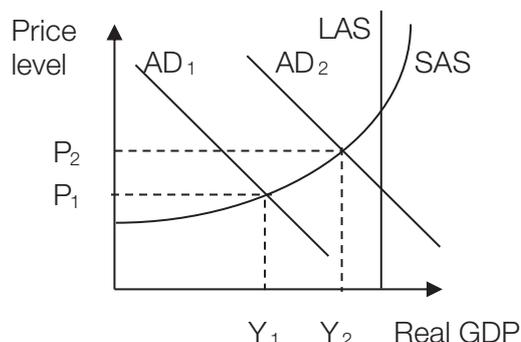
### Answering

#### Introduction

The introduction is used to define major terms and introduce, by name, the paragraphs to follow. Define 'major downturn' in the introduction and define, or make clear the meaning of, the others in the relevant paragraphs. To introduce the paragraphs, you can say that demand management policies – fiscal and monetary policy – can both be used to reduce the immediate effects of a major downturn but supply management policies are long-term policies to be constantly maintained and improved.

#### Paragraph 2

Explain how fiscal policy can increase aggregate demand – that is, with increased government spending or reduced taxation or both. Both are components of aggregate demand, and so an increase in government spending is an increase in aggregate demand. An example of government spending could be school buildings. This increases production, that is, increases GDP. Draw a new AD curve on your diagram to represent increased aggregate demand. Label the new curve, say,  $AD_2$ . Also show that the new equilibrium level of real GDP will be higher, and label this, say,  $Y_2$ . Refer to these labels in the text of your answer.

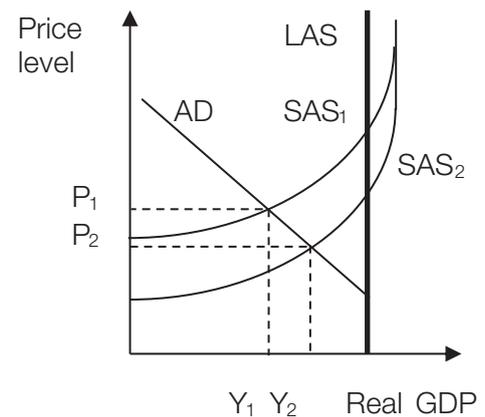


#### Paragraph 3

Explain how monetary policy can increase aggregate demand – that is, by lowering the official interest rate. This stimulates borrowing as all interest rates decrease and facilitates other spending as repayments of existing loans are reduced. You might also mention that it improves consumer and business confidence, further stimulating spending. Refer to the same diagram because the effect of expansionary monetary policy is the same as the effect of expansionary fiscal policy. You might mention other advantages and disadvantages of demand management policy; for example, monetary policy has an impact lag of about 18 months so it acts slower than government spending.

### Paragraph 4

Explain that supply management policies also increase GDP by increasing aggregate supply. Draw a diagram with two short run aggregate supply curves; the second to the right of the first and demonstrating increased GDP. Write a list of supply policies. Explain how they work using an example. You could use, say, labour market reform that can encourage productivity growth by linking it to wage rises. Explain that improved productivity shifts both the SAS and LAS curves, SAS by reducing production costs and LAS by improving production methods or technology. (See textbook) Refer to the diagram in the text of your answer, as described earlier. Mention some advantages and disadvantages of supply policies such as their long-term nature – they take years to impact but they help economic growth and, in addition, assist with the other three major macroeconomic objectives.



### Conclusion

You could conclude by agreeing with the statement in general and explaining why you agree, by using the main points of your essay. These will be the advisability of using expansionary demand management policies – fiscal and monetary – in the short term to respond to a major downturn, but also to use expansionary supply management policies to assist in the long term, not only with economic growth but also with the other major macroeconomic objectives.

### 2011 Question 6

*'The arguments for **free trade outweigh** the arguments for **protection.**'*

*Evaluate this statement with reference to examples.*

### Interpreting

The key phrases in the essay question are “free trade”, “protection” and “outweigh”. In order to decide to what extent the statement is true, the two sets of arguments need to be weighed and compared. To do this it is advisable to weigh each argument as you discuss it, for example by saying how important it is to the economy or by considering counter arguments.

### Planning

The essay can be split into two sections, one on each set of arguments, one paragraph on each argument. In your planning time, list the arguments and decide on an order of presentation, to allow an argument to follow logically from another. The order might change as you write. You might decide also to put more than one argument in a paragraph, either because they are small or because they relate. It is important to try to evaluate the arguments, not merely explain them. Do this by arguing how strong or weak they are, depending on the importance of the issue.

Here is a suggested list of arguments.

#### Free trade

- Improved standard of living
- More foreign investment
- Better international relations
- Improved production efficiency
- Income redistribution away from inefficient firms

#### Protection

- Protection against loss of industries
- Protection from unemployment
- Protection from dumping and cheap foreign labour
- Protection of infant industries
- Improved external balance

## Answering

### Introduction

The introductory paragraph can be used to set out the essay plan, very briefly, by simply naming each paragraph or section – just as you would introduce people, by naming them. The introduction is also commonly used to define major terms, but in this case, it is probably better to define free trade and protection at the beginning of each section. Begin each paragraph with a topic sentence – that is, include the name of the paragraph in the first sentence. This sentence can either summarise or begin the argument.

### Paragraph 2

Begin with a statement about the importance of the standard of living argument. Explain that liberalisation of trade reduces prices of imports for each country, as tariffs are reduced and other protective measures are removed. Reduced import prices increase competitive pressure on domestic producers, keeping local prices down too. Therefore, households can afford to buy more goods and services, increasing their standard of living, especially as imports improve their choice, too.

### Paragraph 3

The production efficiency argument follows logically from the explanation above. Competition from cheaper imports puts pressure on domestic firms to improve their productive efficiency to reduce costs, and also to improve product quality. Make the point that improving competitiveness with the rest of the world is important for the domestic economy – making such a point is a way of “weighing” an argument, by giving it extra weight.

### Paragraph 4

Inefficient firms will close or lose sales to those that compete effectively, redistributing resources to more efficient firms. You could make the point that this improves the economy’s efficiency in general.

### Paragraph 5

Trade liberalising agreements also liberalise international investment. Advised by economists, governments very much favour foreign investment for its power to develop resources and industries. There are also costs of foreign investment, but the benefits are believed to outweigh them.

### Paragraph 6

The argument that increased trade improves international relations, in order to protect that trade, is a short one and could be added to another paragraph.

### Paragraph 7

At the beginning of the protection section, a definition of protection should be followed by a list of protective measures.

### Paragraph 8

The protection from unemployment argument follows logically from the previous paragraph. You could explain that loss of sales, loss of firms, perhaps loss of whole industries – like the Australian textile manufacturing industry – creates unemployment. You could give an opinion that protection against loss of industries and unemployment are the strongest arguments in favour of protection. This adds weight to these arguments.

### Paragraph 9

Explain that protection reduces the incidence of dumping, defining the term ‘dumping’ to show how tariffs make it harder to do. Cheap labour in foreign countries like China gives those countries’ firms a price advantage, which tariffs can also reduce. Here a counter argument could be advanced – that dumping can be dealt with in other ways that do not interfere with the major advantages of liberalising labour, such as through legislation and customs scrutiny.

### Paragraph 10

The infant industry argument, similarly, has two sides, allowing you to reduce the weight of these arguments. The main argument is that firms in infant industries – like the Australian computer manufacturing industry – it is difficult and perhaps impossible to grow in the face of competition from large, established international firms. A counter argument is that government can provide support for a young industry – as they have done for the Australian car manufacturing industry, and still do – without imposing protection.

### Paragraph 11

Explain that protection reduces imports and thereby improves external balance as less income is paid to overseas producers.

### Conclusion

Use the main points of your essay to weigh up the two sides of the debate. Use the values you have ascribed to various arguments to judge the total weight of each group. For example, you could argue that the arguments for free trade, though not more numerous, are stronger than the arguments for protection, and you have shown this in your paragraphs. Make a final statement saying to what extent the statement is true.

**2011 Question 7**

*'The implementation and impact lags of economic policy are more important than the other problems that government may experience when implementing economic policy.'*

Evaluate this statement with reference to examples.

**Interpreting**

The question requires a judgement of the relative importance of problems of implementing policy, with particular attention given to the two mentioned, implementation lags and impact lags. To do this it is advisable to assess each problem as you discuss it, by saying how important it is to the economy. Implementation lags and impact lags could be discussed first, followed by several other problems. Then the relative importance of the first two and the others will have to be discussed and a conclusion drawn.

**Planning**

The essay can be split into two sections, one on implementation and impact lags and one on other problems. In the 'other [problems]' section, you might decide to put more than one argument in a paragraph, either because they are small or because they relate. You will need to make every effort to find an example of each problem and give an explanation that demonstrates your understanding. It will be better to write a small number of well-written paragraphs incorporating explained examples, rather than a large number of small paragraphs in which you say little about the problem.

A suggested list of problems is:

Implementation and impact lags (first), objectives clash, mix of policies, pressure groups, advice, changes, knowledge, political objectives, inadequate statistics, and magnitude of action.

**Answering**

Begin each paragraph with a topic sentence and end each with a sentence linking back to the question – in other words, say how the paragraph helps answer the question, how it advances your argument. Note that it is not necessary to write a separate short paragraph on each problem, but you might prefer to put some problems together in the same paragraph.

**Introduction**

Introduce each paragraph or section by name and define the two lags mentioned in the question. In this case, it is not necessary to name every other problem of policy that you might refer to, just the section of 'other problems'. Indicate the direction of your argument—that is, what your decision is likely to be.

**Paragraphs**

- Say how important the two lags are and support this with your arguments.
- Then use an AD-AS diagram to explain how objectives clash when aggregate demand is shifted – how two objectives are assisted but the other two are hindered.
- Say that it is difficult to get the policy mix right, and outline issues in determining which mix of policies will be best. Some circumstances are trickier than others, such as both inflation and unemployment at high levels.
- Governments are influenced by various pressure groups wanting different policies. Examples of pressure groups include environment groups, unions, farmers, the Business Council of Australia and others.
- Conflicting advice is received from different economic, social and political advisors. Give what examples you can, depending on how much time and words you can spend on this paragraph.
- Explain that changes in economic conditions can impact the effectiveness of policies, giving an example such as drought or the global financial crisis, and suggesting its impact.
- Explain that economic theory is not good enough to accurately predict economic conditions in the future, or the precise impact of economic policies.
- Political and economic objectives may clash. An example you could use is a government trying to bring achieve a budget surplus as a political objective, which may clash with current economic objectives, especially if an election was close.
- Statistics are not completely reliable. For example, some of the most important statistics rely on surveys of a small sample of people.
- Getting the right magnitude of action is not always easy. For example, raising government debt to spend in response to the global financial crisis was a policy that was difficult to end, and continued for several years.

**Conclusion**

Give your final answer. You will probably disagree with the statement. Support your decision with the main points from your essay, avoiding repetition.

# Topic 1: Identifying the Economic Problem

## 1.1 The Economic Problem

### 1. Nature of economics

Economics is about the material aspect of society, about goods and services that households consume, and firms produce. It teaches us how economic decisions are made and the consequences of those decisions. Economics investigates many questions. What economic forces shape our decisions? How do economic mechanisms operate? How are prices set? How much environmental improvement can we afford? Will an arts and comedy festival make a profit for a state? Economics studies how we decide, individually and collectively, what we want to produce and what resources we are prepared to use to get it.

#### Ecoterm

Economics is the study of how a society uses its scarce resources to satisfy its wants.

### The economic problem

Each society wants an unlimited amount of goods and services. Individuals and groups consume goods and services to satisfy wants. However, the resources available to each society are scarce in comparison to the society's wants. This is the 'economic problem' faced by all societies and is discussed in the next section. Economics studies how societies solve the economic problem.

### Economic decisions

Economics studies how basic economic decisions are made.

- How will we, collectively and individually, choose which of our wants to satisfy, since we cannot satisfy them all?
- What resources will be used in producing the goods and services we need to consume in order to satisfy these wants?
- What proportion of the society's total production of goods and services will be available to each individual and group?

These decisions are very important to us.



Economics studies how economic decisions affect individuals and groups. How will a decision by the Reserve Bank of Australia to increase interest rates affect households and businesses? Will Australian exports be affected? How can disadvantage be minimised? Not all economic decisions have such wide-ranging effects. Even a farmer's decision to remove trees or to graze stock on the banks of a creek will create benefits and costs for his own household, and for other businesses and households as well.

## Social science

Economics is a social science. This means that it studies an aspect of society – the economic aspect rather than the legal, social, political or religious aspect – in a scientific manner.

It is about society – how humans behave, how we solve problems and how we organise ourselves. It seeks to explain, describe and analyse people's economic behaviour. It involves logical reasoning and conclusions based on factual evidence. It uses its own language with terms that are precisely defined, and the first task of the economics student is to learn this language and use it correctly.

Sciences involve experiments and economics is no exception. However, no laboratories are involved. To analyse the effects of economic conditions and economic decisions, we make use of thought experiments. These involve using models, or theories, to predict the effects of changes. Controlled experiments allow only one element to change at a time. For example, as the weather begins to cool after summer, and no other changes occurred in the market for air conditioners, we can use market theory to predict that their prices will decrease.

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## 2. Models

Economists use models to explain economic processes and to analyse economic events. In a similar way, a plastic model of a heart is used in biology to study the heart. It shows its shape, size and components but it cannot simulate the heart's beating or a heart attack. Models are used in a similar way in economics because they are useful simplifications of the real world and help us to understand it. Economic models are usually in the form of a graph or diagram or are computer-generated. The price determining mechanism is one such model.

Experiments in economics are thought experiments rather than physical experiments, like those performed in test tubes, but it is still important to perform controlled experiments. By allowing only one variable to change, an economist aims for a reliable conclusion. The aim is to provide logical explanations of what can be expected to result from economic decisions.

## 3. The economic problem

We all face the economic problem in our daily lives and we are familiar with it. We would all like to have more than our resources allow. Relative to our unlimited wants, resources are scarce. Note that scarcity is relative. The sun's energy is not often regarded as scarce, indeed there is no price on it, apart from the cost of harnessing it, and so it is a free resource. However, most resources are not free, and their relative scarcity helps determine their price. The more a resource's availability is exceeded by our demand for it, the higher its price.

### Ecoterm

The economic problem faced by every society is that wants are unlimited but resources are relatively scarce.

Each individual wants more goods and services than it is possible to have, ranging from the basic needs of food, clothing and shelter to goods and services that will improve our comfort, entertainment, self-image, and experiences. As our incomes increase, so do our wants, and even very wealthy people want more than they can afford.



*Oil is a scarce resource. Petrol prices go up as oil becomes scarcer.*

As well as individual wants, each group of people wants particular goods and services collectively. For example, Australians collectively want transport infrastructure (road, rail and air transport facilities), national defence, education services and so on. These too exceed the resources needed to supply them.

The economic problem applies to individuals, households, firms (businesses), communities such as local councils, states, and to whole societies. **Each nation's economy must make choices to decide which wants will be satisfied, and which resources will be used to make goods and service to satisfy those wants.**

Notice that economics deals only with material wants, rather than spiritual, emotional or intellectual wants such as justice, peace, love and happiness. Each society has a range of resources available to it for producing goods and services that will satisfy material wants.

## 4. Wants

Wants are material desires of individuals and communities, satisfied by the consumption of goods and services. Some wants are for essential goods and services but some we don't even know we want until we see them! Wants are unlimited. Once we have satisfied basic wants, others present themselves. Some change with fashion, others are habitual and still others are recurrent, such as the daily want for bread.

Some wants are individual, such as the desire to tell the time, or have a soft drink. Others are collective wants such as education or open spaces for recreation. Collective wants are the result of decisions by groups or communities. It may not be profitable for a firm to supply collective goods and so they are often public goods, provided by government. Publicly produced goods and services such as state schools and national parks are paid for with taxation revenue.

## 5. Goods and services

Firms produce goods and services. A good is a tangible object. People consume goods to satisfy wants. Examples of goods are a loaf of bread, a T-shirt, a house and a mobile telephone. A service is something that someone else does for you. Examples of services include a haircut, a doctor's consultation, a car wash and an economics lesson. If you go shopping for goods, you will carry something back home. If you go shopping for services, you carry nothing back. However, in both cases you have satisfied wants.

### Economic goods

#### Ecoterm

Economic goods and services are those that have a price.

In economics, the term "goods and services" refers to economic goods and services. Free goods and services have no price. Swimming in the sea, breathing air, enjoying a landscape, drinking rainwater or soaking up sunshine are examples of consumption of free goods. These goods are available in sufficient abundance that all wants can be satisfied and no price is charged for them. In some circumstances, goods that are normally free attract a price. For example, using water from a mountain stream is free but using water from a tap is not. Tap water is an economic good. Environmental economics studies ways of imposing prices on goods that once were free but have been overused or abused with pollution. Fishing licences, air and water pollution taxes and River Murray irrigation charges are examples of pricing formerly free goods.

### Consumer goods

Consumers buy final goods, and consume them – that is, they use them for their final purpose. Examples include food, entertainment equipment, cars and houses.

### Consumer durables

Some goods last a long time and satisfy wants over a long period. They can be used many times until they need to be replaced or wear out or break. Houses, cars, boats, whitegoods and furniture are examples of consumer durables. Households often borrow to buy these goods.

## Capital goods

Some goods are used in production of other goods. These range from plates used in a café to computers used in an office. Other goods are produced for use in production, such as machines and equipment. When goods are used by a firm to produce other goods, then they are capital goods. Capital goods may alternatively be referred to as **producer goods**, to distinguish them from consumer goods.

## Intermediate goods

Intermediate goods are goods that still need further processing. They are manufactured goods, used in production of other goods. Examples include alumina, a partly processed aluminium ore, and a tomato. The alumina needs to be used in making aluminium, and the tomato needs to be cut or cooked to make bruschetta or sauce. Intermediate goods are capital goods as they are used in production.

Note that some goods can be either final or intermediate, depending on their purpose. In the case of the tomato, it is an intermediate good when it is used in production, such as an ingredient in tomato sauce. If it is bought by a consumer who then uses it in a salad, then it is a final good, not an intermediate good. What households do is not regarded as production, even if householders make their own salads or sauces, sew their own clothes, or clean. They are only regarded as production the household pays a firm to do these things.

## Factors of production

Resources are sometimes referred to as factors of production, because they are combined together to produce goods and services, just as the factors of six, three and two, are combined, multiplied in this case, to make six. For example, a smoothie is made by combining fruit (a natural or land resource), milk and frozen yoghurt (intermediate, capital goods) by a café worker (a labour resource) in a blender (a capital resource).

## 6. Resources

### Ecoterm

Resources are anything used by firms in the production of goods and services.

They are also known as the factors of production because they are combined together to produce goods and services. For example, to produce a tomato sandwich, bread, tomato slices and pepper are combined. However, these are not the only resources used. A person is needed to do the sandwich making. That person will use tools and equipment such as knives and a peppershaker, and probably a whole kitchen in the case of a café. Three main groups of resources can be identified – land, labour and capital resources.

### Land

Land resources are defined as anything naturally occurring that is used in production. Examples include tomatoes, peppercorns, trees, fish, minerals and sunlight.



*Refrigerators and food warmers are capital goods used in a shop.*

## Labour

Labour resources are any human effort used in production of goods and services. Examples include chefs, managers, teachers and forklift drivers. Some texts discuss entrepreneurship as a separate resource classification. Entrepreneurship is the skill of combining resources to produce goods and services at a profit. In this book we will include entrepreneurship in the labour classification.

## Capital

Capital resources are manufactured goods used for production. Examples include peppershakers, knives, buildings and textbooks.

## 7. Production possibilities curves

### Key Ecoterm

A production possibilities curve shows the combinations of two products that can be produced by an economy with full use of all resources, using the best available production methods.

### The model

We use this model to understand how the economic problem relates to a nation's productive **capacity**. Resources, used to produce goods and services, are scarce relative to wants. The production possibilities curve (PPC) model, or theory, illustrates what level of production is possible when all resources are used and what happens when there is unemployment of some resources. It also illustrates the idea that increased production of one good or service can only be achieved if less of another good or service is produced, if no resources are idle.

The PPC model is represented by a two-dimensional diagram and so it assumes that the economy can only produce two goods or services, and that resources can be used to produce either product.

### The curve

### Key Ecoterm

The production possibilities curve represents an infinite number of combinations of two products that can be produced with existing resources, using the best available technologies.

The curve represents the economy's productive capacity, or potential production. Hence the term production *possibilities* curve. The economy must decide to which combination it will allocate its resources.

Every point *on* the PPC indicates a production combination for which all resources are fully employed using the best, known technologies. Hence each point on the curve represents the productive capacity of the economy.

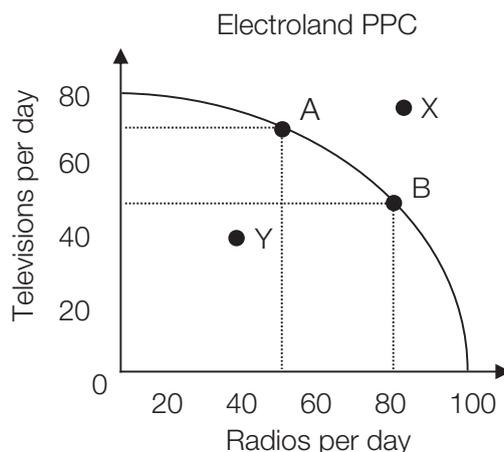


Figure 1.1

The imaginary economy of Electroland, represented in figure 1.1, will serve as an example. With its known resources it can produce only two products; either radios, televisions or a combination of both. The economy could produce

70 televisions and 50 radios per day at A, or 50 televisions and 80 radios per day at B, if it used all its resources and the best, known production methods.

The point Y represents unemployment of some resources because it is inside the curve. Only points on the curve represent full use of resources. From Y idle resources can be brought into production so that more radios as well as more televisions can be produced. For example, more radios can be produced without having to give up production of any television sets. In practice, economies operate inside their PPCs because there are always some productive resources not in use.

The point X represents the production combination of 80 televisions and 80 radios per day, a combination that is currently impossible as it is outside the economy's production possibilities. This is shown by it being outside the curve, with all points on the curve representing production combinations that are only possible when all resources are being used with the best, known technologies.

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## Three economic concepts illustrated

- The economic problem

The economic problem is that resources are scarce relative to wants. It is not possible to produce beyond the economy's capacity to satisfy all wants. Therefore it is necessary to make choices between possible production combinations. The PPC model illustrates this concept by showing that it is not possible to produce a combination represented by points outside the curve, such as the point X in figure 1.1, as there are insufficient resources.

- What to produce

The economy must choose to produce a particular combination of televisions and radios, such as A or B, in the diagram above. Only one combination can be produced at any one time. If more radios are produced, in response to consumer demand, then fewer TVs must be produced.

- Opportunity cost

### Ecoterm

Opportunity cost is the value of the next best alternative given up by a decision to do something else

In order to produce more of one good, some of another good has to be given up. Because resources are too scarce to allow us to produce everything we want to consume, if we produce more of one good we must give up some production of another good. Note that this only applies if all resources are being used. If the economy is not producing at full capacity, as at the point Y in figure 1.1, using idle resources can produce more of each good and service.



*The opportunity cost of a concert ticket might be a tennis racquet.*

There is an opportunity cost associated with consumption, as well as production of goods and services. If an individual spends some of his income on one good, say a DVD, those same dollars cannot be used to buy anything else and so he must forego something, say a new T-shirt. Similarly, a person must decide between going to a football match or going to a party if they are on at the same time. The opportunity of choosing the football match is missing out on the party.

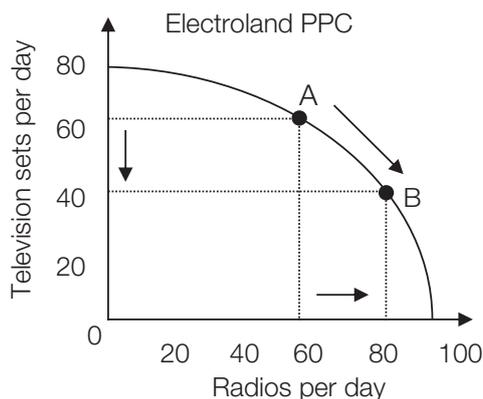


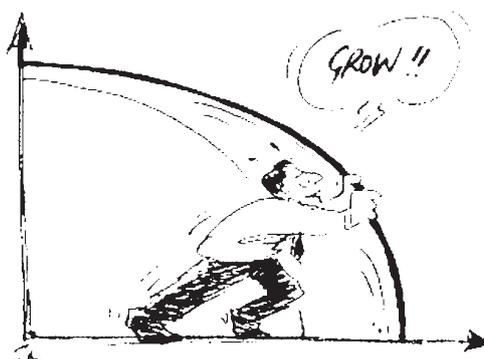
Figure 1.2

Opportunity cost is what we give up to gain something else. Figure 1.2 represents the production possibilities of Electroland. Assume Electroland is operating at combination A. The opportunity cost of producing 20 more radios (moving from combination A to B) is 20 televisions. Opportunity cost exists because, to produce 20 more radios, scarce resources must be diverted away from television production. Those resources cannot be used in both productions and so a choice must be made, and 20 televisions must be foregone.

### Shifting the PPC

It is not possible to produce outside the PPC, at the point X for example, as explained above. In the long run, however, it is possible to shift the PPC outwards. To do this there must be either

- an increase in resources or
- an improvement in technology, or both.



### Increase in resources

One way to increase productive capacity is to use new resources. New land resources can be grown or mined and new natural forces such as solar energy can be harvested. New capital resources can be produced. New labour resources come with immigration or natural population increase. For example, China's population is increasing by about 80 million people a year.

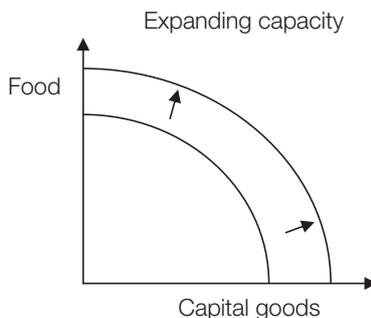


Figure 1.3

The other way is to improve the use of existing resources with better technologies. Think of technologies as ways of doing things, methods of production. If more production can be achieved with the same resources, through better production methods, the economy's production possibilities increase. Technology improves productivity, the output per unit of resources input. This simple but powerful concept is fundamental to understanding many current economic policies. For example, if a country's workforce is made more productive with better technology, the same number of workers can produce more goods and services, increasing productivity, that is increasing the efficiency of production.

## Ecoterm

Productivity is output of goods and services per unit of resources input.

If either of these above changes occurs, production possibilities increase, and the increase is represented by the curve moving out. This is shown in Figure 1.3, representing an economy producing capital goods and food. More resources or better technology will allow more food and more capital goods to be produced. For example, an increase in the working age population will create more labour resources and these resources are used in production of both goods.

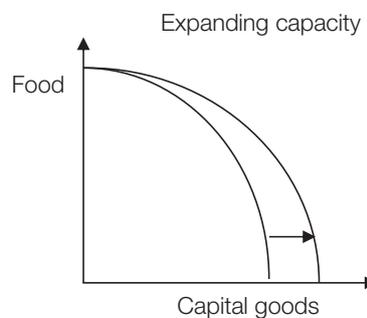


Figure 1.4

Increases in resources or improvements in technology will not necessarily increase production possibilities evenly throughout all industries. Some industries will be affected, and others will not. For example, a new deposit of iron ore will increase resources, increasing the economy's capacity to produce capital goods but not altering the possibilities of food production. This situation is represented in figure 1.4, showing the curve moving out on the capital goods axis but not the food axis.

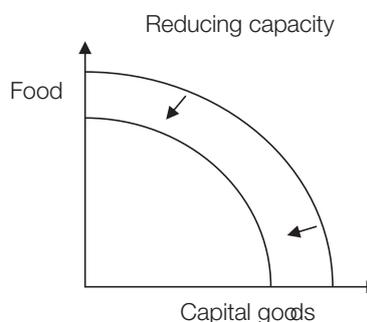


Figure 1.5

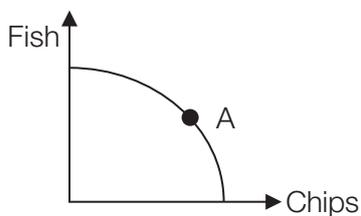
It is also possible that the production capacity of an economy could shrink. Warfare or a tsunami could destroy resources. In such a case, the production possibilities curve would shift inside its original position.

Focus Questions

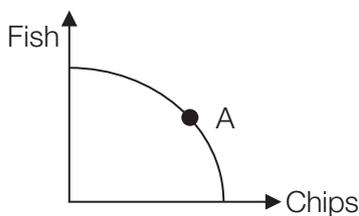
1. Define
  - (a) economics.. .. .
  - (b) the economic problem. . . . .
  - (c) productivity. . . . .
  - (d) resource. . . . .
2. Classify the following as individual or collective wants.
  - (a) toothbrush.. . . .
  - (b) garbage collection.. . . .
  - (c) parklands.. . . .
  - (d) Adelaide-Darwin railway. . . . .
3. Why do you think collective goods such as roads and defence are not often produced by private firms?
 

.. . . .

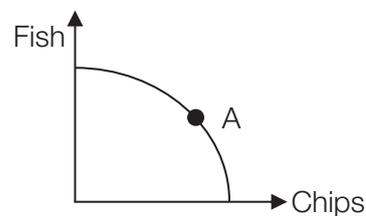
.. . . .
4. Classify the following resources as land, labour or capital and suggest a good or service it is used to produce.
  - (a) economist.. . . .
  - (b) hammer. . . . .
  - (c) toasting machine. . . . .
  - (d) DVD recorder.. . . .
  - (e) wheat.. . . .
  - (f) bricklayer.. . . .
  - (g) solar energy.. . . .
  - (h) lawn. . . . .
5. The diagram shows the production possibilities for Sandy Island whose economy produces two products, fish and chips. Draw three diagrams and draw a new **position** on each diagram to represent the changes described. Label your new point 'B'.



(a) Consumers decide they want more fish and fewer chips.

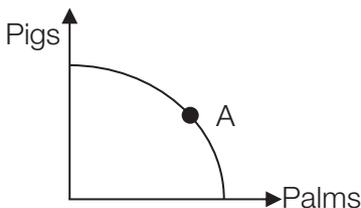


(b) Demand for chips increases.

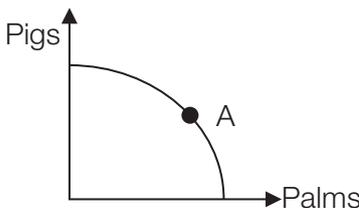


(c) Sandy Island has unemployed labour.

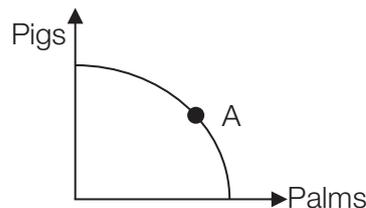
6. The diagram shows the production possibilities for the economy of Daydream Island that produces two products, coconut palms and pigs. Draw three PPC diagrams and mark a new **curve** on each diagram to represent the changes described.



(a) A cyclone destroys a lot of palm trees.



(b) The people of Daydream Island receive immigrants from Coral Island.



(c) Pigs are interbred with Coral Island pigs to produce litters of greater numbers of piglets.

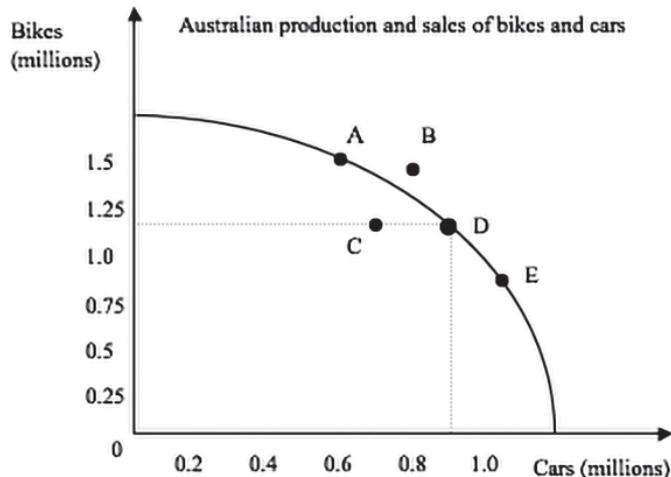


Examination revision

City cyclists gear up

The number of cyclists on Australian city streets has been increasing each year this century. Census figures showed a 28 per cent increase in people riding to work in capital cities in 2008. And for the ninth consecutive year bicycle sales outrode car sales, with 1.2 million bicycles sold in 2008 compared with Australian Bureau of Statistics figures showing 86,772 new motor vehicles sold.

Refer to the diagram.



- (a) A production possibilities curve shows an economy's
  - A actual production of two goods
  - B future production of two goods
  - C past production of two goods
  - D potential production of two goods
- (b) Assuming the economy is using all its resources with the best available technologies, which of the positions, A, B, C or D best represents the 2008 production decision?
 

.....
- (c) If neither the resources available or the production technologies changed, what would be the opportunity cost of increasing production of bikes from D to A?
 

.....
- (d) Explain why the production combination represented by the point B on the diagram was not possible in 2008.
 

.....

## 1.2 Economic decisions

The problem of resource scarcity prevents satisfaction of all of society's wants. With this in mind we need to be aware that trying to satisfy one set of wants may be at the expense of satisfying other wants. The study of economics enables us to decide how we can best use our scarce resources to satisfy as many of our infinite wants as possible. The economic problem leads a society to ask three fundamental economic questions.

### 1. What to produce

#### Ecoterm

The what question is what goods and services will be produced, and how much of each

Each economy must decide what goods and services (and in what quantities) to produce. Somehow, these decisions must be coordinated in each society. In some, the government decides. In others, consumers' and producers' decisions act together to determine what the society's scarce resources will be used for.

In a market economy such as Australia, this 'to produce decision is made mainly by consumers, acting in their own interests to satisfy their wants. Their demands are met by firms seeking profits. For example, if mobile telephones are in demand it will financially benefit private firms to make and sell these. If nobody wants to buy black and white television sets, it is not worth producing them. If a producer makes a product that consumers do not buy in much quantity, there will be insufficient profit. The producer will have to improve the quality and change the product to suit consumer preferences. If the product is still not popular, the producer will probably stop making it. In this way, consumers get the products they want. This idea is referred to as consumer sovereignty. Consumers rule the what decision. They 'vote' for particular goods and services by spending dollars on those they prefer. Each producer needs to supply what consumers want in order to compete successfully against other producers.

Governments also play some part in making what decisions. For example, an Australian law requiring all cyclists to wear a helmet creates demand for cycle helmets, and profit-seeking firms will produce them. In an economy like Cuba or North Korea, governments make most of the what decisions.

### 2. How to produce

#### Ecoterm

The how question is what combination of resources will be used in production.

This decision is about the combination of resources to use to produce each good and service. In Australia, these decisions are usually made by firms that try to make their products at lowest cost. For example, banks have replaced most of their counter service people with automatic teller machines, EFTPOS (electronic funds transfer at the point of sale), telephone banking and Internet banking. These electronic methods of transferring money, using capital instead of labour resources, have reduced the banks' production costs.

In the 1950s dams were being built in China by thousands of people using buckets and shovels. At the same time dams were being built in America with the use of enormous earth-moving equipment. The first method of production, using a resource mix consisting of a little capital and much labour, is labour-intensive while the second, using a little labour and much capital, is capital-intensive. Each of these how decisions was made on the basis of the least cost combination of resources, and available technology.



*Automatic teller machines replaced tellers in banks – a "How?" decision*

### 3. For whom to produce

#### 🔑 Ecoterm

The for whom question is what share of the economy's goods and services each person will consume.



This decision is about who gets what share of the goods and services that the economy produces. For whom decisions make some people better off and some worse off. In Australia, the share of production that each individual and household can consume depends upon their income. Income is distributed according to the value of resources we have to sell. For example, a top tennis player will earn much more income than an economics teacher. (How fair is that?!) A top tennis player has a resource to sell that is scarce, and so a lot of people will pay a high price to watch. Teachers are not so scarce. The for whom decision can also be influenced by skills shortages, in which case firms will offer higher incomes to attract employees with scarce skills. Similarly, high wages may be needed to attract workers to remote locations, such as mines in the desert. Both of these latter two influences have been seen during the mining boom of the 2000s.

Remember that every choice involves an opportunity cost. If the Adelaide City Council decides to use a space to build a Convention Centre, the same space cannot be used for a public swimming pool. Production of a convention centre uses resources; in particular, it uses a scarce piece of central-city land. The use of those resources prevents production of an alternative good or service from the same resources. Producing one good or service incurs a lost opportunity of producing another. If the state government decides to use its resources to promote the production of warships, then it gives up the opportunity to improve health care. Individuals face opportunity costs too. If Hannah and Amelia decide to spend their income on concert tickets, they give up the opportunity to buy new tennis racquets.

#### Focus Questions

1. Give a personal example of opportunity cost.
2. Complete the table below by deciding which type of decision is illustrated by each example. Give a reason for your choice.

Example	What, how or for whom?	Reason
Tax changes favour middle and high-income earners.		
Banks provide electronic banking and reduce the number of bank workers.		
Digital video technology creates demand for digital video equipment.		
The SA Government charges an emergency services levy.		
Law requires smoke alarms to be fitted to all new houses.		

3. Explain the following terms:
  - (a) Opportunity cost
  - (b) Consumer sovereignty
  - (c) The what question
  - (d) The how question
  - (e) The for whom question
4. Why do the world's best rock stars earn so much money? Write your answer in terms of the theory set out in the text about the "For whom" question.



**Examination revision**

**Woolies cut cage eggs**

Woolworths has decided to reduce the number of cage-laid eggs it sells. In 2009 a spokeswoman for Woolworths said that, in response to customers, it would replace cage-laid eggs with barn-laid or free-range eggs. It would do so to follow the way customer-buying habits were changing.

- (a) (i) Classify the Woolworth's decision as one of the following basic economic decisions
  - A What
  - B How
  - C For whom
- (ii) Explain your classification in (i).
- (iii) Explain how the type of economic decision you named in (i) is made in the Australian economy.
- (b) (i) Name one scarce resource used in the production of free-range eggs.
- (ii) Suggest why free-range eggs are more expensive than cage-laid eggs.
- (iii) Classify the resource you named in (i) as
  - A Land
  - B Labour
  - C Capital
- (c) (i) Classify eggs as
  - A Economic goods
  - B Free goods
- (ii) Explain your classification in (i).

## 1.3 Economic systems

### Introduction

How the three fundamental questions are answered depends on the type of economic system a society adopts. Different systems go about making their economic decisions in different ways. The groups of people who make decisions and those who own resources, for example, differ from system to system. The economic system developed in each nation is determined by that nation's culture, history, ideology, politics and geography.

The three types of economic system described below are theoretical, and no pure forms of them exist. Each country's economic system is a hybrid of the three, and so all economies are mixed economies.

### 1. Traditional (or subsistence) economy

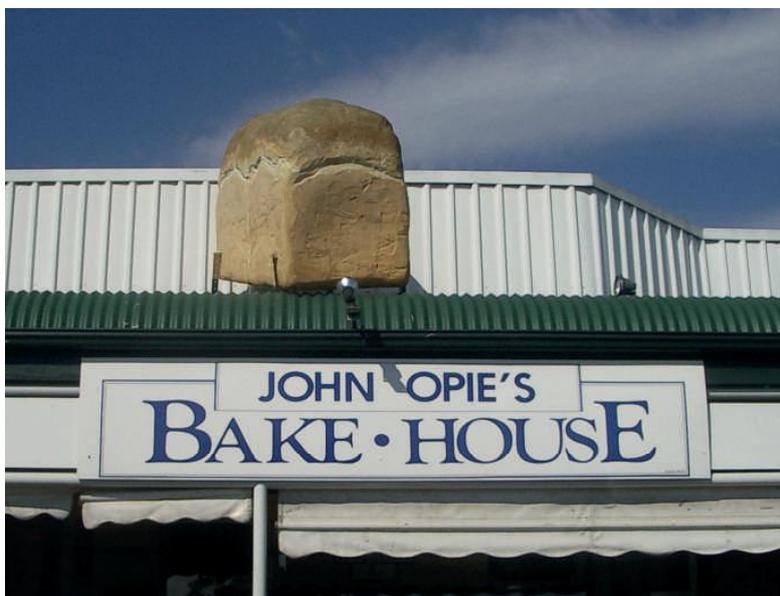
The traditional economic system is one in which each individual or household produces goods and services for their own use and not for exchange in markets. Customs and age-old traditions play an important part in the way people cater for their own needs. Neither the market nor government plays an important role in the process of production and distribution of goods and services. Traditional economies tend to be characterised by a low level of economic development. Current economies began as traditional economies, and some can still be found in the isolated areas of South America, Africa, Asia and Papua New Guinea.

#### The basic decisions in traditional economies

Traditional economies make the what, how and for whom decisions according to tradition. Often it is too risky to experiment with new ideas, if an economy is merely subsisting. They decide

- **what to produce and how much** according to what has been produced in the past
- **how to produce goods and services** on the basis of the methods used by former generations and what resources they have available to them
- **who gets what share of production**, that is, how goods and services will be shared and distributed, also on the basis of tradition? Decision-making elders are likely to receive a larger share than others.

### 2. Market (or capitalist) economy



*In a market economy, a bakery can be privately owned.*

In a market economy, market forces rather than tradition or government planners make economic decisions. Most of the world's economies are market economies. A market is a system of exchange between buyers and sellers.

## Characteristics of market economies

### Private ownership of resources

Resources are privately owned. Owners of capital and land resources provide them to firms and receive an income in return. Workers choose to sell their labour resources for wages and salaries. Firms combine all three types of resources to produce goods and services and so make a profit. People choose how they spend their income to best satisfy their wants. Firms choose which resources to use to minimise costs and maximise profit, competing with each other to satisfy consumers.

### Income from resources

Sellers of land, labour and capital resources receive different types of income, and those incomes vary in size.

**labour** Most of us sell only our labour for wages and salaries. Those who own scarce, highly valued skilled labour, such as managing directors, can receive very high salary incomes.

**land** Those who own land receive rent.

**capital** Owners of capital in the form of whole businesses receive profit. Those who own shares in companies receive dividends, which are shares in a company's profit. People with savings provide firms with funds for investment in capital goods and receive income in the form of interest.

### Inequality

Individuals can sell their labour for what it is worth to the businesses that buy it, and some labour is more valuable than others, depending on the type and level of skills. Other individuals derive income from capital and land resources. There is a great difference between the highest and lowest incomes, and this characteristic draws the most criticism from supporters of planned economies. They say that workers are exploited by being paid less than their worth, so that owners can make a profit.

### Self-interest and the profit motive

Rather than being motivated by contributing to the common good, the basic motivating force in a market economy is self-interest. Individuals spend their income to maximise their satisfaction and sell their labour to maximise their income. Firms and entrepreneurs seek to maximise their profit. Such a competitive system is successful in promoting flexibility and innovation.

### Consumer sovereignty

Consumers play a dominant role in deciding what is produced. Consumers make most what decisions through casting dollar votes in the market. That is, their spending indicates their preferences for certain goods and services. As consumers make spending decisions to maximise satisfaction of their wants, producers respond by supplying what consumers want. They need to do so to compete successfully against other producers, and so make a profit.

### The price mechanism

Prices of goods and services are determined in markets, as sellers and buyers make their own spending decisions. Prices change as sellers respond to changing market conditions. Prices of resources are also set in markets. In resources markets, the buyers are firms and the sellers are households. The process of setting prices, known as the price mechanism, is explained in Topic 2.

## The basic decisions in market economies

Market economies make the What, How and for whom decisions in markets. Markets decide

- **what** goods and services to produce and how much of each according to consumer sovereignty. Producers supply what consumers want. Even capital goods, purchased by producers, are chosen based on how best to satisfy consumers' wants.
- **how** to produce. The producers themselves decide what mix of resources to use in production. They choose the cheapest combination of resources that will satisfy their customers and give the firm a competitive edge in the market. They operate to maximise profit.
- **for whom** to produce. The share of an economy's production of goods and services that each household or individual receives is determined by their income. In a market economy, distribution of income is determined by the value of resources we have to sell.



### 3. Command (or planned) economy

A command economy is one whose basic economic decisions are made by government on behalf of the people.

Central planning has been introduced into Russia, China and other Communist countries after overthrowing capitalist governments. The revolutionary governments' ideology was to eliminate poverty and inequality.

#### Characteristics

##### Public ownership of resources

No capital or land resources are privately owned. They are *commonly* owned, by everybody, and controlled and allocated by the government. Only personal goods are privately owned. The most important belief in the ideology of a command economy is that everyone should have equal access to the economy's production of goods and services. This means that every citizen should receive much the same income.

##### Central planning

A central planning committee decides the economy's goals, usually expressed as a five or ten year plan. Various agencies then plan in detail how they will be achieved. They pass their production decisions to local planning committees.

##### Incentives

In the absence of the profit motive, managers of production units such as factories and farms use a system of monetary as well as non-monetary incentives. Bonuses and tax concessions make incomes unequal to some extent. Holiday houses and cars are bigger incentives, but an extensive system of individual and team awards and medals, such as 'Worker of the week', emphasises the moral duty of people to work hard for the common good.

##### Low prices

In a command economy, prices are decided by planners, and are fixed. Basic consumer needs, such as food, rent, clothes and telephone services, are free or very cheap. If certain goods are in higher demand than their supply, the price does not change, the queues and wait times get longer.

For example, all Moscow citizens in the former USSR had a job and at least an apartment to live in. They paid only 2% of their income to rent the apartment from the government. However, consumers met great difficulties when shopping, such as having to queue for hours to buy simple items like bread and meat. They often found that consumer goods were unavailable and were only able to choose between a very narrow range of consumer goods and services, such as blue or brown socks.

##### No unemployment

Planners ensure that everyone has a job and contributes to production of goods and services.

## The basic decisions in planned economies

Planned economies decide the what, how and for whom decisions in committees. Government planners decide

- **what** to produce. A central bureau makes nation-wide decisions and hands detailed planning to regional groups. Consumer goods are not supplied in great numbers or variety. More resources are allocated to production that the government decides is in the nation's best interests, such as medical and military equipment, and scientific research.
- **how** to produce. This decision is also made centrally. Central planners set production targets for regions and regional planners tell each farm and factory their production targets, where to buy their materials, and where to source labour, capital equipment and raw materials. Planners set prices of resources, including labour, and also set prices to charge for products. Production is not organised for profit, but to satisfy national and regional wants.
- **for whom** to produce. Wages and salaries are determined by government planning, keeping incomes more or less equal, but those working on higher priority production receive higher incomes and so are able to afford a larger share of the economy's production of goods and services.

1

## 4. Mixed economies

The above descriptions are models or theories of economic systems. All real economies are a mix of the three types. Australia, for example, is mainly a market economy because market forces make most of the three basic economic decisions. However, the government makes some what decisions, for example, making compulsory the use of safety restraints for children in motor vehicles. The government also influences the how and for whom decisions with its spending and taxation decisions and other policies. Some economic decisions are made on the basis of tradition. For example, a production method might be used because it has always been used. We also buy turkey and plum pudding at Christmas because it is traditional, and this is an example of the what decision being made by consumers.

## 5. Economies in transition

Economic systems do not remain static. Change and reform are constant. However, sometimes major system change occurs. It may be as a result of political upheaval, a change in economic theory, or a powerful new force such as globalisation. When such major change occurs, a country can spend decades in transition towards a different economic system. The most dramatic example of this, in recent decades, has been the abrupt abandonment of a command system in Russia and the other Union of Soviet Socialist Republic (USSR) countries in 1991. Their transition to a market economy then began.

China is also in transition from a command to a market economy, but it has been a much more gradual process.

## 6. Causes of major system change

### Political change Case Study: USSR countries after 1991 (not examinable)

Communist rule ended in the Union of Soviet Socialist Republics in 1991 and the new government began to reconstruct the economy as a market system. The command system had failed. Despite low prices and zero unemployment, there had been increasing dissatisfaction with the ability of economic planners to manage economic activity in such a large and complex economy. The Soviet economy had not kept up with the pace of change in technology or maintained stocks of capital equipment. Transport and communication networks were in decay. The bureaucracy was so big as to be unwieldy and it was quite inefficient. Workers and managers lacked the profit incentive to do their best and learn new technologies. Some areas, particularly waterways, were polluted and the banking system was very limited. Consumers were annoyed by their wants not being satisfied.

When the people of Russia were at last able to say what they thought, they demanded an end to the disastrous economic management of the Communist Party. At the same time, the non-Russian states in the USSR demanded an end to the Union, which was formally dissolved on 26 December 1991. The new government freed the economy from central planning and converted the economy to a market system.

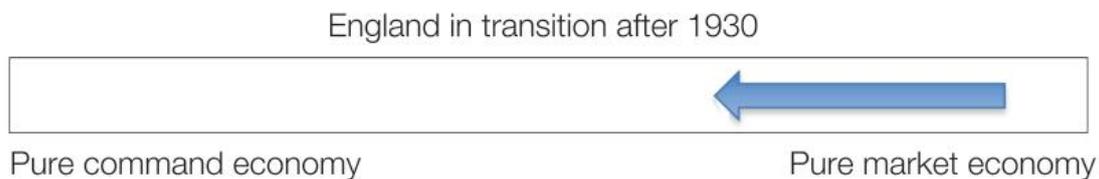
### Economic theory

#### Case Study: Developed market economies after 1930 (details not examinable)

## Keynesian theory

Different economic theories have evolved and been embraced over the years by governments charged with the task of managing their economies. Before the 1930s, *laissez faire*, a French phrase, meaning to leave the economy to market forces, was the prevailing theory. English economist Adam Smith called market forces the 'unseen hand' that made economic decisions.

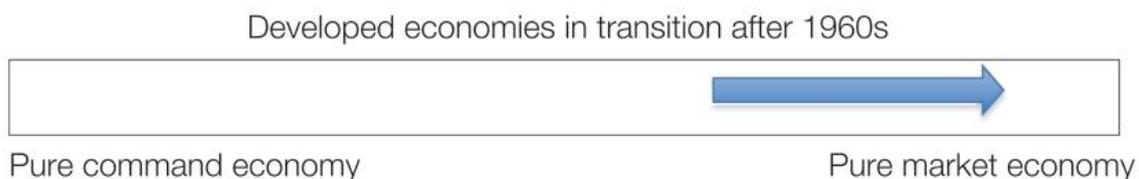
The Great Depression of the 1930s showed that a *laissez faire* approach to economic management was inadequate, and each country affected by the Depression made changes to its economic system. John Maynard Keynes, another English economist, wrote in 1936 a response to the Great Depression. He argued that government needed to act to avoid some of the undesirable outcomes of markets, such as a destructive depression, when millions were without jobs and families were broken up and even lost their homes. 'Keynesian economics' led to a major change by governments who took deliberate steps to set economic objectives and use their powers to regulate the economy to try to achieve those objectives. These economies were in transition towards a more command, planned structure, until the outbreak of World War Two.



## Economic rationalism

The process of globalisation, as national economies become more involved with each other, has allowed countries to learn from each other. As globalisation has progressed, economic systems have become more similar. Most economies are putting into practice the theory of economic rationalism.

This theory suggests easing off some degree of government control of the economy, leaving markets more freedom to organise economic activity. Since the 1960s, governments of developed economies have increased their reliance on markets. They have introduced policies such as deregulation and privatisation. Deregulation removes and reduces existing regulations to free markets to operate more efficiently. Privatisation is selling off government business enterprises to private firms in the expectation that competition and the profit motive will increase their efficiency.

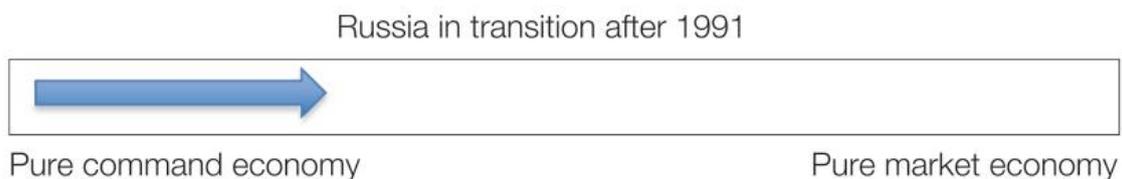


## 7. Effects of major system change

### Case Study: USSR countries after 1991 (not examinable)

Most examples of major system change in recent decades have all been in the same direction – towards a more market-driven system. The best example is provided by the countries of the former Union of Soviet Socialist Republics, once their Communist Party government was replaced and the Union dissolved.

When central economic planning was suddenly dropped in 1991, economic decisions were left to markets, a system that was far from fully formed. Initially, a lot of problems occurred. The effects of the change highlight the differences between planned and market economies.



## Private ownership of resources

Once private ownership of the means of production was allowed, government-owned enterprises were sold to private buyers, and other, new firms began to operate. Entrepreneurial skills had to be developed, and consumers and producers had to become used to responding to market signals. These were gradual processes, and the new system of producing and distributing goods and services, inefficient at first, developed.

A system of privately-owned banks had to develop, regulated by the government’s central bank. The new banking system provides funds for investment, though the International Monetary Fund made vital loans in the early years.

### Inflation

In the early years after 1991, markets for took some time to sort themselves out, and for many goods and services demand was high but the changing mix of public and private production struggled to keep up supply. Consequently, high prices pushed the general level of prices higher and inflation became a problem. Inflation means the rate of increase in the general level of prices. Economic planners of the old, planned economic system had kept prices lower than they would have been under a market system. Eventually inflation was controlled by a combination of market forces and government economic management.

### Unemployment

Governments of command economies control ownership of resources, including hiring of labour, as well as prices. Everyone had a job, directed by planning committees, and everyone worked for the government. Once this high level of planning and command disappeared, millions of people in the soviet countries had to secure their own job. People had little or no experience of winning jobs and unemployment became a problem.

There is no longer a guarantee of employment for everyone who wants a job. Producers with a profit incentive often shed labour to try to decrease their costs and improve efficiency. Workers had never developed the kinds of job-winning skills that are necessary in a market system, such as choosing appropriate education and training courses, taking opportunities to develop personal skills, interview techniques and writing an application for a job.

Over the years since 1991, the labour market sorted out most problems and current unemployment figures are not abnormal.

### Inequality

Massive privatisation brought sudden changes to a country not ready for a market economy. Crime and corruption quickly soared and many salaries were not paid.

Income inequality has remained a more prominent feature as income now depends on the value of resources owned. Some people are accumulating wealth rapidly but others are very poor. The new economic system allows entrepreneurs to start privately owned businesses to produce goods and services. Some have been very successful. The lowest incomes go to people with unskilled labour or poorly performing businesses.

### Consumer sovereignty

Consumers decide what is to be produced, after the initial period of chaos, now that distribution of privately produced goods and services has sorted itself out and inflation is controlled.



#### Focus Questions

1. (a) How do planned and market economies differ in the way they answer the what, how and for whom questions?

.. .. .

(b) In what ways is Australia a mixed economy?

.. .. .

2. Compare the features of a planned economy with those of a market economy.

.. .. .  
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 .. .. .  
 .. .. .  
 .. .. .

3. For what reasons do economic systems change?

.. .. .  
 .. .. .

4. Explain the **key causes** and **effects** of Russia’s transition from a command economy to a market economy.

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**Examination revision**

**Cubans to own their homes**

In 2009, Cuban President Raul Castro announced a policy change that would allow the construction of new dwellings. People would be allowed to use their own funds to build homes and own them. Previously home construction was in the hands of government, but a lack of housing had become increasingly frustrating.

(a) The Cuban Government’s decision is an example of an economy in transition from a

- A market economy to a planned economy
- B traditional economy to a market economy
- C planned economy to a market economy
- D planned economy to a traditional economy

(b) (i) Classify the Cuban economic system as

- A Tradition
- B Market
- C Command
- D Mixed

(ii) Justify your choice.

.. .. .  
 .. .. .

(c) How has Cuba’s ‘What’ question changed as a result of the new policy?

.. .. .

## Topic 2: The Price Mechanism

### 2.1 The Competitive Market Model

#### 1. The model

This chapter examines the Competitive Market Model, the theory that explains how markets operate. The model is used to show how prices are determined in markets and the effect of government intervention. The model can be used to display how sellers and buyers come to exchange at a price in the market.



One of the very first books written on economics, *The Wealth of Nations* by Adam Smith, described the market mechanism as an 'unseen hand' that made markets work without any government action at all. Prices are determined in the market so that the quantity of goods produced for sale matches the quantity that consumers want to buy. As a result, there are rarely any shortages or surpluses. For example, it may sometimes be difficult to buy a pie late in the day, and at other times there are pies left over. But usually about the right number of pies are baked and sold each day. The same applies to loaves of bread, television sets, haircuts and so on.

#### Assumptions

The competitive market model or theory makes a number of assumptions in order to simplify its theory.

#### Competitive markets

The most important assumption is that markets are competitive, that there are lots of sellers competing to sell and lots of buyers competing to buy. In a market that is not competitive, for example a monopoly in which there is only one seller, the model will not adequately explain how prices are set.

#### Same product

To explain how prices and quantities of a product are determined, it is simpler to assume that all producers in a market are supplying exactly the same product, be it a toothbrush, or ice cream.

#### Free entry

It is assumed that there are no barriers to a new firm entering the market or an existing one stopping production and leaving the market.

#### Perfect information

It is assumed there is no lack of information about production techniques or the conditions of sale, such as other firms' prices.

## 2. Markets

### Key Ecoterm

A market is defined as an organisation that allows buyers and sellers to exchange goods and services.

A fruit and vegetable market is a good example. It consists of lots of sellers displaying their goods on stalls. They sell pretty much the same produce and compete with attractive displays and friendly service. Their main competitive strategy, however, is their price. If three stalls sell the same kind of apples of similar quality, the one with the lowest price will sell most apples.

A used car market in a capital city is another example of a market. Buyers are all those individuals and organisations, in or near the metropolitan area, who want to buy a used car. Sellers consist of all car yards in a particular region such as a metropolitan area, plus regular car auctions and advertisements in newspapers by private sellers.

Not all markets can be defined by area. The crude oil market, for example, is worldwide and buyers and sellers rarely meet, conducting their exchange by electronic communication. The Internet increasingly allows markets to be international as firms use e-commerce technology.



*Unley Nissan is one supplier to the Adelaide used car market.*

## 3. Demand

### Key Ecoterm

Demand for a good or service can be defined as the quantity that buyers are willing and able to buy at a particular price.

Imagine that Auntie Beryl is researching the market for chocolate-covered strawberries, which she likes to make and sell. She would ask people how many they would like to buy at a range of prices. She would find that each individual has a different demand schedule for chocolate-covered strawberries. Some will buy none, whatever the price, and others will buy a lot even if they are expensive.

Below are three individuals' demand schedules for chocolate-covered strawberries. They all display different preferences for the product. Sarah is the keenest and is prepared to pay more, and to buy a greater quantity, than the others. However, they all have one thing in common. Notice that as the price increases, buyers buy less. This is always the case for goods and services that are seen as having some value. The law of demand is that the quantity demanded will decrease as the price increases.

*Individual demand schedules for chocolate-covered strawberries:*

Luke		Sarah		Jayne	
Price per chocolate strawberry	Quantity demanded per week	Price per chocolate strawberry	Quantity demanded per week	Price per chocolate strawberry	Quantity demanded per week
10	5	10	25	10	10
20	2	20	20	20	10
30	0	30	15	30	10
40	0	40	10	40	5
50	0	50	5	50	0

Auntie Beryl would need to aggregate all individual demand schedules to estimate the total quantity demanded by the market at various prices – that is, market demand. Her market research data could be plotted on a graph such as in figure 2.1, showing different quantities demanded at each price. A curve of best fit would slope downwards and to the right.



Figure 2.1

To build the model we will simplify her findings so that the demand curve can be drawn as a straight line. A model is, after all, a simplification of reality to help us to understand the basic principles.

2

*Market demand schedule for chocolate strawberries:*

Price per chocolate strawberry	Quantity demanded per week
10	10000
20	8000
30	6000
40	4000
50	2000

The market model is portrayed as a demand curve and a supply curve graphed in a space where each point is a combination of price and quantity. At 40 cents buyers will pay for and consume 4000 per week. However, if the price were lower, at 10 cents, they would buy 9000 per week. The demand curve in figure 2.2 represents market demand for chocolate-covered strawberries. It is the graph of the above schedule. The law of demand is illustrated by the decrease in quantity demanded as the price increases. **The demand curve shows the quantity demanded at a range of prices.**

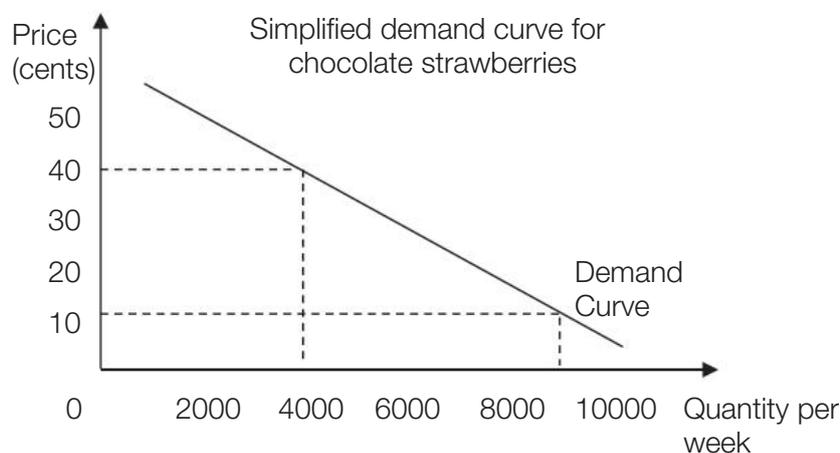


Figure 2.2

## 4. Supply

### 🔑 Ecoterm

Supply is the quantity of a good or service that producers are willing and able to supply at a particular price.

In the market for chocolate-covered strawberries, Auntie Beryl is only one supplier. Each supplier has his or her own individual supply schedule. Examples of supply schedules are shown below. Notice that as the price increases, producers supply more. This is because they are driven by the profit motive. At higher prices, producers will make more profit. It will be better for them to use more of their resources to produce chocolate-covered strawberries when the price increases. Auntie Beryl, for example, will spend more of her time dipping strawberries and will be happier to buy more raw materials if she expects a higher price. **The law of supply is that the quantity supplied will increase as the price increases.**

*Individual supply schedules for chocolate-covered strawberries:*

Auntie Beryl		The Fine Foods Company		Confectionery Supplies	
Price per chocolate strawberry	Quantity demanded per week	Price per chocolate strawberry	Quantity demanded per week	Price per chocolate strawberry	Quantity demanded per week
10	50	10	250	10	600
20	100	20	500	20	600
30	150	30	750	30	600
40	200	40	1000	40	2000
50	250	50	1250	50	2000

The market supply schedule is the aggregate of all individual supply schedules and may look like the one to the right. **A supply curve shows the quantity supplied at a range of prices.**

The supply curve below represents the market supply schedule for chocolate-covered strawberries. Like demand curves, supply curves are never perfectly straight lines but it is best to simplify by representing them as straight lines.

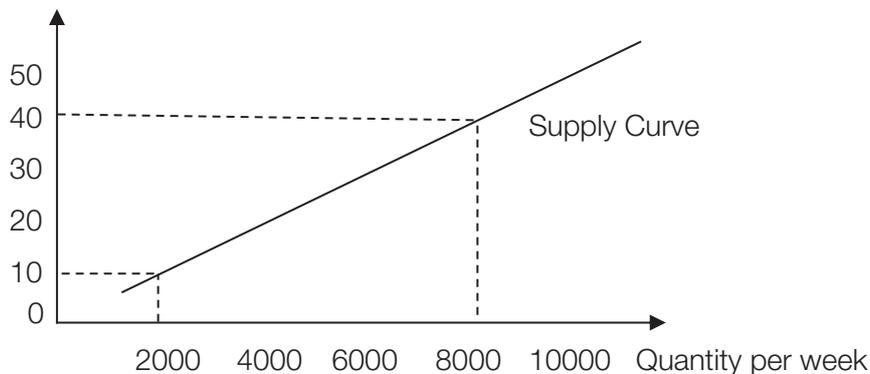


Figure 2.3

The law of supply is illustrated by the decrease in quantity supplied as the price decreases. For example, in figure 2.3, when the price is 40 cents producers supply 8000 chocolate strawberries per week, but at the lower price of 10 cents the quantity supplied is 2000. At lower prices, producers make less profit and so most will cut back their supply. Some will drop out of the market altogether, ceasing supply, because the price decrease puts the price below their costs, preventing them from making a profit.

It is stated above that suppliers will make more profit as prices increase. That is because their revenue increases. Revenue is price multiplied by quantity. When the price is \$40 in the above diagram, the quantity sold is 8000, and so revenue is \$320,000. Costs are unchanged in the short term, and therefore profit, which is revenue less costs, increases.

## 5. Equilibrium

### Market price

#### Key Ecoterm

Market price is the price at which buyers want to buy the same quantity that sellers want to sell.

Prices are determined in markets by the interaction of supply and demand. When both the demand and supply curves are drawn together on the same diagram, there is only one point at which the two curves meet. That point, represented in figure 2.4, is at the price of 30 cents in the market for chocolate strawberries, at which price both buyers and sellers agree to trade 6000 per week. 30 cents is the equilibrium price.

There is also an equilibrium quantity. This is the quantity that buyers and sellers agree to trade in the market. At the price of 30 cents, both buyers and sellers are satisfied. Buyers demand 6000 per week and that is the same quantity that producers will supply at 30 cents. Once the market or equilibrium price has been established, the magic quantity is both supplied and demanded and there is no shortage or surplus. Markets can operate quite efficiently in this way, without any government action.

This magic position is the decision of the market, arrived at by interaction of sellers and buyers. The market determines a market price, known also as the equilibrium price, and a market or equilibrium quantity. This equilibrium position is the price and quantity at which the market is stable and there is no tendency to change. At every other price, a quantity shortage or surplus will exist and there are market forces at work that will tend to move the price back towards its equilibrium level.

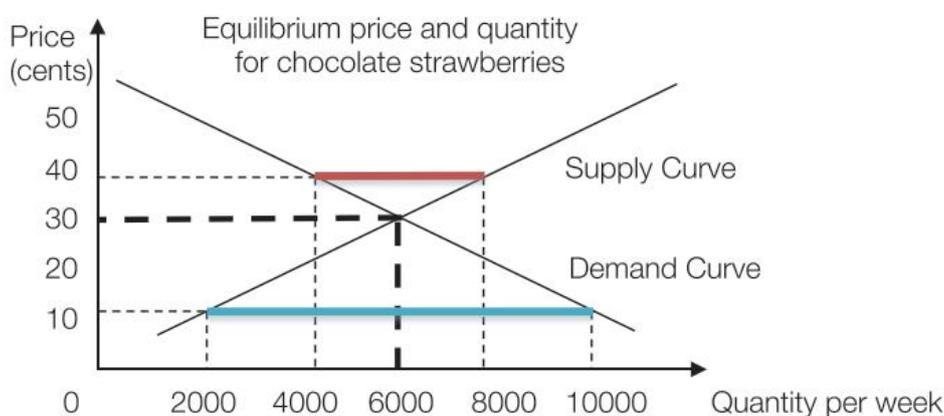


Figure 2.4

### Shortage

At a price of 10 cents, which is lower than the market or equilibrium price, 10000 chocolate strawberries are demanded, while producers are willing to supply only 2000. At this price a shortage of 8000 exists, shown by the blue line on figure 2.4. The existence of a shortage tells sellers that they could not only sell more, but also charge a higher price, as at least some consumers are prepared to pay more than 10 cents. For example, at a house auction, the price only stops rising when no more prospective buyers want to pay more.

Suppliers will notice that their stocks sell quickly and will supply more, but will charge a higher price. They know that buyers will pay a more and they can increase their profit. This will happen at every price level below 30 cents, where a shortage exists. If the price is pushed up to 20 cents, a shortage still exists and so suppliers will still sell out and will increase the price further. To eradicate the shortage completely, the price will increase until the quantity supplied is equal to the quantity demanded. This occurs at the price of 30 cents.

### Surplus

At a price of 40 cents, a price above equilibrium, only 4000 are demanded but producers are keen to supply 8000. At this price a surplus of 4000 exists, shown by the red line on figure 2.4. To eradicate the surplus and clear excess stocks, producers will reduce the price, encouraging existing buyers to demand a greater quantity, and encouraging more people to enter the market and buy. This will happen at every price level above 30 cents. To eradicate the surplus completely, the price will decrease until the quantity supplied is equal to the quantity demanded. This occurs at the price of 30 cents.

### Focus Questions

1. What is the purpose of the competitive market model?  
 ..  
 ..
2. What is meant by each of the following terms?  
 (a) Market..  
 (b) Law of supply..  
 (c) Market demand..  
 (d) Market quantity..  
 (e) Supply curve..  
 3. (a) Why does a surplus exist when the price is above equilibrium?  
 ..  
 ..  
 ..  
 (b) Explain the process that would eradicate a surplus in the market for doughnuts.  
 ..  
 ..  
 ..
4. Why are there so few shortages and surpluses in a market economy?  
 ..  
 ..  
 ..
5. Explain why the price increases when a shortage occurs at the market price.  
 ..  
 ..  
 ..

## 2.2 Shifts in demand and supply

### Introduction

Market conditions change quite frequently, affecting demand and supply schedules. When the demand curve or the supply curve shifts position, the market will move to a new equilibrium. A different price and quantity will prevail at the new equilibrium.

For example, in winter the demand for chocolate-covered strawberries may increase. This means that a greater quantity is then demanded at every price. At 10 cents, 12000 will be demanded instead of 10000, and 4000 instead of 2000 at 50 cents.

*Individual supply schedules for chocolate-covered strawberries:*

Price per chocolate strawberry	Quantity demanded per week in summer	Quantity demanded per week in winter
10	10000	12000
20	8000	10000
30	6000	8000
40	4000	6000
50	2000	4000

The demand curve will shift to the right in winter, as shown in figure 2.5, and the winter demand curve ( $D_w$ ) will be to the right of the summer curve ( $D_s$ ). The new equilibrium price will be 40 cents and the quantity traded in the market will now be 8000 per week. The demand shift has increased both the market price and market quantity.

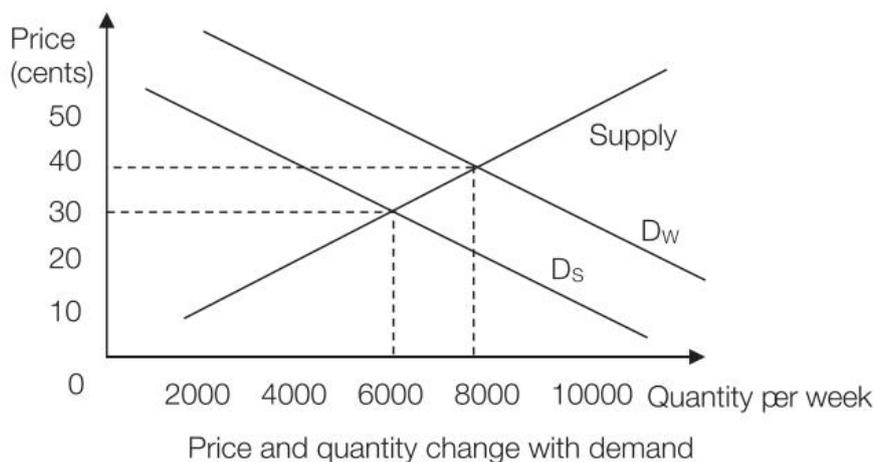


Figure 2.5

### 1. Demand shifts

Demand and supply shifts occur in every market when market conditions change. To represent this, one of these curves will shift, either to the left or to the right. If market demand increases, a greater quantity will be demanded at every price. To represent this, the demand curve shifts to the right. A decrease in demand is represented by a leftward shift of the demand curve.

### Ceteris paribus

You may recall from Chapter 1 that economists use thought experiments to build their theories. Just as with any experiment, it is necessary to change only one factor at a time so that conclusions can be meaningful. For example, if you added manure to a plant as well as increasing the amount of water, it would grow faster. You would not know whether the manure or the water was the factor causing the improved growth. Hence, in explaining the following effects, it is assumed that no other factor is changing at the same time. This is the most common assumption in economics. (The Latin phrase, *ceteris paribus*, is often used in place of the above explanation; it is roughly translated as “all other things being equal”).

## Decreased demand

If consumers discover that coffee is harmful to their health, the demand for coffee will shift to a lower quantity of demand *at each price*. Drawing a new demand curve to the left of the old one represents this shift. The demand curve is shifted left because, as the horizontal axis tells us, quantity decreases to the left. The effects of the demand shift are now evident from figure 2.6. The quantity traded will fall from  $Q_1$  to  $Q_2$  as consumers buy less. The market has moved from its original equilibrium position,  $E_1$ , where the supply curve meets  $D_1$ , to a new equilibrium position,  $E_2$ , where the supply curve meets  $D_2$ . At the new equilibrium position the price and quantity are both lower.

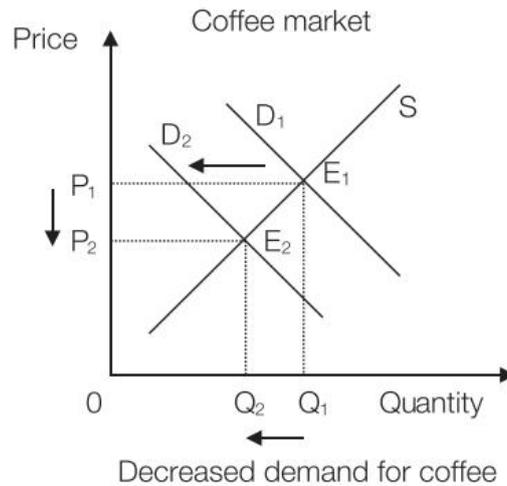


Figure 2.6

It is useful to focus on the response of supply to a shift in demand. When demand decreases, producers notice that their stocks of coffee are increasing. They drop their prices to clear surplus stocks of coffee. This is illustrated in figure 2.7. If the price remains at  $P_1$ , suppliers will be left with a surplus, represented on the diagram by the line segment shown in red. They have to charge a lower price  $P_2$  to clear the surplus. They are therefore prepared to supply a lesser quantity  $Q_2$ . Supply has contracted from  $E_1$  to  $E_2$  in response to the shift in demand. Suppliers have moved back along their supply curve to a position where quantity supplied and demanded are again in balance.

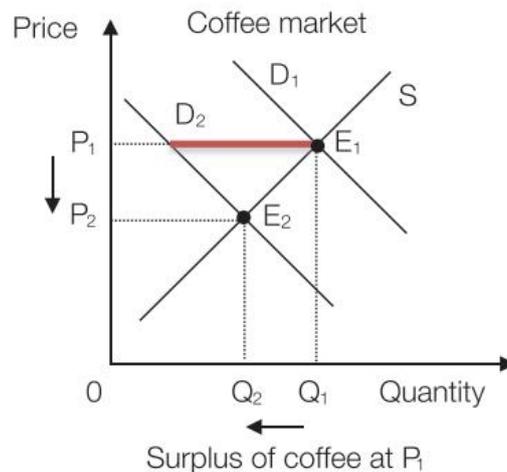


Figure 2.7

## Increased demand

The demand curve may alternatively shift to the right. This will happen if buyers change so that they buy more coffee at every price. For example, a change in lifestyle towards a café culture, in which consumers enjoy drinking coffee in cafés in a social atmosphere, has increased demand for coffee.

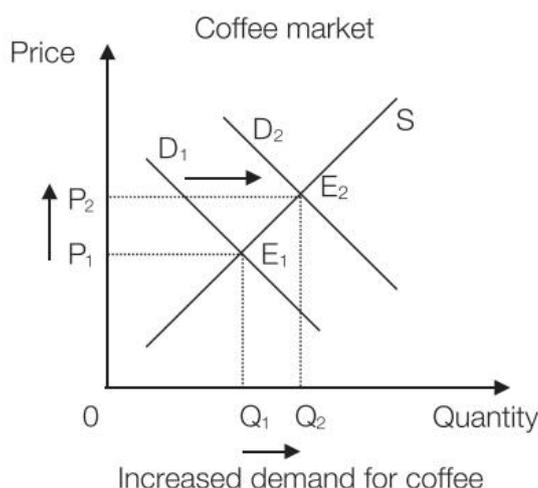


Figure 2.8

Producers of coffee will supply more coffee to satisfy demand, but they will take advantage of the increased demand by charging a higher price. In figure 2.8, supply has expanded from  $E_1$  to  $E_2$ , a movement along the supply curve in response to the price change brought about by a shift in demand. The diagram shows that the quantity supplied will change from  $Q_1$  to  $Q_2$  to meet increased demand, and the price will increase from  $P_1$  to  $P_2$  to allow increased profit.

## 2. Factors shifting demand

### Income

#### National income level

A rise in household incomes will increase demand for nearly all goods, as most households can afford more of each good and service. A nation-wide rise in incomes will shift demand curves for most goods and services to the right, and a fall will shift them to the left.

#### Income distribution

A change in distribution of income can also shift demand. If you own a florist shop in a particular suburb, and the demography of that suburb changes so that average incomes are higher, demand for your flowers should increase. The demand curve for flowers, in that particular flower market, will shift to the right.

### The price of substitutes

**Substitute goods are alternative goods that can be consumed to satisfy the same wants.** Beef and lamb are substitutes for chicken and pork, for example, and Holden Commodores and Ford Falcons are substitutes for each other. *If the price of one good increases, demand for its substitutes increases.* For example, if beef becomes very expensive, consumers will demand a greater quantity of lamb, substituting lamb for the dearer beef. The converse is also true. The *price* of the good and the *demand* for its substitute are directly related, changing in the same direction.



### The price of complements

**Complementary goods are goods that are consumed together to satisfy a want.** Examples include bread and butter, cricket bats and cricket balls, and a mobile phone and cover. *If the price of a good increases, demand for its complement will decrease.* Thus, if the price of football tickets substantially increased, demand for football merchandise, such as shirts and jackets with club emblems, would decrease. The *price* of a good and *demand* for its complement change in opposite directions.

## Tastes, preferences and fashion

Consumers' tastes and preferences for particular goods and services depend on factors such as education, social and psychological pressures, advertising and weather conditions. Changes in fashions will also change consumer demand. If tastes, preferences or fashion change in favour of a particular good, then the quantity demanded will increase, and the demand curve will shift to the right. The opposite demand shift will result from an unfavourable change in tastes, preferences or fashion. Consumer tastes have recently changed, for example, in favour of lean meats and foods with low cholesterol content, and away from fruits and vegetables that have been in contact with a lot of chemicals.



## 3. Supply Shifts

If market supply conditions change, the quantity supplied will either increase or decrease at every price. An increase in supply is represented by a shift to the right of the supply curve, and a decrease in supply is represented by a leftward shift.

A supply shift refers to a change in the quantity of coffee that producers supply, *at each price*. The model shows this as a movement of the supply curve. Let us assume that a disease has reduced the quantity of coffee beans that can be harvested in one of the world's major coffee producing areas. Producers of coffee will have to supply a lower quantity of coffee at each price. Drawing a new supply curve to the left of the old one represents this shift. As a result, the price of coffee will increase. This has happened at times in the past, striking fear into the hearts of coffee drinkers all over the world!

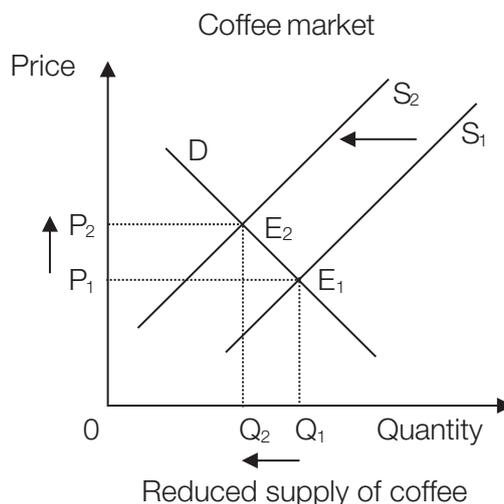


Figure 2.9

The effects of the supply shift can be read from figure 2.9. A shortage exists at  $P_1$ , now that the supply curve has shifted to the left. The shortage is measured by the horizontal difference between the two supply curves at  $P_1$ . The quantity traded will fall from  $Q_1$  to  $Q_2$  as producers can supply less. At the same time, producers will increase their prices to ration the shortage of coffee stocks and try to maintain their profit margins. As a result prices will rise, from  $P_1$  to  $P_2$ . Some buyers will pay the extra price to get the coffee, and some will not. Buyers as a whole have

moved back along their demand curve to a position where they pay a higher price and are therefore prepared to buy a lower quantity.

Changed market conditions have moved the original equilibrium position, where the demand curve meets  $S_1$ , to a new position where the demand curve meets  $S_2$ . At the new equilibrium position the price is higher and the quantity traded is lower.

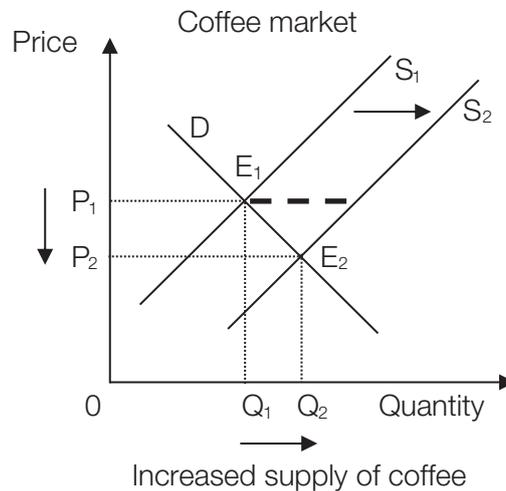


Figure 2.10

The supply curve may alternatively shift to the right. This will happen if production costs or conditions change so that producers supply more coffee at every price. For example, a decrease in production costs will increase profit and suppliers will be keen to increase supply of coffee to  $S_2$  in figure 2.10. There will be a surplus at  $P_1$ . The surplus is measured by the horizontal difference between the two supply curves at  $P_1$ , shown by the bold, dashed line in figure 2.10. Producers will reduce the price to  $P_2$  to clear the surplus. The quantity of coffee demanded at the lower price will then extend to  $Q_2$ .

## 4. Factors shifting supply

### The costs of production

Production costs affect profit. If costs increase, such as the price of materials, most producers will supply a lesser quantity because production is less profitable. Other producers, who were operating on a small profit margin, may find that they make no profit at all once costs increase, and they will cease production altogether. As a result of increased costs, total market supply will decrease. This is illustrated in the model by a shift to the left of the supply curve. Alternatively, it is useful to think of the supply curve as shifting *up*, instead of *left*. The result is the same but it may make more sense to represent increased production costs with an upward shift of the supply curve, as suppliers will increase their prices to cover the extra costs.



Apple prices change with the seasons

## Seasonal influences

Seasonal factors affect supply, particularly in agricultural industries. Weather patterns, pests and crop diseases will affect the quantity that producers are able to supply. A good barley-growing season will increase barley supply, shifting the supply curve for barley to the right, whereas a drought or locust plague will shift supply to the left.

## Taxes

Governments require firms to collect tax on goods and services and so the imposition of a new tax or the increase or decrease of an existing tax will shift the supply curve. For example, an increase in excise tax on petrol would be passed on to consumers by the producers who have to pay it. An excise tax is imposed on producers of certain goods to gain taxation revenue. The increased tax payable increases producers' cost per unit, reducing their profit, and causes them to supply less litres of petrol at each price. Another way of looking at this is that producers will charge higher prices for each quantity level they produce. The change is represented in figure 2.11 by the move to  $S_2$ , resulting in a price increase to  $P_2$ . Taxes that shift the supply curve include, apart from excise tax, any pollution taxes, licensing fees and the goods and services tax.

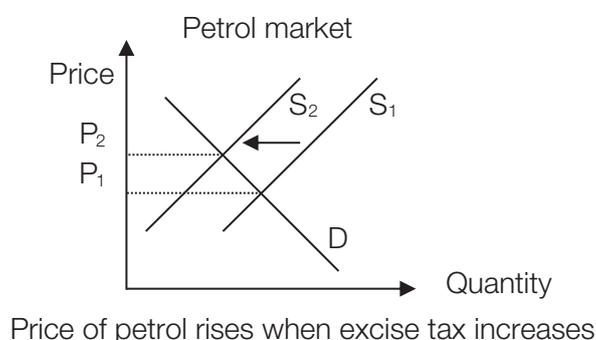


Figure 2.11

## The prices of other goods

Prices affect producers' profits and so they may reduce supply of one product if the price of another is more attractive. For example, if the price of wheat increases substantially relative to the price of wool, a farmer may switch paddocks to wheat production and sell some sheep to reduce sheep production. Notice that resources must be able to be switched from production of one good to another for such a shift in supply to be possible.

## Technology

An improvement in technology means the use of more effective production methods. This often takes the form of better capital equipment, but may simply mean better methods or organisation of production. The use of computers and robots has greatly improved productive efficiency (productivity) in many industries. Increasing the efficiency of resource use leads to lower costs per unit for producers, and thus greater profits, and encourages them to increase supply.

## 5. Price determination

In summary, prices are determined in markets by the forces of demand and supply. The price of a good, service or resource will be the equilibrium, or market, price. Market price is the price at which the quantity demanded is equal to the quantity supplied. This price will only change if there is a shift in demand or supply, represented on the model by a shift of the demand or supply curve.

Browsing through the lists of factors that shift demand or supply, you will notice that price is not one of the causal factors. A price change is the *effect* of a demand or supply shift. For example, assume the supply of building materials shifts to the left as a result of the imposition of the goods and services tax (GST).

The price of building materials will rise as a result of the supply shift as sellers pass the tax on to buyers. This is shown in figure 2.13. Demand contracts as the response of consumers is to demand a lower quantity, as the law of demand predicts. This is represented by a movement back along the demand curve to the left. Note that this is a resources market and so most buyers are producers.

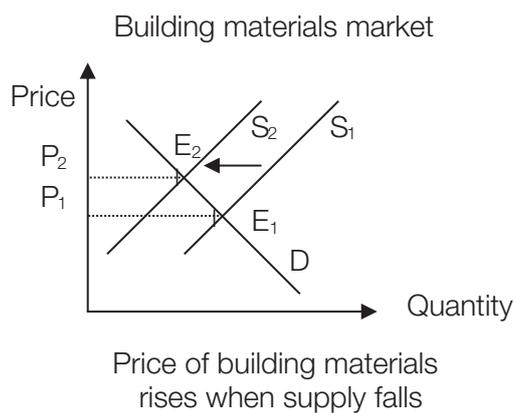


Figure 2.12

It is important to realise it is a *shift* in supply that has caused the price to change. In response to a price increase, demand will *contract*, represented by a movement along the demand curve from  $E_1$  to  $E_2$ , as shown in figure 2.12.

## 6. Role of the market mechanism

A market economy relies on markets to solve the economic problem – that is, to allocate scarce resources to maximize satisfaction of wants. Markets make the three basic economic decisions, performing important functions.

### The ‘What’ decision

The decision about what to produce and how much is made when market quantity is determined in each market by the forces of demand and supply. In Australia, the market for Vegemite decides that a certain quantity will be traded, and resources are allocated to this to satisfy wants for Vegemite. However, a much smaller quantity of resources are allocated to the production of tofu in Australia.

The ‘What’ decision is also in operation when markets *ration* goods and services that are in short supply by increasing their price. To ration means to distribute fairly. As scarcity increases, sellers increase prices to maintain their profits in the face of reduced quantity. Some buyers will pay the higher price. This market response rations the scarce goods or resources to those willing to pay the higher price.

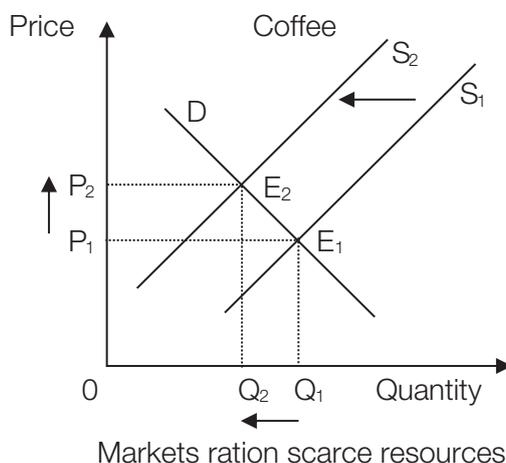


Figure 2.13

For example if coffee growers experience crop losses, the supply curve for coffee will shift to the left, as in figure 2.13. The price of coffee will rise to  $P_2$  and buyers will demand a lesser quantity. Coffee supplies will be automatically rationed – that is, they will be distributed to those who will pay  $P_2$ .

### The ‘How’ decision

The decision about what mix of resources to use in production mix is assisted by knowing the prices of resources. While goods and services markets ration scarce goods and services, resources markets also ration scarce resources. Some types of labour resources will be scarce at different times. For example, accounting skills are currently in short supply. Labour markets ration these scarce resources by increasing the price. This happens when employers compete with each other by offering high wages to attract people with high levels of accounting skills

### The ‘For whom’ decision

The ‘For whom’ decision is made on the basis of incomes. Markets for resources set resource prices and in this way determine income, as income is defined as payment for resources. Those who own more valuable resources can sell them for higher incomes. Income is distributed in the Australian economy in accordance with the value of resources we have to sell. In this way, markets distribute income.

#### Focus Questions

1. Using a diagram, explain what happens to the price and quantity of coffee traded in the market when demand for coffee increases at every price.
 

.. .. .

.. .. .

.. .. .
2. Using a diagram, describe the response of consumers to a decrease in supply of bananas.
 

.. .. .

.. .. .

.. .. .
3. Decide the direction of change in price and quantity when the following shifts in demand and supply occur in the soft drink market. Hint: sketch diagrams to help your analysis.
  - (a) Demand increases at every price. . . . .
  - (b) The supply curve shifts to the right. . . . .
  - (c) Supply decreases due to increased production costs. . . . .
4. Complete the table below to analyse the following changes in the market for beef.

Changes in the market for beef	Demand or supply?	Increase or decrease?	Right or left?	Effect on price?	Effect on quantity?
A a drought in beef producing areas					
B advertising promotes beef					
C an increase in income tax					
D a rise in the price of lamb					
E a fall in the price of cattle food					



5. Draw diagrams and mark a new curve to show the following shifts in demand or supply in the Unley bread market.

(a) Consumers increase their preference for bread.

(b) Butter and margarine prices increase.

(c) Nutritionists recommend children eat bread.

(d) Wheat prices decrease substantially.

(e) A new bakery opens in Unley.

(f) A goods and services tax is imposed.

6. Show on a diagram, and explain the effect of, an increase in the price of coffee on

(a) demand for tea

.. .. .  
 .. .. .

(b) the price of tea.

.. .. .  
 .. .. .

7. Show on a diagram, and explain the effect of, an increase in the price of cricket bats on

(a) demand for cricket balls

.. ..  
.. ..

(b) the price of cricket balls.

.. ..  
.. ..

8. Show on a diagram, and explain the effect of, increased excise tax on

(a) supply of petrol

.. ..  
.. ..

(b) the price of petrol.

.. ..  
.. ..

9. Show on a diagram, and explain the effect of, an increase in the price of wheat on

(a) supply of sheep

.. ..  
.. ..

(b) the price of sheep.

.. ..  
.. ..

Examination revision

**\$20m hotel plan**

In two consecutive months the Adelaide Sunday Mail reported plans for two new hotels in Adelaide. The Westpac Bank building on the corner of North Terrace and King William Street will become a four-star, 121-room hotel.

And there are plans for a \$20 million four-star hotel, 14 stories tall with 207 rooms, to be built in Grote Street next to the Franklin Street bus station. It will be built on the back of the Church of Christ building, which will become a restaurant and bar.

A spokesman for the latest hotel venture said that the central business district population was growing and there was a need for more accommodation.

(a) (i) What is the price mechanism?

(ii) Why does a demand curve slope downward to the right?

(b) (i) Draw the diagram of the hotel accommodation market and show the effects of two new hotels.

(ii) Explain your choices of curve shift and direction.

(iii) Explain the effects of two new hotels on the price and quantity of hotel accommodation.

(c) Draw the B&B market diagram and show the effects of the change in the hotel market on the market for bed and breakfast accommodation (B&B), given that B&B is a substitute for hotel accommodation.

(d) How do buyers respond to the change in the price of hotel accommodation?

(e) (i) State one demand factor mentioned in the article.

(ii) Predict the effects of that demand factor on the hotel accommodation market.

(f) Explain the role of markets in making the 'What' decision.



## 2.3 Price elasticity

Elastic is a word meaning responsive, flexible and capable of expansion. A piece of elastic ribbon, the kind that holds up clothing, is capable of flexibly responding to a stretching force by expanding. It is then able to return to its original shape when the force is removed or reversed. Elasticity refers to the ability to respond to a force. In economics, this concept is applied to demand and supply of goods and services. A price change is the market force that both buyers and sellers respond to. Price elasticity measures the responsiveness of quantity demanded or supplied to a change in price.

Demand and supply can be relatively price elastic or price inelastic. The more responsive quantity is to a change in price, the more elastic is supply or demand. Conversely, the less responsive the quantity is to a price change then the less elastic is demand or supply.

### Price elasticity of demand

#### 🔑 Ecoterm

Price elasticity of demand is the measure of responsiveness of the quantity demanded to a change in price.

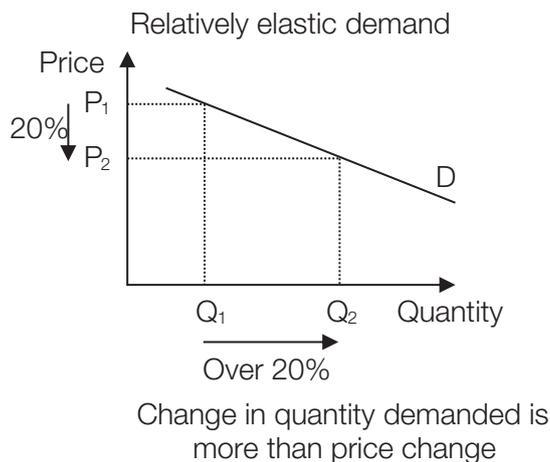


Figure 2.14

When the price of some goods and services changes, demand is very responsive. Demand for other products has a very low degree of response by buyers. Demand is classified as price inelastic when a change in price leads to a proportionally smaller change in the quantity demanded. Demand is price elastic if there is a big response by buyers to a change in price. For example, if the price of bananas falls by 10% and in response the quantity demanded rises by more than 10%, say by 25%, then demand for bananas is said to be price elastic. If the quantity demanded increases by less than 10%, say 5%, then demand for bananas would be regarded as price inelastic. This concept is demonstrated on the diagrams in figure 2.14 and 2.15.

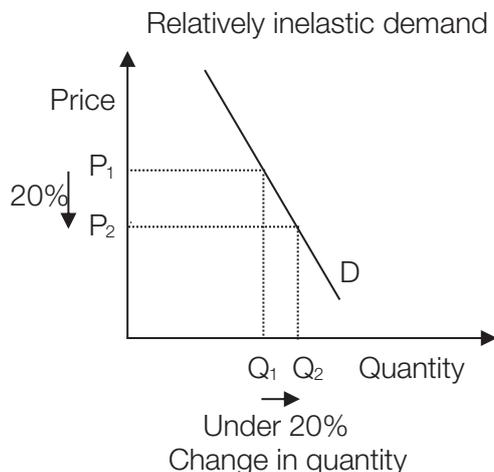


Figure 2.15

Relatively elastic demand can be represented by a flatter demand curve. Buyers' response to a 20% fall in price from  $P_1$  to  $P_2$ , in figure 2.16, is to increase their quantity demanded from  $Q_1$  to  $Q_2$ . The change in quantity is proportionally bigger (more than 20%) than the change in price, and so demand is said to be relatively elastic.

Relatively inelastic demand is shown by a steep demand curve. Buyers' response to a 20% drop in price from  $P_1$  to  $P_2$ , in figure 2.16, is the relatively small increase in quantity demanded from  $Q_1$  to  $Q_2$ , a decrease of less than 20%.

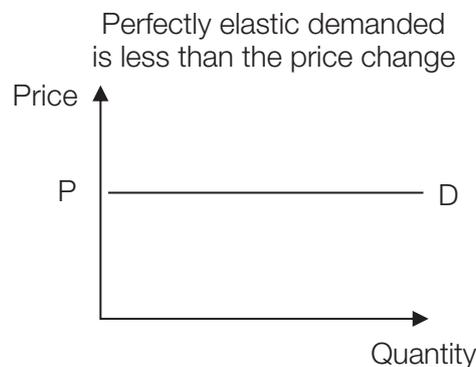


Figure 2.16

Perfectly elastic demand is represented in figure 2.16 by a horizontal demand curve. Buyers' response to an increase in price is infinite. For a close example of this theoretical extreme, imagine that the price of pens in the post office increased slightly above that of pens in the newsagent next door. The post office would theoretically lose *all* of its sales of pens.

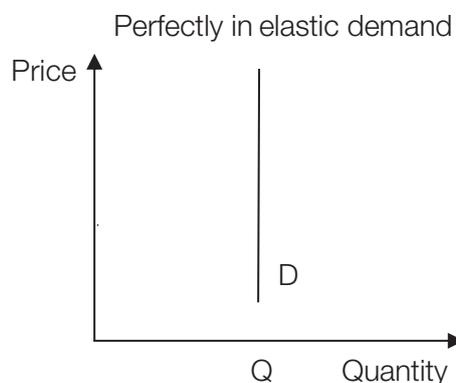


Figure 2.17

Perfectly inelastic demand is represented in figure 2.17 by a vertical demand curve. Buyers' response to an increase in the price of a life-saving medicine would be zero. The quantity demanded would not change and buyers would simply pay the higher price.

## Factors affecting price elasticity of demand

### Close substitutes

When prices rise, consumers switch their spending to substitute products. The availability of substitutes causes demand for the product to be relatively price elastic because it allows buyers to respond easily to a change in price. For example, if lamb becomes more expensive, the quantity demanded will fall quickly and substantially, as consumers substitute beef, chicken or pork. Diesel fuel does not have a close substitute and so demand is price inelastic. Drivers of vehicles with diesel engines will still buy a similar quantity of diesel fuel even after a price increase.



*Clothing has many substitutes; prices cuts will increase the quantity demanded quite elastically.*

## The relative cost of the item

When a product costs a relatively small proportion of a household's or individual's income, a change in its price produces little response from buyers. For example, an increase in the price of matches from 20 to 30 cents is a 50% increase, but this would be insignificant for most consumers and is unlikely to reduce the quantity demanded. Demand for a good or service whose price is an insignificant fraction of income is price inelastic. Even if the price of onions rose by 50%, the quantity of onions demanded would not fall by as much as 50%. Consumers would still buy much the same quantity, to improve the flavour of their cooking.

## Complements to an expensive product

Complementary goods are those that are consumed together to satisfy a single want. If two goods or services are complementary, and one is much more expensive than the other, then a rise in price of the cheaper complement will cause only a small response by buyers. Two such complements are tennis racquets and tennis balls. An increase in the price of tennis balls will not stop most people playing tennis. They do not want to waste the use of the more expensive complement, their tennis racquet. Hence, the quantity of tennis balls demanded would fall by a smaller percentage than the percentage by which price of tennis balls increased. Applications (apps) for a mobile telephone or tablet, and the 'phone or tablet itself, are also pairs of complementary goods. The cheaper complement has relatively inelastic demand.

## Durability of the product

Demand for durable goods tends to be price elastic. Because a durable good such as a house or car lasts a long time, the consumer can put off purchase and wait for the price to go down. Other examples of 'consumer durables' are furniture, white goods and boats.



## Necessity of the product

Demand for goods and services that are perceived to be necessary is relatively price inelastic. This would apply also to drugs to which we become addicted. As the price of such products rises, demand falls by a proportionally smaller amount than the price rise.



## The revenue effect

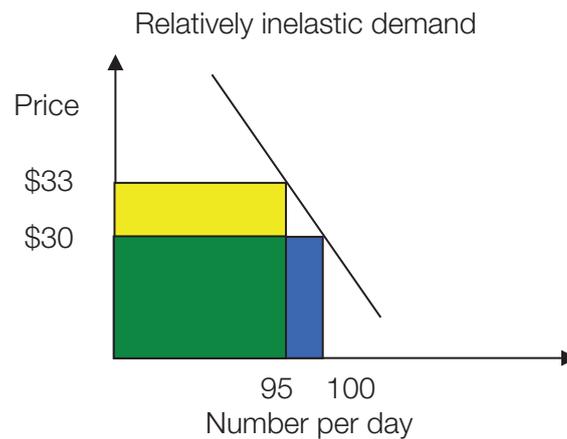
Sellers who change their price need to understand the price elasticity of demand. They need to know how the market will respond. If prices rise, the change in quantity demanded, and hence the revenue from sales, will change. Revenue is the firm's income. Sales revenue is the quantity of sales multiplied by the price per sale. For example, if a CD shop sold 100 CDs at \$25 each, the revenue would be \$2500.

The change in revenue as a result of a change in price depends upon the products' price elasticity of demand. If demand for a product is relatively inelastic, a price increase of 10% will result in a reduction in quantity demanded of less than 10%. In this case, revenue will increase. On the other hand, if price elasticity of demand is relatively elastic, revenue will fall when the price is increased.

To see this, concrete examples are useful. First, the one and only ferry between Kangaroo Island and the mainland of South Australia provides an example of price inelastic demand, represented by the steep demand curve in figure 2.17. In this market, there are no close substitutes as there are no other ferries. Imagine that the ferry operator raised the price of a ferry crossing from \$30 by 10% to \$33. The number of people making the crossing per day might fall from 100 to 95, a fall of 5%. Before the price rise the ferry revenue was 100 fares at \$30 per fare, a total of \$3000. After the price rise, revenue would be 95 fares at \$33, a total of \$3135. It follows that revenue increases as the price is increased for products whose demand is relatively price inelastic.



*There are no close substitutes to the Sealink ferry to Kangaroo Island, and so demand for tickets is price inelastic.*



Revenue rises as price rises

Figure 2.18

Figure 2.18 shows that the revenue before the price rise, represented by the green plus the blue box ( $\$30 \times 100$  fares), is less than the revenue after the price rise, represented by the green plus the yellow box ( $\$33 \times 95$  fares). An alternative analysis is to compare the gain from the fare rise, represented by the yellow box, to the loss, represented by the blue box. It is clear that the gain in revenue is greater than the loss.

In this extreme case of an absence of close competition, prices could rise enormously. If this happened, competitors would be attracted by the big profits available, or the government would step in to control prices. Because people living on Kangaroo Island need to make the crossing, the South Australian Government controls the price. This keeps fares to an affordable level. See Topic 3 for further explanation of government intervention in markets.

Fish, and indeed many other foods, provide an example of relatively price elastic demand. A fishmonger might sell a particular type of fish at \$20 per kilogram, and sell 50 kilograms of this fish each day. Imagine that he now increases his price by 10%, to \$22. Demand for fish is relatively price elastic because there are plenty of substitutes, it is reasonably expensive and it does not last. Therefore, the quantity demanded of this seller's fish will decrease by more than 10%, say by 20% to 40 kilograms per day. This is illustrated in figure 2.19.



Figure 2.19

There are many substitutes for fish, and so demand for fish is price elastic.



Before the price rise, the revenue was 50 kilograms at \$20 per kilogram, a total of \$1000. After the price rise, the revenue fell to 40 kilograms at \$22, a total of \$880. The diagram represents this. The green plus the blue boxes representing the revenue before the price rise ( $\$20 \times 50$  kg) are together bigger than the green plus yellow boxes representing revenue after the price rise ( $\$22 \times 40$  kg). The revenue lost, represented by the blue box, is greater than the revenue gained, represented by the yellow box.

## Price elasticity of supply

Supply of a good or service is relatively elastic if there is a big change in quantity supplied relative to a change in price, as shown in figure 2.20. The closer the supply curve is to the horizontal, the greater will be a change in quantity supplied in response to a given change in price. In other words, the more elastic will be the supply. Such a shallow supply curve indicates that producers are very responsive to a change in price. Elasticity allows producers to take advantage of a price rise of a particular product by supplying more of those products. They can also quickly reduce production of a product whose price falls.

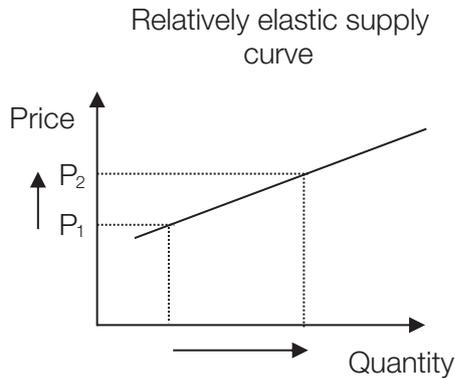


Figure 2.20

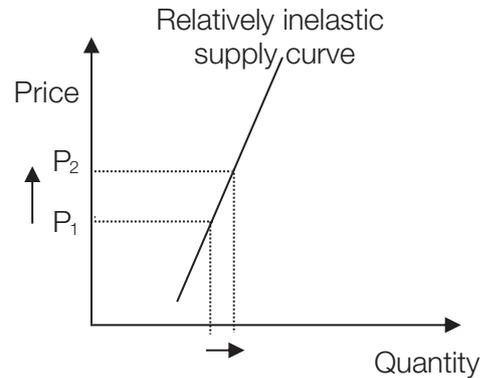


Figure 2.21

If an increase in price brings about a relatively small change in quantity supplied, as in figure 2.21, supply is said to be relatively price inelastic. The closer the supply curve is to the vertical, the smaller will be the change in quantity supplied in response to a price change, and the less price elastic the supply. Price inelastic supply means that producers are unresponsive to a change in price. This is usually because they are not able to respond quickly enough to take advantage of price rises, or to avoid profit contractions when the price falls.

## Factors affecting price elasticity of supply

### The length of the production period

Supply of agricultural goods is often relatively price inelastic, because it is difficult to change output in response to a change in price. This is particularly so once a crop has been planted. Producers of such goods may only be able to supply a given quantity to the market. Once an orchardist's apple trees have been pruned, sprayed and watered, the size of the apple crop is very difficult to change. Alternatively, before the season's plantings, supply of some agricultural products is a little less inelastic because farmers can change their management of the orchard to boost the number of apples.



### Ability to hold stocks

Firms that produce durable goods (such as cars, electronic equipment and furniture) are able to store their stocks of materials and produced goods. The ability to hold stock means that the quantity available for sale is not restricted to current production. If the price changes, suppliers can easily increase supply to the market by drawing on stored stocks, or reduce supply by putting some current production into storage. In this way, supply can respond and is therefore elastic. Supply of perishable goods, such as fruit and vegetables, tends to be price inelastic because it is not easily stored.

### Availability of excess capacity

Excess capacity refers to buildings, machinery and labour that can be used in production, but are not in current use. Firms that are operating at full capacity will not have any idle resources. They will not be able to increase supply in response to a price rise. For those firms, supply is relatively price inelastic and their supply curve will be steep. Firms that have excess capacity can more easily respond to a price increase and have a more elastic supply curve.

## Transferability of resources

Producers can change the quantity of their supply more easily and quickly if their resources can be switched to an alternative production. For example, production of wheat and sheep often occur together because they require many of the same resources – land, labour and general agricultural equipment. If the price of wheat rose and the price of wool and lamb fell, farmers could hold fewer sheep and use more land and other resources for wheat production. Similarly, a printing machine that is capable of producing both magazines and greeting cards can reduce the quantity supplied of one and raise the other, in response to price changes.

## Using elasticity

Knowledge of elasticity can be used to predict the effects of price change on quantity traded.

### Elastic demand

We know that if demand is relatively price elastic, a change in price will result in a proportionately bigger change in the quantity demanded. We have also learned in this chapter that price only changes when either the demand or supply curve shifts.

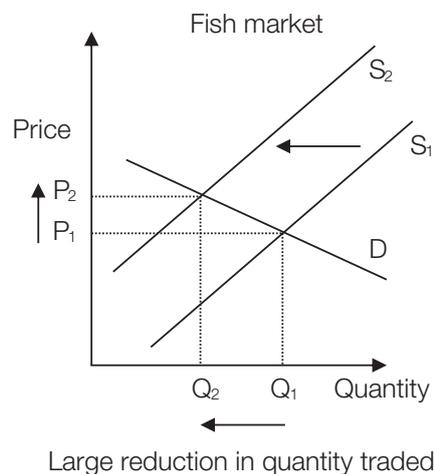


Figure 2.22

For example, imagine that the availability of fish decreases, as a result of poor fishing conditions. The change is represented on the model in diagram 2.22, by the supply curve shifting to the left to  $S_2$ . Suppliers will increase the price of their fish, to maintain their profit in the face of falling supplies.

Demand for fish is represented by a relatively elastic demand curve because there are so many substitutes for fish, it is not durable and its expense is a significant part of a family's food budget.

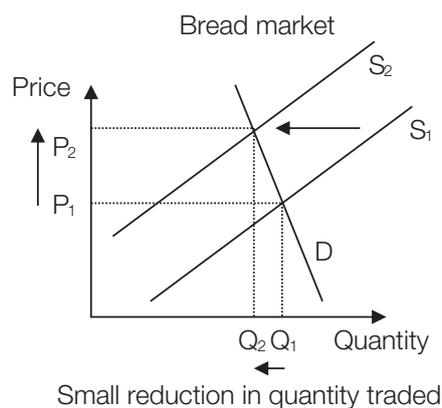


Figure 2.23

In response to the price rise, consumers will buy a lot less fish. The quantity traded in the market will reduce to  $Q_2$ , a proportionately bigger change than the change in price. Revenue for the fish supplier will fall.

## Inelastic demand

On the other hand, if demand for a product is relatively price inelastic, we can predict a small decrease in the quantity traded in proportion to a price rise.

If the price of bread increases, say as a result of increased production costs, our model again shows the supply curve shifting to the left to  $S_2$  in figure 2.23. Demand for bread is relatively price inelastic because it has few substitutes that most of us prefer, and it is relatively inexpensive. Therefore, buyers change the quantity they demand by proportionately less than the price rise, and the quantity traded in the market falls very little, to  $Q_2$ . Revenue will increase.

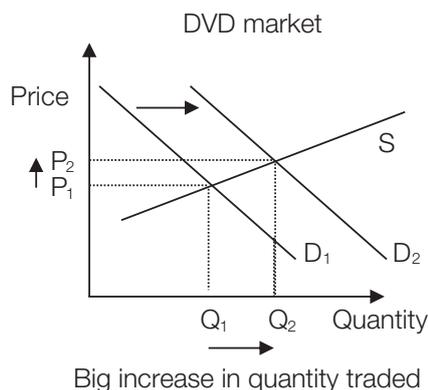


Figure 2.24

## Elastic supply

When demand increases for a good, producers are able to charge a higher price to earn extra profit. If the supply of that good is relatively elastic, they can easily produce more, further increasing their profit.

For example, supply of blank digital video disks (DVDs) is relatively price elastic because the production time is relatively short and they are easy to store. To respond to the increased price,  $P_2$  in figure 2.24, caused by increased demand, stored DVDs can be released for sale and more can be quickly made. The quantity traded will increase to  $Q_2$ , a rise proportionately bigger than the price rise.

## Inelastic supply

On the other hand, the quantity traded of goods whose supply is relatively inelastic will increase by less than the price increase, when demand increases.

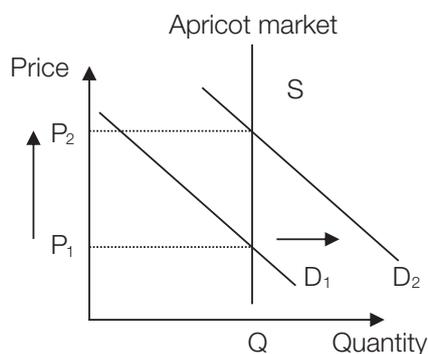


Figure 2.25

For example, if a rise in demand for fresh apricots increased their price, it would be difficult for farmers to increase their production of apricots in the short term. The production period is long as farmers need to wait until summer to harvest, and may need to plant more trees and wait for them to bear fruit. Apricots are very perishable and can't be stored fresh for more than a few days. Therefore, the quantity traded is not able to increase at all, in the immediate term. The supply curve has been drawn as perfectly inelastic in figure 2.25, on the assumption that supply can not be changed in response to the price rise. In this case, the change in quantity traded is certainly proportionately less than the price change – it is zero!

### Focus Questions

1. Draw a relatively inelastic supply curve for wool and show on the diagram that a given price change will cause a proportionately smaller change in quantity supplied. Label your diagram.

.. .. .  
 .. .. .

2. Define the term 'price elastic demand' and give an example of a good whose demand is relatively price elastic.

.. .. .  
 .. .. .

3. Using a diagram, explain the effect of a 10% increase in the price of apples on the quantity of apples traded. First, decide whether demand for apples is relatively price elastic or inelastic and justify your decision.

.. .. .  
 .. .. .

4. Explain the effect of durability on price elasticity of demand.

.. .. .  
 .. .. .

5. Decide whether demand for the following goods is likely to be relatively price elastic or inelastic, and justify each decision with at least two factors.

- (a) Refrigerators.. .. .
- (b) Tomatoes.. .. .
- (c) Cigarettes.. .. .
- (d) Pencils.. .. .

6. Explain the concept of excess capacity and the effect of excess capacity on price elasticity of supply.

.. .. .  
 .. .. .

7. Explain with reference to a diagram why a 10% increase in the price of fares on the Kangaroo Island ferry, if it is the only service to Kangaroo Island, results in increased revenue to the ferry operator.

.. .. .  
 .. .. .

8. Decide whether supply of the following goods is likely to be relatively price elastic or inelastic and give a reason for each decision.

- (a) Gold.. .. .
- (b) Cars.. .. .



9. (a) How does the length of the production period for wheat (about 12 months in South Australia) affect the price elasticity of supply, after the crop is planted?

..  
 ..  
 ..  
 ..

(b) Draw a diagram of the supply curve for wheat in (i) the short term (less than one year) and (ii) the medium term (about 5 years).

10. When the price of car tyres increased by 15%, the quantity demanded decreased by 5%. Classify the price elasticity of demand for car tyres.

..

**Examination revision**

**Excess petrol excise tax?**

The amount of fuel excise tax collected by the Federal Government more than doubled in the 1990s, to about 50 cents per litre by 2001, according to the Royal Automobile Association of South Australia.

In 2014 it was about 70 cents per litre.

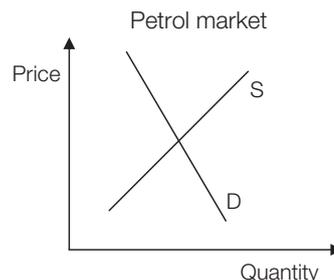
(a) Define price elasticity of demand.

..

(b) Use at least two factors of the price elasticity of demand to support the diagram's representation of demand for petrol as relatively inelastic.

..  
 ..

(c) On the petrol market diagram (right), show the effects of the excise tax.



(d) Comment on the effect of the change in petrol market conditions on

(i) sellers' sales receipts

..

(ii) taxation revenue

..

(e) Assume the excise tax on a litre of petrol is 70 cents, and the total price is \$1.40. Predict the effect of halving the excise tax on the quantity of petrol demanded, and justify your answer.

..  
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# Topic 3: Markets in Practice

## 3.1 Market structures

### 1. Market structures

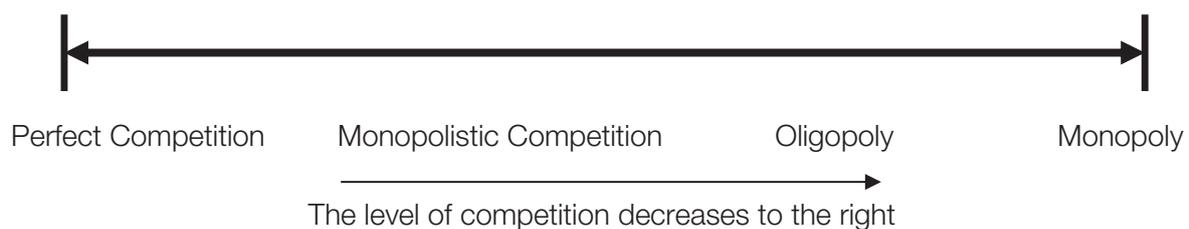
The theory of the price mechanism, dealt with in the previous chapter, assumes that markets are competitive. In practice, markets are not all perfectly competitive. Firms conduct themselves differently in different market structures, with varying outcomes for consumers, producers and other groups. Many Australian markets have a competitive structure as by far the greatest number of Australian firms are small and have little influence on the markets they serve. This is because they compete with many other small firms that supply the same market. There are also markets that are not very competitive. In most of these, there are a few firms that are very large and powerful, and governments watch their conduct carefully to protect consumers. However, governments also appreciate the importance of big business to Australia's economy.

It is instructive for us to look at the markets in which we participate to see how they are structured. **Market structure describes the size, shape and relative strength of the buying and selling sides of a market.** The structure of a market is the main factor determining the conduct of firms in that market. The theory that follows draws connections between the way a market is structured and the conduct of firms in their market structures. In particular, we are concerned with competitive conduct, because it determines prices and profits.

### 2. Four Models

There are four theoretical models of market structure: perfect competition, monopolistic competition, oligopoly and monopoly. These models can be used to classify real markets. If a market can be closely matched to a model, we can get some idea of its operation. For example, classifying the ice cream market in Australia as an oligopoly allows us to use our knowledge of oligopoly theory to understand something about how the ice cream producers operate.

The four models form a spectrum of market structures with the most competitive structure on the left-hand end and the least competitive on the right.



The major differences between each of the four models are:

- the number and relative size of firms in the market
- the degree of influence of firms on the market
- the degree of product differentiation
- the existence of barriers to new firms entering the market.

### 3. Perfect competition

#### Ecoterm

Perfect competition is an industry structure in which many small firms compete to supply a single identical product.

#### The model

Perfect competition is represented by the extreme left-hand end of the continuum above. It is a market structure in which the following conditions exist:

- There is a large number of buyers and sellers. This is the vital condition, because it means that there will be a high level of competition on both the buying and selling sides of the market.
- No one buyer or seller can influence the market price or conditions of sale. Sellers are 'price takers': if a seller increase its price, consumers will switch to other suppliers, as perfect substitutes exist in the market.
- The product of each seller is identical. An alternative way of saying this is that products throughout the market are **homogeneous**.
- There are theoretically no barriers to entry into, or exit from, the market. Firms can easily enter or leave the market.
- There is perfect knowledge for both consumers and producers. That is, the prices and conditions of sale of all resources and products are known, and all available technologies are known.

Perfect competition is a theoretical model. It never exists in its pure form. The closest examples of perfectly competitive markets are found in the agricultural sector of the economy, because there are large numbers of firms supplying each market. The orange market provides a reasonable example. Let us see how closely this market fits the model described above.

#### Many buyers and sellers

Regional orange markets are supplied by a great many producers, with most operating on relatively small fruit blocks along the Murray-Darling River system. There are a large number of buyers, ranging from large supermarket chains through to small fruit and vegetable shops, general stores and motorists who stop to buy from roadside stalls.

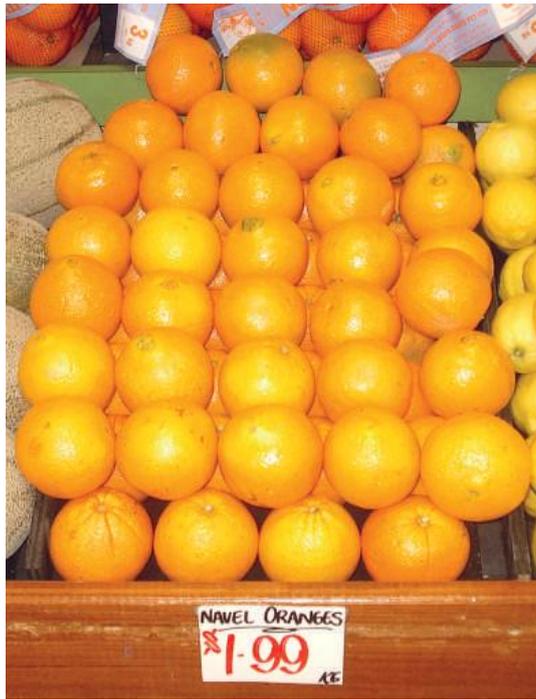
#### Influence on price



The model says that none of the growers or sellers can influence the price of oranges. If sellers put up their prices by even a small amount, then competition would dictate that buyers would purchase oranges elsewhere. Sellers and buyers in perfectly competitive markets are **price takers**, with no influence on the price or conditions of sale, according to the model.

This is where our example falls a little short of the theoretical model of perfect competition. There are in fact a few very large buyers of oranges — the big supermarket chains. A grower approaching a supermarket in the hope of securing a regular buyer of his goods may find that the supermarket is able to dictate the price and conditions of the transaction. The seller will accept the lower price in return for a guaranteed market. The influence imposed by large buyers makes the orange market less than perfectly competitive.

In order to counter this buying power, growers in agricultural markets often group together. They may form a 'cooperative', a company that acts on behalf of the group. In this way growers have more market power when negotiating with buyers than they have when they act alone. The cooperative can guarantee supply and so win price concessions.



*Greengrocer's oranges from different producers are the same.*

3

## Homogeneous product

Every grower's oranges are very similar to every other grower's. One grower's navel oranges are going to be much the same as everyone else's navel oranges. All navel oranges are perfect substitutes for each other. However, if a producer can grow oranges that are twice as big, or have other differentiating features, then people would be willing to pay more for those oranges. This will give some influence on price. While oranges are homogeneous, growers can only compete on the basis of price.

## Barriers to entry

There are no significant barriers to entry into, or exit from, the orange market. Anyone who wishes to produce oranges needs relatively small capital and knowledge bases. However, if there are no blocks of land left suitable for oranges, then the orange market will fall short of the model of perfect competition. Similarly, a barrier to exit from the market may be encountered if a fruit block is difficult to sell.

## Perfect knowledge

Prices of other growers' oranges and of resources are well known by those involved in the orange markets. Appropriate production methods and technologies are also known or are at least learnable. But knowledge falls short of being perfect. For example, buyers may not be able to easily tell whether the oranges they buy are juicy or sweet enough for their taste until they remove the peel. In this sense, the orange market may again fall short of the theoretical model.

You can see from this example that exact cases of perfect competition are rare. Some other close examples are to be found in markets for other agricultural produce such as fruit, cereals and livestock.

## Elasticity

A single firm in a perfectly competitive market faces a horizontal demand curve for its products. Figure 3.1 shows market demand and supply curves for oranges, faced by all suppliers to that market. The second part of the figure shows that any one perfectly competitive supplier faces a demand curve that is horizontal at market price. Demand for a perfectly competitive firm's product is perfectly elastic. If the firm raises its price, consumers will stop buying from that supplier altogether, and find an alternative supplier at a lower price. If the firm lowers its price, it will be able to sell all it has to offer. However, intense competition has already forced prices as low as they can go without foregoing profit, and so growers cannot lower their prices any further. They can charge neither more nor less than the market price.

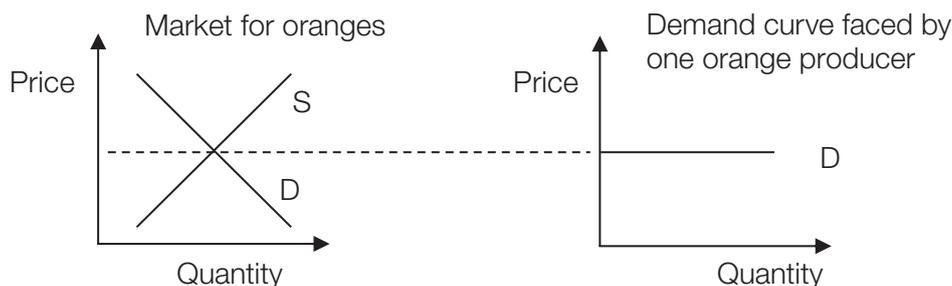


Figure 3.1

## 4. Monopolistic competition

The second market structure along the competition spectrum is that of monopolistic competition. This is a very similar market to perfect competition. The major differences are that the products are not identical and perfect knowledge does not exist. It is by differentiating their product that firms try to establish a “monopoly” on their particular version of the product, or at least a degree of price control. Competition occurs on the basis of differences in products that perform the same basic function. For example, every manufacturer's T-shirts are different, but the T-shirts all do the same job. If one producer is able to achieve some customer loyalty, to a style in which it has a monopoly, it will be able to charge a higher price.

### Ecoterm

Monopolistic competition is a market structure in which many small firms are selling products that are similar but not identical.

### The model

The model of monopolistic competition describes a market structure with the following features. Unlike the model of perfect competition, there is no one point on the continuum between perfect competition and monopoly, which defines monopolistic competition. For that reason, certain *features* distinguish these markets, rather than a precise set of conditions.

Examples of monopolistic competition include the women's clothing industry. It has a market structure that can be categorised as monopolistic competition because it displays all the features outlined above. Shops in an arcade sell similar clothes at similar prices. Product differentiation can be in the form of colour, style, fabric, store loyalty, store image, brand loyalty or brand image. Similarly, restaurants, hairdressers, and people offering professional services such as doctors, lawyers, and physiotherapists provide examples of monopolistic competition.

### Many buyers and sellers

No one firm supplies a significant proportion of the market. There are a large number of small firms that have limited influence on price. In this way the market is different from perfect competition in which firms have *no* influence on price. The degree of control a firm has depends essentially on the degree of its product differentiation. If a firm is able to establish brand loyalty or store loyalty, it will be able to charge a slightly higher price than other firms will. However, if it raises the price too high, its share of the market will decrease.

## Product differentiation



*Both price and non-price competition are used in monopolistic competition.*

Each firm tries to create a 'monopoly' of some sort by making its product unique, by providing it with certain distinguishing features. The market's products are close, but not perfect, substitutes.

3



### Demand Curve

For example, R M Williams makes a particular style of shirts, trousers, boots and hats. It has developed a reputation for its particular style, and it has a monopoly on that style. Consumers are willing to pay higher prices than for similar products. The firm has some influence on price, but its influence is limited. It cannot charge whatever price it likes because there are many close substitutes available.

### Entry is easy

It is relatively easy for a new firm to enter the market. A new entrepreneur can begin producing and marketing without encountering significant barriers. However, there are some barriers to entry. It will need to differentiate its product. It may need to spend money on research and development. To survive, the new firm must also win customers away from established firms. It may need to outlay considerable sums on advertising to inform consumers of the new brand and to convince them of its benefits and advantages over rival brands.

### Non-price competition

In addition to price competition, firms engage in vigorous non-price competition. This is because their products are differentiated. For example, advertising is necessary to tell potential buyers how the firm's product is different from its substitutes. They also compete through packaging, promoting brand names, after sales service and so on. Firms will compete on the basis of product quality, often attempting to associate reliable quality with a particular brand in the minds of consumers. Sales promotions and reputation for service are other forms of non-price competition.

## Low barriers to entry

Barriers to entry to a monopolistically competitive market are low, so it is quite easy to set up a business and sell goods and services. Advertising is necessary in this type of industry because businesses need to broadcast their points of difference to their competitors, and advertising can add considerably to costs, especially for new firms. Although firms are typically small, some may be large. For example, small bakeries compete with a few large ones, and the large firms will have achieved economies of scale. This concept is explained in the oligopoly section, where it is much more relevant.

## Elasticity

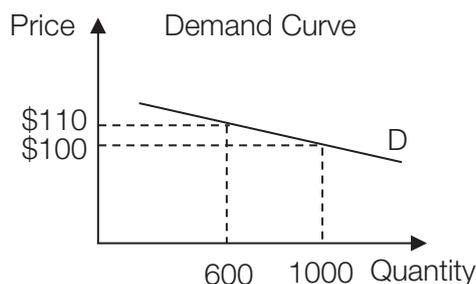


Figure 3.2

Firms in monopolistic competition typically have only a small degree of influence on price. This can be illustrated by the elastic demand curve faced by a single firm. Refer to figure 3.2. Any increase in price,  $P_1$  to  $P_2$ , by the supplier will result in a big decrease in the quantity demanded by buyers, from  $Q_1$  to  $Q_2$ . For example, a line of jeans might increase in price from \$100 to \$110 (a 10% rise) and experience a decrease in the quantity demanded of from 1000 to 600 per week (a 40% fall).

The reason for such an elastic response to the price change is that there are lots of substitutes supplied by other firms. The demand curve is not perfectly horizontal, as in perfect competition, because the monopolistic competitor has succeeded in gaining some degree of product loyalty, so that a small increase in price will be borne by those who prefer that style of product, and market share will not be entirely lost. The greater the success of product differentiation, the less elastic is demand.

The example of RM Williams, quoted earlier in this section, will serve again here. The market demand curve is less elastic than it would be in a perfectly competitive market because there are a number of people who like the RM Williams style and are prepared to pay higher prices than for substitutes. The demand curve faced by RM Williams is also less elastic than in perfect competition, giving the company the ability to raise its price without losing all the quantity demanded for its products.

## 5. Oligopoly



### Ecoterm

Oligopoly is a market structure in which a small number of firms supply most of the market.

Now we are in the realm of big business. We are also well into the realm of imperfect competition, on the right-hand half of the continuum of market forms and closer to monopoly than to monopolistic competition.

### The model

The model of oligopoly describes a market structure with the following *features*. Like the previous model, it is less precisely defined than perfect competition or monopoly.

A fascinating aspect of this market structure is the range of competitive strategies used by firms. The level of price competition is often low, but there is usually a very high level of non-price competition. This means that we know some examples of oligopoly industries quite well because they spend a lot of money on advertising, research and development, and innovation. Prices will generally be higher for their products, but the quality will also usually be high.



*Coca Cola is the biggest supplier in the Australian soft drinks market.*

## Few firms dominate

Only a few firms supply most of the market, and the firms are big. Each big firm has a large share of market sales. There still may be several sellers but these will be insignificant in comparison to the major suppliers. For example, Coca-Cola Amatil and PepsiCo dominate the Australian soft drinks market. There are a lot of other producers of soft drinks in each state but these two are responsible for about 85% of national sales. Because each firm has a substantial market share, the decisions of one of these have a marked influence on the behaviour of other firms in the market. These businesses are **'price-makers'**.

## Interdependence

Firms in an oligopoly are interdependent. They watch each other closely because the competitive strategies of each firm have profound effects on the others. For example, several car manufacturers offer a five-year or longer warranty on its new cars, to win or keep their market share.

## Non-price competition

Price competition is not common in an oligopoly. If one firm lowers its price, the other firms in the market will usually lower their price too. If they did not, they would lose market share. Price wars tend to be destructive in an oligopoly, with firms sacrificing profits to avoid losing market share (share of market sales) to the cheaper firms. After all firms have reduced their prices to protect their market share, they will all be making lower profits. For example, when Virgin entered the Australian airlines market, they started a battle for market share, resulting in both airlines investing in more aeroplanes and offering more routes, pushing up operating costs for both companies. Both eventually survived.



In the absence of price competition, non-price competition is common. Competition through strategies such as warranties is an example of non-price competition. Firms in an oligopoly compete on the basis of quality, reliability, design, service, advertising, packaging, after sales service and so on. The soft drinks industry, for example, competes heavily through advertising. Car manufacturers compete on the basis of features such as parking

assistance, cameras, collision avoidance and satellite navigation. An advantage of oligopoly firms is that they have both the incentive and the money for research and development to further differentiate their product, providing high levels of quality for consumers.

Competition is often fierce in oligopolies. Coles and Woolworths, having long controlled about 70% of the groceries retail market, have run milk price wars and also use advertising to compete.

## High barriers to entry.

It is difficult to enter an oligopoly market, as there are significant barriers to entry. **Set-up costs** are high in oligopolies, as businesses are big. Mining, banking and car manufacturing are industries in which it is very expensive to set up a new business. Land, premises or factories have to be bought and equipped.

Another barrier to entry could be the existence of **economies of scale**. In some industries, car manufacturing again being a good example, the cost of each unit of production (each car) decreases as more units are made, using the same factory and machines to produce more cars. The cost of each machine and building is spread over a larger number of cars. They can also buy raw materials more cheaply because they buy in bulk. Japanese, American, German, French and Korean car manufacturing plants can produce cars at a lower cost per car than Australian factories. The major reason for this is their size. Economies of scale was a major factor in the exit of Mitsubishi Motors Australia, General Motors: Holden, Ford Australia and Toyota Manufacturing Australia from the world car manufacturing industry.

Economies of scale can be achieved by expanding the scale of production, so that a jam manufacturer, for example, makes eight tonnes of jam instead of five each week. The same building and machinery can probably produce the extra jam without adding to plant costs. This reduces the cost of each jar as increased production costs are spread over a greatly increased volume of production.

Because large, existing firms enjoy economies of scale, new, smaller scale entrants tend to face higher production costs, and are generally deterred from entering the industry as they are likely to suffer losses in the short term. Hence, the presence of economies of scale acts as a barrier to entry.

Big businesses in an oligopoly market can spend enormous amounts of money on **advertising**. They need to compete with other big businesses to win and keep customers. They need to communicate the benefits of their products in a way that their targeted segment of the market will respond positively to.

Other barriers to entry may be associated with **licences** that are a legal requirement for operation. Banking, fishing and taxicab industries are examples. **Secret ingredients**, such as the formula for Coca-Cola and Kentucky Fried Chicken, may make it difficult for new entrants to compete effectively. **Patents** for new inventions, **control over raw materials** such as mineral deposits, sheer **know-how** and **brand loyalty** can also act as barriers to entry.



*Oligopolists like Heinz spend a lot of money on advertising.*

## Types of Oligopolies



### Differentiated oligopolies

Differentiated oligopolies are in fast food, biscuits, beer, cigarettes, soap, detergents, whitegoods, motor vehicles and soft drinks. Each firm in a market tries to make a different version of the product.

### Pure oligopolies

Pure oligopolies offer standard products such as lead, tin, alumina, cement and crude oil. In each market the product of each firm is identical to other firms' products. Each cement company's cement is essentially the same. Pure oligopolies do not differentiate their products, and so there is very little price competition or non-price competition.

### Elasticity

The demand curve, faced by a single firm, tends to be kinked at the market price. This shape can be understood by considering the response of other firms to one firm's change of price. If a firm in an oligopoly lowers its price to  $P_2$ , in figure 3.3, below that prevailing in the market ( $P_M$ ), in an effort to grab extra market share, the other firms will quickly follow suit. If they do not, the price-cutting firm will win some of their share of the market. Following the leader's price cut ensures that the leader will gain only a small increase in sales, as shown in the diagram by the increase from  $Q_M$  to  $Q_2$ . Such a low sales response to the increase in price is classed as inelastic.

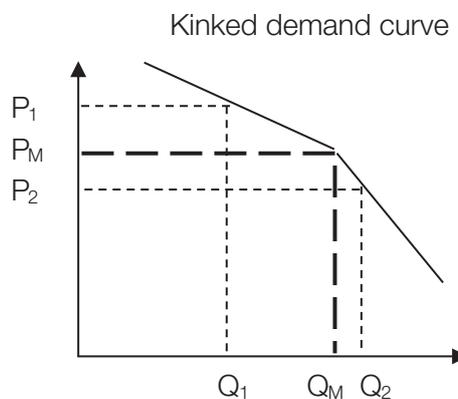


Figure 3.3

On the other hand, if an oligopolist lifts its price above the market price  $P_M$  to  $P_1$ , the other firms will not follow, leaving their prices lower. Buyers will respond to the firm's higher price by substituting its product with those of other firms and its quantity demanded will fall substantially. This is a relatively elastic response.

## 6. Monopoly

Monopoly and perfect competition are the two extremes of market forms and appear at the very ends of the spectrum. They are the only two forms that can be defined with a model, or theory. Because they are extreme forms, it is very difficult to real-world examples.

### Key Ecoterm

A monopoly is a market supplied by a single firm: there are no close substitutes and entry to the market is blocked.



Monopolies are often very large firms, some of which have been created by governments, such as Australia Post. Although it may be every entrepreneur's dream to be a monopolist, monopolies in Australia are very closely watched for their pricing policy and to make sure they do not abuse their considerable market power. Some markets are monopolies because they are isolated. A small country town, at a great distance from other population centres, will experience regional monopolies, such as a swimming pool, a supermarket or a service station.

Some monopolies exist because they are natural monopolies. A natural monopoly exists in a market whose quantity demanded prevents more than one firm from operating at maximum efficiency. If a second firm were to enter the market and win some market share, both firms would fail to achieve maximum economies of scale. One firm, operating at the scale at which maximum technical efficiency is achieved, is big enough to supply the whole market.

### Key Ecoterm

A natural monopoly exists in a market whose quantity demanded prevents more than one firm from operating at maximum efficiency.

### One firm

One firm supplies the whole market. Australia Post, for example, supplies the market for letter delivery in Australia, without competition. Australia Post has a monopoly in letter delivery, enforced by law. The ferry from Cape Jervis to Kangaroo Island in South Australia is a close example because there is only one ferry crossing the sea. Air travel is a substitute for passengers, though not a very close one; but it is not a reasonable substitute for goods, especially passenger cars.

A sole supplier has considerable market power, of course. If customers do not buy from that firm, they cannot buy from anyone else domestically. This allows monopolists to set the price that they wish to charge. However, if the firm makes enormous profit, it will attract some very determined entrepreneurs to compete with it, if they can enter the market. The famous Ladislav Biro, the man who invented and sold the world's first ballpoint pen, set a price of 55 shillings for his first pens, but within months competitors were selling ballpoint pens for one shilling.

Monopolists face a demand curve

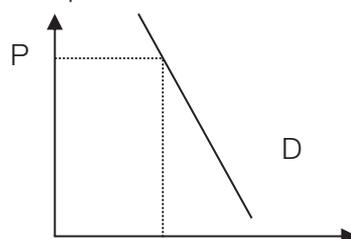


Figure 3.4

However, even monopolists face a demand curve. A monopolist can certainly set the price, say at  $P$  in figure 3.4, but must accept the quantity that buyers are willing to buy at that price,  $Q$ . Alternatively, the monopolist can set the quantity that it wishes to sell but must accept the price that the market will pay.

## No close substitutes

In a monopoly, the product has no close substitutes. If a monopolist's product had close substitutes and the firm tried to set a very high price, buyers would switch to the substitute. For example, Australian Consolidated Industries (ACI) is the only manufacturer of glass bottles in Australia. If this firm raised its price high enough, beer manufacturers and other users of glass bottles would use substitutes such as aluminium cans for their products or import bottles from foreign producers.

## Barriers to entry

- **Economies of scale**

Economies of scale are likely to be achieved by a monopolist. This means that the existing firm is very big and producing at low cost. If a new firm were to produce in competition, it would have to match the scale of the existing firm's operations in order to match its low-cost structure. Recall that economies of scale are achieved when increased scale of production result in decreased costs per unit. A natural monopoly is said to exist when one firm, achieving maximum economies of scale, can supply the whole market. If another firm entered, both firms would have to share the market and neither of them would be able to operate at minimum unit costs. Maximum economies of scale are achieved when unit costs are minimised.

- **Control of resources**

Control of essential resources by one firm can maintain a monopoly position. Australia Post, which owns all public post boxes, provides an example. A new entrant to the letter delivery market would have to lease post boxes from Australia Post or build its own network.

- **Government regulation**

Some monopolies are created by law. In some cases, the government sets up production in a monopoly market, for example, letter delivery. In the recent past, electricity and water were state-owned monopolies. Many government monopolies were set up to reduce costs by achieving economies of scale, and to provide rural communities with access to a range of essential services. In other cases, patents and copyright protect and give incentive to inventors and creators, for a time period. Protection from competition encourages research and development and assists in the creation of new goods and services and innovative production techniques.



*Australia Post was set up by law as a monopoly; now it only has a monopoly in letter delivery.*

- **Set-up costs**

Set-up costs are usually very large. To break into a monopoly market requires capital to build large plants, establish markets, advertise and possibly run at a loss for a while.

## 7. Game theory

### The concept

Game Theory, a branch of applied mathematics, is used by economists to explain competition among firms in oligopoly and monopolistic competition. It is a mathematical analysis of strategic behaviour. The players are the rival businesses in an industry where strategic games are commonly played as firms seek advantage over rivals. Firms decide on their strategies, taking into consideration what their opponents' strategies are likely to be. Mathematical analysis of strategic behaviour, known as Game Theory, helps us to understand the decisions made by firms.

#### Ecoterm

Game Theory is a mathematical analysis of businesses' competitive strategies.

Some common competitive games are outlined in this section and the strategies of each player are analysed by comparing the payoffs of those strategies. A payoff is what a player receives from the outcome of a game once players have made their decisions. Payoffs can be summarised in small matrices.

In each game, firms will try to use a dominant strategy, a strategy that, no matter what their rivals do, will bring them the best payoff. Each firm will need to deduce its rivals' likely responses to their own strategies, for the best results.

#### Ecoterm

A dominant strategy is a strategy that, no matter what their rivals do, brings them the best payoff.

### The duopoly game

We read in Chapter 3.1 that price competition is not common in an oligopoly. This is because, if a firm's strategy is to cut its price to lift sales, its rivals will do the same to defend their share of the industry's sales. The result is likely to be lower prices and lower profits for each firm. So how do firms set their prices?

Price fixing is illegal, but firms in an oligopoly sometimes find ways of colluding anyway. To understand how oligopoly firms charge a similar price, we will limit our study to a duopoly, an oligopoly with only two firms. To do a similar analysis for a market supplied by more than two firms is more complicated, but the principles are the same. Collusion is not effective, in addition to being illegal in the structure of laws prevailing in Australia.

If both duopolists charge a high price they will both make high profits. The dilemma for both companies, having made a collusive agreement to both charge a high price, is whether to comply with that agreement, or to cheat. If one undercuts the other's price, it will get more customers, winning those customers from its rival. Its rival's response will be to also charge a lower price. After some trial and error by both companies, an equilibrium will emerge, as each decide on the strategy that delivers their best outcome. The equilibrium position will occur when both companies charge a competitively low price.

Even if the equilibrium is for players to comply with the agreement, they will probably cheat at some point. An actual case study can illustrate this. In the case study, the players are countries rather than companies. The Organisation of Petroleum Exporting Countries (OPEC) is based on an agreement by oil-rich, Middle Eastern countries to hold back oil production in order to keep crude oil prices high. However, there are several examples of countries cheating on this agreement. When Kuwait expanded its production in defiance of the agreement, Iraq invaded Kuwait in 1990 and set fire to its oil wells, sparking American intervention codenamed Desert Shield. Also, in 2018 Iran accused Saudi Arabia and Russia of breaking the OPEC agreement by increasing oil production.

We will now use game theorists' mathematical analysis for the duopoly game. Our fictional example is of two newspapers servicing the same small city, The Express and The Clarion, both issued daily. Imagine that payoffs in the table below are calculated by both players, with full knowledge of their own costs and educated guesses about their rival's costs. These are summarised in the matrix below. Payoffs from The Clarion's strategies show the change in profit after equilibrium, in green, and The Express' in purple. The payoffs if both firms cheat are shown in the top left box, and in the bottom right if both comply. The matrix shows outcomes, or payoffs, as percentage changes in income.

Payoff matrix		The Express' strategies	
		Cheat	Comply
The Clarion's strategies	Cheat	+ 5%/+ 5%	+ 40%/- 10%
	Comply	- 10%/+ 40%	+ 20%/+ 20%

To choose The Clarion’s best strategy outcomes, focus on the green numbers only. First, look at The Express’ first column, “cheat”. If The Express cheats, The Clarion’s profit will increase by 5% if it also cheats but will decrease by 10% if it complies. Since a 5% rise in profit is preferable to a 10% decrease, The Clarion’s best strategy, if The Express cheats, is to also **cheat**. See (1) in the table below.

	Strategy	Cheat	Comply
The Clarion’s strategies	Cheat ✓ (3)	+ 5% ✓ (1)	- 40% ✓ (2)
	Comply	- 10%	+ 20%

Next, to choose The Clarion’s responses if The Express complies, look at The Express’ second column. If The Clarion also complies, it’s profit will fall by 40% if it cheats and will increase by 20% if it complies. Since a 40% increase is better than 20%, The Clarion’s best strategy, if The Express complies, is to **cheat**. See (2) in the table above.

The Clarion’s strategy in both cases is to cheat. This, then, is its **dominant strategy** because it is its best strategy no matter what The Express does. See (3) in the table above.

To choose The Express’ best strategy outcomes, focus on the purple numbers only. First, look at The Clarion’s first row, “cheat”. If The Clarion cheats, The Express’ profit will increase by 5% if it also cheats and fall by 10% if it complies. The Express’ best strategy, in the case of The Clarion cheating, is to also cheat. See (1) in the table below.

Payoff matrix		The Express’ strategies	
		Cheat ✓ (3)	Comply
The Clarion’s strategies	Cheat	+ 5% ✓ (1)	- 10%
	Comply	+ 40% ✓ (2)	+ 20%

Next, look at The Clarion’s second row. If The Clarion complies, The Express’ profit will increase by 40% if it cheats but by only 20% if it complies. In this case The Express’ better strategy is again to **cheat**. See (2) in the table above.

The Express also has a dominant strategy—it’s best strategy no matter what The Clarion does – which is to **cheat**. See (3) in the table above.

The dominant strategies for both firms is the same, and so the market will settle into an equilibrium, a dominant strategy equilibrium.

**Key Ecoterm**

A dominant strategy equilibrium occurs when each player plays its dominant strategy.

**Nash equilibrium**

In terms of the matrix reproduced below, both firms choose the box in the top left-hand corner. That means that both publishers will cheat, in other words they will compete rather than comply with an agreement to collude. **They both have the same dominant strategy**, which is to cheat, and neither has anything to gain by changing to a better strategy. This can be checked by looking at the alternative strategies to each other’s plays. If The Express cheats, The Clarion’s response to cheat (a 5% increase in profit) pays better than to comply (a 10% drop in profit). If The Clarion cheats, The Express also cheats because the alternative pays less (a -10% profit change compared to a 5% profit increase). A Nash equilibrium exists.

Payoff matrix		The Express’ strategies	
		Cheat	Comply
The Clarion’s strategies	Cheat	+ 5% ✓/+ 5% ✓	+ 40% ✓/- 10%
	Comply	- 10%/+ 40% ✓	+ 20%/+ 20%

A Nash equilibrium is named for its originator, John Nash, the subject of the film “A Beautiful Mind” in which Nash was played by Russell Crowe. Nash shared the Nobel Prize for Economics in 1994 for his Game Theory.

**Key Ecoterm**

A Nash equilibrium exists when each player’s strategy is the best response to the other players’ strategies, and each has no incentive to change their strategy.

## The price game

Let us imagine Qantas and Virgin airlines each pricing the Sydney to Melbourne 8.00 am flights. They do not produce identical services. Virgin, for example, try to have a more fun approach to their customers' flight experience in order to differentiate their product from Qantas, an established company when Richard Branson entered Virgin into the airline market in the year 2000.

The two airlines fly similar aeroplanes for these flights. They both have good knowledge of the costs of supplying their own flight services, but not exact details of each other's costs. Let's say that Qantas and Virgin consider charging either \$100 or \$120 for an 8.00 am return flight to Sydney from Melbourne. They would both have to calculate their likely profits from a single seat. Note that the amounts shown in the table below are fictional.

Payoff matrix		Qantas' prices	
		Charge \$100	Charge \$120
Virgin's prices	Charge \$100	\$30/\$30	\$50/\$10
	Charge \$120	\$10/\$50	\$40/\$40

Working through Virgin's responses to Qantas' strategies, the first column shows that Virgin would choose to charge \$100 if Qantas did, as a \$30 profit per seat is better than \$10, and the second column shows that Virgin would choose \$50 over \$40, charging \$100, if Qantas charged \$120. Virgin has a dominant strategy, then, which is to charge \$100 no matter which price Qantas chooses.

Payoff matrix		Qantas' prices	
		Charge \$100	Charge \$120
Virgin's prices	Charge \$100 ✓	\$30 ✓/\$30	\$50 ✓/\$10
	Charge \$120	\$10/\$50	\$40/\$40

The first Qantas row in the table below shows that it will choose \$30 over \$10 if Virgin charged \$100 per seat, thus charging the lower price itself. The second row shows that Qantas would also charge \$100, preferring /\$50 to /\$40 if Virgin charged \$120. Qantas too has a dominant strategy, to charge \$100 no matter what price Virgin might choose.

Payoff matrix		Qantas' prices	
		Charge \$100 ✓	Charge \$120
Virgin's prices	Charge \$100	\$30/\$30 ✓	\$50/\$10
	Charge \$120	\$10/\$50 ✓	\$40/\$40

Looking at the strategies chosen by both, in the table below, and focussing on the four boxes highlighted in yellow in the table below, the top left is the only box that both airlines choose with two ticks in the same box. That combination of strategies will bring the market to equilibrium.

Payoff matrix		Qantas' prices	
		Charge \$100 ✓	Charge \$120
Virgin's prices	Charge \$100 ✓	\$30 ✓/\$30 ✓	\$50/ ✓/\$10
	Charge \$120	\$10/\$50 ✓	\$40/\$40

The equilibrium position is a dominant strategy equilibrium because it is the result of both players following their dominant strategy. It is also a Nash equilibrium because neither player can do better with a different strategy. It seems that the bottom right box is a better outcome for both, but we have already decided that there is a better strategy in response to each of the other player's strategies. Virgin won't choose to charge the higher price if Qantas does, because the alternative, a \$50 profit, is better. The same argument applies to Qantas.

Profits could be higher for both if they make an enforceable agreement to each charge \$120. However, not only is an enforceable agreement illegal in most countries, the duopoly game described above suggests that duopolists are unlikely to collude, given that the dominant strategy for each is to cheat.

A different game is illustrated by a real event involving these two airlines, not a price war but a capacity war that erupted in 2012-2013. In 2012 Virgin began a discounting war with Qantas in order to grab a bigger share of the corporate and government business class market. It made immediate gains in that market, and then, in order to consolidate these gains, bought more aeroplanes to increase its capacity to fly more routes. Qantas responded immediately, to win back their lost market share. Alan Joyce, Qantas CEO, explained that his airline's profit maximising position was to keep its 65% of the market, and so Qantas also bought more aeroplanes and increased its flights.

It is instructive to look at one more price game scenario, both for practice and to illustrate the fact that there is not always a dominant strategy, there is not always an equilibrium and if there is an equilibrium it will not necessarily be a Nash equilibrium.

In the case shown in the payoff matrix below, two firms, Firm 1 and Firm 2, each firm chose a high or low price in response to the other firm's decisions. The numbers refer to an increase in profit. It is a good idea to work it through yourself. There is more practice in the focus questions to follow.

Payoff matrix		Firm 2	
		Low	High
Firm 1	Low	60/80 ✓	40 ✓/70
	High	70 ✓/60	30/70 ✓

Neither firm has a dominant strategy, there is no Nash equilibrium as there is no one box in which the two firms choose the same strategy, and there is no equilibrium position between the firms.

### The advertising game

Advertising is an effective strategy and will increase a firm's revenue, at least for a while. The Decore shampoo television advertisement, from 1988 to 1992, was wildly successful, and each campaign broadcast resulted in higher sales for a while. However, the product itself seems to have been unpopular as sales always fell off quite soon.

Advertising announces its product and its product differentiation. New customers try the product and so move their custom from rival firms. Each time an oligopolist starts an advertising campaign, it wins market share from its competitors. But then its competitors respond with competitive strategies of their own, usually advertising, to regain their lost market share. The end result is higher costs and therefore lower profits for each company. Television advertising in particular is extremely expensive.

However, the first company to advertise does win some market share and usually keeps it. That is the advantage of moving first. Such an advantage can be achieved by strategies other than advertising, such as the release of a new product or a new technology, or by increasing output. The advantage gained from these competitive strategies is achieved by being the first to move – to release a new product, to increase capacity or to advertise.

3

#### Focus Questions

- List the conditions of perfect competition.
  - .....
  - .....
- Explain why firms in perfect competition are described as 'price-takers'.
  - .....
  - .....
- Describe a market that you believe may be close to perfectly competitive by outlining:
  - the features that support your classification of the market as perfect competition
  - the features which cause it to fall short of the classification.

You could follow the pattern adopted above to describe the orange industry.

Give your answer in note form in the table below and compare your answer with another student.

Number of sellers	Influence on price	Homogeneous product	Barriers to entry
Features causing the market to fall short of monopolistic competition:			

4. Group task: Read the following description and write down the features that categorise the physiotherapy market as monopolistic competition. Use a table like the one below to write your answer in note form.

Frank the physiotherapist has completed his study and has worked for a few years in the practice of another physiotherapist. He wants to open his own practice and believes he can offer a competitive service, which he will call 'Sports Physiotherapy and Massage'. He wishes to show by this name that his service offers hands-on treatment and specialises in sports injuries. He noticed a shop for lease on a main road, in the seaside suburb of Grange, in South Australia. He knows that there are a lot of other small businesses offering physiotherapy services. He plans to charge reasonable prices that are just above what private health insurers will cover, and to try to develop "store" loyalty so that his clients will return.

Number of sellers	Influence on price	Product differentiation	Barriers to entry

5. Group discussion question: Suppose the soft drink market in a particular region is supplied as follows.

Coca Cola Amatil      65%  
 Cadbury Schweppes    20%  
 Lion Nathan (Pepsico)   5%  
 Others                    10%

- (a) Point out features that classify the soft drinks market as an oligopoly.

.. .. .  
 .. .. .

- (b) Suggest names of some firms in the 'other' category, producing soft drinks in your region.

.. .. .

- (c) Oligopoly markets are often fiercely competitive. Give examples of competition in the market for ice creams.

.. .. .

6. Group discussion question: When Whirlpool increased the length of its warranties on some white goods to five years, a warranty war started with Hoover who followed by offering a five-year warranty on washing machines. Email and Fisher & Paykel quickly matched these offers. Hoover extended its warranty to cover refrigerators and its rivals did the same.

- (a) Which market form best describes this industry?

.. .. .

- (b) What would be the objective of Whirlpool's tactic?

.. .. .

- (c) Does your market forms theory predict the response by Hoover and others?

.. .. .

- (d) Why would Whirlpool prefer a warranty-based competitive tactic to competition on a price basis?

.. .. .

.. .. .

- (e) List the features of the white goods market that led to your classification decision in (a).

.. .. .

- (f) What factors give monopoly power to firms?

.. .. .

7. Group discussion question: Imagine you are the manager of a large firm that manufactures biscuits. You need to maintain or increase your firm's market share in order to maximise profit. One of your competitors increases its price. Explain why you would or would not follow its lead.

.. .. .

8. Suggest examples of barriers to entry and interdependence in the car manufacturing industry.
- .. .. .
- .. .. .
- .. .. .
9. (a) What happens to market price and quantity if all firms in a market agree to raise their prices?
- .. .. .
- (b) Find the meaning of ‘collusion’ in a market context. See section 3.4.
- .. .. .
10. Explain why a patent is a barrier to entry. See glossary for a definition of ‘patent’.
- .. .. .
- .. .. .
11. In what industry might transport costs constitute a barrier to entry? Explain.
- .. .. .
- .. .. .
12. Explain with a diagram why a monopolist can set the market price, or the market quantity, but not both.

- .. .. .
- .. .. .
13. Prepare a summary of the costs and benefits of oligopolies.
- .. .. .
- .. .. .
14. (a) What is the purpose of game theory?
- .. .. .
- (b) Explain the difference between a dominant strategy equilibrium and a Nash equilibrium.
- .. .. .
15. (a) Complete the following payoff matrices. Note any Nash equilibria or dominant strategies. Label the vertical columns Firm A and the horizontal rows Firm B. Start by looking at Firm A’s responses to each of Firm B’s choices and tick their best ones, then tick Firm B’s best responses to Firm A’s choices.

	(i)		(ii)		(iii)		(iv)
9, 9	1, 10	7, 6	5, 5	8, 7	4, 6	5, 6	2, 7
10, 1	2, 2	4, 5	6, 4	6, 5	7, 8	4, 3	3, 4

- (b) Summarise the lesson for duopolists to learn from the “advertising game”.
- .. .. .

16. Summarise the four market forms in the table below.

	Perfect Competition	Monopolistic competition	Oligopoly	Monopoly
Features				
Close Australian examples				

Examination revision

1.

Big fish

Two Greek families joined together to create Australia’s biggest seafood company. This was in 2005, 20 years after they had each started up small fish shops, one in Brisbane and one in Sydney.

In an industry made up almost entirely of small businesses, the new company will supply about five per cent of the Australian market but will be several times bigger than its nearest rival.

(a) (i) Classify the type of market structure described in the article as

- A Perfect Competition
- B Monopolistic Competition
- C Oligopoly
- D Monopoly

(ii) Support your decision in 1(a) with reference to two characteristics of that market structure.

.. .. .  
.. .. .

(iii) Given your answer to (a) part (i), how well would you expect the fish market to meet consumer needs? Refer to three market objectives in your assessment.

.. .. .  
.. .. .

(b) Explain the degree of influence that a single producer is capable of in this type of market. Illustrate your answer with a diagram showing the demand curve faced by a single producer.

.. .. .  
.. .. .  
.. .. .

2.

Mobile money

The National Australia Bank (NAB) has a fleet of “mobile bankers” that turn up to new home display villages, homemaker centres, university campuses, shopping centres, and public events such as festivals and concerts.

“NAB on Wheels” vans include an ATM and bank officers have the same access to their bank’s systems as they would at a branch.

(a) Use the features of an oligopoly model to discuss to what extent the banking market is a good example of an oligopoly.

.. .. .  
.. .. .  
.. .. .  
.. .. .

(b) (i) Explain the concept of non-price competition using the example of NAB in the article.

.. .. .

(ii) Outline one other type of non-price competition the bank might use.

.. .. .

(c) Explain why oligopolies avoid price competition.

.. .. .  
.. .. .  
.. .. .

## 3.2 Market Objectives

### 1. Importance of markets

Markets set the *prices* of all goods and services. Prices are determined on the basis of supply and demand through interaction between buyers and sellers. The result of this interaction in the market place is to provide just enough goods to satisfy all those who want to buy. Large surpluses and shortages tend to be rare. Markets also determine the *quantity* that will be produced and consumed.

Markets are important because they answer the three major questions. Producers' responses to consumer demands decide the 'What' question. It is the buyer who is best served by this process. Buyers decide what they want and sellers, chasing profits, try hard to satisfy them. This idea of consumer sovereignty means that consumers rule markets! Markets also set prices of resources, including wages. Through this, they determine incomes with which households buy what is produced, thus deciding the 'For Whom' question. Additionally, through the setting of prices for resources, they determine the combination and quantity of resources used in the production process. In this way, markets also answer the 'How' question.

### 2. Objectives of markets

Because markets are so essential to a market economy, it is important to know what outcomes we want from markets. In other words, what do we want markets to do for society? What are the criteria for a successful market? Markets are the heart of a market economy, allocating resources and goods and services to all parts of the economy. We need them to work well. But what do we mean by "work well"? Several market objectives can be identified.

#### Objectives for consumers

##### Price

Markets should set prices that allow firms to make a profit but are as low as possible for buyers. Competitive markets do this best. Sellers in a competitive market keep their prices down. Low prices satisfy a high level of wants, providing a good standard of living.

##### Choice

Markets should provide buyers with a choice of sellers as well as a range of product styles from which to choose. Competitive markets are characterised by a large number of firms, providing buyers with choice in respect to price and product. If a customer does not like the products or service of a particular firm, there is a need for other firms to turn to.



*These two cafes, close to each other, compete vigorously.*

## Quality

To keep customers, and to win potential customers from competitors, it is also essential that firms try to maintain quality products and service. Firms compete with improved quality, warranties, after sales service, improved technology and so on. We need the pressure of competition to keep sellers doing their best for their buyers, whether it is firms supplying goods and services or households supplying labour and other resources.

**Competition generates the best combination of price, choice and quality of products for consumers.**

## Efficient resource allocation

Economists regard resources as being allocated efficiently when they are used to produce the goods and services that households want. By efficient allocation they mean the most *desirable* allocation of resources, so that maximum wants are satisfied. Efficient allocation of resources occurs when consumers are able to maximise the value they get from the economy's use of scarce resources. For example, if consumers want one hundred times more petrol than kerosene, then crude oil resources are allocated efficiently if they are used to distill one hundred times more petrol than kerosene. We also find it increasingly desirable to allocate resources for reducing damage to the environment, and to investigate and establish production methods that preserve the environment.

For allocative efficiency to occur, sellers need to respond to market signals, such as changes in stock levels. Shortages and surpluses need to be eliminated. This does not happen in uncompetitive markets, or in markets where anti-competitive behaviour occurs, such as price-fixing or abuse of market power. In these cases, consumers pay too much or refuse to buy, and so maximum wants are not satisfied.

## Information

In a market that is operating in the best interest of the community, information is freely available to all market participants. This means that consumers know the suppliers of a particular good or service, the prices they charge and other conditions of sale, including warranties and after sales service. Information enables both buyers and sellers to make informed decisions. Markets sometimes fail, and so governments intervene to counteract market failure, for example by requiring full labelling of products. For example, food packets must contain information such as ingredients. This helps people avoid dietary problems and ingredients to which they may be allergic.

## Technical innovation

Consumers want the goods and services that they buy to use effective technology and like to have the latest technology. Technology gives more and better features, for example, of cars and entertainment equipment, and also helps a device to work more effectively.

## Objectives for producers

### Profit

Firms should make a 'normal', reasonable profit. Competition restricts firms to normal profits. It is for this reason that governments have taken action to increase competition in markets. Normal profit refers to an amount of profit that is sufficient to keep producers in the market, and to encourage new firms to enter the market.

Lack of competition allows firms to make above-normal profits. They can only do this by successfully keeping new suppliers from entering, with barriers to entry. Buyers have to pay high prices and also face reduced choice of sellers.

To achieve profit, producers need to use resources efficiently to minimise costs. Note that technical efficiency, an objective for producers, is not the same as allocative efficiency, an objective for consumers.

### Technical innovation

In order to keep costs down and profits up, firms need to be innovative. In order to maintain a competitive edge, it is vital that firms continue research and development into efficient production techniques and product quality. We want markets to encourage research, development and implementation of new technologies. When this happens, consumers are better satisfied with price and quality and Australian goods and services compete better in global markets. For example, a South Australian firm developed a successful technique for raising tuna in sea pens, or 'tuna farms', reducing the need to find them in the ocean.

## Specialisation

Markets need to encourage producers to specialise in order to compete. Entrepreneurs put together resources to produce a particular, specialised product. Cold Rock specialises only in ice creams, Bagel Boys in bagels and nothing else, and BlueScope manufactures steel and steel products. Specialisation allows them to apply the best technology to their products.

## Information

Information needs to be available to producers as well as to consumers. Producers need to have information about production technologies and availability of resources. In a market with perfect knowledge, there are no secret recipes or formulae or industrial espionage, eliminating a barrier to entry.

## 3. Market forms and objectives

Different market forms achieve market objectives to different degrees. The more competitive markets achieve more objectives, but imperfectly competitive markets also play an important role in a market economy. This section uses the market objectives identified above to evaluate the four market forms.



*This producer specialises in sandwiches.*

3

## Perfect competition

### Consumers

Consumers like perfectly competitive markets because they achieve so many of their objectives. Prices are generally low as a result of fierce competition between many sellers. They have a large number of producers to choose from. On the other hand, as the product is homogeneous, they do not have a range of products to choose from – just the one. With low prices, consumer wants are well satisfied, which means that resources are allocated efficiently.

### Producers

Producers make normal profits in perfect competition. However, the intense competition among producers, who must accept the market price, leaves them with little spare profit for research and development of new technologies, and perhaps leaves some unable to afford to buy new equipment to keep up with available technology. On the other hand, the competition forces producers to achieve cost efficiency with careful use of resources. Finally, agricultural producers tend to specialise in a narrow range of products, refining their expertise. And information about prices and production techniques tends to be freely available.

## Monopolistic competition

### Consumers

Consumers pay relatively low prices in markets in monopolistic competition, as producers have only a little influence on price. They have a wide range of products as well as producers to choose from, as the many producers differentiate their product. The product quality is likely to vary between producers, but each producer will try hard to achieve high quality. Although information about prices and conditions of sale will not be perfect, producers will communicate a lot of this information to describe their product differentiation. Again, wants are well satisfied, indicating efficient allocation of resources, but some duplication of resources occurs – there may be lots of Italian restaurants, for example, in a single suburb.

## Producers

Producers will be able to make above normal profits if they can differentiate their products to achieve some degree of monopoly, that is, some uniqueness of their product. They will employ non-price competition but will also have to compete on price. They will also need to be cost efficient in their resource use to successfully compete against a large number of other sellers. Monopolistically competitive producers have a high degree of incentive to innovate and to use the best available technology. Technology is important both to keep down production costs and to maintain the level of quality that will defend their market share. A high level of technology will perhaps win some customer loyalty (brand loyalty or store loyalty) for their unique product. Producers try to specialise in their particular style or brand.

## Oligopoly

### Consumers

Consumers pay higher prices than they would in perfect or monopolistic competition, as leading oligopolists have sufficient market power to substantially influence the price, and smaller firms tend to follow a price leader. In addition, many firms in oligopoly avoid price competition, as described earlier in the chapter. Consumers can choose between only a few sellers but may enjoy a wide range of products. For example, each car manufacturer produces a range of models and each beer, biscuit and soft drink manufacturer similarly produces a range of their products. Quality is likely to be high. Because high prices prevail, resources are not usually allocated to maximise satisfaction of wants. However, while there is less price competition in oligopolies, there is plenty of non-price competition and oligopolies can be fiercely competitive. Some forms of non-price competition used include the latest technological features and attractive guarantees of quality.

### Producers

Oligopolies are exciting market forms for producers. There is the prospect of above normal profits for those that can survive and perhaps dominate in the cut and thrust of competitive strategies. The big businesses that form oligopolies are able to afford research and development and the latest machines and equipment, and they use these high levels of technology to try to gain market share. There is incentive to keep secrets from each other and therefore from the customers, meaning that available information is not complete. Oligopolists, like firms in monopolistic competition, try to specialise in their products.

## Monopoly

### Consumers

A monopoly will be able to charge a very high price because there is no other firm for consumers to choose, and there are no close substitutes for its product to choose from, either. At high prices, consumers will buy a lesser quantity than that which would fully satisfy their wants. A small-town newspaper or remote service station may not always provide a good quality product and may not wish to provide all the information consumers want. However, to guard against potential competitors, good quality and a high level of technology may well be on offer: research and development of new technologies and innovation are also important for monopolies to keep ahead of potential competition.

### Producers

Every producer wants to have the benefits of a monopoly, such as control of the price and therefore the ability to make super-normal profits. However, there are factors limiting the monopolist's control over the market. Although the monopolist can set any price, the quantity demanded at that price must be accepted. Although a monopoly may be protected by a patent, for example, it will need to remain efficient and keep up with technology to maintain competitiveness when its patent ends. Naturally, a monopolist is the specialist in its product. It will wish to keep information about its production techniques to itself, not wishing to advantage potential competitors.

### Focus Questions

1. Why do consumers prefer competitive markets?  
.. .. .
2. What is meant by efficient allocation of resources?  
.. .. .
3. Why is technical innovation important to both consumers and producers?  
.. .. .  
.. .. .
4. Is the quality of goods likely to be high in oligopoly markets? Explain.  
.. .. .  
.. .. .
5. How much control does a monopolist have over its market?  
.. .. .  
.. .. .  
.. .. .
6. Why is it important to society that firms make only normal profits?  
.. .. .  
.. .. .
7. How does a market encourage the use of new technology?  
.. .. .  
.. .. .
8. Perfect competition is often seen as the ideal market structure. Test this idea by listing those objectives of the market that you believe would be achieved by a perfectly competitive market. You could compare your work with someone else's. This might lead to an instructive debate.  
.. .. .  
.. .. .  
.. .. .
9. Oligopolies are examples of markets in 'imperfect competition'.
  - (a) Using the soft drink market as your example, list those objectives of the market that it fails to achieve.  
.. .. .  
.. .. .
  - (b) Which groups in the community, consumers or producers, are best served by oligopolies? Discuss.  
.. .. .  
.. .. .

## 3.3 Market failure

### Introduction

A market economy relies on markets to operate efficiently without government intervention. They are supposed to use resources so that maximum wants are satisfied. The price system sets prices through achieving equilibrium between buyers' demand and sellers' supply and allocates resources accordingly. Consumers make purchasing decisions guided by prices, and producers make production decisions based on prices of resources. Producers respond to changes in market conditions when they notice that changing stock levels signal a shortage or a surplus and adjust their prices and production quantities to clear the market. And market objectives are achieved.

However, this does not always work. Resources are not always allocated to maximise satisfaction of wants and to achieve market objectives. Prices do not always provide the proper signals to consumers and producers. When this happens, markets are said to fail. Even when markets *do* allocate resources efficiently, and there is *no* market failure, some market outcomes might be undesirable. This section describes the four main types of market failure, and some undesirable outcomes of efficient markets.

#### Ecoterm

Market failure occurs when markets fail to allocate resources efficiently.

We will first develop the concept of consumer and producer surplus to learn another tool for evaluating the efficiency of markets.

## 1. Consumer and producer surplus

### Consumer surplus

In Chapter 2.1, we developed the concepts of demand and the demand curve, using Auntie Beryl's research into what buyers were willing to pay for her chocolate-dipped strawberries. She found that some were willing to pay more than others.

Consumers are looking for value for money when they operate in markets, by comparing the value of what they receive with the market price. If the price is lower than what they were willing to pay, economists say they receive a consumer surplus.

Sticking with food examples, consider the market for pies. Liam, for example, is willing to pay up to \$7 as he loves pies. At the market price of \$4 per pie he is getting good value for his money.

#### Ecoterm

Consumer surplus is the value difference between the highest price the consumer was willing to pay and the market price they paid.

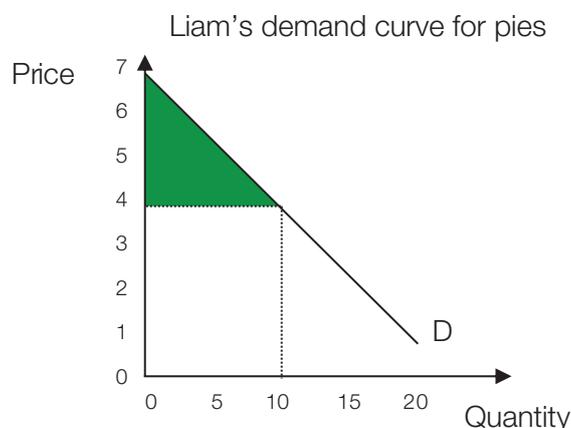


Figure 3.5

Liam's demand curve in diagram 3.5 shows that he buys

- no pies at \$7 per pie
- 10 pies per week at \$4 per pie
- 20 pies per week at \$1 per pie

At the market price of \$4 he buys 10 pies per week. His consumer surplus can be valued at the number of pies for which he paid less than he was willing to pay. He would have paid \$7 for just one pie, a little less for the second and so on, down to \$1 for the 20<sup>th</sup> pie. His total consumer surplus is the total of the saving he made from for each pie. He paid \$4 for the first pie but would have been willing to pay \$7, a saving of \$3. He was willing to pay \$6 for the second and \$5 for the third pie, saving a little less on each, and saved nothing on the fourth as he paid what he was willing to pay. The diagram illustrates this as the coloured area of the triangle below his demand curve and above the market price, that is 10 (the base of the triangle) multiplied by \$3 (its height) and divided by two, \$15.

## Producer surplus

Just as a consumer like Liam receives a consumer surplus when he pays less than he would be prepared to pay, so a producer achieves a producer surplus by selling a good for a higher price than he is willing to sell for.

Consider Milly's pie supply curve. Milly is not willing to produce and sell pies for less than \$2 each. She would use her resources better by baking bread and cakes. If she made and sold pies for \$2 each, she would be giving up the opportunity cost of producing bread and cakes and making more profit.

However, at any price *above* \$2 she can make a profit and achieve some producer surplus, as the price she receives is greater than the production cost of each pie, including opportunity cost.

3

### Ecoterm

Producer surplus is the income from production of a good at a price above that at which he is willing to supply.



Figure 3.6

Refer to figure 3.6. At the market price of \$4 per pie, producing 200 pies per day, the amount of producer surplus she is receiving is equal to the green area of the triangle below the market price and *above* the supply curve.

In fact, that is the maximum achievable producer surplus at the market price, because by charging a higher price she would be able sell fewer than 200 pies per day. This can be illustrated on the diagram by a smaller producer surplus triangle at every price below the market price.

## Market efficiency

A market is in equilibrium when the quantity demanded equals the quantity supplied, as determined in Chapter 2. In this situation, the market is also operating efficiently. Adam Smith's concept of the "unseen hand" gives us an understanding of the forces of demand and supply determining market price and market quantity.

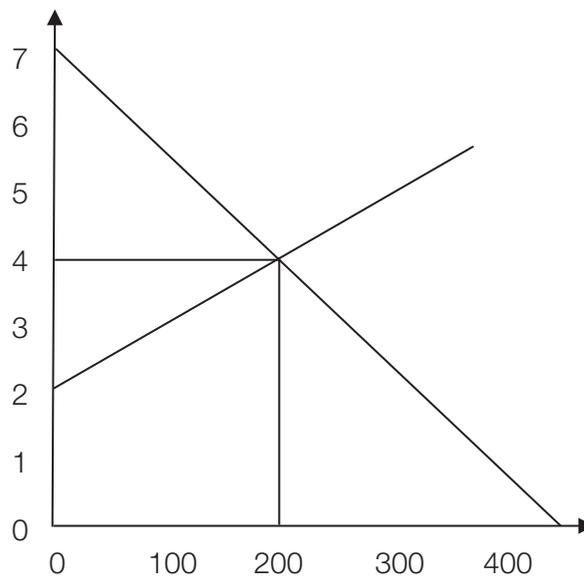


Figure 3.7

Also in this equilibrium position, consumer and producer surplus are both maximised. At any different price level either consumer surplus or producer surplus would be below its maximum, creating a smaller triangle than the ones created in figure 3.7.

At any price level other than the market equilibrium, either consumers' or producers' objectives are not fully met. To put this another way, it is not possible to increase supply at greater than market quantity without giving up some other good or service that is valued more highly. And if less than the market supply is produced, resources will be used to supply some other goods valued less highly than the ones foregone.

We will use the concepts of consumer and producer surplus, to analyse the effects of government intervention in markets.

## 2. Externalities

### Ecoterm

External costs and benefits are those imposed on people not undertaking the economic activity.



Market activities affect people who are not directly involved as consumers and producers. When producers make economic decisions, they compare the private costs of their production with their private benefits – their revenue. They do not generally consider external costs and benefits. Externalities are external costs (negative externalities) or external benefits (positive externalities) that production creates for external parties, that is, for those not involved in the economic decision.

Externalities can be caused by consumers and producers. Consumer negative externalities include public smoking leading to passive inhalation by non-smokers and drunkenness leading to public disorder. Examples of consumer positive externalities include having vaccinations that reduce the spread of disease and improve public health and cycling to work reducing traffic congestion and pollution. Positive producer externalities include beekeeping that results in pollination of crops and garden plants and use of solar power to reduce carbon emissions. Two examples of negative externalities by producers are pollution and noise.

### Positive externalities

Analysis of an example will help us to understand this. The benefits of cycling to work, school or university are improved health and fitness and fewer parking problems. These are private benefits, enjoyed only by the cyclists themselves. However, there are other effects, such as reduced pollution and road congestion, and these benefits are enjoyed by the public in general – they are external to the cyclists and are positive externalities. These external benefits could be enjoyed in many cities of the world but underprovision of safe cycling lanes deters cyclists. Market failure occurs because resources are not allocated efficiently.

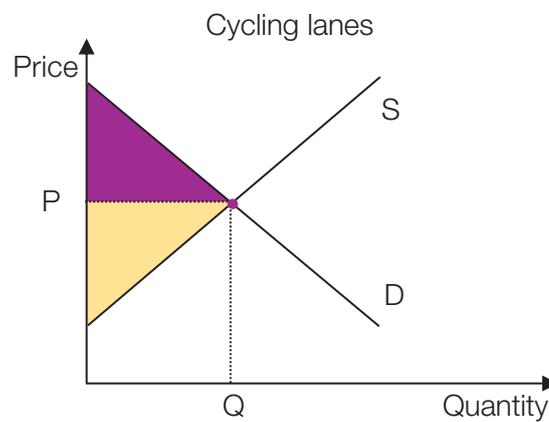


Figure 3.8

We can use the concepts of consumer and producers surplus to analyse the market for cycling lanes. At the same time, let us indulge in a little fantasy. Figure 3.8 shows the market equilibrium with the external benefits of cycling lanes taken into account as well as the private benefits. This is the socially optimum equilibrium, highlighted by the purple dot. Consumer and producer surplus are maximised. To revise, consumer surplus is represented by the purple area below the demand curve and above the market price, the difference between what consumers are prepared to pay and what they have to pay. Producer surplus is represented by the orange area below the price and above the supply curve, the difference between the price at which producers are prepared to supply and the price they receive.

However, such a market equilibrium does not often exist in the real world because consumers demand, in the economic sense of the word “demand”, only what they are prepared to pay for, and they are not prepared to pay for cycling lanes.

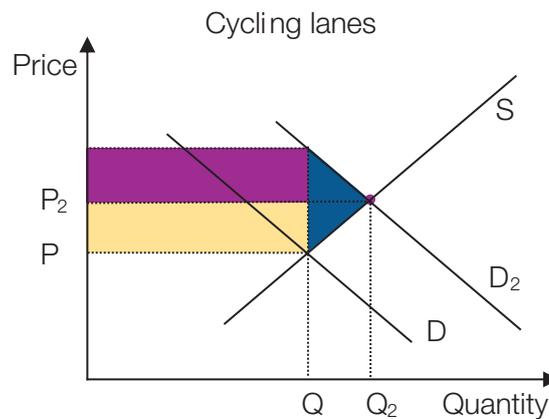


Figure 3.9



Figure 3.9 helps us to analyse the impact on market efficiency in the existence of such a positive externality. The lower demand curve,  $D$ , represents the demand for cycling lanes based only on private benefits and the upper demand curve,  $D_2$ , represents the demand for cycling lanes that includes public benefits.

The market will not operate at the same position as in figure 3.8, the purple dot equilibrium at  $P_2$  and  $Q_2$  representing social optimum, and an efficient market. It will operate at  $P$  and  $Q$ , and at that equilibrium position the market underprovides cycling lanes, providing quantity  $Q$  rather than  $Q_2$ .

The purple rectangle represents the lost consumer surplus when the externality is taken into consideration, and the orange rectangle represents lost producer surplus. There is still some consumer surplus above the purple section, between what they are prepared to pay and what they would need to pay to achieve the external benefits. And some producer surplus is left below the orange section above the price they are prepared to supply for and below their price they receive. The blue triangle represents deadweight loss, an extra loss to society. **When an externality exists, the market does not operate efficiently.**

## Negative externalities

When a producer of potash (a potassium-based fertiliser) used water from the river, wastewater was allowed to run back into the river, carrying chemicals with it. The polluted run-off reduced the quality of water for other uses, including a healthy environment for dolphins, fishing and water sports.

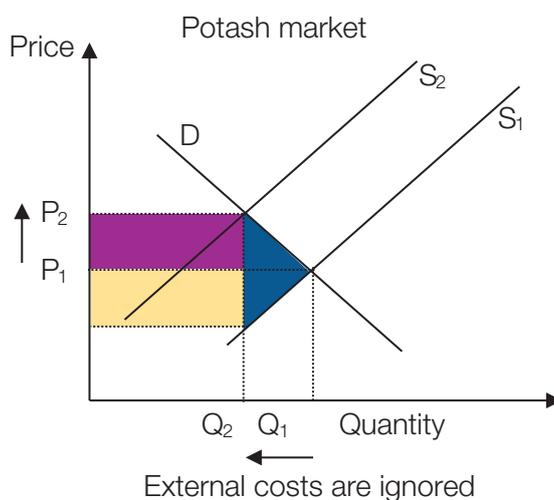


Figure 3.10

In the above example, the producer did not take into account external costs – the costs to other river users – in its calculations of the cost of production. It set its supply curve at  $S_1$  in the potash market diagram. If it had included the cost of pollution in the total cost of production, its supply curve would have been at  $S_2$ .

At  $S_1$ , potash is cheaper, and more is sold, but there are environmental costs. At  $S_2$ , potash is dearer and less is demanded, and fewer resources are allocated to its production, but resources are also used to protect the environment, and environmental wants are also satisfied. **At the market equilibrium at  $P_1$  and  $Q_1$ , external costs are ignored.**

The purple shading represents lost consumer surplus and the orange section represents lost producer surplus. The blue triangle represents deadweight loss.

From the point of view of what is best for the whole of society, the presence of negative externalities leads to over-production and the presence of positive externalities leads to under-production.

## 3. Abuse of market power

Some firms in an industry have a high degree of control over the sale of a product. This happens generally in oligopolies or monopolies when existing firms have advantages—barriers to entry such as superior technical knowledge, greater size, exclusive access to resources, laws or better capital backing. The existing firms have what is known as monopoly power, or market power. Some choose to abuse this power with anti-competitive practices. They can make super-normal profits. They can dictate the price and conditions of sale. They can damage competitors and their actions are not restricted by their competitors. This can only occur in the absence of effective competition.

## Ecoterm

A firm has market power if its actions are not restricted by competitors.

Market power can also be evident at the local or regional level. For example, a country town may have only one local newspaper, or a very small town may have only one service station for petrol and car repairs and services. At the international level, the Organisation of Oil Exporting Countries (OPEC) has been able to hold back supply of oil in order to maintain high prices.

Consumers and potential producers are both disadvantaged by monopoly power. Consumers have to pay higher prices than they would in a competitive market. They therefore demand a lesser quantity than they would in a more competitive market, thus fewer wants are satisfied. By definition, the market fails, as resources are not efficiently allocated, that is, to maximise satisfaction of wants. Prospective producers are disadvantaged as they are prevented from entering the market by barriers erected by existing firms acting to protect their monopoly power.

Governments legislate to protect consumers and to outlaw such practices. Examples of government intervention are outlined in section 3.4.

## 4. Asymmetric information

Information is inadequate for one side of some markets. In some markets, it is buyers who have insufficient information and in some other markets, sellers are uninformed. Information is unevenly, or asymmetrically, distributed in these markets. In the used car market, buyers may lack information about the condition of a car that they are considering for purchase. Has the car been in an accident? Is the distance travelled, as shown on the odometer, reliable? The same problem occurs in labour markets, when buyers of labour (firms) have little information about those applying for jobs.

When information is unevenly distributed, buyers are not able to respond to market signals as they do not know what they are getting. They might make a purchase that they would not have otherwise made if they had accurate information. Consequently, resources are not properly allocated to maximise satisfaction of wants.

To fix the market failure in used car markets, legislation requires used car dealers to display certain information on the window of each car for sale. In labour markets, employers often resort to using academic qualifications, or some other easily available criteria, to select employees. They also check on information presented by the job applicants.

## 5. Need for public goods

There are some goods and services that are not produced by private enterprise because it is not possible to make sufficient profit. Examples include parks, street-lights, some public transport, and services to remote areas. Clearly, markets do not allocate any resources at all to satisfy these wants.

Three characteristics in particular distinguish public goods.

### Free-riders

Free-riding by non-payers can remove the opportunity to make a profit. Sometimes it is not possible to prevent people from consuming the benefits without paying. This is the 'free rider' problem. It is not possible to limit the use of streetlights, for example, to only those who pay for them. No firm would build parklands without fencing them and charging an entry fee. This problem does not apply to the government because it has the power to tax all earners.

### Non-rival

To say that public goods are **non-rival** means that one person's use does not prevent others from using the goods or services. Someone using a street-light to find a dropped article does not prevent others from using the same light to read a map.

A 'retail schedule' is required by law to give buyers information about a used car for sale.

3



It is not possible to charge people for using street lights.

## Non-excludable

It is not possible to exclude non-payers from using the goods or services such as street-lights. Because it is not possible to ensure all users pay, no market can exist. The government therefore has to provide them using public funds.

## 6. Merit goods

### Ecoterm

Merit goods are goods regarded by society as worthy of public finance.

Merit goods are goods and services that have significant external benefits. Governments suspend consumer sovereignty to provide them because they create **positive externalities** (external benefits) such as better health, lower welfare payments, greater labour productivity and more income tax revenue. Suppliers do not receive the external benefits in revenue, and consumers do not receive the external benefits in satisfaction of wants. **Left to markets, merit goods are undersupplied.**

Examples of merit goods are health, education, and museums. Government spending increases supply of such goods, either by supplying public schools, hospitals and museums, or subsidising their provision, as they do for private schools and hospitals. Secondary education brings a lot of external benefits such as better-informed voters and employees, improving productive efficiency, and a lower crime rate. However, there are no private companies providing high school education at a price that consumers are willing to pay. Governments supply most of the finance for secondary education, and some not-for-profit community groups, such as the Catholic Church and other independent organisations, also provide some schools, for the benefit of society. Without government education, too few people are educated. No country achieved a developed economy without public education.

## Demerit goods / Undesirable goods

### Ecoterm

Demerit goods are goods that harm consumers.

Consumer sovereignty results in over-production of demerit goods, such as alcohol, tobacco and recreational drugs. Production of such goods creates **negative externalities** (external costs) such as increased health care costs, increased crime and reduced labour productivity. Governments intervene in such markets to correct these outcomes with taxation or regulation. **Left to markets, demerit goods are oversupplied.**

## 7. Undesirable market outcomes

The market mechanism does not consider social or economic justice. Even when markets operate efficiently, some outcomes will be **inconsistent with the social, moral and ethical values** of the society in which they operate. Some market decisions will disadvantage certain groups in the community. Governments often intervene to try to remove undesirable outcomes, such as income inequality, and fluctuations in economic activity. Note that **undesirable market outcomes are not examples of market failure** as they occur when markets are operating perfectly efficiently.

### Inequality of income

Even when resources markets operate efficiently, equality in income distribution is not guaranteed. Labour markets will lavish tremendous wealth onto movie stars, athletes and those fortunate enough to have the kind of labour resources that are in great demand but give little to those whose skills are not special. Some people will be impoverished through no fault of their own. The market does not consider social justice in terms of wage outcomes. It is only through the intervention of governments that the unemployed, the aged and the sick obtain welfare benefits. However, most societies accept some degree of income inequality as high incomes can be a just reward for skill and hard work.

### Fluctuations in economic activity

The level of economic activity naturally cycles through a repeated pattern of boom, downturn, trough and recovery. This occurs as a result of market decisions. The economy can begin a recovery after a trough when firms decide to increase spending on investment, creating more employment. After a boom, a period of high economic activity, spending will begin to decrease, reducing production and employment. Fluctuating levels of economic activity are undesirable as they cause fluctuations in employment and profit. Government economic management efforts have not yet succeeded in eliminating booms and trough in economic activity.

## Focus Questions

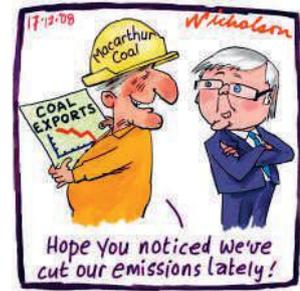
1. (a) Define market failure.  
 ..  
 ..
- (b) Explain why market outcomes, such as undesirable goods, income inequality and fluctuations in economic activity, are not examples of market failure.  
 ..  
 ..
2. Why do markets fail to provide
  - (a) street lighting?  
 ..  
 ..
  - (b) sufficient public transport  
 ..  
 ..
3. (a) What is meant by producer surplus?  
 ..  
 ..
- (b) In what circumstance is producer surplus maximised?  
 ..  
 ..
4. (a) Explain why the existence of externalities is an example of market failure.  
 ..  
 ..
- (b) Draw a diagram to illustrate the effects of an externality on consumer and producer surplus.  
 ..  
 ..
- (c) Explain the effects shown in the diagram with reference to it.  
 ..  
 ..
5. Explain the occurrence of asymmetric information in insurance markets.  
 ..  
 ..
6. To what extent are unequal incomes undesirable, in your opinion?  
 ..  
 ..
7. To what extent do markets fail when some firms use considerable market power?  
 ..  
 ..

Examination revision

Carbon emissions plan criticised

When the Rudd Government announced plans for a carbon pollution tax in 2008, heavy industry demanded more subsidies than the plan allowed.

Industries such as cement, aluminium, and coalmining said the plan would cost jobs and deter investment, worsening the effects of the economic downturn.



(a) (i) Define the term 'market failure'.

.....

(ii) Name the type of market failure that occurs when coal mining creates carbon emissions.

.....

(iii) Explain how carbon emissions create market failure. (HINT: Use the definition of market failure in your answer.)

.....

.....

.....

(b) (i) Show on a coal market diagram the effects on the market for coal of the Australian Government's proposal to apply an emissions tax.

(ii) Explain the effects shown on the diagram.

.....

.....

## 3.4 Government intervention in markets

### 1. Introduction

Markets drive our economy. Any market, perfectly competitive or not, will be imperfect in meeting all objectives. Although governments prefer to rely on markets, they do intervene to correct some types of market failure and undesirable outcomes.

Government intervention can take a variety of forms. Direct price intervention, production of public goods, legislation regulating competition and taxation are discussed below. Measures to correct asymmetric information and external costs are not discussed here. It is not possible to describe these measures in general terms because they vary with each market.

We will first develop the concept of consumer and producer surplus to assist in our understanding of the impacts of government intervention on markets.

### 2. Direct price intervention

One way to improve market outcomes is to intervene directly in the price mechanism. Formal price intervention is only used when it is necessary to correct prices that disadvantage groups of consumers or producers. The government intervenes in the price mechanism where it sees such intervention to be socially desirable and economically necessary. Governments can use their power to set a minimum or maximum price. To maintain a price *above* market price it is necessary to *support* the price. To keep a price *below* market price requires price *control*.

#### Price support (Minimum price)

Price support occurs when the government sets a price higher than market equilibrium. It does so when it is seen to be necessary to support the incomes of producers, when the equilibrium price is seen to be insufficient to provide the incentive to keep producing.

There are very few current examples of price support for producers, and none in South Australia, but governments retain the power to intervene in this way. The Chinese Government supports several agricultural prices by subsidy, rather than direct price intervention. In 2018, for example, China increased their subsidies for soybean farmers in the northeast provinces. Wages, the price of labour, however, are supported in Australia, for employees whose wage is not determined by an award or agreement.

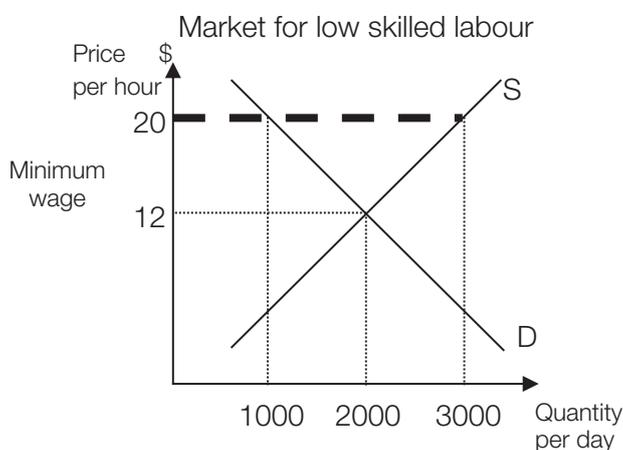
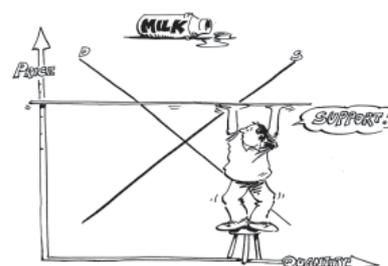


Figure 3.11

In figure 3.11, at the equilibrium price of \$12 per hour for low skilled labour, employers demand 2000 workers per day and households supply that quantity. However, to ensure that Australian workers receive an income that is sufficient, the Fair Work Commission sets a minimum wage of \$20 per hour.

The cartoon helps us to understand that the Government is using its power to keep the price above market price, defying market forces. This idea of support helps us distinguish price support from price control.



## Consequences

When the government uses its power to change the price of low skilled labour, pushing it up to \$20 per hour, the equilibrium position is at the government supported price of \$20 instead of \$12. At this supported price, employers' demand for labour contracts to 1000, whereas householders would be happy to supply 3000. At this wage, a labour surplus of 2000 workers are not hired at \$20 per hour. Labour resources are now allocated differently.

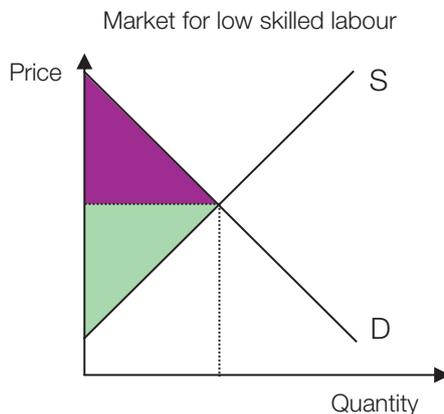


Figure 3.12

The concepts of consumer and producer surplus, introduced in section 3.2 of this chapter, can be used to further analyse the effects on resource allocation. Recall that at market equilibrium, free of government intervention or other distorting forces, consumer surplus and producer surplus are both maximised. Figure 3.12 illustrates consumer surplus, in magenta, and producer surplus, in green. In the case of a labour market, the consumers/buyers of labour are businesses and the producers/sellers are households.

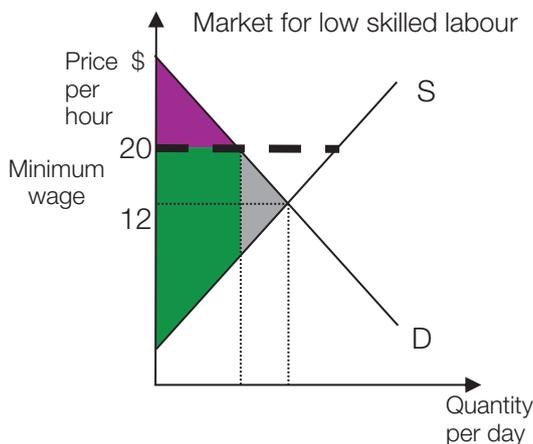


Figure 3.13

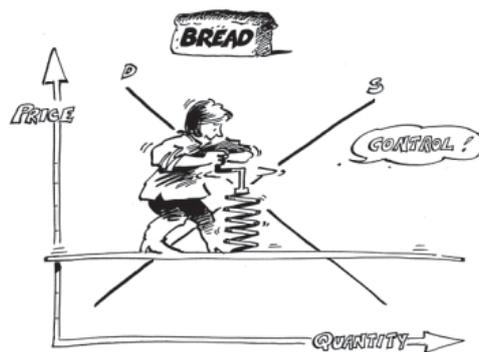
With price support, however, these surpluses are not at all maximized. Diagram 3.13 shows the changes. Consumer surplus, shown in magenta, is reduced because there is less difference between the price and what buyers are prepared to pay. Producer surplus, in green, is bigger because there is more difference between the price and what workers are prepared to supply for. There is now some deadweight loss, in grey, because there is some former producer and consumer surplus that is no longer available to either party. Deadweight loss is evidence of inefficiency.

### Ecoterm

Deadweight loss is the decrease in consumer and producer surplus that results from an inefficient level of production.

### Price control (Maximum price)

Examples of price control differ from state to state. In South Australia prices are controlled, at the retail level, in the markets for Kangaroo Island freight. Without this, most goods would be very expensive for residents of K.I. China's major cities impose price control on new flats, the toughest of these in Shanghai. Price control helps keep prices affordable for consumers. The cartoon shows the government using its power against market forces, that would tend to push it back to the market price, forcing it down.



A maximum price is set at  $P_C$  in figure 3.14, below the market price  $P_M$ , to control the price of an essential good or service such as freight service to Kangaroo Island. This is to make an essential service affordable to islanders.

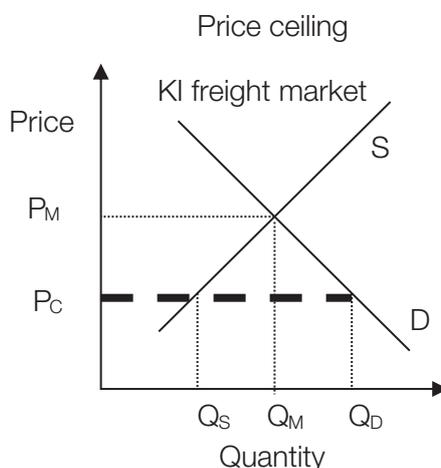


Figure 3.14

### Consequences

At this price, consumers will demand  $Q_D$  but producers will be willing to supply only  $Q_S$ . A shortage of  $Q_S - Q_D$  will occur. This means that the frequency of freight services is reduced by the intervention, as  $Q_S$  is less than the quantity traded would be without intervention,  $Q_M$ . The price is controlled to help consumers, but resource allocation is distorted nevertheless, as fewer wants are satisfied.

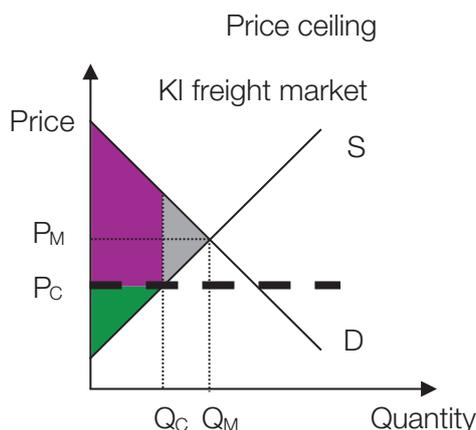


Figure 3.15

To illustrate loss of market efficiency, figure 3.15 shows the change in consumer and producer surplus. Resulting from the government intervention described above, consumer surplus has expanded. It is shown as the area below the demand curve and above the price, coloured in magenta. Producer surplus, however, has contracted to the area above the supply curve and below the price, coloured in green. The grey area, between the supply and demand curves and to the right of the quantity supplied at the controlled price, depicts deadweight loss.

## Consumer subsidies

Subsidies are payments by governments to firms or to consumers. Childcare, for example, is subsidised to make it more affordable for parents, mostly women, to work. Part of the price of childcare is paid by the federal government to households and parents pay the unsubsidised part of the price. Another example is a subsidy paid to households to encourage installation of solar panels to produce their own solar electricity. The subsidy in this case is in the form of an attractive price for electricity generated but not used, and so this surplus electricity is fed back into the statewide grid and the household is paid for it.

## Producer subsidies

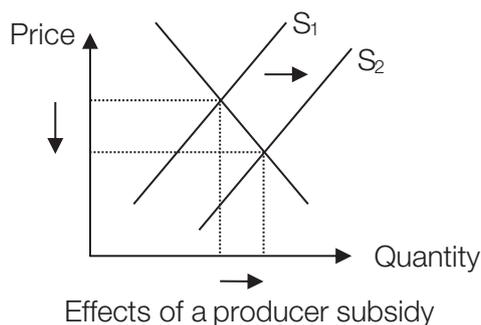


Figure 3.16

The Australian Government fund exploration for resources in northern Australia by Geoscience Australia, a government organisation. The form of this subsidy is direct government spending. Diesel fuel is also subsidised to make it cheaper for farmers and miners. That intervention is in the form of reduced excise tax (see next section), but its effect is the same as a subsidy. Instead of pushing the supply curve forward, as a subsidy does, the reduced tax pushes the supply curve not so far left.

The effect of a subsidy paid directly to the producer is to reduce the companies' costs and hence increase supply, from  $S_1$  to  $S_2$  in figure 3.16. This type of subsidy allows producers to supply at a lower cost and so the quantity demanded expands as consumers buy a greater quantity.

## 3. Public goods

Production of public goods satisfies some of society's collective wants, and these are paid for out of taxation revenue. Public goods include parklands, health and education services, beach maintenance, and museums. **Public goods remedy the failure of markets to provide some goods and services required by society.**



Public transport is provided by government.

Government business enterprises produce goods and services that are not provided at all by private firms, or are not supplied in sufficient quantity, or are provided at a price that many people are unable to afford. For example, private firms provide schools and hospitals, but not in sufficient quantity or affordable price.

Governments provide public goods when markets fail to do so. However, there are two other reasons for the provision of public goods that it is useful to consider.

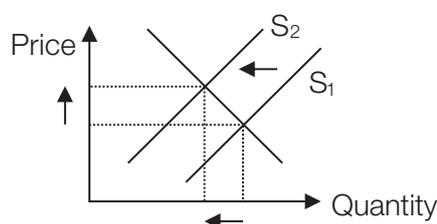
## Low levels of competition

Low levels of competition in a market may result in a government business enterprise entering a market to provide competition with existing private firms. The Commonwealth Bank provides an example, because it was established as a government business enterprise to provide competition in the banking market. It was privatized—sold to shareholders—in 1991. Medibank was a government medical insurance organisation, paid for with taxes. It was also privatized in 2014 and is now Medibank Private Ltd, a private health insurer.

## Security

For reasons of national security, governments need to control the police and armed defense forces. They will not allow private production of these services.

## 4. Tax



Effects of excise tax

Figure 3.17

## Excise tax to reduce consumption

Some taxes impose costs directly on products. Excise tax is imposed on certain goods like petrol, cigarettes and alcohol. (Excise just means tax—to take a cut, to impose a duty of some kind). Its purpose is to reduce consumption as well as to raise revenue. It is a way of raising government revenue. It can, at the same time, be a response to consumption of undesirable goods, those judged undesirable by society. For example, excise tax on petrol is meant to reduce the use of petrol and hence conserve oil, a non-renewable resource, as well as to reduce the level of pollution caused by burning it as a fuel. Excise tax on cigarettes and alcohol is to reduce consumption of potentially harmful products.

## Consequences

To discuss the effects of an excise tax, we can consider the market for beer. The effect of these taxes on their respective markets, such as the beer market, is to add to production costs, as brewers are obliged to collect the tax on behalf of the government. Added costs decreases supply and this change is represented by shifting the supply curve to the left, from  $S_1$  to  $S_2$  in figure 3.18.

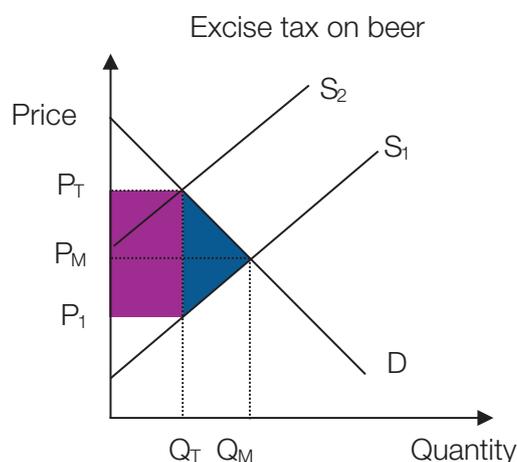


Figure 3.18

At  $S_1$ , while the market was still in equilibrium, consumer surplus was shown by the area above the market price  $P_M$  and below the demand curve. With the added tax it is the area below the demand curve and above the new price,  $P_T$ . This is the area shown in magenta, a much smaller triangle. Producer surplus has also decreased. Its size at market equilibrium was the area of the triangle above the supply curve and below market price,  $P_M$ . At  $P_T$  it is the area above the supply curve and below the new price, the area shown in green.

The rectangle shown with vertical back lines represents the amount of tax revenue paid by the businesses to government. The triangular area blue represents deadweight loss, that had been part consumer surplus and part producer surplus before the tax, at market equilibrium.

## Taxes to reduce externalities

Governments also use taxation of goods and services to correct externalities. Taxes on producers can be used to internalise external costs. In other words, they can be used to force producers to pay the costs that their activities impose on others. The most common external costs treated in this way are environmental costs. A pollution tax, for example, imposes environment costs onto the producer's costs and pushes up the price. It also encourages the producer to reduce the pollution, to minimise the cost of the tax.

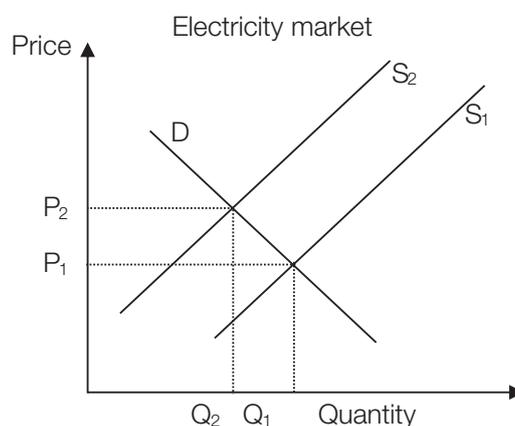


Figure 3.19

## Carbon tax

A carbon tax, if used, would be a tax on the carbon content of fuels, released as carbon dioxide when they are burned. It imposes an extra cost on the producers of goods that burn carbon-based fuels such as oil, petrol, gas, wood and coal. Electricity has been produced by burning a carbon-based fuel, usually coal. The tax on producers results in higher prices for electricity and hence lower consumption. Satisfaction of wants for electricity is reduced but satisfaction of the want for environment quality is increased.

The effects of a carbon tax on electricity generators is to add to private production costs. The supply curve in figure 3.19 moves back to the left, increasing the price of electricity. The tax acts as an incentive for electricity producers to find cleaner sources of energy and reduce external costs.

## 5. Regulation of competition

The Australian Competition and Consumer Commission (ACCC) is the Australian Government's regulator of competition in markets. The ACCC enforces the Competition and Consumer Act. **This type of government intervention in markets tries to correct the market failure described in section 3.3 as abuse of market power.**

## The Competition and Consumer Act 2010

The Competition and Consumer Act allows the Federal Government to regulate and control all commercial activities, both private businesses and government enterprises. It prohibits restrictive trade practices in order to protect consumers and small businesses from unfair conduct. In so doing it tries to promote competition, increase efficiency in industry and lower barriers to entry. The ACCC has the task of monitoring the conduct of firms to see that the Competition and Consumer Act is complied with. Two of the practices that are regulated by the Act are collusion and mergers.

## Collusion

Collusion occurs when a group of firms makes an agreement on price, market share or tendering for a contract. In other words, firms agree not to compete. This practice is prohibited by the Act. The most common form is price-fixing. In 2013, Flight Centre was found guilty of price-fixing. Emails to three airlines provided the evidence needed to convict. In 2016 Colgate-Palmolive was found guilty of having conspired with two rivals, Unilever and Cussons, with Woolworth’s cooperation, to lift prices for laundry detergent. It was fined \$18 million.

## Mergers and takeovers

Mergers and takeovers are only prohibited when they “substantially reduce competition”. In 2014, the ACCC investigated electricity retailer AGL’s takeover bid for Macquarie Generation to check its concern that the takeover would result in a substantial lessening of competition in the NSW market for electricity.

If the ACCC judges that there will be sufficient competition after a merger or takeover, or public benefits are judged to outweigh the costs of reduced competition, it will be allowed to proceed. For this reason, beer maker Lion Nathan was allowed to buy SA Brewing, and BHP was allowed to merge with Billiton, a big UK mining firm. That merger has now ceased, and BHP now trade in their original name.

## The Australian Competition and Consumer Commission

The Australian Competition and Consumer Commission (ACCC) monitors the level of competition in each market, and firms’ market conduct, and advises the government on appropriate regulation. It also uses the Act to protect consumers. It provides guidance to consumers and businesses by publishing leaflets, booklets and survey results, and reports on particular aspects of the legislation. In response to complaints, officers of the Commission will provide advice on how to comply with the law. It may ask a business to stop or modify the conduct in question. In more serious cases, it may accept undertakings—which are legally enforceable—from the business that it will not engage in certain unfair trading practices in the future. The Commission can also take a firm to court. The court can impose fines up to a maximum of \$10 million for a corporation or \$500,000 for an individual. It can order sale of shares or assets, require compensation for loss or damage, or force a firm to carry out corrective advertising or any other court order.

3

## Evaluation

The ACCC has had a lot of well-publicised success and handed out substantial penalties to some big-name companies. It is now clear that both businesses and their managers may well be prosecuted and fined. However, it is very difficult to collect evidence of many anti-competitive practices. Collusion, for example, can be set up simply with a series of telephone calls. Many cases brought to court by the ACCC have failed to prove breach of the Act. Furthermore, many decisions rely on judgements, weighing up public benefits against costs to society of lost competition. Regulators sometimes get it wrong.

### Focus Questions

1. Why did the Federal Government establish a bank? Which bank?  
 .. .. .
2. Why are there more public than privately owned native bush parklands?  
 .. .. .
3. Explain how a pollution tax would ‘internalise’ external costs.  
 .. .. .  
 .. .. .
4. Which restrictive trade practice could also be called ‘price fixing’?  
 .. .. .
5. How effective is the ACCC in eliminating anti-competitive practices?  
 .. .. .  
 .. .. .  
 .. .. .

6. Why did the Federal Government deregulate the telecommunications market, to allow Optus and other firms to enter as competitors for Telstra?

.. .. .  
 .. .. .

7. From your own knowledge, suggest ways consumers are protected by government regulation.

.. .. .

8. Discuss whether the operation of competition and consumers law is likely to be successful in achieving the following objectives:

(a) fair prices

.. .. .

(b) reasonable profits

.. .. .

(c) improvements in technology.

.. .. .

9. Group Discussion

(a) Give an example of how the government intervenes to address social and economic justice in each of the following situations.

- income inequality

.. .. .

- undesirable goods

.. .. .

- asymmetric information

.. .. .

- monopoly power

.. .. .

- externalities

.. .. .

(b) Give an example of a social group disadvantaged by each of the following market imperfections listed in part (a) above.

Examination revision

1.

**Fossil fuels conversation**

On Tuesday November 10, 2011 Christine Milne, then deputy leader of the Greens political party, said that it was time for ‘a national conversation about how quickly we can move away from fossil fuels’.

On Wednesday November 11, Prime Minister Julia Gillard said that coal was making 88 per cent of electrical power and would remain part of Australia’s energy mix for at least another four decades.

On Thursday November 12, Senator Brown, Greens leader, said the Greens had no plans to shut down the coal industry, but he said he had met Treasurer Mr Swan to discuss the removal of fossil fuel subsidies and instead to direct savings into education, health and transport. (Australian Financial Review November 12, 2011)

(a) (i) What is a subsidy?

(ii) Explain the effects on the coal market of a government subsidy and show these on a coal market diagram.

(iii) Explain with the aid of a diagram the effects on the coal market of removal of the subsidy.

(iv) Explain with the aid of a diagram why some people believe that applying a carbon tax to the production of electricity would reverse the effects of negative externalities in the electricity market.



2.

### The minimum wage

The Australian Fair Pay Commission decided in July 2009 to keep the minimum wage at \$543.78 a week, in spite of an increase in general wages, to contain wage pressures on production costs.

- (a) The labour market is an example of a
  - A share market
  - B resources market
  - C capital market
  - D goods and services market
- (b) (i) Draw a labour market diagram and show the effects on the labour market of a minimum price imposed by the Australian Government.

.. .. .  
(ii) Explain the effect on wages and employment of the minimum wage. (HINT: Refer to labels on the diagram to clarify your answer.)

.. .. .  
(iii) What effect would this government intervention have on business' production costs?

.. .. .  
(c) Explain the effect on wages and employment of removing the minimum wage.

# Topic 4: Macroeconomic Objectives and Their Measurement

## Introduction

Each national government pursues several economic objectives in managing the economy. It tries to continually improve its society's standard of living, achieve full employment, encourage business success, maintain the spending power of money, stimulate trade and protect and improve international competitiveness. It designs policies to achieve these objectives. The objectives are interdependent, as achievement of one has impacts on others. For example, achievement of very low rates of unemployment creates the danger of rising prices. Macroeconomic objectives are those that relate to the economy as a whole, rather than to sectors. There are several, but the four major macroeconomic objectives are:

- Full employment
- Price Stability
- Economic Growth
- External Balance

Achievement of these objectives has to be measurable so that economists, who advise government, know to what extent the objectives are being achieved. The government statistics body publishes indicators to measure each one. Australia's statistics body is the Australian Bureau of Statistics (ABS), China's is the National Bureau of Statistics of China and Malaysia's is the Department of Statistics Malaysia. The main indicators are shown in the table following.

Table 4.1 Indicators of macroeconomic objectives

Full employment	Price Stability	Economic Growth	External Stability
Unemployment rate Target 5%	Consumer Price Index (CPI)	Gross Domestic Product (GDP)	Current account as a percentage of GDP
Participation rate	Rate of change in CPI Target 2-3%	Rate of change in GDP Target 3-4%	Foreign debt as a percentage of GDP
			Exchange rate

## 4.1 Full employment of labour

### 1. Full employment

#### Ecoterm

Full employment is the lowest rate of unemployment obtainable without accelerating inflation.

Full employment is a major macroeconomic objective because it generates personal and economic well-being, whereas unemployment reduces a household's standard of living and an individual's self-esteem. The economic and social consequences of unemployment increase with the length of time unemployed.

#### Target rate

Governments set targets for their macroeconomic objectives. The target for the full employment objective is the lowest possible rate of unemployment without accelerating inflation. The lowest rate of unemployment attainable is known as the 'natural' rate of unemployment. (For the braver students, it is also known as the non-accelerating inflation rate of unemployment!)

Full employment is defined as this natural rate. Any rate below the natural rate risks accelerating price rises, and any rate above it creates the problems caused by unemployment, described later in section 4.1.

### 2. Indicators of unemployment

#### The labour force

The labour force of a country is the pool of people available to work in production of goods and services. In Australia, the labour force consists of those over the age of 15 who are either working in paid employment for more than one hour per week, or actively seeking employment.

#### Ecoterm

The labour force consists of those over the age of 15 who are working in paid employment for more than one hour per week, or actively seeking employment.

Australia's population is slightly above 23.5 million people. 18.6 million are civilians over the age of 15 years; of these, 12.1 million participate in the nation's labour force.

Table 4.2 The labour force

<i>Employed</i>	<i>Unemployed</i>
Working more than one hour per week in paid employment: 12.1 million	Actively looking for work: 0.9 million

Source: ABS Catalogue 6202.0 2020

## The labour force participation rate

### Ecoterm

The labour force participation rate is the percentage of those eligible to work who are employed or actively seeking employment.

The labour force participation rate measures the proportion of the population eligible to work who participate in the workforce or labour force, either as employed and unemployed. Participants either work or actively seek employment. In August 2012, 65% of those Australians eligible to work participated as workers or active job seekers. The Australian Bureau of Statistics (ABS), using the following formula, calculates the labour force participation rate (LFPR):

$$\text{LFPR \%} = \frac{\text{Labour force}}{\text{Civilian population over 15 years old}} \times 100$$

Using the figures for August 2006, the LFPR

$$= \frac{11.5\text{m employed} + 0.6\text{m unemployed}}{18.6\text{m civilians over 15 years old}} \times 100$$

$$= 65\%$$

The participation rate in Australia, 63.7% in April 2020, is compared to 11 other countries at about that time in the table below.

Table 4.3

Labour Force Participation Rates	
Country	% *
Australia	63.7
Canada	59.5
China	68
Egypt	43.3
France	72
India	49.3
Indonesia	69.2
Japan	61.5
New Zealand	70.7
South Korea	62
Sweden	73.3
United Kingdom	64.2
United States	60.7
* latest available at June 2020	

Source: ceicdata.com

### Relationship between the participation and unemployment rates

Unemployment usually falls when the labour force participation rate rises. However, when the media report increased labour force participation after a recession ends, some of those people who were not actively seeking employment begin to look for work. For example, students are more inclined to leave school and mothers are more likely to apply for jobs. Increasing labour force participation during an economic upturn can therefore have a confusing effect on the unemployment rate. When economic activity starts to increase, the unemployment rate can actually increase, or not decrease as fast as expected, as more people begin to actively seek work. This is because the job seekers will initially be unemployed.

## The rate of unemployment

The rate of unemployment used by many countries, and measured by the ABS in Australia, is the percentage of the labour force unemployed but actively seeking work.

### Ecoterm

The unemployed are those working less than one hour per week in paid employment, actively seeking work and ready to start.

The formula is:

$$\text{Rate of unemployment \%} = \frac{\text{Total number of unemployed}}{\text{Labour Force}} \times 100$$

$$\begin{aligned} \text{Using the figures for March 2019, the unemployment rate} &= \frac{0.673\text{m unemployed}}{13.463\text{m labour force}} \times 100 \\ \text{(Source: Australian Bureau of Statistics Catalogue 6202} & \\ \text{– Labour Force Australia March 2019)} &= 5.0\% \end{aligned}$$

The ABS conducts a monthly survey to estimate the number of unemployed. The ABS surveys a sample of the population to calculate the numbers of people employed and unemployed. The definition of employment used by the ABS includes all those who worked for more than one hour in paid employment during the survey week. Those unemployed must have worked less than one hour for pay and been actively seeking work.

The unemployment rate in Australia dropped steadily from 6.2 % in June 2015 to 5.2% in December 2019, but the covid-19 crisis caused it to rise very steeply to 7.4% by June 2020.

## 3. Causes of unemployment

In theory, it is possible for every person who wishes to do so to work in paid employment. In practice, however, there is always some unemployment and there is an acceptable level of unemployment in the economy. Even when the economy is at peak production, there is some unemployment. There are people who are temporarily unemployed, between jobs. Others are permanently unemployed for various reasons. Still others have lost their jobs because their skills are no longer required in a re-structured industry.

### Cyclical or general unemployment

One cause of unemployment is a general lack of demand for goods and services. If consumers, firms, governments and foreign buyers reduce their aggregate demand for goods and services, firms will respond by reducing production and hence their demand for resources. This causes unemployment of resources, particularly labour resources. Unemployment due to a lack of demand is referred to as cyclical unemployment, because demand experiences peaks and troughs in cycles from boom to recession. The level of employment follows the ups and downs of the business cycle. Note that full employment will not necessarily be achieved in a period of peak economic activity.

### Frictional unemployment

The term frictional unemployment is used to describe people who are between jobs. Many such workers are likely to have secured their next job. New entrants to the labour market such as school-leavers and university graduates are classified as frictionally unemployed until they begin their first job. Similarly, those re-entering the workforce after an absence, to travel or to care for children for example, will be unemployed at first.

### Seasonal unemployment

Seasonal unemployment occurs when workers are temporarily unemployed between seasons. It can be seen as a form of frictional unemployment because those who work for a season are only unemployed between seasons. Many agricultural industries need seasonal workers such as fruit pickers and shearers. For example, workers on Port Lincoln tuna fishing boats cannot work outside the months in which tuna fishing is allowed in South Australia. Some tourism jobs such as ski instructors are also seasonal. Governments are not concerned with addressing this type of unemployment because it is temporary.

## Structural unemployment

When firms restructure, they usually shed labour that is no longer required. Similarly, when firms 'downsize' to cut production costs, they reduce the size of their labour force. Technical change to improve labour productivity will create structural unemployment if fewer workers are needed to produce the same output. Capital equipment is often used to replace workers in order to reduce production costs. Unemployment created in these ways is structural unemployment. The skills of some technicians such as typists, for example, are much less in demand now that so many employees do their own word processing. Widespread structural change in industry has been the major cause of unemployment since the late 1980s. See Topic 6 for information about structural policies to manage the overall structure of the economy.

Structural unemployment occurs when there is a mismatch between the skills of a person and the demand for those skills in the location where he or she lives. For example, a winemaker who lives in Port Lincoln may find no work in his hometown, but a job may exist elsewhere in South Australia, such as in the Barossa Valley.

## Hard-core unemployment

Hard-core unemployment occurs when the personal attributes of job seekers make it difficult for them to get a job. They may have a strong negative attitude towards authority, or lack effective personal hygiene, for example.

Even at the natural rate of unemployment, there will be some frictional, structural and hard-core unemployment. There are also two reasons for unemployment that do not fit the official definition and are therefore not included in the official statistic calculations.

## The hidden unemployed

The hidden unemployed are those people who would like to work but are not actively seeking employment. Their reasons will be quite varied, including difficulties with transport and child-care responsibilities. However, most of them are discouraged from seeking work, believing they will not be able to find a job. If they were offered a job, they would accept it. This group is *outside* the labour force and is not included in unemployment statistics.

## Part time employment

The trend in part time employment has been a gradual increase, and a decrease in full time unemployment. In April 2020, the number of full-time employees had decreased to 8.7 million, and the number of part-time workers had increased to 3.8 million.

## The underemployed

The underemployed are those who want more hours of work. The definition of employment, used by most countries' official statistics bureaus in their measurement of the unemployment rate, is narrow, including as employed only those who work for more than one hour per week. As a result, there are many people employed part time who regard themselves as underemployed because they would like to work for more hours per week. The underemployment rate reported by the ABS in April 2020 was 13.7.

The Australian Bureau of Statistics (ABS) also measures the labour force underutilisation rate – the unemployed plus the underemployed as a percentage of the labour force. It was measured at 19.9% in April 2020 (*Source: beta.abs.gov.au*).

# 4. Changing employment trends

## Casualisation of the workforce

The term 'casualisation' is used to describe an increase in the proportion of workers who are employed on a casual basis. Australia has one of the highest rates of casual workers among OECD's 34 member countries, at about 25% of the workforce ([abc.net.au](http://abc.net.au) 25 April 2019).

Casual workers have a different employment contract to permanent workers. Permanent employees are employed to work for a particular organization, fulfilling certain requirements. In return, they are guaranteed employment, a wage or salary, paid sick leave and annual leave and superannuation. Casual workers are offered work that they may choose to accept or decline, but there is no guarantee of work. They are not paid for sick leave or annual leave but receive a higher rate of pay compared to the wage of permanent workers doing the same job. Just as employers do not have to offer work to casual employees, so employees do not have to accept offers of work. (See [fairwork.gov.au](http://fairwork.gov.au))

## Reasons for casualisation

### Competition

Governments have signed trade agreements putting domestic industries under much greater competitive pressure from more, cheaper imports. At the same time, governments have pursued policies to ensure competition in all markets.

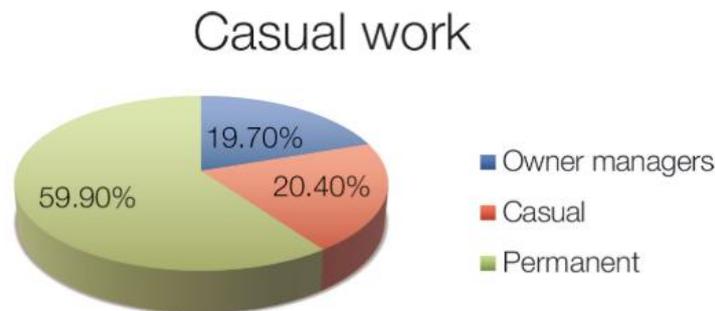


Figure 4.1 (Source: ABS 2013 Australian Social Trends)

One way to cut labour costs has been to replace full-time permanent employees with casual and part-time employees. Casual employees can be asked to work and be paid only when they are needed. Even though casual workers are paid a higher hourly rate, firms' labour forces are more efficient without full-time workers idle during less busy times.

### Women

Other reasons for casualisation are on the supply side. More women have entered the labour force in the last 30 years in many countries. In Australia the number of women in full-time positions has trended slowly upward in that time while the number of men working full time has trended slowly downward. Many expect to work as well as rear children. They have demanded and got equal pay and child-care and maternity leave provisions and spent less time at home with their children than women of previous generations. Part time and casual work suits their child-care responsibilities.

### Work-life balance

At the same time, more men have also preferred part-time or casual work, as they have accepted more home and child care responsibilities. They have 'downshifted' their working hours to leave more time for other pursuits, moved into semi-retirement, or preferred consultation or contract work to full-time employment.

## Negative aspects

### Underemployment

However, most casual workers would prefer permanent employment, for a more secure job future. An Adelaide University survey in 2006 found that two thirds of casual workers did not like working casually. The ABS counted 566,600 people in September 2003 (5.9% of the 10 million employed) who usually worked part time but would have preferred to work more hours and were available to start work.

### Lower incomes

The main negative impacts of casualisation for workers themselves are lower income and therefore lower standard of living, and lack of job security. A growing group of casual and part-time workers has been called 'the working poor' by some social commentators. The positive impacts are flexibility for both employers and employees, and reduced labour costs.

### Job security

Casual workers have poor job security as their employers do not have to offer work. The availability of work might just stop. Banks won't lend for housing to people who cannot show evidence of future income.

## Labour market reform

A series of industrial relations laws have set rules for wages and working conditions to be negotiated between employers and employees. Unions can no longer insist on representing workers. Negotiating pay and working conditions has become an important aspect of employment relations. Many workers, especially those in casual employment in lower skilled occupations, have a weak bargaining position and lack negotiating skills.

## Flexible working arrangements

The majority of workers have access to some sort of flexible working arrangements. Employees may be able to start work late or finish early, for example to take children to school to pick them up. There is a trend to replace some work with leisure activities. Others work from home, making use of information and communication technologies, and this trend accelerated during COVID-19 social restrictions. It is also possible for two people to share a single job. Technologies such as mobile telephones, email and internet access have made it possible for employees to work away from their work premises.

## 5. Costs of unemployment

### Economic costs

#### Consumer

When labour unemployment occurs, resources that could be used in production are not contributing to making goods and services. Fewer wants are satisfied, and the rate of economic growth is reduced. The economy produces less than its potential, or capacity. Another way to put this is to say that the economy is operating inside its production possibilities curve. This is represented in Figure 4.2 by the point U. Reduced unemployment would enable production of both capital and consumer goods to increase in the economy of Everyland.

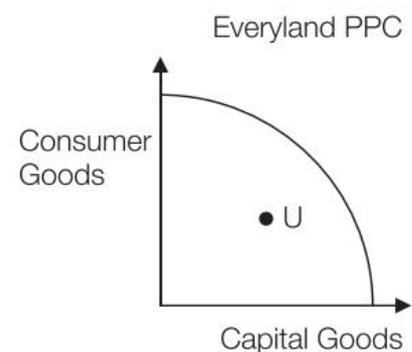


Figure 4.2

#### Budget impacts

Increased unemployment will also necessitate more government spending on social security payments. At the same time, less workers are paying income tax, and so, government revenue is reduced. This will lead to reduced government spending in other areas. Higher than expected levels of unemployment will force the government to change budget plans.

### Individual costs

Apart from these economic costs of unemployment, there are dramatic social and personal effects.

- Loss of a job can cause a person to lose some **self-esteem**, which can cause further mental difficulties for both individuals and their families and friends.
- It is harder to participate fully in society on a greatly **reduced income** and society suffers a less effective citizenry.
- **Savings are lost** reducing future income.
- **Job skills deteriorate**, with negative impacts on the future employment of the individual as well as on the productivity of the labour force.
- Unemployment is also associated with **increased violence and crime**, which cause problems for individuals and families and also impose high costs on society and the economy.
- It strains **family relationships** and can impose negative impacts on the **next generation**, as the children of an unemployed family suffer a more difficult upbringing.



These problems are amplified for the long-term unemployed.

**Focus Questions**

1. Define the following terms:
  - (a) full employment.....
  - (b) the natural rate of unemployment.....
  - (c) labour force.....
  - (d) unemployment rate.....
2. Differentiate between frictional and structural unemployment.
 

..

..

..
3. What sorts of people are 'hidden unemployed'?
 

..

..
4. How can the labour force participation rate increase?
 

..
5. Study the following figures and calculate the unemployment rate.
  - (a) Population 20m
  - (b) Full time workers 6m
  - (c) Part time workers 3m
  - (d) Unemployed but seeking work 1m
  - (e) Unemployed but not seeking work 0.9m

..
6. Explain why the unemployment rate might actually worsen when the economy begins to improve after a recession.
 

..

..
7. Label the unemployment type associated with each of the following:
  - (a) Janice Cool, a vinyl record groover, is not required in the CD industry.
 

..
  - (b) Glenys left Hungry Jacks to take up a job at McDonalds' in two weeks.
 

..
  - (c) Morris' employment contract has not been renewed as the economy is in recession.
 

..
  - (d) Renee is looking for a job after several years of rearing children.
 

..
  - (e) Bob's job is redundant because his company has re-organised its management structure.
 

..
8. Why is the ABS' definition of unemployment regarded as 'narrow'?
 

..

..

9. Use the Australian Bureau of Statistics website ([www.abs.gov.au](http://www.abs.gov.au)) or the Malaysian Department of statistics website ([www.statistics.gov.my](http://www.statistics.gov.my)) or the National Bureau of Statistics of China ([www.stats.gov.cn/english](http://www.stats.gov.cn/english)) to find the most recent figure for the unemployment rate.

**Examination revision**

**Not enough working hours**

In March 2010 the Australian Bureau of Statistics released economic employment data that included underemployment. At the time, South Australia had the lowest unemployment rate of 4.7 per cent, but this figure masked the nation’s highest underemployment rate of 8.2 per cent. Underemployed workers have part-time or casual jobs but want to work more hours, or full-time.

The previous year, ABS figures showed that 65 per cent of those who reported they were “underemployed” were women.

- (a) (i) Define underemployment.
- (ii) The underemployed are:
  - A outside the labour force but employed
  - B outside the labour force and unemployed
  - C in the labour force and employed
  - D in the labour force but unemployed
- (b) (i) Define participation rate.
- (ii) If a considerable number of underemployed gain more hours work:
  - A the participation rate will increase and the unemployment rate will decrease
  - B the participation rate will be unchanged and the unemployment rate will decrease
  - C the participation rate will increase and the unemployment rate will be unchanged
  - D the participation rate and the unemployment rate will both be unchanged
- (c) How does casual work differ from permanent employment?
- (d) Do you think South Australia has achieved full employment with its unemployment rate at 4.7 per cent? Explain.
- (e) Why are the underemployed sometimes referred to as ‘the working poor’?
- (f) Why are the underemployed not recorded in unemployment statistics?
- (g) Suggest a reason for the recent trend towards part-time work.
- (h) Outline one other changing employment trend.



## 4.2 Price Stability

### 1. Price stability

**Objective:** The price stability objective is to maintain a low rate of inflation.

The term inflation is used to describe an increase in the general level of prices. Prices continually rise as incomes, production and demand continue to grow. A slow rate of inflation is not harmful to the economy.

#### Ecoterm

Inflation is a sustained rate of increase in the general level of prices.

**Target rate of inflation: Governments set very similar inflation rates as their price stability objective.** The Reserve Bank of Australia (RBA) for example has set a target range of **two to three percent per year on average over a complete business cycle** as its target rate of inflation. This is Australia's price stability objective.

### 2. Indicator of price stability

To monitor the economy's achievement of the price stability objective, it is important to measure inflation rates regularly. The Consumer Price Index (CPI) is the most common and accurate measure of the rate of inflation.

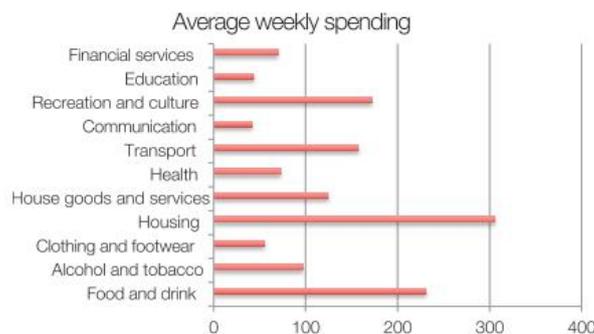


Figure 4.3

The CPI measures the rate of increase in price of a “basket” of goods and services that represents average consumption expenditure. It is published every quarter. The groups of goods and services that make up the theoretical basket, shown in the table above, are decided by surveying metropolitan wage-earning households. The selection of items is periodically reviewed to allow for changes in consumption patterns. The items in the basket are weighted to reflect the relative importance of each item in consumer spending patterns. ABS researchers record the price of each item at regular intervals and use these to calculate the cost of the whole basket of goods.

**The rate of increase in the price of the total basket is deemed to be the inflation rate in Australia.**

The most useful term of the inflation rate published is the rate of increase over the previous 12 months. In figure 4.4, the inflation figure for 2020 is 1.6%. This was a forecast figure at the time of writing but it can be used as an example: it means that prices will be 1.6% higher than at the same time of the year before, 2019.

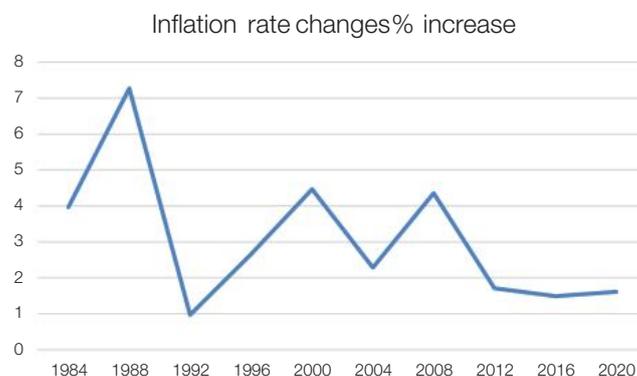


Figure 4.4 (Source: Statistica.com)

Don't be fooled by the slope. As the vertical axis shows percentages, the slope of the graph does not represent the rate of change – the *height* of the graph shows this. When the graph sloped downward, from 1988 to 1992, prices were not decreasing; they were increasing at a decreasing rate. The height of the graph shows that prices were still increasing in this period, still at a rate of 1% per annum in 1992.

Such a graph is useful for assessing whether the economy achieved its price stability objective in the period. The inflation objective is a target range of 2% to 3% on average over a business cycle. We can see from the graph that in the period 2012 to 2020 the target range was not achieved, as it remained below 2% per annum

## Headline and underlying inflation

The inflation rate measured by the rate of increase in the CPI is known as headline inflation and is widely reported. However, economists and government advisors, the Treasury and the Reserve Bank for example, prefer to use the underlying inflation rate as being more useful. It does not vary up and down in the short term as the headline rate does.

The underlying rate of inflation is calculated by removing from the CPI those items whose prices are influenced by highly volatile, seasonal or policy factors. Examples include the prices of fruit and vegetables and some seafoods whose prices vary with the seasons, being cheaper when plentiful. Mortgage rates and council rates can change by banks' or government policy decisions.

## 3. Causes of inflation

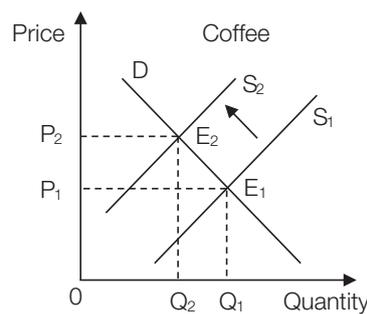


Figure 4.5

### Imported inflation

Inflation in trading partner countries is imported. Trading partners' inflation will increase the prices of imported capital goods and other goods used in production. In response, domestic producers will increase their prices in order to maintain profits. In addition to this effect, dearer imports relieve local firms from some overseas competitive pressure and allow them to edge their prices upward.

### Cost-Push inflation

Producers will pass on additional production costs to consumers by increasing prices. In this way, they maintain their profit margins in the face of wage increases and rising prices of other resources. The market model, shown in figure 4.5, tells us that the supply curve for coffee, for example, will shift to the left from  $S_1$  to  $S_2$ , offering less quantity at every price. Another way of looking at this is that suppliers increase the price from  $P_1$  to  $P_2$  as market quantity decreases from  $Q_1$  to  $Q_2$ . If prices increase generally across the economy, as a result of increased production costs, cost-push inflation occurs. Wages, costs of raw materials and government taxes are some factors that can increase production costs.

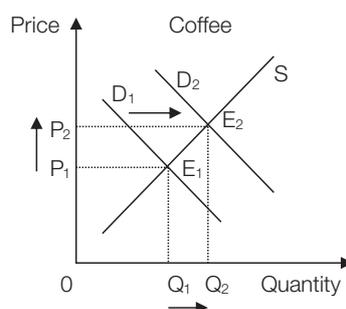


Figure 4.6

## Demand–Pull inflation

When the level of spending in the economy is high, producers will be able to raise their prices. In effect, buyers bid up the prices of goods and services that are in high demand as they are prepared to pay higher prices in competition with each other. In the market for coffee, for example, as shown in figure 4.6, an increase in demand from  $D_1$  to  $D_2$  will increase the price of coffee from  $P_1$  to  $P_2$ . If prices increase generally across the economy, as a result of increased demand, demand-pull inflation occurs. Job security, incomes, taxes, interest rates and government policies are some factors that can affect demand.

## Expectations of inflation

People's spending plans change depending on their expectations of the inflation rate. If buyers expect the rate of inflation to increase, they will increase their spending to buy what they want before the prices go up. This behaviour increases demand-pull inflation, and so expectations of higher inflation become a self-fulfilling prophecy! Similarly, if buyers expect the inflation rate to decrease, they will decrease their spending, waiting for lower prices. This reduces demand-pull inflation.

## The inflation problem

Although a low rate of inflation is not economically harmful, rapid and sustained price increases across a large range of goods and services is a concern. A high inflation rate can cause adverse effects on the economy and individuals. In the late 1980s, the Prime Minister Paul Keating described inflation as Australia's major economic disease. Inflation creates several serious problems.

## Effects on individuals

### Spending power falls

When prices rise, the spending power of our income decreases. If prices have risen by 10% in the past year, then goods that cost \$100 a year ago will now cost \$110. Put another way, our \$100 now buys fewer goods and services. Groups whose income does not rise as fast as inflation are disadvantaged, as a result of inflation eroding their spending power.

### Demand for wage rises

As workers' incomes buy less, demands for wage rises increase. This takes people away from their normal jobs to prepare and present arguments, and so there is a real economic cost. Also, wage increases raise production costs, and prices of goods and services are then pushed further upward.

### Income redistribution

Those on **fixed incomes** would suffer a continuing deterioration of their living standard. However, most people living off pensions have their income 'indexed', which means that their income payments increase at the same rate as the CPI.

Workers with **strong bargaining power** will be able to keep their incomes increasing: but those whose skills are common, or who are not represented by a union, find that their incomes do not keep pace with the CPI.

**Lenders lose** as they find the value of their investment decreasing. On the other hand, **borrowers win** in times of rapid inflation, as their loans and repayments assume a smaller and smaller proportion of their income when prices and wages rise together.

People whose personal financial management is **poorly organized** may well be worse off in times of high inflation, whereas careful planners and investors can be better off.

### Savings

Households are able to save less in times of rapid price increase, as they must use more of their income for consumption spending. Besides, there is less incentive to save when price rises erode the spending power of money put away as savings.

## Effects on the economy

### Trade competitiveness

If Australia's inflation rate is higher than those of our trading partners, two effects occur to worsen our balance of trade. Exports compete less favourably in world markets. Also, Australian goods and services are dearer relative to **imports**. Spending switches away from Australian production, slowing economic growth and pushing up unemployment rates.

### Savings

The level of savings in the economy falls as the value of savings is eroded by rising prices, and households need more money to buy their goods and services.

### Interest rates

Banks and other financial institutions raise interest rates to encourage households to save. High rates on deposits solves the problem of reduced spending power for households; when annual inflation of 10% erodes the spending power of \$100 saved for a year, 10% per annum interest paid on the savings makes up for the spending power lost. Financial institutions are happy to pay the higher deposit rate to ensure their supply of funds for lending, and loans are their source of income. They maintain their profit margin by raising interest rates on loans, too.

### Focus Questions

1. (a) Define inflation  
 ..  
 ..
- (b) Name the indicator of price stability.  
 ..  
 ..
2. Give four reasons why price stability is important for an economy.  
 ..  
 ..  
 ..  
 ..
3. What prices are used to compile the Australian Consumer Price Index?  
 ..  
 ..
4. Granny May, who lives in Moonta, feels that inflation is much higher than reported by the CPI. She buys a lot of cigarettes and dairy products. Explain to her why she perceives a difference between her cost of living and the official rate of CPI increase.  
 ..  
 ..
5. How does inflation affect:
  - (a) the ability of households to spend?  
 ..  
 ..
  - (b) the ability of firms to export?  
 ..  
 ..
6. Differentiate between cost-push and demand-pull inflation.  
 ..  
 ..

7. Name and describe two winners and two losers of inflation.

.. .. .

8. Explain how inflation is imported.

.. .. .

.. .. .

.. .. .

9. Predict and explain the effects of income tax cuts on inflation.

.. .. .

.. .. .

10. Use the Australian Bureau of Statistics ([www.abs.gov.au](http://www.abs.gov.au)) or the Malaysian Department of Statistics ([www.statistics.gov.my](http://www.statistics.gov.my)) or the National Bureau of Statistics of China ([www.stats.gov.cn/english](http://www.stats.gov.cn/english)) website to find the current national rate of inflation for the last 12 months.

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**Examination revision**

**Monetary policy statement 7 February 2014**

The Reserve Bank of Australia found that higher import prices may have contributed to a higher than expected rate of inflation in early 2014. Another factor contributing to rising prices in the first two months of 2014 was low interest rates. They expected higher inflation to continue in future months as the lower exchange rate continued to keep import prices up.

The RBA also noted that slow growth in wages in 2013 had helped restrict the CPI increase to 2.7 per cent for the year to February 2014.

(a) (i) The RBA's inflation target for Australia is a rate of two to three per cent per annum over the business cycle. Was it being achieved in 2013?

.. .. .

.. .. .

(ii) Explain what is meant by a CPI increase of 2.7 per cent.

.. .. .

.. .. .

(b) Explain two reasons why it is important for an economy to control inflation.

.. .. .

.. .. .

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.. .. .

(c) State one demand-pull inflation factor and one cost-push factor mentioned in the article.

.. .. .

.. .. .

.. .. .

## 4.3 Economic growth

### 1. The objective

#### Ecoterm

Economic growth has occurred when the total value of goods and services produced in a year (Gross Domestic Product – see below) is greater than in the year before.

Economic growth is expected. Only rarely does the economy fail to achieve positive growth in a period, even in a recession. The objective is to achieve a steady but continuous rate of economic growth.

#### Target rate of growth

Government set similar targets for economic growth, as for other their macroeconomic objectives. Australia's target rate of growth for example is 3% to 4% per year. Such a growth rate should reduce unemployment or maintain full employment, without accelerating inflation. It will continually improve standard of living.

### 2. Sources of growth

#### Demand growth

- Continuously growing demand stimulates the above increase in production. Households spend to improve their standard of living. World growth demands more spending on exports. Governments find more public goods and services on which to spend taxation money, while firms spend on investment for future profit.

#### Resources growth

- Resources grow naturally and constantly.
- Natural **population growth** and immigration increase labour resources. In addition, better health and education improves human capital, making labour more productive.
- **Investment spending** by firms and governments increases the economy's stock of capital resources.
- **Mineral exploration and new plantings** increase land resources.

#### Technology growth

- Technology allows for the use of improved methods of production.
- Existing **resources are used more productively**. This means that more output is possible with the same resources, or the same output is possible with fewer resources.
- Better work practices **improve labour productivity**. For example, improved farming techniques (such as the controversial genetic engineering) is increasing the potential of agricultural output.
- The use of increasingly better capital goods **increases** both the quality and amount of **production**.

### 3. Gross domestic product

#### Ecoterm

Gross domestic product (GDP) is a measure of the total value of all final goods and services supplied by Australian producers in a year.

Only *final* goods and services are included in this measure. This means that production of *intermediate* goods and services is not counted. For example, a car is a final good because it is sold to an end user. A car radio, bought by a car manufacturer, is an intermediate good because it is used in producing a car. If both the car and the car radio were counted in GDP, the radio would be counted twice. Omitting intermediate goods and services from GDP avoids double counting. Note that when a car radio is sold to an individual, who then installs it in his car, the radio is a final good, and is counted in GDP.

## Measuring GDP

There are three methods of measuring GDP, the production, expenditure and income method. Each is used by the ABS to measure and report GDP. The ABS finds that the most reliable figure is in fact the average of the three calculations, and this is the figure used by economists and others for Australia's GDP.

In practice, the three methods give slightly different figures, due to limitations in data sources. However, they should be the same, according to the circular flow of income theory (explained in Topic 5).

### Theory explanation

All *production* is counted as sold. Production that is not immediately sold is added to stocks, and the definition of investment includes additions to stocks. Therefore, the production and *expenditure* calculations are measuring the same thing.

*Income* is also equal to the *production* figure. Individuals earn income by selling resources. Firms buy resources in order to produce goods and services. The revenue firms make from selling their production is paid out to buy resources and make a profit. But firms also pay the profit to their owners. Therefore, every dollar of sales revenue is paid to individuals as income.

### Production method GDP(P)

The production method involves collecting information about the production of each firm and government body and calculating a total value. It is useful to think of each producer's contribution to GDP as value added to materials used. For example, if a wheat farmer keeps seeds from last year's crop, sows these, and eventually sells wheat for \$80 000, the farm has added \$80 000 to the value of the seeds. Therefore, \$80 000 is counted as the farm's contribution to GDP. If a flour miller buys the wheat for \$80 000 and produces flour worth \$120 000, it has added \$40 000 value to the wheat. A baker may then buy the flour for \$120 000 and sell bread for \$220 000, adding a further \$100 000 value to the flour. Total value added by all these firms is \$220 000, consisting of the farm's \$80 000, the mill's \$40 000 and the baker's \$100 000. If the economy consisted of only these three firms, its GDP would be \$220 000. This is repeated in table 4.4.

Table 4.4 The production method: the sum of firms' value added

Producer	Input	Output	Value added (Output – Input)
Farm	0	\$80 000 wheat	\$80 000
Mill	\$80 000 wheat	\$120 000 flour	\$40 000
Bakery	\$120 000 flour	\$220 000 bread	\$100 000
Total			\$220 000

### Expenditure method GDP(E)

The expenditure method involves calculating the total value of expenditure on final goods and services produced. In the above example, of an economy with three firms (a farm, a mill and a baker), the only final product is bread. Total spending is \$220 000. In this simple example, both methods yielded the same figure for GDP.

Total expenditure on Australian goods and services can be measured using the formula:

Consumption spending + Investment spending + Government spending + net exports (export earnings less import spending).

$$\text{Also shown as } C + I + G + (X - M)$$

### Income method GDP(I)

The income method is to calculate the total income of all individuals in the economy. The ABS gets its information from the firms, government departments and individual producers that pay income. All income is paid to the factors of production, that is, to employees, to owners of land such as farmers and to owners of capital goods such as factories and other businesses. Therefore total income is the sum of wages + rent + interest + profits.

## Average GDP(A)

The practical problems of collecting all the necessary information create inaccuracies and so the three methods, outlined above, give slightly different figures. The average of the three answers, GDP(A), is the best available measure of an economy's production.

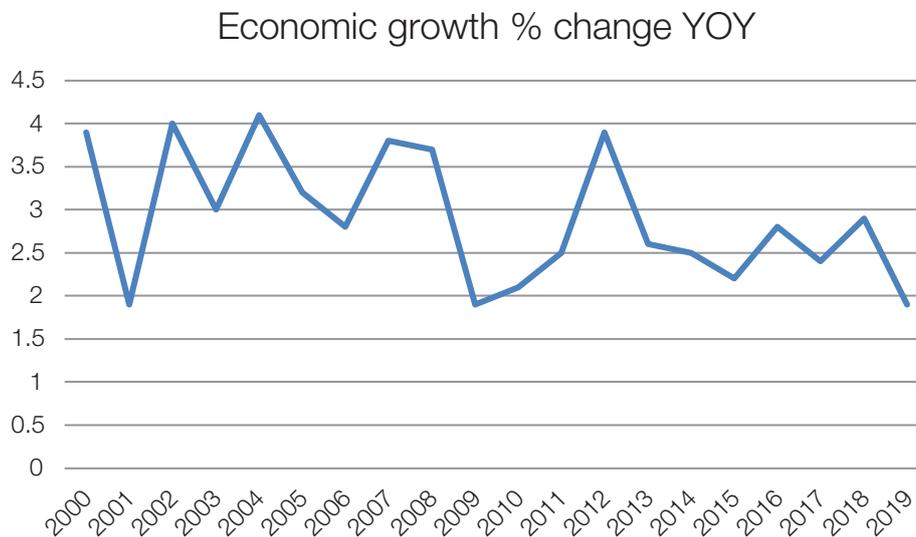


Figure 4.7 (Source: data.worldbank.org)

The graph in figure 4.7 shows annual rates of economic growth since the start of the century. It shows that the rate of growth is not even and that the Australian Government's target rate was in most years before the 2008 global financial crisis, but only once after it. The COVID-19 crisis made a big negative impact on economic growth, but the measure of that impact was not available at the time of writing.

## 4. Measuring economic growth

### 🔑 Ecoterms

- Economic growth is the rate of increase in real GDP;
- Real GDP is GDP with the effect of price changes removed.

An alternative definition for real GDP is GDP that has been adjusted for inflation. An increase in GDP simply shows an increase in output in dollar terms. The increase is likely to be a combination of more production as well as higher prices. A measure of economic growth needs to be a measure of increased production, on its own. Therefore, economists want economic growth measured as a percentage increase in *real* GDP.

For example, if the value of GDP is 8% higher than last year's, but inflation has been 3% during the year, then real GDP growth is roughly 5%. Economic growth, then, is measured by the rate of increase of real goods and services produced. If GDP increases by 3% in a year of 3% inflation, the increase in GDP is only due to price rises – there is no increase in the real volume of goods and services.

## 5. Effects of economic growth

### Benefits of economic growth for individuals

#### Standard of living

##### **Ecoterm**

Standard of living is measured by the consumption of goods and services in a period.

By definition, economic growth increases standard of living as it means growth in the value of goods and services produced in a period. As households buy and consume more goods and services, their standard of living increases. Economic growth is usually accompanied by a growth in employment, improving opportunities for employment or promotion, a change of employment, or self-employment to allow greater fulfilment of ambitions and raise people's self esteem, and indeed, their social status.

Another effect of raised living standards has been reduced population growth. The rate of growth is lowest in the most highly developed economies.

#### Less absolute poverty

As income and employment in a nation increase, a greater proportion of its population is able to escape poverty, earning sufficient income to access a minimum essential level of goods and services and opportunities. Note that absolute poverty differs from relative poverty, which is poverty in comparison to others' wealth.

### Benefits of economic growth for the economy

#### Greater tax revenue

As national income increases so too does income tax collected by government. The same applies to other taxes, such as company tax, council rates, and environment levies, as people are able to bear a higher tax burden. Governments are then able to provide a greater level of services. These include welfare payments, redistributing income to those who have less. More is able to be spent on essential services such as utilities (water supply, sewerage, gas and electricity), health and education. Better transport and communication infrastructure is also more affordable, and money can be spent on environment programs for collective benefits.

#### Higher environmental standards

As economic growth adds a higher level of comfort and pleasure to the basic wants of food, clothing and shelter, a higher standard of environmental quality is expected and more people are willing to pay more for it, through taxation and prices. It becomes more acceptable to limit fish catches and pollution and to spend on repair of river flows, soil erosion and salinity, for example.

#### New technology

In competition for sales, particularly in the face of growing international competition, producers continually seek new technology. They try to adopt the latest methods in their bid to reduce costs and improve quality. In this way, new ways of producing are discovered and spread through an industry and beyond. Some technology solves problems, such as cures for diseases or alternative sources of energy. Other technology improves efficiency, making better use of resources. Depletion of scarce resources can be avoided or deferred as technological solutions are sought, in response to price increases of those scarce resources. Still other technology allows production to be cleaner, reducing waste and hence pollution.

## Costs of economic growth for the economy

### Environmental degradation

The major cost of economic growth is the damage that can be done to the natural environment. The easiest and cheapest way to dispose of wastes is to dump them into the air, onto land, or into the seas and waterways. Such polluting practices reduce the usefulness of those natural resources for future production and for future generations, as well as damaging people's health.

Farming practices that cause topsoil to be lost, or allow its salt content to build, have been developed in environmental ignorance and apathy. At the same time, some of our products to clear vegetation, kill insects, provide cooling systems such as air-conditioning for cars and so on have proven to be damaging to other life and to the air, including its ozone layer.

Some resources have been overused, resulting in losses of entire species of plants and animals, or reduction of resources such as forests and some fish stocks to levels regarded as too low for short-term renewal. Other resources, such as minerals, are non-renewable; once the planet's deposits are used, there are none left. Crude oil, in particular, has a very high level of use by developed countries. As it runs out its price rises ever higher and this has been at least partly responsible for international tension and conflict.



*Air pollution from a factory in India*

## Costs of economic growth for individuals

### Created wants

As more and more wants are satisfied by economic growth and its attendant increase in the standard of living, more wants are created. Humans in general simply lift their level of wants as their wealth and incomes increase. New wants become less and less necessary to survival. Once most wants are satisfied, others such as a Venice visit may be created.



*A trip to Venice can be a created want, when all essential wants are satisfied.*

## Inequality

Economic growth often results in some groups in society increasing their income much more rapidly than others. For example, in some oil-rich countries, a small percentage of the population is very wealthy, while the majority is quite poor. The majority of an increase in national income is usually earned by a small minority of people.

## Social costs

One of the casualties of economic growth is the reduced demand for unskilled or low-skilled labour. This means that unskilled job seekers may remain unemployed or accept very low wages, becoming the 'working poor'. Competition between producers has caused this as firms have 'downsized' by cutting the number of employees, replacing workers with machines, and replacing full-time, permanent jobs with part-time and casual work.

## Urban congestion

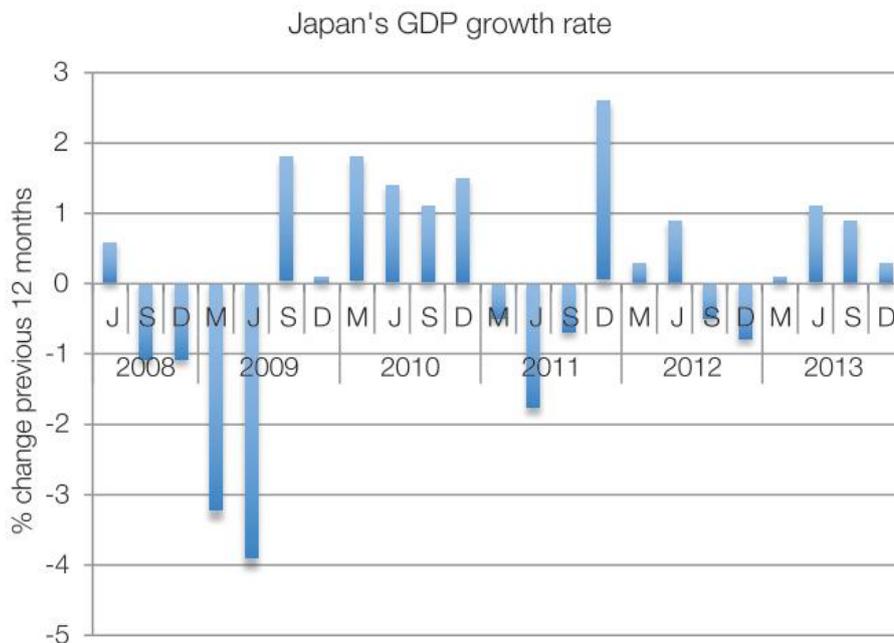
Increasing numbers of people in most countries prefer to live in cities, and a large part of the reason for this is the availability of jobs. This has caused many cities to grow to great size, sometimes faster than accommodation and other essential services can be provided. For example, Mexico City grew from 9 million in 1970 to 14 million in 1980, then to 15 million by 1995. This rapid growth created water supply and sewerage problems as well as heavy pollution and traffic congestion.

### Focus Questions

1. Why is economic growth a major objective?  
.. .. .
2. What is meant by:
  - (a) Gross Domestic Product? .. .. .
  - (b) Real GDP? .. .. .
  - (c) Economic growth? .. .. .
3. What causes economic growth?  
.. .. .  
.. .. .
4. Name the three methods of calculating GDP.  
.. .. .
5. (a) Use the graph 'Economic growth' to describe economic growth in 1991.  
.. .. .
- (b) Were more goods and services produced in December 1985 than in January 1985?  
.. .. .  
.. .. .
6. Do the benefits of economic growth outweigh the costs? Justify your answer with argument.  
.. .. .  
.. .. .
7. Use the Australian Bureau of Statistics ([www.abs.gov.au](http://www.abs.gov.au)) or the Malaysian Department of Statistics ([www.statistics.gov.my](http://www.statistics.gov.my)) or the National Bureau of Statistics of China ([www.stats.gov.cn/english](http://www.stats.gov.cn/english)) website to find the current national rate of economic growth.  
.. .. .  
.. .. .

**Examination revision**

Refer to the graph below.



Source: [www.tradingeconomics.com/cabinet-office-japan](http://www.tradingeconomics.com/cabinet-office-japan)

(a) (i) Which macroeconomic objective is measured by GDP?

.....

(ii) In which quarter of which year was Japan's growth rate the highest in the period shown in the graph?

.....

(iii) What is meant by “% change previous 12 months”?

.....

.....

(b) (i) In which calendar year was the least amount of income tax collected by the Japanese government?

.....

(ii) Was the total value of Japanese production greater in December 2013 than in March 2012? Explain your reasoning. Note that the GDP growth rates for each of those two quarters was the same, at 0.3%.

.....

.....

## 4.4 External balance

### 1. External balance objective

#### Ecoterm

The external balance objective is to receive enough inflows from foreign countries to be able to meet all financial obligations to other countries.

Each country needs to maintain external balance. It needs money flowing in to buy imports and make income payments overseas. External balance can be seen as external stability, or external viability. Each country needs to manage its external sector so that it does not impose any constraints on achieving its internal macroeconomic objectives – full employment, price stability and economic growth.

A simple balance between payments to and from the rest of the world is recorded in the Balance of Payments (BoP). The external balance objective is **not** simply to balance ins and outs. But we need start our study here.

### 2. The balance of payments

Flows of money in and out of a country are recorded in the balance of payments. In Australia, for example, it is published monthly by the ABS, in Malaysia by the Department of Statistics Malaysia and in China by the National Bureau of Statistics of China. The balance of payments is a summary of money flows between the origin country and the rest of the world. The balance of payments consists of two accounts, to report both current and capital transactions. Current money flows in and out of the country are recorded in the 'Current Account' and capital transactions are recorded in the 'Capital and Financial Account'. Capital transactions are investments, including loans, to fund the purchase of capital resources.

Table 4.5

Balance of Payments	MAIN INFLOWS	MAIN OUTFLOWS
	Money inflows result from	Money outflows result from
Current flows	export earnings receipts of income payments	import spending income paid to overseas investors
Capital flows	foreign investment including loans	investments overseas and loan repayments

#### Debtor and creditor countries

Australia is a debtor country, and so is the US. Australia's current payments usually exceed their current receipts. There is a need to finance this deficit. This is done with capital transactions such as loans. Figure 4.8 represents a debtor country's balance of payments. It shows that a surplus of capital inflows over outflows finances a current account deficit. The balance of payments balances total ins and outs, mainly for this reason.

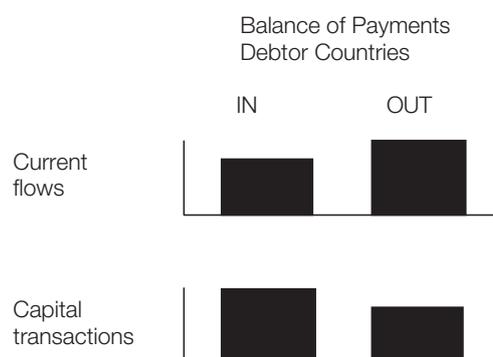


Figure 4.8

Malaysia, China and Japan are examples of creditor countries. Malaysia's current account balance is usually positive. Its capital and financial account balance is negative as it lends more than it borrows and this also applies to Japan. China has a huge trade surplus.

## Current account

### Ecoterm

The current account of the balance of payments is a summary of international trade transactions, income transfers and other current transfers

The current account summarises transactions that have a current or immediate economic effect. Imports are consumed or used in production in the current period, and export sales generate current national income. Income transfers also have an immediate effect on the funds available for spending.

Current account components are

- trade in goods and services
- income transfers
- current transfers.

## Components

### Trade in goods and services

This component of the current account records payments and receipts resulting from trade in goods and services in the current period. Import spending on goods and services is recorded as payments, and exports earnings as receipts.

Table 4.6 Exports and imports: Australia (Source: rba.gov.au)

<b>Composition of Australian exports</b> % of total			
	2018	2000	1960
Resources	58	3	12
Services	21	23	13
Agriculture	11	20	63
Manufacturing	10	20	10
<b>Composition of Australian imports</b> % of total			
	2018	2000	1960
Industrial supplies	15	26	30
Services	24	24	22
Consumer goods	19	15	13
Capital goods	20	22	17
Transport and equipment	12	10	9
Fuels and lubricants	10	3	9

Two of Australia's top five exports are services, those being education and personal travel services. Tourism spending flows into Australia as well as out, and results in both receipts and payments. Australia sells more education and technology services than it buys, but freight and insurance on shipping are nearly all imported services, and these outweigh the total value of exported services.

### Ecoterm

The trade balance for a period is the difference between the values of exports and imports.

Export earnings help pay for imports. If a positive trade balance is achieved, that is, if export earnings exceed import spending, then imports are paid for with export earnings. If export earnings do not cover the amount required to pay for import spending, then the trade deficit needs to be financed either with a current income surplus, or with a capital and financial account surplus.

Table 4.7 (Source: rba.gov.au)

Australia's major trading partners		
	% of exports	% of imports
United Kingdom	3	4
Euro area	4	15
Japan	14	8
China	27	19
South Korea	7	4
Other east Asian economies	24	30
United States	5	14
Other economies	15	5

### Income (Primary)

The income section records international payments and receipts of investment income and wages. Investment income is, mostly, interest, profit and dividends. It results from investments recorded in the capital and financial account **in earlier periods**. For example, foreigners own several well-known Australian firms, such as Arnott's Biscuits, owned by US firm The Campbell's Soup Company. Dairy Farmers, Oak and Dare iced coffees are all owned by Kirin, a Japanese company. The foreign owners are paid the profits. Foreign shareholders in Australian firms are paid dividends (profit is divided among shareholders). Other investors are paid interest on loans they have made to Australian companies. Wages are international transfers for workers overseas.

Net income in the Australian current account is always negative, meaning that payments exceed receipts. This happens because the level of foreign investment in Australia is much higher than Australian investment overseas.

### Income (Secondary)

Also known as the current transfers section, this component records payments that are not for goods, services or income. Examples include pensions, insurance payouts and gifts. Pensions are recorded here instead of in the income transfers section, because these income payments are not made in exchange for resources. Some foreign aid is included here, if it is a flow of money from one country to another without any goods, services or income flowing back in return, and of a short-term nature. If the aid is for capital works, it will be recorded in the capital account. The current account figures in table 4.2 show that the current transfers amounts are much smaller than the other two components and are less significant.

The summary table following is for five consecutive financial years (2006-2007 to 2010-2011). Inflows are recorded as credits and outflows are recorded as debits. The balance on current account is the sum of the trade balance, net income transfers and net current transfers. Note that the trade balance was in deficit on three occasions and in surplus twice. The net primary income figure was always a large negative, and the major reason for ongoing current account deficits.

Table 4.8 The Australian Current Account (Source: ABS AUSTRALIAN YEARBOOK 2012 (1301.0))

\$ million	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
<b>Goods</b>					
Credits (Export earnings)	169,620	182,922	231,623	201,751	246,975
Debits (Import spending)	<u>-183,554</u>	<u>-205,149</u>	<u>-220,890</u>	<u>-204,995</u>	<u>-219,267</u>
Balance on goods	-13,934	-22,227	10,733	-3,244	27,708
<b>Services</b>					
Credits (Export earnings)	47,175	50,891	52,948	52,011	50,570
Debits (Import spending)	<u>-45,148</u>	<u>-53,017</u>	<u>-56,328</u>	<u>-53,388</u>	<u>-57,360</u>
Balance on services	<u>2,027</u>	<u>-2,126</u>	<u>-3,380</u>	<u>-1,377</u>	<u>-6,790</u>
<b>Balance on goods and services (Trade Balance)</b>	-11,907	-24,353	7,353	-4,621	20,918
Primary income					
Credits	36,926	44,523	43,364	34,285	40,184
Debits	<u>-85,319</u>	<u>-93,099</u>	<u>-87,741</u>	<u>-84,612</u>	<u>-93,798</u>
<b>Net income transfers</b>	-48,393	-48,572	-44,376	-50,327	-53,613
Secondary income					
Credits	6,403	6,639	6,667	6,315	6,605
Debits	<u>-6,646</u>	<u>-6,585</u>	<u>-6,916</u>	<u>-7,385</u>	<u>-7,139</u>
Net current transfers	-243	54	-249	-1,070	-534
<b>BALANCE ON CURRENT ACCOUNT</b>	-60,543	-72,871	-37,272	-56,018	-33,229

The graph 'Current Account Components' in figure 4.9 shows the main components of the current account – trade and net income transfers—for five consecutive years. Trade consists of exports and imports of both goods and services. The 'balance on goods and services' figure is often referred to as the trade balance, or as net exports. Net income transfers is the net result of outflows and inflows of primary income.

Clearly, total outflows exceeded total inflows in each financial year. The colours show that an income deficit (more income payments than receipts) caused most of Australia's current account deficits in those years. The trade deficit is the secondary contributor to the current account deficit, and varied between a \$20,000m surplus in 2010-11 to a \$20,000m deficit in 2007-08.

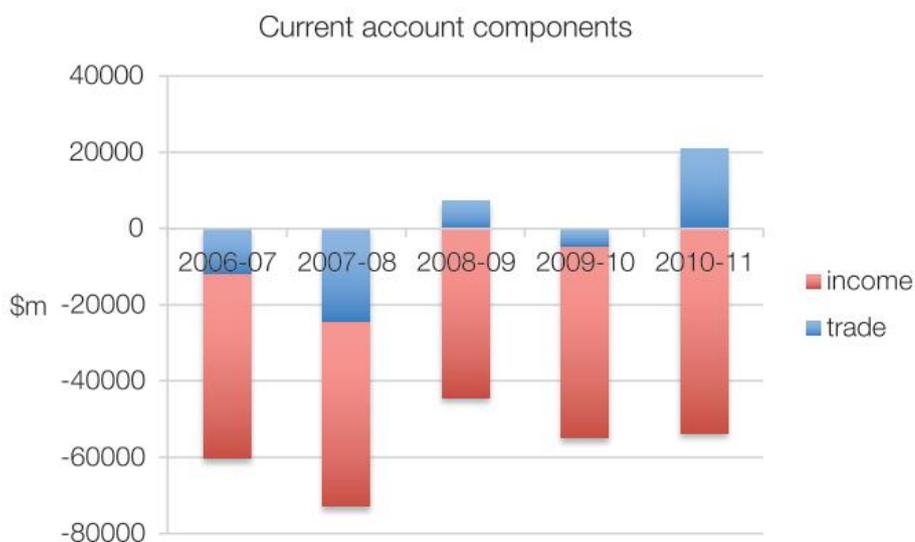


Figure 4.9 (Source: ABS Yearbook Australia 2012 1301.0)

## Current account deficit

### Ecoterm

Current account deficit is an excess of current payments over current receipts.

Foreign investment is desirable, in fact encouraged, and so this external imbalance situation is acceptable, up to a point. As the economy grows, so too does the need for foreign investment, and therefore the value of income transfers overseas also grows in size. As long as the value of the current account deficit rises in proportion to GDP, the problem of external stability does not worsen.

In practice, then, the external balance objective is a current account deficit that is consistent with continuing growth in GDP. In other words, the external balance objective is a stable current account deficit as a percentage of GDP, staying around 3%.

## Capital and financial account

**The capital and financial account records transactions that have a long-term economic effect.** It is usually in surplus, total receipts exceeding total payments. The types of transactions reported on this account are capital flows, mainly in the form of loans or share purchases. Capital flows occur in the form of receipts and payments, as do flows reported on the current account. Capital receipts from overseas consist of loans from foreign banks and investments by foreign firms and households. Capital payments overseas consist of Australian investments and loans to foreign firms and governments, and loan repayments. An example is provided by BHP Billiton's investment in Bougainville in Papua–New Guinea to mine copper.

## 3. Types of foreign investment

### Direct investment

### Ecoterm

Direct investment refers to foreign investment in a domestic firm resulting in ownership of 10% or more of that firm.

Direct foreign investment occurs if some degree of control is exercised by the investor. Ownership of 10% or more of a company is regarded as direct investment. For example, Coca-Cola Amatil, a major bottler of non-alcoholic beverages in the Asia Pacific region, was set up as one of the world's five major Coca-Cola bottlers, and is 29% owned by the Coca-Cola Company. Direct foreign investment also includes the purchase of a domestic firm, or enough shares for controlling interest in an Australian firm. A substantial proportion of share ownership gives the owner decision-making power, and perhaps a seat on the board. Owners of more than 50% of a company's shares have the majority of votes in major decisions. For example, Campbell's Soups, a United States firm, bought enough shares in Arnott's Biscuits to establish control.

## Portfolio investment

### Ecoterm

Portfolio investment includes purchases of less than 10% of a firm.

A New Zealand purchase of Qantas shares would be an example of portfolio investment if less than 10% of the company is bought. Purchases of foreign government securities and commercial bonds and debentures are also recorded as portfolio investment. These are loans formalised by certificates that state a particular number of dollars borrowed, a date on which the loan is to be repaid, and the interest rate. Deposits in domestic financial institutions are also classified as portfolio investment. Portfolio investment is made up of loans and share purchases.

Portfolio investment tends to fluctuate more than direct investment. Individuals, firms and financial institutions build a portfolio of investments to generate future income, and will quickly sell any shares that are not performing well. Direct investment represents a longer-term commitment to production in Australia than portfolio investment. Direct investors are more likely to remain for the long term, and more likely to develop existing resources, generate technological improvements and create employment. For this reason, the Australian Foreign Investment Review Board's guidelines are set to prefer direct investment applications from overseas.



*A portfolio of investments is a collection of shares, each less than 10% ownership.*

## 4. Impacts of capital flows

Capital flows are international money flows for capital purposes. Capital flows both ways, into and out of each country. Income transfers occur in both directions, some flowing home to foreign investors and some flowing in to the domestic economy. Both exert powerful influences on the domestic economy.

- Capital inflows have a big impact on developing a country's resources and industries. They also create a flow of income transfers in future years, mainly in the form of interest and dividends.
- Capital outflows generate future income in the form of interest and dividends flowing into the domestic economy in future years.

## Investment finance

### Economic development

Foreign investment is very valuable to an economy. It develops resources and facilitates production that would otherwise not occur. Fuelled by capital, domestic firms can expand and export. Just as valuable is the technology that accompanies investment.

As well as capital, the firms that formed a partnership to establish the Australian Submarine Corporation at Port Adelaide, for example, brought naval shipbuilding know-how and processes. This established an industry in South Australia that had ceased to exist when BHP shut down its Whyalla shipyards. In 2006 the industry won an Australian naval contract to build warships.

### Investment funding

The amount of national savings is not necessarily sufficient to finance total investment spending. In other words, there is a gap between the funds available in domestic financial institutions and the funds needed for investment, and this gap is filled by foreign investment. Such a gap occurs in Australia because it has a relatively small population. Foreign investment is especially needed in large and risky projects such as mining and particularly mining exploration, and mining is Australia's biggest export industry.

## Employment

Foreign-funded economic development creates employment. Considering the assistance that foreign investment gives to the economy's achievement of its macroeconomic objectives, it is not surprising that governments have long encouraged it. The Australian Foreign Investment Review Board, for example, rejects less than 10% of applications for foreign investment.

It is worth distinguishing here between two types of foreign investment, direct and portfolio investment. The government has a preference for direct investment.

## Income repatriation

Income repatriation refers to sending income 'home' to the original investors. Foreign investment generates income outflows to foreign investors in later periods.



### Ecoterm

Gross national income (GNI) is defined as all income earned by residents, both in the domestic economy and abroad

Income inflows from other countries add to gross national income and therefore to national wealth and standard of living. Income outflows, on the other hand, take income out of the domestic economy. Australia's net income transfers, an excess of outflows over inflows, averages about 3% of GDP. This means that \$3 out of every \$100 of income generated in Australia is paid to foreigners. Malaysia experienced a net income inflow each period, so big that its gross national income is about double its GDP. China's is about the same as its GDP.

## Current account deficit (CAD)

Net income transfers, resulting from earlier capital flows, contribute to the current account balance. In the case of debtor countries, they contribute to current account deficits, unless they are outweighed by a positive trade balance.

## Foreign debt

Some capital flows are loans, and new borrowings increase foreign debt. **A country's foreign debt is the total amount of money owed by residents to overseas firms.** In each period, new loans are taken and former loans are repaid. The foreign debt grows in every period in which new borrowings exceed repayments of old debts. Countries lend as well as borrow. If foreign borrowings exceed loans, there is a net foreign debt.



## Foreign ownership

Every foreign purchase of shares in a domestic firm increases foreign ownership of domestic industry. If a single firm or individual owns more than 50% of a company, that firm or individual has control of the company. Many Australian companies are controlled by overseas firms and many more have some degree of foreign ownership.

## 5. Benefits and costs of capital inflows / foreign investment

### Benefits

#### Growth and employment

Foreign investment is beneficial for development of a country's industries and resources. In Australia, for example, it has been necessary from the first settlement in 1788 to the present day. Virtually every industry in Australia has benefited from capital flows from foreign investors. With growth of industries comes demand for labour, and foreign investment is important in generating employment.

#### Savings gap

If there is a gap between the capital finance needed for investment and the supply of domestic savings available, foreign capital fills the gap.

#### Technology

Foreign investors can bring to domestic industries new technology, management expertise and access to foreign-funded research and development. For example, Swedish owners provided submarine building know-how and equipment to the Australian Submarine Corps.

#### Foreign exchange

Foreign investors need to provide their own currency to buy the domestic currency, supplying currency dealers with foreign currency and also boosting the domestic exchange rate.

#### Diversification

Establishment of new industries improves an economy's diversification. This is valuable as drought or falling demand can reduce income from agricultural or other exports. A diversified economy will have other industries to fall back on.

#### Access to foreign markets

Multinational companies, responsible for most direct investment in other countries, are large, powerful organisations with access to foreign markets. For example, when the Australian Government allowed Campbell's Soups, a US firm, to take over Arnott's biscuits, a major deciding factor was Campbell's well-developed marketing and distribution network already established in Asia, and it was expected that this would expand Arnott's export sales.

### Costs

#### Income repatriation and debt servicing

Foreigners invest their capital funds into other countries in order to make an income. Capital inflows this year will result in income outflows in future years. Income will be sent home (repatriated) to investors in the forms of profits to foreign owners of domestic firms or subsidiaries like Toyota Australia, dividends to foreign owners of shares in domestic companies, and interest payments to foreign lenders. These income transfers may maintain a persistent current account deficit, as they do in Australia. Another form of income outflow is licence fees for use of technology developed in other countries.



*Arnotts' profits go to foreign owners.*

#### Market power of multinational companies

It is possible for large multinationals, acting in their own interests, to use their market power to reduce competition in domestic markets. Oil companies, for example, may well have taken advantage of shortages of crude oil to maintain high petrol prices.

## Decisions in foreign interests

Multinational companies make important decisions about resources, and these decisions, made in the interests of a foreign-based company, may conflict with the economic objectives of the host country. All Australian car manufacturers, for example, have decided to shut down their Australian operations, with significant consequences for employment.

## Foreign ownership and control

The more foreign investment, the more local companies will be partly or wholly owned or controlled by foreigners. Some Australian icons such as Arnott's Biscuits and Vegemite are no longer Australian-owned. While foreign ownership has made no difference to their continued production and quality, much of the profit and decision-making go overseas.

## 6. Indicators of external balance

There are three main indicators of external balance. These are the:

- current account deficit as a percentage of GDP
- net foreign debt as a percentage of GDP
- exchange rate.

### Current account deficit as a percentage of GDP

A debtor country, such as Australia, always has a current account deficit. The size of the current account deficit (CAD) measures the extent of external imbalance. However, as economic growth occurs each year, so the values of imports, exports and income transfers grow, and hence the size of the CAD. This does not mean that external imbalance is steadily getting worse, just because the dollar value of the deficit increases. We should expect it to increase with the value of GDP. **External imbalance is only seen to worsen if the deficit increases as a proportion of GDP.**

A recent figure is from December 2019 when the current account deficit was 0.3% of Australia's GDP. The Australian Government seems to target 3% for this indicator. The target has not always been achieved. Variations in the figure have been acceptable in some circumstances. For example, a blowout of the CAD as a result of investment spending is less of a concern than one that funds consumer spending. If capital inflows are used for investment, future production and employment growth is generated, and the CAD's size as a proportion of GDP is sustainable.

Also, when the economy is in a growth cycle, import spending increases, pushing the current account further into the negative. When the CAD reaches 6% of GDP in a boom, there is less concern than in a recession.

### Net foreign debt as a percentage of GDP

Net foreign debt is total debt owed by the domestic population to other countries less total debts owed by foreigners. Economists use net foreign debt as an indicator of external balance, studying not so much the size of the debt, but its proportion to GDP, and the uses, productive or otherwise, to which borrowed funds are put.

Debt is not always used productively. For example, Australia experienced a boom in commercial building in the late 1980s and much of this was funded by external borrowing. CADs increased as interest payments rose with debts. Property prices boomed, and then collapsed when monetary policy was employed to cool off the economy. The recession, brought about by fiercely high interest rates, was a painful one, accompanied by high unemployment. The moral of this experience is that the economy was not advanced by such activity, while foreign debt soared to 50% of GDP. The situation was judged harshly, not simply because of the size of the indicator, but because the use of borrowed funds was unproductive. Productive uses of debt include to

- develop infrastructure
- enhance export capacity
- develop import-competing industries

To track the economy's net foreign debt performance, it is calculated as a percentage of GDP. This makes sense because, as inflation and economic growth continually expand GDP, so borrowings and hence foreign debt also grow. **Economic managers are only concerned when the foreign debt increases as a proportion of GDP.**

Note that foreign debt is not the same as national debt. National debt is the amount owed to other countries by the national *government*.

## Exchange rate

The third indicator of external balance is the exchange rate.

### Ecoterm

The exchange rate is the price or value of one unit of domestic currency expressed in a foreign currency.

### Measurement

It is most common to express, for example, the price of an Australian dollar (\$A or AUD) in terms of United States dollars (USD). For example, the exchange rate might be \$US0.85. It is the number of US dollars that can be exchanged for, or bought with, \$A1.00.

The value of many currencies, such as the Australian dollar, is also measured against a basket of foreign currencies, weighted according to the value of currency usually traded. In Australia's index, Japanese yen carry a greater weighting than Singapore dollars, for example, because Australia operates a greater volume of trade with Japan than with Singapore. This measure is the Trade Weighted Index. It is used by economists and is regarded as a more accurate measure of the exchange rate.

### Stability

If demand and supply of a country's currency are balanced, the exchange rate will stay stable. A stable exchange rate indicates to investors around the world that the domestic economy is healthy, and that domestic production and currency are worthwhile investments.

Too much fluctuation in the exchange rate causes uncertainty and dampens foreign investment and international trade. For example, English buyers of Australian wine will be discouraged if they cannot rely on the price in pounds staying the same from one order to the next. Similarly, in times of uncertainty, currency speculators will sell Australian dollars rather than buy them.

### Fixed and floating exchange rates

A fixed exchange rate is one fixed to the value of another, stable currency. Few countries still use a fixed exchange rate as it prevents the use of monetary policy (see Topic 6) to achieve macroeconomic objectives.

A floating exchange rate is one that 'floats' on the forces of demand and supply of a currency. The foreign exchange market sets the price at which a particular currency is exchanged for other currencies.

### Foreign exchange market

The foreign exchange market is the market for all international currencies. Currency dealers include banks, major travel agents, and specialist 'bureaux de change'. Some of them have shops in airports, central railway stations and city centres. Currencies can be exchanged at banks or bought and sold using computer links between currency dealers. We can use the competitive market model to understand how the foreign exchange market works and how the exchange rate for Australian dollars is determined.

In the market for Australian dollars, the equilibrium price is the exchange rate, which can be stated in terms of any other currency. The exchange rate changes with shifts of demand or supply.

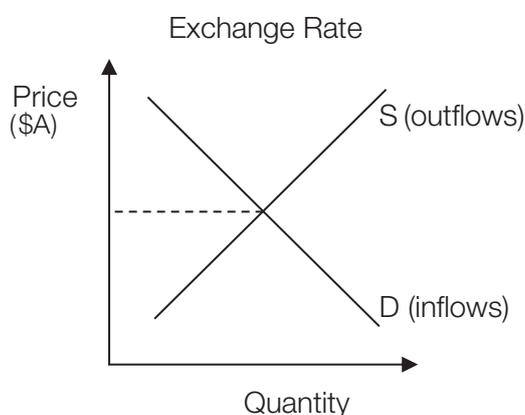


Figure 4.10

## 7. Determination of the exchange rate

The price or value of a currency, its rate of exchange for other currencies, is determined in the same way as prices of resources and goods and services, that is by the forces of demand and supply. These forces operate in the foreign exchange market, for example in the market for Australian dollars (\$As). Figure 4.10 represents this market.

### Buyers

The buyers are foreigners who want to buy Australian goods and services or to invest in Australian companies. Purchases of Australian dollars therefore create flows of foreign exchange into Australia.

### Sellers

The sellers of \$As are Australians who want to buy foreign goods and services or invest overseas. Sales of Australian dollars create outflows.

## Foreign exchange market

Australians supply Australian dollars to the market when they wish to purchase something in a foreign country. **Whenever Australians buy overseas goods, services or investments, they must first buy the relevant foreign currencies.** To do this they must take their Australian dollars to the foreign exchange market and use them to buy US dollars, British pounds, Japanese yen and so on. *Supply* is therefore associated with *outflows* as Australian dollars are supplied by *Australians*. Similarly *demand* in this market is associated with *inflows* because *foreigners* demand Australian dollars. This is because **when foreigners wish to spend money in Australia, they must buy Australian dollars first**, exchanging their own currency in the foreign exchange market. Remember that total flows are both current and capital flows.

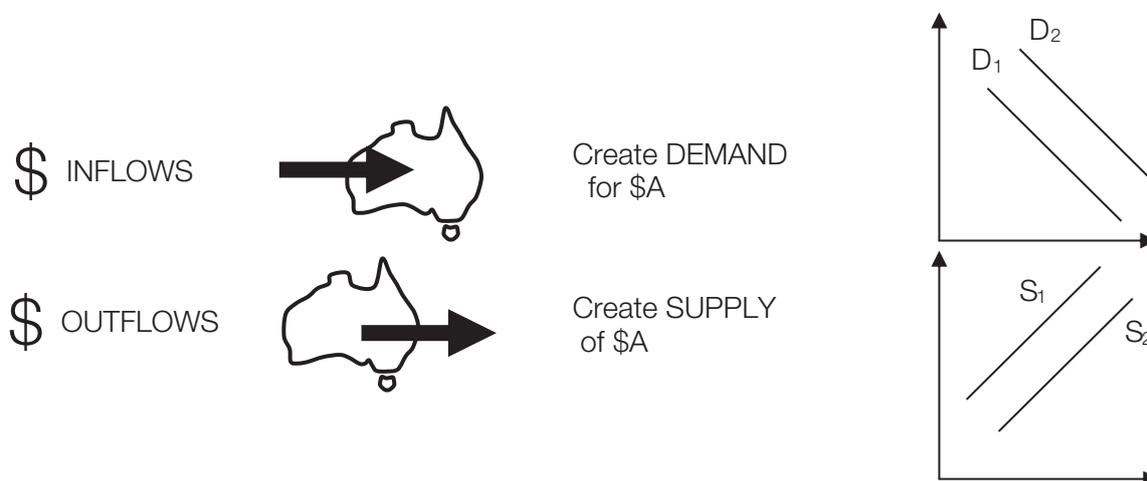


Figure 4.11

## Demand factors

### Exported goods

Overseas demand for Australian exports creates demand for Australian dollars with which to pay for the exports. This is because Australian firms want Australian dollars in exchange as this is the only currency acceptable in Australia. If overseas demand for Australian goods and services increases then demand for Australian dollars will increase, and so the demand curve will shift to the right, as shown in figure 4.12. As demand for Australian dollars increases, its price is pulled up.

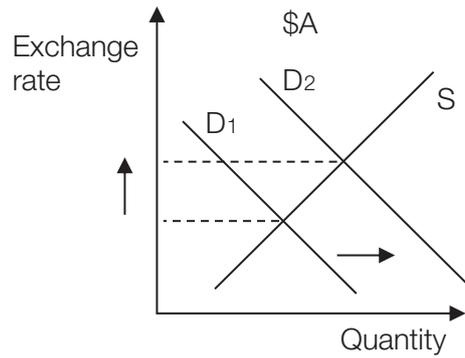


Figure 4.12

## Exported services

Overseas visitors exchange their currencies for Australian dollars in order to spend on travel, accommodation, tours, souvenirs and food and drink while visiting Australia. Education is the biggest services export as increasing numbers of foreign, particularly Asian, students are taking Australian courses. In the main the students move to Australia to study, but some secondary and university courses are exported. For example, a number of Malaysian and China students take South Australian year 12 courses and sit the examinations in their own country. Both groups, those who study in Australia and those who study Australian courses at home, need to buy Australian dollars to pay for them.

## Foreign investment

Residents of other countries and firms registered overseas buy shares in Australian companies, lend money to Australians, deposit money in local financial institutions and buy or set up companies in Australia. Foreign investors need to convert their foreign currencies to Australian dollars to buy investments in Australia and to lend money to Australian firms. In this way demand for Australian dollars is created by foreign investment.

## Supply factors

Australians supply Australian dollars. For example, Australians who

- travel overseas
- import goods and services
- pay income overseas
- make loans to other countries
- buy shares in foreign companies

must first supply Australian dollars to the foreign exchange market to buy foreign currencies. With those foreign currencies they can then buy foreign goods, services and investments and pay income and other transfers.

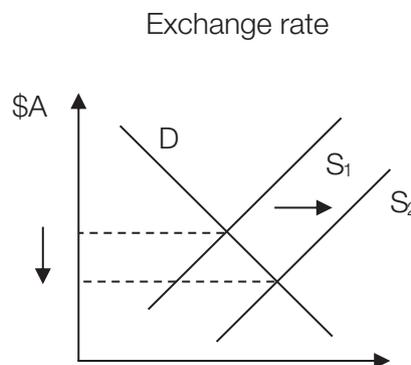


Figure 4.13

Currency	Notes	Buying		Selling	
		Notes	T/C	Notes	T/C
USA	USD	35.03	35.80	36.10	
EURO	EUR	45.72	45.97	46.88	
ENGLAND	GBP	68.96	69.66	70.90	
JAPAN	JPY	0.2878	0.2912	0.2971	
SINGAPORE	SGD	22.89	22.98	23.88	
HONG KONG	HKD	4.47	4.50	4.66	
AUSTRALIA	AUD	27.08	27.36	27.97	
NEW ZEALAND	NZD	24.18	24.32	25.31	
SWITZERLAND	CHF	27.99	28.32	28.81	
SWEDEN	SEK	4.89	5.03	5.19	
DENMARK	DKK	5.94	6.13	6.28	
CANADA	CAD	29.65	29.98	30.66	
NORWAY	NOK	5.43	5.60	5.76	
BRUNEI	BRD	22.10	-	23.50	
INDONESIA	IDR	0.0025	-	0.005	
MALAYSIA	MYR	8.53	-	10.76	
CHINA	CNY	3.70	-	4.97	
KOREA	KRW	0.029	-	0.043	
TAIWAN	TWD	0.88	-	1.19	
U A E	AED	7.75	-	10.20	
BAHRAIN	BHD	59.63	-	88.33	
OMAN	OMR	59.41	-	84.21	
QATAR	QAR	7.67	-	10.22	
SAUDI ARABIA	SAR	7.58	-	10.19	
SOUTH AFRIC	ZAR	3.65	-	5.45	

Increases in these activities will increase supply, to  $S_2$  in figure 4.13, causing currency suppliers to drop their price to reduce the surplus. In this way the exchange rate is depreciated.

The reverse is also true. Any decrease in the above activities by Australians will cause an appreciation through reducing supply of Australian dollars to the market. Currency suppliers ration reduced supply by raising the price of Australian dollars.

## Interest rates

Domestic interest rates, relative to other countries that compete for foreign investment, affect the amount of foreign investment, and thus demand for domestic currency. Keeping interest rates above those of other countries, especially the US, attracts foreign investment, as lenders and other investors are able to earn better returns.

## Speculation

Speculators are those who buy foreign currencies in the expectation that they will rise in value, with the intention of then selling those currencies to make a profit. The Australian dollar is one of the most traded currencies in the world, out of proportion to the size of the Australian economy. A significant part of such trading is speculative. After the global financial crisis, Australia's economy was perceived by many to be strong. These perceptions contributed to strong demand for Australian dollars and hence to a high exchange rate, rising above the \$US.

## Value of other currencies

The exchange rate of a currency will rise against another currency if that second currency falls in value. For example, if the \$US falls due to conditions in the United States of America, then other currencies, for example the \$A, will buy more \$US.



## Reserve Bank intervention

In order to stop the wild fluctuations and negative impacts of a rapidly rising or falling Australian dollar, the Reserve Bank of Australia can participate in the foreign exchange market by buying or selling Australian dollars. This practice is referred to as open market operations. To slow a damaging fall in the value of the dollar it will increase demand for Australian dollars by buying some, using its reserve of foreign currencies. Alternatively, to arrest a dramatic upswing, it will increase supply by selling \$A to the market.

The Reserve does not target a specific exchange rate, or even a range, and will only intervene to prevent a strong, persistent rise or fall of the exchange rate. A final point to note is that, compared with the large amount of demand for and supply of Australian dollars, the RBA cannot achieve control of the exchange rate, or even a strong influence.

## 8. Effects of changes in the exchange rate

The rate of exchange changes from hour to hour and affects all international transactions. When the exchange rate increases, the value or price of, for example, \$A1.00 increases, and so more US dollars, more Euro, more Yen and so on can be bought with each Australian dollar. When the exchange rate decreases, the value of the Australian dollar decreases, and less foreign currency can be bought with each Australian dollar. **An increase in the exchange rate is referred to as an appreciation** because the value of the currency has risen. **A decrease in the exchange rate is known as depreciation.**

### Effects of depreciation

To examine the effects of changes in the exchange rate, it is useful to examine one direction of change in detail. We will study the effects of depreciation: the effects of appreciation are opposite to this.

**Depreciation is neither wholly good nor wholly bad for an economy.** It improves the trade balance, economic growth and employment but it may push up the rate of inflation. It also makes acquisition of domestic assets, such as businesses, easier for foreigners.

### International trade

Exports become cheaper for overseas buyers as the cost of the domestic currency decreases. For this reason export sales are likely to increase with depreciation. However, sellers of exported goods and services still receive the same price in \$A. Therefore **export earnings increase**, and incomes of exporters increase too.

Imports become more expensive for locals to buy because foreign currencies become more expensive, and so **import spending decreases**. The balance of trade improves with increased export earnings and reduced import spending.

## International competitiveness

From the argument above, it follows that domestically produced goods and services become more competitive when the exchange rate depreciates. In international markets our exports gain a price advantage, and in domestic markets locally produced goods and services gain a price advantage over imports.

## Economic growth and employment

Improved competitiveness both at home and abroad **switches spending towards domestic production**. Buyers at home substitute domestically produced goods and services for the more expensive imports. Overseas buyers switch some of their spending to the more affordable Australian exports in preference to substitutes from other countries. Economic growth and employment are both boosted as a result.

## Inflation

For three reasons, depreciation has an inflationary impact. If not overcome, increased prices can nullify the trade gains from depreciation.

1. The Consumer Price Index measures the rate of inflation. Its regimen, or “basket” of goods and services, includes imported goods and services and so, when depreciation increases import prices, the CPI rises.
2. Other items in the basket are manufactured with imported components, such as cars with imported car radios, or are produced with imported capital equipment, such as machinery, and the prices of these items also rise.
3. In addition, more expensive imports allow Australian producers of competing substitutes to put up their prices, freed from some competitive pressure.

4

## Overseas payments

Depreciation requires more of the local currency to be exchanged to make overseas payments, including payments for imports, overseas travel and tourism or payments of debts. The size of the country's foreign debt increases as more domestic currency is needed to pay it.

## Foreign investment

Just as foreigners pay less of their currency, so they will pay less for anything that has a local price. This includes investment in Australian firms and so depreciation has the effect of encouraging foreign investment. Another effect of a large depreciation is that Australian firms become targets for foreign takeover, as their cost in terms of foreign currencies decreases.

## Effects of appreciation

An appreciation will have the opposite effects of those above. For example, if the price of the Australian dollar increases it becomes more expensive for foreigners to buy anything Australian. Export sales and foreign investment will fall. However, imports will cost Australians fewer Australian dollars.

## 9. Causes of external imbalance

External imbalance occurs whenever an economy's receipts and payments are not equal. But this happens more often than not, and, while accurate, it is not a useful definition. We need to define external balance in the long-term sense. Debtor countries like Australia and the US experience external imbalance as a result of persistent current account deficits, the excess of current outflows over current inflows. A constant inflow of foreign capital is needed to finance monthly current account deficits.

What is wrong with using foreign investment to finance current account deficits? This depends on the use to which it is put. While foreign capital is used for investment that increases economic growth and generates income, interest on loans and profits and dividends on other investments must be paid. If the capital is used for consumption, or unproductive investment, insufficient income will be generated to make current income payments. Then a long-term imbalance problem would exist.

Compiling a list of the causes of external imbalance can easily be done by listing the reasons for current account deficits. We will examine the main components of the current account – trade in goods, trade in services and income transfers – and factors affecting these money flows. The section of the current account entitled ‘Current Transfers’ will be ignored because it is very small and is fairly evenly balanced between inflows and outflows.

## Income transfers

For debtor countries, this section of the current account is often the biggest contributor to the current account deficit. To use the Australian example again, the reasons for this are two sides of the same coin.

## High demand for investment

Throughout Australia’s history, high levels of foreign investment have maintained high levels of income transfers overseas. The mining and finance sectors of the economy have a very high rate of foreign ownership and so most of the profit from these industries flows overseas.

## Savings gap

There has been a much smaller amount of local funds available for investment compared to the high demand for investment capital.

## Trade deficits

A trade deficit, in other words a negative trade balance, contributes to an overall current account deficit. Australia’s trade balance, for example, has been in deficit on all but rare occasions over the last 50 years. This means that, as a nation, Australians spend more on imported goods than we earn from goods exported.



*Unloading containers of imports in Hamburg*

A major reason for this is that the bulk of Australia’s exports are still primary products: agricultural goods, such as wheat and wool, and minerals such as coal and iron ore. On the other hand, 85% of our imports are manufactured goods, especially elaborately transformed manufactures such as cars and other transport equipment, machinery, entertainment equipment, and mobile telephones. Manufacturers have struggled to compete with cheaper producers, especially from Asia. On the other hand, exports to growing Asian economies are expected to grow in the future.

## High growth

In times of rapid economic growth, demand for imports increases, increasing the trade deficit. This will occur during the boom in economic activity. In such times, domestic firms can have difficulty supplying demand, and imports are sought instead.

## Commodity prices

Fluctuations in commodity prices cause export earnings to fluctuate, so that the trade deficit worsens in periods of low commodity prices. The word **commodity** is used by economists for internationally traded goods. When iron ore and coal prices fall, for example, miners earn less income for their exports. A general fall in commodity prices pushes down export earnings and contributes to imbalance.

## Exchange rates

High domestic exchange rates also contribute to trade deficits, making exports more expensive for foreigners, and imports become cheaper for Australians. This reduces demand for exports and increases demand for imports.

# 10. Effects of external imbalance

## Is external imbalance a problem?

Foreign investment is accepted for the net economic benefits it brings. Current account deficits have allowed Australia, for example, to maintain a higher rate of investment, and economic growth, employment and standard of living have all benefited. Foreign investment has been important to many countries to develop infrastructure, increase export capacity, develop existing resources, build industries, and create employment. However, the cost of foreign investment is external imbalance, as it creates future income payments that in turn create future current account deficits (CADs).

**External imbalance not a problem, if internal balance can be maintained.** Full employment, economic growth, and low inflation can all be sustained when an economy's receipts and payments are not equal. External imbalance has receded as a problem in Australia as it has become clear that persistent CADs have not prevented internal macroeconomic objectives from being reached.

However, such a situation can change. **External imbalance still poses a risk.** Persistent CADs may *become* a problem if economic conditions deteriorate. Export prices could fall relative to import prices, sales of resources could fall, global demand could recede, and financial institutions could face another global financial crisis. It would then become difficult to pay for imports, pay interest on loans and income on other investments. It is important to be aware of the negative effects of external imbalance, especially as the CAD climbs well above its target level. Government debt could also rise out of control, as happened in the mid 2000s to some Mediterranean European countries.

## Economic effects

### Debt servicing

Debt has to be serviced, that is, interest has to be paid on loans and dividends have to be paid to foreign shareholders, and these payments flow overseas. Each year a certain percentage of income goes out of the country and some income flows in, as money is earned overseas. Those countries with a great deal of foreign investment experience net income outflows.

### Debt cycle risk

If foreign debt becomes large enough, and debt service becomes a very big proportion of the current account deficit, it may become necessary to borrow abroad for money to service the debt. At this point, an economy enters the dangerous phase of a debt cycle that continually re-creates itself.

A situation of external imbalance puts a country at risk of not being able to pay its way internationally if the economy performs poorly. Any of a number of factors can cause an economy to slide into the dark abyss of a vicious cycle of debt. (See '*Is external imbalance a problem?*' above)

### Investor confidence

Foreign investors may become concerned about a country’s external imbalance. They may regard the country as a risky place to invest if an economic or political crisis occurs. In such circumstances, investors would impose increased charges on loans, to cover their perceived risk. Funds may also become more difficult to raise abroad.

### Credit rating

A country’s credit rating can be reduced by substantial and persistent increases in the current account deficit. The lower a country’s credit rating, the more expensive are the loans.

Countries are assigned a rating to mark the level of risk taken by lending institutions. Australia has usually been seen as a very low credit risk, maintaining the top-level international credit rating of AAA.

### Policy responses

When the CAD approaches a target rate of GDP, the Commonwealth Government begins to think about putting the brakes on spending. High levels of spending increase import spending and to counteract this, the government may respond with policies that reduce total spending. Slowed spending means slowed production, less national income and lower demand for labour.

#### Focus Questions

1. Define external balance.  
.. .. .
2. Complete the following table.

International transactions by Australians recorded in:	Current account			Capital & financial account	Inflow or outflow?
	goods	services	income		
(a) wine exports					
(b) purchase of a UK bank					
(c) interest payment on loan					
(d) loan repayment					
(e) purchase of Singapore Airlines flight					

3. Which section of the current account contributes the most to current account deficits?  
.. .. .
4. Explain why export sales create demand for Australian dollars.  
.. .. .  
.. .. .  
.. .. .
5. Who supplies Australian dollars to the foreign exchange market?  
.. .. .
6. Suggest one way in which the supply of Australian dollars to the foreign exchange market will be reduced.  
.. .. .  
.. .. .
7. Draw diagrams to illustrate the following changes in the market for Australian dollars:
  - (a) Speculative sales of the domestic currency rise.

(b) A national airline buys more airbuses from the US.

(c) Fewer foreign tourists visit.

(d) A British firm establishes a local branch.

(e) Export sales drop sharply.

(f) Government loans are repaid to Japan.

8. Distinguish between direct and portfolio investment, with an example of each.

.. .. .

9. In 2009 a Chinese company Valin Iron and Steel purchased 17.55 per cent of Fortescue Metals, an Australian company.

(a) Classify the purchase as either direct or portfolio investment.

.. .. .

(b) Explain the likely impact of this purchase on the current account balance

(i) in the current period

.. .. .

(ii) in future periods

.. .. .

.. .. .

**Examination revision**

1.

**\$A devalued**

In late 2013 and early 2014, the value of the Australian dollar fell by 15%, as iron ore and coal prices dropped and foreign investment in mining was reduced.

(a) (i) What does a falling Australian dollar indicate about the net direction of money flows between Australia and the rest of the world?

.. .. .  
 .. .. .  
 .. .. .  
 .. .. .

(ii) Explain one of the reasons mentioned in the article for the falling value of the Australian dollar. Incorporate a diagram in your answer.

.. .. .  
 .. .. .

(b) Explain the effects of a falling exchange rate on

(i) Australia's balance of trade

.. .. .  
 .. .. .

(ii) Australia's current account balance

.. .. .  
 .. .. .

(iii) Australians travelling overseas.

.. .. .  
 .. .. .

2.

**Top credit rating at risk**

Rapidly rising foreign debt and the big current account deficit was in danger of costing Australia the top credit rating in 2006. Standard and Poor's, the British-based agency that helps determine the cost of international borrowing, warned that the current account deficit remained the biggest risk to the AAA rating.

Standard and Poor's said that there was the likelihood that investors would lose confidence in the ability of borrowers to repay loans. The warning came after the Australian Bureau of Statistics revealed that foreign debt had also ballooned to a record \$494 billion, a debt-to-GDP ratio of 51.3 per cent of the economy.

(a) Explain one problem that may arise for the Australian economy as a result of a loss of confidence by foreign investors in Australian borrowers' ability to repay loans.

.. .. .  
 .. .. .

(b) Name the two indicators of external balance mentioned in the article.

.. .. .  
 .. .. .

 **Helpful online resources**

Australian Bureau of Statistics

**[www.abs.gov.au](http://www.abs.gov.au)**



Reserve Bank of Australia

**[www.rba.gov.au](http://www.rba.gov.au)**



National Bureau of Statistics of China

**[www.stats.gov.cn/english](http://www.stats.gov.cn/english)**



## 4.5 Data analysis

### 1. Introduction

Economists generate and analyse a lot of economic data to study the health of the national economy and its parts, and to provide advice to governments, businesses and households. To make sense of the figures involved, it is necessary to understand a number of ways in which they are presented. For example, imagine you want to study incomes in Australia. You will need to interpret and analyse relevant data.

### 2. Median and mean

Median and mean are two ways to average a set of data. The mathematical term “mean” of a set of figures is their average. To find the average or mean height of a sports team is to add all players’ heights to find the sum, and then divide by the number of players. For example, a men’s basketball team’s first five players’ heights might be 1.98, 1.98, 1.78, 2.08 and 2.08 metres. The sum of these heights is 9.98 metres. The mean height of that team is 9.98 divided by five, the number of players, which is 1.98 metres.

#### Ecoterm

The mean of a set of values is the sum of those values divided by the number of items in the set.

The median height of that team is the middle height, in other words the height of the middle-sized player. To find this figure, we put the heights in ascending order and pick the third one. In ascending order, the heights are 1.78, 1.98, 1.98, 2.08 and 2.08. The middle one, or third out of five, is 1.98.

Note that a data set with an even number of items does not have a middle item. In this case, the two middle items are averaged. In our case of heights, if we want the median of a group of 12 players, the average of the sixth and seventh heights is the median value.

#### Ecoterm

The median of a set of values is the middle item of the set, arranged in ascending order.

Which is the best measure, mean or median? Almost always it is the median. To understand why, consider five professionals earning salaries of

\$100

\$1,000

\$10,000

\$100,000 and

\$1,000,000.

Their mean (average) is their total of \$1,111,100 divided by five, or \$222,000. The median, the third highest of the five incomes, is \$10,000, and this is the better indicator as two of them earn above the median and two earn less than the median. Only one earns above the mean and four below it. If you want to know the most common income of the group, using the mean does not represent the middle earners as well as the median.

Using another example, of ten people, one’s annual income is one billion dollars and nine others earn \$100,000 per year. Their mean annual income is \$1,000,900,000 divided by 10, or \$100,090,000. But nine of them earn \$100,000 each year, a lot less than the mean of over \$100 million. The median figure of these ten incomes is the fifth and sixth incomes of \$100,000 averaged, or \$100,000. Since nine of the ten earn that amount, it is a much better indicator of the middle of the set of incomes. The billionaire is such a big variant as to skew the mean to a misleading figure.

### 3. Quantiles

A useful statistical measure is to split a data set into quantiles, groups with an equal quantity of data. The groups are then averaged and compared.

## Key Ecoterm

A quantile is a position in a data set splitting that data set into subsets, each with an equal number of data.

A median is a quantile halfway through a data set, splitting it into two groups, so that exactly half the set is above the median and half is below.

Some data sets are grouped and arranged in ascending order in percentiles. A percentile is one percent of the statistical group. You may want to know the first, 10<sup>th</sup>, 90<sup>th</sup> or hundredth percentile, rather than just the mean of a set of data. For example, if a person in a group is in the 90<sup>th</sup> percentile in terms of income, then only ten per cent of the total group have a higher income than those in the 90<sup>th</sup> percentile, and 90% have a lower income.

## Key Ecoterm

A percentile is one percent of a statistical group ranked from one 1 to 100.

Similarly, a statistical group can be split into 10 subsets rather than 100, showing deciles. Each decile is an equal 10% of the group. A person in the ninth decile in terms of height is in a sub-group who are taller than 90% of the total group and shorter than 10% of that group. Alternatively, a group can be split into quartiles, showing data for four equal quarters or 25% sections of the group; or into quintiles, showing data for five equal fifths, subsets with 20% of the data set. These are all measurements of position in relation to the overall group, as are mean and median.

To illustrate this, consider the chart below in figure 4.14. The population of a small coastal town has been divided into ten equal sub-groups in ascending order of income. Each bar in the graph represents one of the ten sub-groups, one decile. The length of the bar represents the average, or mean, income of that group.

This graphic illustration also shows that the median is a better indication of the incomes of most of the town than the mean would be, in this example. Note that the bar graphs of the top two deciles are substantially longer, distorting a calculation of the mean or average income. The median income, on the other hand, can be seen between the fifth and sixth deciles, around \$400 per week. In fact, the middle incomes earners are the third to eighth deciles, this group making up 60% of the population, the majority of the town's incomes. That middle 60% of the population can be accurately regarded as earning an income typical for the town, between \$300 and \$500 per week.

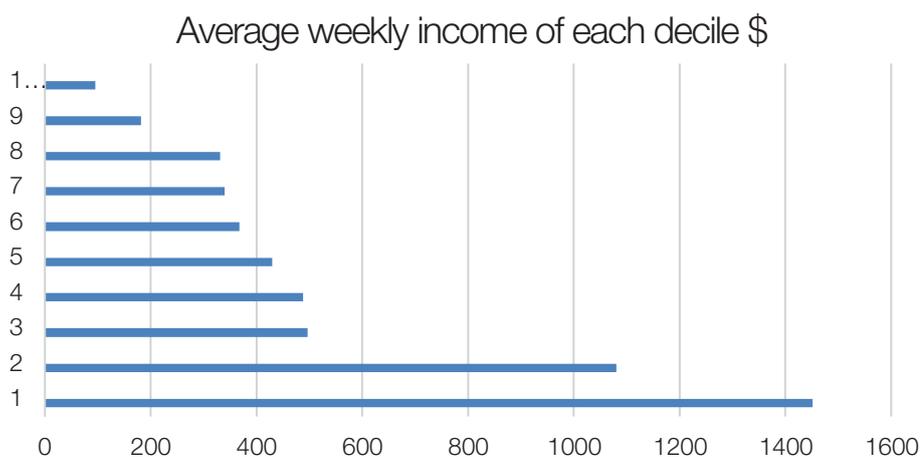


Figure 4.14

A calculation will provide further evidence of this, using the following tables giving the actual weekly income data represented in the graph.

Decile	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>	9 <sup>th</sup>	10 <sup>th</sup>
Amount	\$95	\$182	\$331	\$340	\$368	\$430	\$488	\$493	\$1080	\$1451

The mean total weekly income is the total, \$5256, divided by 10, \$525.60. The median is the average of the fifth and sixth decile,  $\$368 + 430 = 798$  divided by 2, or \$399 per week. Since there are only two deciles earning above the mean, this analysis again suggests that the median is the better measure. The chart gives a graphical illustration, showing that the top two incomes are substantially bigger than the rest, skewing the average upwards.

However, the choice of the better measure, median or mean, depends on the nature of distribution of the data. Consider the following, alternative distribution of income in the small coastal town described above.

Decile	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>	9 <sup>th</sup>	10 <sup>th</sup>
Amount	\$320	\$340	\$360	\$380	\$400	\$420	\$440	\$460	\$480	\$500

Note that the incomes of the subgroups are evenly spread with no very low or very high incomes to skew the average either up or down. The mean of the above ten weekly incomes is their total of \$4100 divided by 10 = \$410, and the median is the average of the fifth and sixth deciles, 400 and 420, and is also \$410. In this case, either mean or median give the same middle income of the data set.

### 4. Linear regression

Linear means *in a line* and regression means *going backwards to a lesser state*.

We often use a linear relationship, shown as a line on a graph or chart, to see the relationship between two variables. For example, the relationship between Fahrenheit and Centigrade measures of temperature is linear. A straight line can be graphed to allow conversion between the two temperature measures.

#### **Ecoterm**

Linear regression is a linear approach to modelling the relationship between two variables.

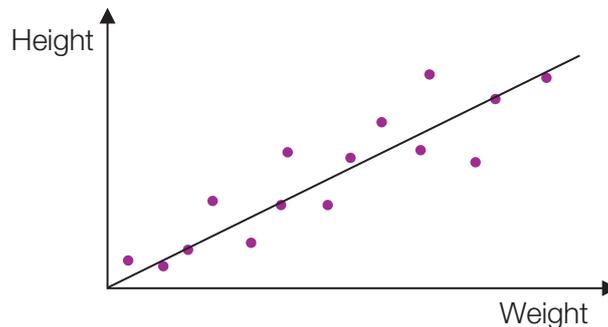


Figure 4.15

Linear regression, on the other hand, is used to try to *establish* a relationship, by going backwards from a set of data to find the linear relationship. This linear relationship, shown as a line on a graph, is then a model for predicting the value of one variable, given the other variable.

For example, imagine you want to find the relationship between people’s height and weight. You could collect data from a large number of people and plot this on a chart, as in figure 4.15. Height as the independent variable is plotted on the vertical axis, and weight as the dependent variable is plotted on the horizontal axis. Note that a positive relationship is shown as height increases, so does weight. This is indicated by a positive slope, sloping upwards to the right. Some linear relationships will be negative, sloping upwards to the left: as the independent variable increases, the dependent variable decreases.

Then a line could be drawn where it best fits the data coordinates. The line’s best fit puts it between the points of data. The line represents the linear relationship. This becomes your model for predicting a person’s weight given their height. However, to find the best position of the line, it not enough to situate it below the same number of points that it is above. It needs to balance the distances to the points above and below. The line in figure 4.15 has different sized vertical gaps from the various points, for example the vertical distance shown between the line and one particular outlying point.

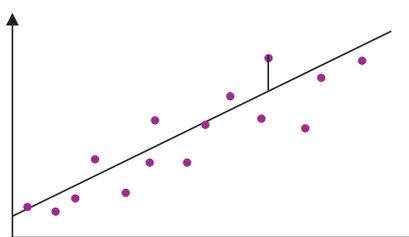


Figure 4.16

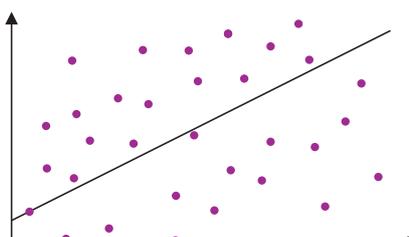


Figure 4.17

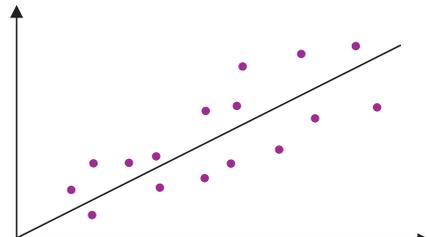


Figure 4.18

How far the point is from the line, illustrated in figure 4.16, is a measure of how far the model, the linear relationship, failed to predict that person's weight.

The vertical difference between the point and the line of best fit is referred to by mathematicians as an error. The measure of error over the whole model is referred to as R squared. Calculation of  $R^2$  is not required at this level of study. Its value is between zero and one hundred. The zero value represents a model that explains *none*, 0%, of the variations from it, and a value of 100 represents a model that explains 100% of variations. It is the degree of variance that indicates the value of the correlation.

Figure 4.17 represents less precise predictions:  $R^2 = 15\%$ .

Figure 4.18 represents more precise predictions:  $R^2 = 85\%$ .

Figure 4.17 might represent a poor correlation of the two variables, or it might be trying to explain some relationship in human behaviour, which is very difficult to predict.

$R^2$  does not give the full picture of the accuracy of the relationship created. Other information is needed to judge whether the model is a good predictor. The accuracy of the height-weight relationship, for example, seems to be between the 15% and 85% models. In this case, although there is a positive relationship, a number of other variables affect the relationship such as body shape, muscle mass and health issues.

### Focus Questions

1. The populations densities of the following 12 countries, in the number of people per square kilometre, are:

Australia	3	New Zealand	18	United States	35	Afghanistan	60
Greece	79	Iraq	92	China	148	Italy	201
United Kingdom	279	India	420	South Korea	512	Hong Kong	6,791

- (a) Calculate the mean of the population densities in the table above, to the nearest whole number.

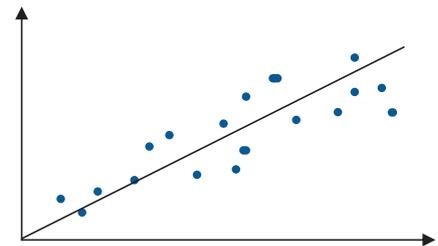
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- (b) Calculate the median of the population densities in the table above.

.....

2. The relationship shown in the diagram is likely to be

- A negative and  $R^2$  20%
- B positive and  $R^2$  40%
- C negative and  $R^2$  60%
- D positive and  $R^2$  80%



3. What is the purpose of linear regression?

.....

# Topic 5: Determination of Output and Price Level

## 5.1 Indicators

### Introduction

Economic indicators are measures of certain aspects of the economy. Each country's government sets up a body to collect data and publish indicators. For example, because price stability is an important economic objective, the Australian Bureau of Statistics (ABS) calculates inflation, a measure that is used to indicate how well the Australian economy is achieving its price stability objective. A high rate of inflation indicates that action needs to be taken.

A range of indicators is needed to diagnose the health of the economy and to try to predict its course. The indicators tell us about different types of economic activity, and this information is used by economists, governments including institutions such as the Reserve Bank of Australia, firms and households to help make economic decisions.

Data for indicators is gathered and compiled from a wide variety of sources. In Australia, the ABS is the major government institution that provides this statistical information for public and private use. In Malaysia, the Department of Statistics Malaysia is the body that publishes indicators. There are also several private firms that provide specialist indicator information and services, such as Access Economics and the major banks. The Reserve Bank of Australia also collects data and publishes reports.

### The business cycle

Some indicators show a cyclical pattern, that is, a repeated pattern of peaks and troughs. The level of economic activity displays this pattern, known as the business cycle.

#### Ecoterm

Business cycle is a repeated pattern of peaks and troughs of economic activity.

On the basis of past experience, it is expected that economic activity will ebb and flow between high and low levels. The level of economic activity repeatedly passes through four phases of the business cycle. A peak of activity is usually followed by a downturn that bottoms out and is followed by a period of recovery. This cyclical pattern can be stylistically represented by the shape of a sine curve, as in figure 5.1.

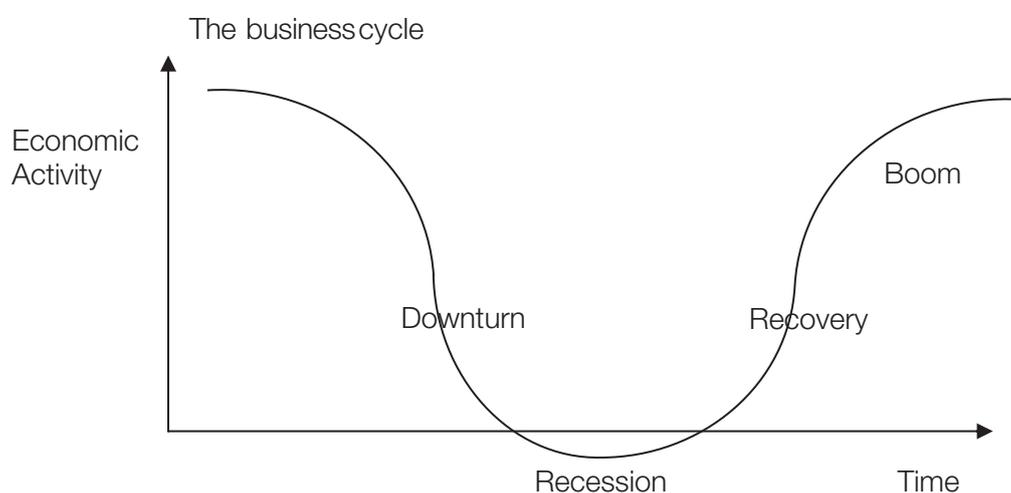


Figure 5.1

The 'Economic growth' graph, figure 5.2, shows a clear cyclical pattern, a repeated pattern of peaks and troughs. The time span of each complete business cycle varies in practice.

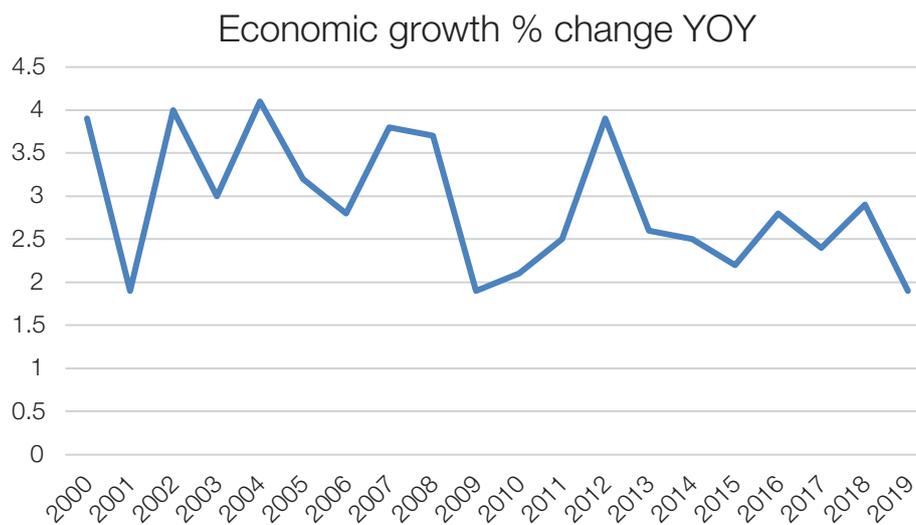


Figure 5.2 (Source: data.worldbank.org)

## Boom

A boom is a period of high economic activity. It is a time with high levels of investment and production. Consumers and producers are confident of the future and expectations are positive. The boom phase is represented in the business cycle diagram, figure 5.1, as a peak.

Demand for resources is high and shortages of resources begin to occur. When a boom period lasts a long time, increased demand for resources, goods and services becomes difficult to meet. Higher prices are charged to producers competing for scarce resources. For example, wages and salaries increase rapidly. Demand for resources creates full or near-full employment, and the level of investment spending is high, fuelled by good business profits and significant sales expectations. The rate of inflation increases as producers increase prices to cover higher production costs, and take advantage of higher demand. The labour force participation rate will increase too, as economic confidence encourages more people to enter the labour force and look for work. Eventually however, firms' investment slows after a period of spending and in anticipation of a downturn.

## Downturn

Once the period of high spending has run its course, investment spending slows quickly. Higher prices eventually combine with cooling investment spending to reduce the pace of economic growth. It may be that firms have bought all the capital goods they need for a while. In the downturn phase, fewer resources are demanded and economic activity begins to slow. Firms are alerted to the slow down by rising levels of stock, to which they respond by reducing both production and prices. Lower demand for labour raises unemployment. Household consumption will also begin to eventually fall as households also start to believe that they have purchased sufficient major goods and services for a while and start saving again.

## Recession

A recession is defined as **two or more consecutive quarters (three-month periods) of negative growth**. Figure 5.1 represents a period of negative growth as the section below the horizontal axis; the axis itself represents zero growth. If the phase between downturn and recovery lasts for less than two quarters, it is defined more simply as a trough in economic activity.

A recession is a period when economic activity is at a low level. It is a period of relatively low expectations and confidence. Investment, consumption spending, production and employment continue to fall. Prices are stable and so inflation rates will fall to relative low levels. Prices may even fall; the term for falling average prices is deflation. Business failure is more likely during a recession. More resources lie idle and so the unemployment rate will climb to a relatively high level. A very prolonged period of very low activity and very high unemployment is a depression, but there has not been a depression in Australia since the Great Depression of the 1930s.

## Recovery or upturn

A recovery is triggered by an autonomous (self-determined) increase in spending. It can be engineered by government spending, tax cuts or falling interest rates, but usually it is investment spending that increases after a low period, due to the need to replace worn equipment and in expectation that the business cycle will repeat

and a recovery period will occur. Firms find their stock levels falling as spending increases, and they will increase production and use more resources. As aggregate demand increases, household income increases with more employment and so consumer spending also increases. Confidence returns and production increases, with firms at first using excess capacity. Overtime work increases and excess capacity is used up. Prices rise slowly in this period and the labour force participation rate increases. Unemployment slowly begins to fall.

## Interpretation of statistics

Interpretation of statistics is most easily done by studying graphical representations. The shapes of the graphs provide useful information. It is necessary to read graphs as carefully as we read text. The heading should be read first, followed by a close study of the axis, both the measure and scale. When these are understood, it is time to look at the shape of the graph.

Studying graphs can identify the influence of factors that shape them. For example, the Asian recession in the mid 1990s reduced export sales noticeably. A graph of export sales would show a dip at the time when the recession in most Asian countries began to affect their ability to buy imports. The 'Economic growth' graph in figure 5.2 above, shows that the Global Financial Crisis of 2008 caused a downturn but not a recession, as growth did not fall below zero. 'YOY' means 'year on year'.

## Qualities of statistics

When interpreting economic statistics, we also need to be aware of the following qualities that statistics may display.

### Seasonal factors

Seasonal factors are well known by statisticians and their effects are apparent in tables and graphs. For example, retail sales increase before Christmas and the supply of labour increases at the end of the academic year. Seasonal factors need to be taken into account when deciding whether sales, employment and other measures are showing a real change from previous periods, or a normal seasonal change. This problem is resolved by seasonal adjustment of the figures.

### Ecoterm

Seasonal adjustment is the process of adjusting data to remove known seasonal influences.

## Trends

A graph or table of figures will show a trend, discovered by examining the general movement and ignoring small fluctuations. For example, despite some short-term increases and decreases, the 'Economic growth' graph shows an upward trend after the 1992 recession until about 1995, when the Asian crisis reduced export earnings. In figure 5.3, the bolder line is an attempt to show the upward trend by roughly bisecting the fluctuations.

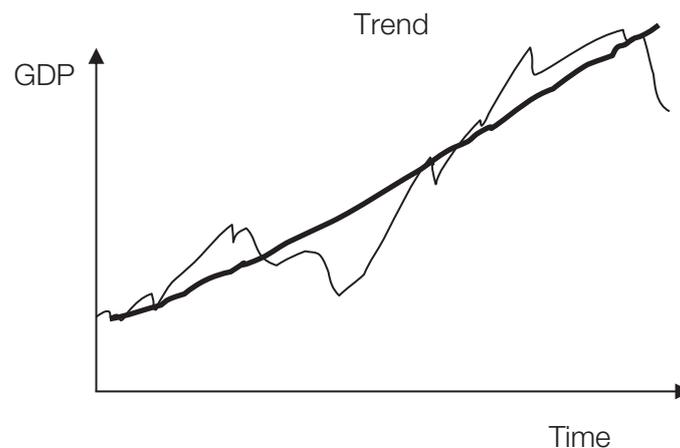


Figure 5.3

## Cyclical pattern

Some indicators move in a repeated pattern of highs and lows. Check for graphs whose shape is similar to the business cycle, such as the 'Economic growth' graph, figure 5.2 above. We say that such indicators have a cyclical pattern.

## Types of indicators

### Key indicators

Key indicators are single indicators that measure the performance of the economy. The unemployment rate, the rate of growth of GDP, the rate of change in the CPI, the exchange rate, the current account and foreign debt are all key indicators, as are interest rates, housing loan approvals, job vacancies and retail sales, amongst others.

### Composite indicators

#### Ecoterm

A composite indicator is a combination of several single indicators into a single index.

The Australian Bureau of Statistics and the major banks publish composite indicators to show macroeconomic trends. A good example is the Westpac–Melbourne Institute Leading Index of Economic Activity, released monthly, which predicts the rate of economic growth three to nine months ahead. It is a composite of several individual leading indicators.

### Leading indicators

**Leading indicators measure economic activity related to production, before production occurs.** Governments, economists, businesses and householders use leading indicators to predict future economic activity. For example, housing approvals indicate the likely level of housing construction that will occur in the next few months. An increase in factory overtime indicates that manufacturing production will increase in the near future.

Indicators of business confidence are compiled using surveys of business leaders and these are helpful in predicting levels of investment spending in the coming period. Similarly, surveys of consumer confidence are useful in predicting consumption spending.

### Coincident indicators

**A coincident indicator measures current levels of economic activity.** Retail sales, for example, indicate current levels of spending and therefore production. Current indicators are used to plot the business cycle. Other examples are GDP, the exchange rate, interest rates, car registrations and share prices. They all give information about current economic activity. Share prices, for example, indicate share market activity. If the number of car registrations increases, it is clear that more cars have been bought at that time.

### Lagging indicators

**Lagging indicators measure economic activity that has occurred after production.** For example, an inflation graph will peak after a peak in production, and an unemployment graph will trough a few months after the business cycle has peaked. The graph 'GDP Growth and Inflation Rates', figure 5.4, shows that economic growth peaked in 2012, and then, largely as a result of that growth, inflation peaked in 2014. GDP growth measures growth in economic activity, and so its graph is the business cycle itself. Inflation lags behind it, and so inflation is a lagging indicator. This makes sense because it is the rise in economic activity that increases demand for most goods and services, pulling up their price. Economic growth is a cause of inflation; inflation is the effect of economic growth. Lagging indicators can be used to confirm the business cycle, plotted with coincident indicators. The sudden fall in GDP growth forecast for 2020 was a result of severe COVID-19 restrictions on economic activity.

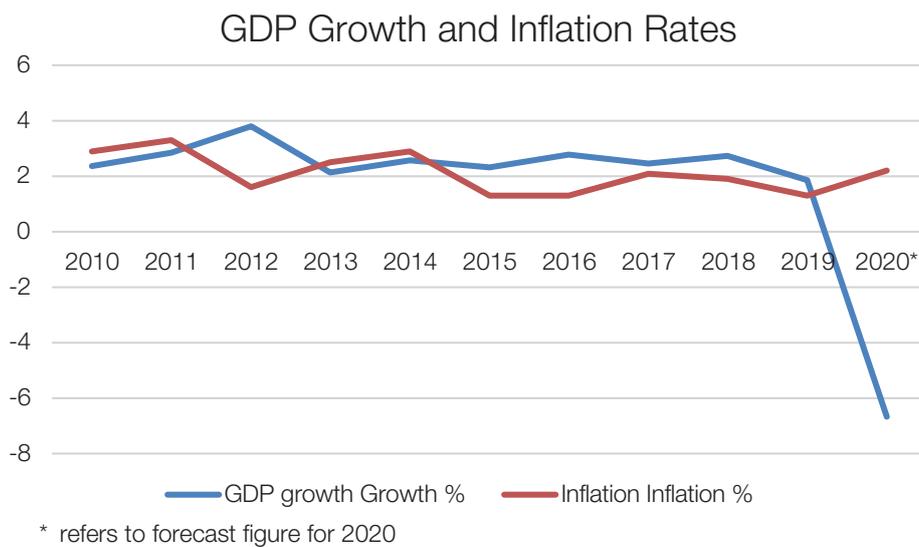


Figure 5.4

## Limitations of indicators

### Accuracy

Some inaccuracy occurs as a result of difficulties of measurement. Accurate information is not always available when needed, and the ABS issues revisions of some of its reports once more complete and accurate data becomes available. Some data is based on sample surveys, rather than actual measurements.

### Information lags

Some indicators only become available after a time lag. Unfortunately, some of the most important indicators, such as GDP, unemployment and inflation data, is reported weeks after they occur. Note that this is not the same as a lagging indicator.

### Conflicting trends

Indicators do not always show the same trend at the same time. For example, spending may show a decline while employment figures are still rising.

### Focus Questions

1. (a) Why are indicators important to governments and to the economists who advise them?
 

.. .. .

.. .. .
- (b) What does the exchange rate indicate about money inflows and outflows?
 

.. .. .

.. .. .
2. (a) Distinguish between a recession and a downturn in economic activity.
 

.. .. .

.. .. .
- (b) During which phase of the business cycle would you expect economic growth to reach its peak?
 

.. .. .
- (c) During which phase of the business cycle do wage rates increase the slowest?
 

.. .. .

3. Explain the terms:

(a) seasonal adjustment

.....

(b) cyclical pattern

.....

(c) composite indicator.

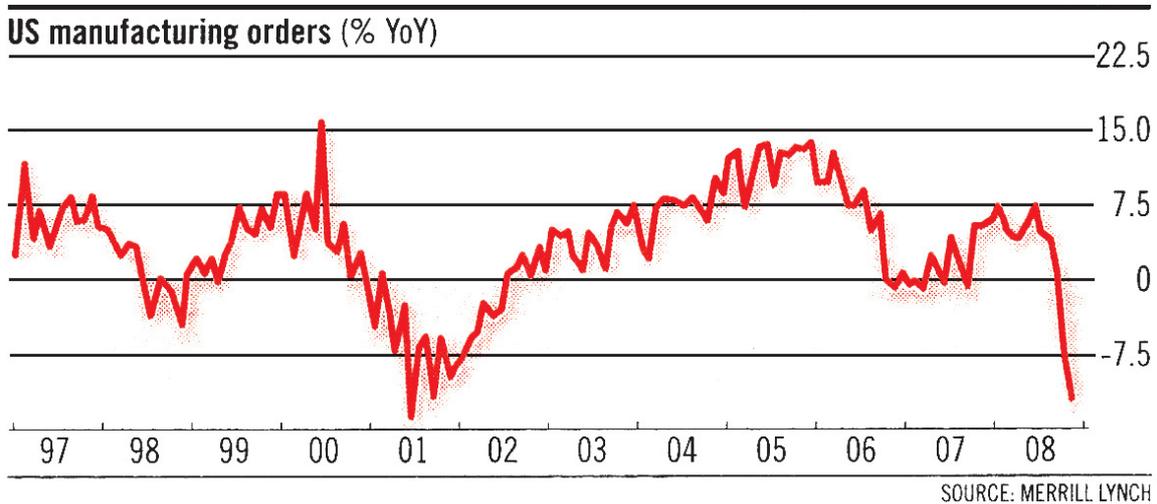
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4. Using an example, explain what a leading indicator is and how it may be used.

.....

**Examination revision**

1. Refer to the following graph “US manufacturing orders”.



(a) (i) Choose the letter corresponding to the best answer.

The graph of US manufacturing orders is an example of a

- A leading indicator
- B coincident indicator
- C lagging indicator
- D composite indicator

(ii) What use do economists make of that type of indicator?

.....

.....

(b) Why do economists want a range of different indicators?

.....

.....

(c) (i) In what way is the shape of the “US manufacturing orders” graph similar to the shape of the business cycle?

.....

(ii) What evidence is there in the graph to support the prediction of a recession in 2009?

.....

.....

(iii) Suggest one problem in using such an indicator to predict economic conditions.

.....

.....



2. Refer to the following information.

### Expectations of recession

In November 2008 it was widely expected that the Australian economy would fall into recession, as a result of the global economic crisis. It had experienced five full business cycles in the past 30 years.

(a) Define the term 'recession'.

.. .. .  
 .. .. .

(b) Explain the level and types of unemployment that you would expect to become more prominent in a recession.

.. .. .  
 .. .. .

(c) Name the phase of the business cycle that follows a recession.

.. .. .

(d) Name a coincident indicator that could be used to confirm that an economy is in recession.

.. .. .

(e) Explain the difference between a key indicator and a composite indicator.

.. .. .  
 .. .. .

## 5.2 The circular flow of income

The circular flow of income model is a macroeconomic model that provides a big-picture understanding of the sectors of the economy and their interdependence. It also summarises the major roles played by each sector of the national economy. It shows how income is generated and how its level changes. It also helps in developing the concepts of aggregate demand and aggregate supply.

### The two sector model

The two-sector model in figure 5.5 summarises the relationship and interdependence of households and firms. It shows that income flows from firms to households, as firms pay households for their resources. Consumption spending flows from households to firms as households spend on the consumption of goods and services. Consumption spending consists of payments made by households to firms for goods and services. Income consists of payments by firms to households for their resources.

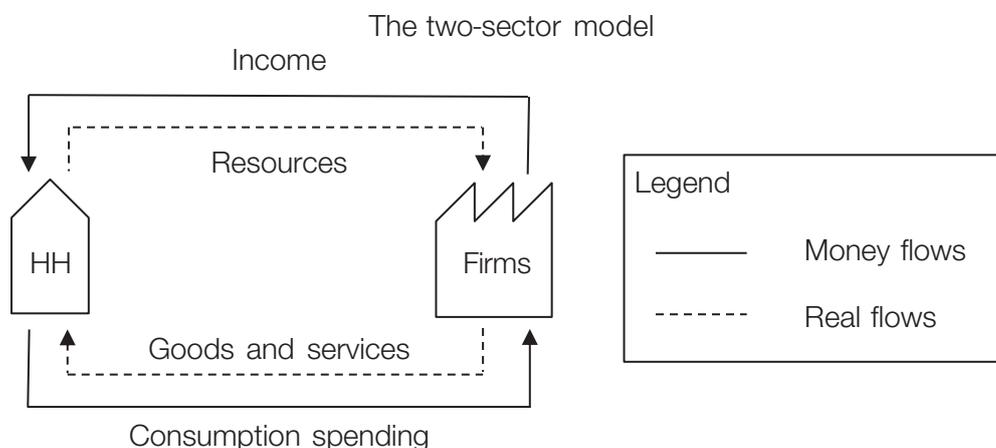


Figure 5.5

Money flows in the opposite direction to the real flows of resources and goods and services. In figure 5.5, money flows in an anti-clockwise direction and real flows are shown in a clockwise direction. The 'circular flow' referred to in this model is the circular money flow between households and firms.

Markets organise exchanges between the two sectors of the economy. They determine prices of resources and of goods and services. In goods and services markets, households buy and firms supply. In resources markets, firms buy and households supply. These markets also determine what resources will be used and how much of each, and similarly, what goods and services will be produced and how much of each. The 'How' decision is mostly made by resources markets, and so is the 'For whom' question.

### Roles of sectors

#### Households

The model helps us to understand that the role of households in the economy is to sell resources to firms and to receive income payments in return. Households own all resources. Household members own their own labour and, through ownership of firms, they also own capital and land resources. They answer the 'What' question by choosing which goods and services to buy to satisfy their wants.



Income is paid to households in several forms. Wages and salaries are paid for labour resources. Rent is paid for use of land resources. Interest is paid for money borrowed to buy capital resources. Profit is paid to owners of firms. Dividends are paid to owners of company shares.

Form of resource provided	Form of income paid
Loans	Interest
Shares in Australian firms	Dividends
Ownership of Australian firms	Profit
Labour	Wages and salaries
Ownership of Australian property	Rent

According to the two-sector model, households spend all their money on Australian produced goods and services. This version of the model is too simple. Households also direct some income to savings, taxation and import spending.

### Firms

The role of firms is to buy resources and combine them together to produce goods and services that satisfy wants, both individual and collective. In this way firms answer the ‘How?’ question by choosing the best, most efficient mix of resources.

Again, the two-sector model of the economy is too simple because firms sell to other sectors of the economy as well as to households.

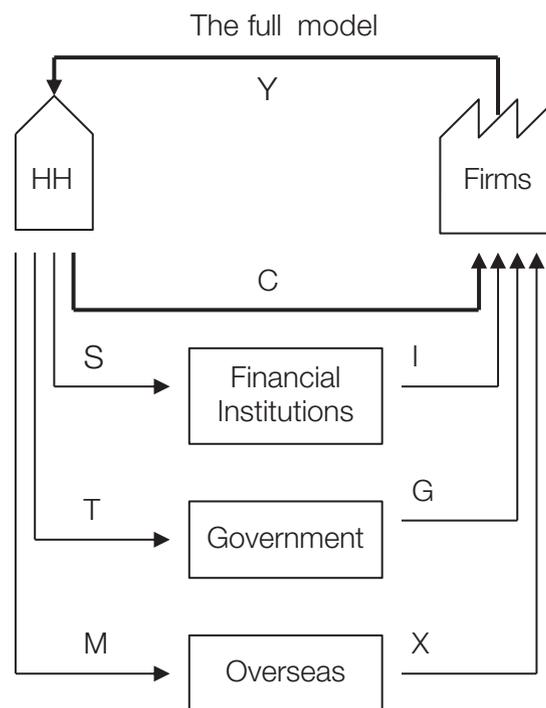


Figure 5.6

### The full model

The two-sector version of the model shows the relationship between households and firms. In figure 5.6 it is expanded to the full five-sector model. The full model consists of households, firms, financial institutions, government and overseas. The lines represent money flows.

This version is more realistic, as it shows that households do more with their income than spend it on goods and services. They also save some by depositing a proportion of their income into financial institutions; they pay tax to governments; and they spend on imports produced in foreign countries. Firms sell goods and services, not only to households, but also to governments, other firms and overseas. Financial institutions lend savings to firms for investment spending. The model is still too simple to show that investment spending is done by firms. The diagram shows only the money flow from financial institutions to firms, representing borrowing to fund investment spending. It is important to realise that the money spent by firms on capital goods flows to other firms, those that supply capital goods.

Table 5.1: A summary of money flows in the circular flow of income

Ecoterm	Symbol	Definitions
Income	Y	Payment for resources
Consumption spending	C	Spending by households on final goods and services
Saving	S	Income not spent on consumption goods and services
Investment	I	Spending by firms on capital goods plus additions to stocks
Taxation	T	Compulsory payments to governments for their services
Government spending	G	Spending by governments
Import spending	M	Spending by residents on foreign goods and services
Export earnings	X	Spending by foreigners on domestically produced goods and services

Three new sectors of the domestic economy were introduced with the expanded circular flow of income model – financial institutions, government and overseas.

## Roles of sectors

### Government

Governments, as shown by the model, take taxes from households and spend that revenue by buying goods and services from firms. The model is still too simple, as governments also raise taxes from firms. However, it is worth remembering that a model is a simplification of reality, to allow us to learn about the economy by focusing on the main aspects. Most tax revenue is income tax.

### Financial institutions

Financial institutions are those organisations that accept deposits and lend money. They include banks, credit unions, finance companies, merchant banks, insurance companies and a central bank controlled by the government. They keep enough money to repay those who want to withdraw their deposits, and lend as much as possible, because it is from loans that financial institutions make their revenue. They lend mainly but not exclusively for investment purposes.

### Overseas

The rest of the world is important to every national economy and can be referred to as the economy's overseas or foreign sector. In Australia's case, all foreign countries are geographically overseas. The role of this sector, in relation to national income, is to provide revenue from exported goods and services, and to receive spending on imports.

## Roles of financial institutions

### Intermediaries

The key role of financial institutions is to mediate between savers and borrowers by accepting deposits from savers and lending the money to borrowers. This key role defines financial institutions. It is difficult for investors to source funds for themselves. For example, if a manufacturing company wanted to build a new factory, it would probably need to borrow most of the money. It is a company skilled in its manufacture, but not skilled in sourcing funds. It would need to find people willing to invest, and to satisfy each of them that their investment risk would be rewarded. Financial institutions provide funds for such businesses.

Financial institutions make their profit from the difference between the interest rate they pay on deposits and the rate they charge on loans, and from other fees and charges. When money is deposited in accounts, the financial institution will need to keep a certain percentage of deposits in reserve, for payment to people withdrawing some of their funds. The bulk of the deposited money is lent or invested in some other way, to make a profit.

The circular flow model in figure 5.7 shows the financial sector, consisting of financial institutions. The model indicates that they accept deposits from households who want to save, and they lend to firms who want to invest.

The model is a simplified version of reality, to assist understanding. In reality financial institutions accept deposits from firms, local councils, government bodies and government business enterprises as well as from households. They also make loans to all these groups, for example to households, for spending on consumer durables such as houses, motor vehicles, boats and so on. The model only shows the major money flows.

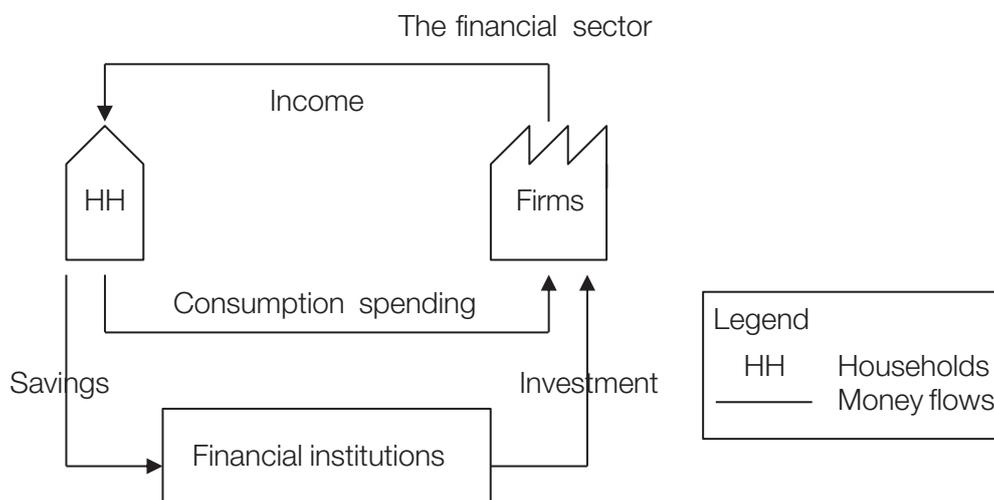


Figure 5.7

## Specialised services

Financial institutions specialise in financial services. They offer a range of deposits including term deposits (deposits left for a specific term, for example 12 months) featuring higher interest rates. They lend for a range of purposes including for investment, housing, business overdrafts and personal loans. Each of these loans attracts a different rate of interest. They offer a range of services including safety deposit boxes, investments, telephone and on-line banking, term deposits, and international transactions.

Some further specialise in particular financial services. For example, merchant banks (investment banks) such as Macquarie Bank, give investment advice to firms big and small and arrange large loans for investment projects.

However, the specialised nature of building societies, credit unions and insurance companies is not the same as it once was. Now many banks and non-bank financial institutions sell insurance and lend money for building. Credit unions offer cheque accounts and other services once confined to banks. The lines dividing the different kinds of financial institutions have blurred, especially since the removal of some government regulations.

## Collect small deposits

Financial institutions collect a large number of small deposits together to make up the loans required. It would be very difficult for an investor to do the same thing. Savers happily deposit their funds with financial institutions because they trust that their money will be safe and because they expect to be paid a rate of interest for the use of their savings.



## Spread risk

By collecting a lot of small deposits the risk of borrower default is spread. There is always a risk that a borrower may default on payment – that is, they may not repay the loan. If a two-million-dollar loan was financed by two people each contributing one million dollars, and the loan was not repaid, those two lenders would suffer greatly. However if a million people had each contributed two dollars, the suffering would be widely spread, and very small. In this way, financial institutions spread the risk.

## Mobilise funds

Well-developed financial systems aid economic growth. The best way to understand the importance of financial institutions is to imagine the economy without them. In their absence, borrowers would have enormous difficulty finding enough people or firms to each lend a sum of money to gather finance for an investment project. The problems of finding finance would so severely restrict investment spending that economic activity and economic growth would be substantially lower than it is. The Global Financial Crisis of 2008-09 brought recession to most developed economies because financial institutions were not able to supply sufficient funds to businesses.



Financial institutions mobilise funds between lenders (depositors) and those who want to borrow. Pools of savings are used to finance investment. In this way, the economy is able to grow. The economy's capital stock is able to expand as spending on capital equipment is financed. Economic growth is achieved as real gross domestic product increases. Employment is created as output increases. Capital improves the productivity of labour as each worker is able to produce more goods and services per working hour. Capital equipment also improves Australia's competitiveness as the quality of production improves and costs are lowered.

## Components of total expenditure

The expanded version of the circular flow of income model illustrates the components of total expenditure on domestic production. All of the arrows that point to the firms sector represent money flows to domestic firms.

### Consumption

Consumption spending is spending by households on goods and services consumed – that is, used as a final product. For example, an air conditioner used in a house is consumed as a final product, whereas an air conditioner in a shop is used in production of retail services, and so is not a consumer but a capital good. The purpose of consumption spending is to satisfy wants.

### Investment

Investment spending is spending on capital goods and additions to stocks. Capital goods are resources used in production of other goods. Additions to stocks, for example cars manufactured but not yet sold, are classified as investment because the stock will create a future revenue. The purpose of investment spending is to make profit in the future.

### Government spending

Government spending is simply spending by governments and government organisations. They buy an enormous range of goods and services from warships to paperclips to administer government and produce public goods and services. They also make welfare payments, for example to the unemployed, single parents and the disabled.

### Export earnings

Export earnings are money flows from foreign countries to pay for domestic goods and services exported. Australian examples of exports include coal, iron ore and other minerals, wool, wheat and other agricultural products, wine, car parts and other manufactured goods, and examples of services exported by industries are tourism, education and technology.

### Import spending

The first three expenditures—consumption, investment and government spending—include imports. For example, Australian consumers buy imported food, clothing and entertainment equipment; firms buy imported machinery and chemicals; and governments buy imported computer equipment. Therefore, in order to calculate total expenditure on *domestic* production, import spending needs to be subtracted.

Total expenditure = Consumption + Investment + Government + Export earnings – Import spending

$$\text{Total expenditure} = C + I + G + X - M$$

If one of the first four components increases, the total amount of expenditure increases, and vice versa. When total expenditure increases, so does income. Firms receive revenue that other sectors spend, but they pay it all to households. They buy resources from households and also pay their profit to households, as households own firms.

## Limitations

The full model is also too simple in limiting interdependence between sectors to the money flows shown. In reality, it is not only households that pay tax and deposit money in financial institutions, for example, and it is not only firms that borrow. Many more money flows could be added to the model to make it more realistic, but then it would not do its job as effectively as a simplification of the real world.

## The level of income

The circular flow of income refers to the money flow between households and firms, consisting of consumption spending and income. The flow is circular because increased consumption spending will increase the level of production, and hence the level of income paid for resources. However, the full model reveals that there are several other influences on the level of income in the circular flow.

## Injections

The level of income ( $Y$ ) flowing to Australian households clearly depends on the total amount of resources that Australian firms want to buy. This in turn depends on the level of total planned spending on Australian goods and services, usually referred to as aggregate demand. If total spending increases, production will increase, spending on resources will increase and income will increase. You can use the full circular flow model to check this.

Total spending consists of consumption spending plus the three injected flows, investment spending, government spending and export earnings. The three inflows to firms, in addition to consumption spending, are shown on the right hand side of figure 5.8, and all lead to revenue for firms. Any increases in investment, government or export spending will increase production, and hence demand for resources, and hence the size of the income flow. These three can be referred to as injections into the circular flow of income.

Income, production and spending all have the same value, in theory. When spending occurs, Australian firms receive revenue. They pay *all* of this revenue to households in the various forms of income, including profit to the owners of firms, who are householders. Spending of \$100m will generate \$100m of production and \$100m income for households.

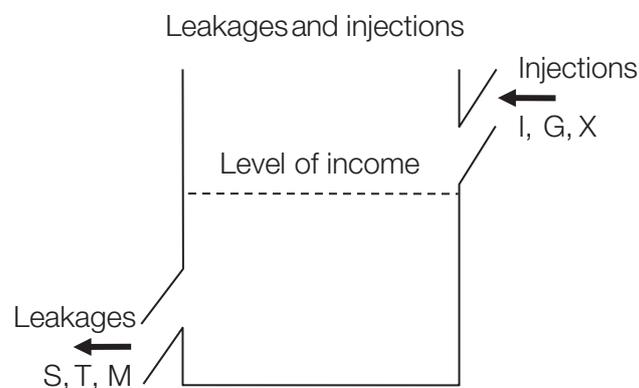


Figure 5.8

## Leakages

The left-hand side of figure 5.8 shows that saving, taxation and import spending can be seen as leakages from the circular flow of income because, unlike the flows on the other side, they *reduce* the size of the income flow. If the level of saving increases, for example, then households will spend less on consumption goods and services. Hence, production and income will decrease. Any increase in taxation or import spending will also decrease spending by households on Australian goods and services, as they also divert household income away from Australian firms. These three flows can be referred to as leakages from the circular flow of income.





Table 5.2 The expenditure multiplier

Initial increase in spending	Total increase in spending	Induced consumption
1 G \$100m	2 Y \$100m	3 C \$80m
	4 Y \$80m	5 C \$64m
	6 Y \$64m and so on	
TOTAL \$100m	TOTAL \$500m	TOTAL \$400m

The size of the multiplier is determined by the fraction of extra income that households spend. Assume this fraction is 80%, and we will trace this consumption spending through the circular flow again. The process is initiated by autonomous investment spending of \$100m at step 1 in figure 5.9 and table 5.2. In response to increased income of \$100m, represented by step 2, the first round of induced consumption spending is 80% of this or \$80m (step 3). Firms will produce an extra \$80m worth of goods and services and pay \$80m more income (4). Households are further induced to spend 80% of the extra \$80m, or \$64m (5), on goods and services, increasing production and income by \$64m (6), as the circular flow continues. It takes time for all the many rounds of spending to occur. Like ripples on a pond, after a stone is thrown, these rounds of spending create further rounds of spending and eventually fade out to nothing, as each new round of spending is smaller than the previous one. Table 5.2 tells the same story.

The final increase in spending is \$500m, the sum of the initial (government) spending, \$100m, and induced consumption spending, \$400m. It is consumer spending, induced by extra income, which causes spending to continue after the initial autonomous injection. Induced spending is spending induced by increased national income. The term autonomous refers to spending that is not a response to increased income, but due to some other factor.

Note that each round of extra income is smaller than the last because households use part of their income for savings, tax and imports in addition to consumption spending. Eventually the size of the induced spending and resulting income will fade out to zero. By that time, however, the total income flow, initiated by \$100m spent by government, is much more than \$100m—a multiple of it, in fact. The degree to which the initial spending is multiplied is affected by the proportion of household income that is 'leaked' away from consumption spending through savings, taxation and import spending.



In this example, the size of the multiplier is 5 and so national income will eventually increase by \$500m, 5 times the initial autonomous spending injection of \$100m. For those particularly interested in the mathematics, the formula for the expenditure multiplier is the reciprocal of  $(1 - c)$  where  $c$  is the fraction of extra income consumed. In our example  $c$  is 80% (0.8), so the multiplier is the reciprocal of 20% ( $1 - 0.8 = 0.2$ ), which is 5. The bigger the fraction of extra income consumed, the bigger is the multiplier, and vice-versa.

**Note that the calculation in this paragraph is not examinable: it is clarification for the mathematically inclined.**

The multiplier can also work in reverse. If spending decreases by a certain amount, the multiplier process will result in aggregate demand decreasing by some multiple of the initial reduction, through induced reductions in consumption spending.

### Focus Questions

1. (a) Name the major sectors of the economy.  
 ..  
 ..
- (b) Explain the concept of 'interdependence' of the sectors.  
 ..  
 ..
2. What do firms do with their profits?  
 ..
3. Explain the meaning of the term 'income'.  
 ..
4. According to the full circular flow model, what do households do with their income?  
 ..  
 ..
5. (a) Explain the concepts of injections and leakages when related to the circular flow of income model.  
 ..  
 ..  
 ..
- (b) How do they differ in their effect on the level of national income?  
 ..
6. Why is saving seen as a leakage from the circular flow of income whereas investment is regarded as an injection.  
 ..  
 ..  
 ..
7. Use an example to explain why the circular flow model is too simple a view of the real economy.  
 ..  
 ..  
 ..
8. (a) List the components of total expenditure on domestic production.  
 ..  
 ..
- (b) State the formula for total expenditure.  
 ..
9. Explain why exports and imports contribute differently to total expenditure on domestic production.  
 ..  
 ..  
 ..
10. What does the circular flow model say about the role of the rest of the world in the Australian economy?  
 ..  
 ..
11. Suggest one way the government could change the level of income.  
 ..

12. What is meant by the term ‘financial intermediary’?

.. .. .  
 .. .. .

13. How do financial institutions reduce risk for lenders?

.. .. .  
 .. .. .  
 .. .. .

14. How do financial institutions stimulate economic growth?

.. .. .  
 .. .. .

15. Write definitions for

(a) the expenditure multiplier

.. .. .  
 .. .. .

(b) induced consumption

.. .. .  
 .. .. .

16. How would the multiplier process be different if households did not respond to increased income by increasing consumption spending?

.. .. .  
 .. .. .  
 .. .. .

17. What factors limit the size of the expenditure multiplier?

.. .. .  
 .. .. .

18. In a cartoon above, people cheer one household’s decision to buy a car. Explain why.

.. .. .  
 .. .. .  
 .. .. .

19. Trace the effect, on the circular flow of income model, of a decrease in investment spending of \$100m.

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Examination revision

**Banks' lending attitudes are changing**

After the global financial crisis, banks were less able to make loans. They were also more careful about their sources of funds, the cheapest being their own depositors.

In early 2009, The Weekend Australian had reported cuts in lending by foreign banks. The Reserve Bank blamed this fall in foreign lending for a fall in total lending to households and businesses. Reduced credit from overseas contributed to reduced spending by households and businesses, and put investment and jobs at risk.

A year later, The Age reported a change in banks' marketing to consumers. A few years before the banks were encouraging borrowing and living on credit, but new marketing campaigns such as "Saving is the new borrowing" and "FebuSave" were encouraging saving instead.

- (a) Explain two economic roles of banks and other financial institutions.

.. .. .

.. .. .

- (b) Explain two factors affecting household saving.

.. .. .

.. .. .

- (c) Use the circular flow model to explain the effect of increased saving on the level of national income. There is no need to draw a diagram.

.. .. .

.. .. .

- (d) The spending by businesses, largely financed by borrowing from financial institutions, is

- A consumption spending
- B saving
- C investment spending
- D government spending

- (e) Explain how a reduction in "total lending to households and businesses", would affect the level of national income

.. .. .

.. .. .

.. .. .





## Aggregate supply

Aggregate supply is the total supply of goods and services from all sectors of the domestic economy, in a period.

### The aggregate supply curve

Aggregate supply is the total quantity that all Australian producers are willing and able to supply. The aggregate supply curve (SAS) in figure 5.11 represents the quantity of goods and services produced at each price level. In the short run, it is assumed that wages and all other influences on production plans do not change. The curve is known as the short run aggregate supply curve to distinguish it from the long run aggregate supply curve, introduced below. In fact, both aggregate demand and aggregate supply curves are drawn in the short run. However, there is no need to refer to aggregate demand as short run aggregate demand.

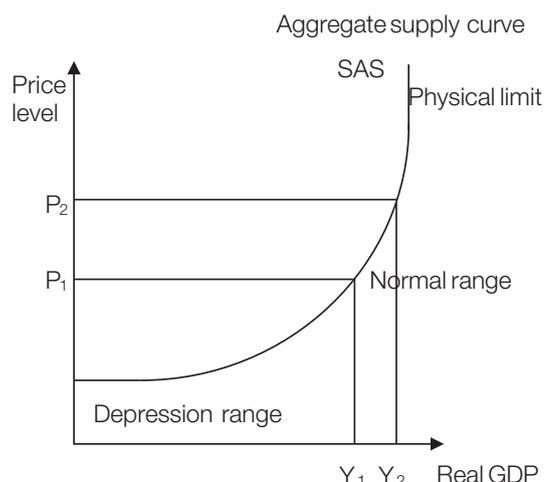


Figure 5.11

Three sections of the short run aggregate supply curve can be identified.

### Normal range

The normal range of the SAS curve is the middle section. This is the range of the curve where the economy normally operates. It represents suppliers' usual response to a change in price. If the price level increases, from  $P_1$  to  $P_2$  in figure 5.11, suppliers in aggregate will increase the quantity supplied, from  $Y_1$  to  $Y_2$ , encouraged by increased profit. This is represented in figure 5.11 by the section of the aggregate supply curve that slopes upwards to the right. The SAS curve can alternatively be drawn as the upward-sloping section only, and simplified to a straight line, if the normal range is the only section relevant.

### Depression

The horizontal section of the SAS curve shown in figure 5.11 shows that, as production increases from a very low level, the price level does not rise. This only occurs during a depression (a very severe recession) when suppliers are happy to sell more of their goods and services without raising the price from its rock-bottom level, to avoid discouraging spending.

### Physical limit

The vertical section of the curve in figure 5.12 represents the economy's physical limit. No matter how high prices climb, it is not physically possible to produce any more output because all resources are being fully used, with the best-known technologies. The last phrase will sound familiar because the physical capacity of an economy is also represented by a production possibilities curve described in Topic 1. The link between the two models is shown in figure 5.12. The AD-AS model, in the top half of figure 5.12, and the production possibilities curve, in the bottom half of the figure, represent the same concept. That concept is the physical limit of production, otherwise expressed as the economy's productive capacity or production possibilities. Note that the physical limit in the AD-AS model is represented by every point on the production possibilities curve.

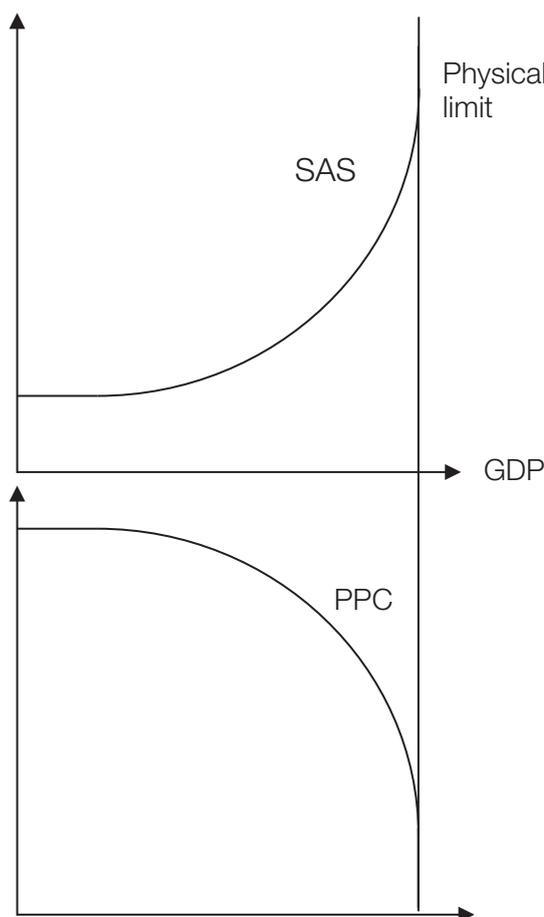


Figure 5.12

The vertical section of the AS curve in figure 5.12 represents the productive capacity of the economy when all resources are used with the best possible technologies. This is not how we have defined full employment because, in reality, there is always some unemployment, even when the economy is using all the labour and other resources that it is capable of using. The natural level of unemployment is not represented by the vertical section of the AS curve, but it can now be added to the model.

### Full employment

Currently the natural rate of unemployment in Australia, or full employment, is believed to be about 5%. Remember that the physical limit represents the economy's production capacity, where all resources are used. There must therefore be a gap between the physical limit of the economy Full employment and the level of income at which full employment is achieved. The gap represents the natural rate of unemployment. The full employment level of GDP is shown in figure 5.13, slightly to the left of the economy's physical limit, and represented by the line  $Y_f$ .

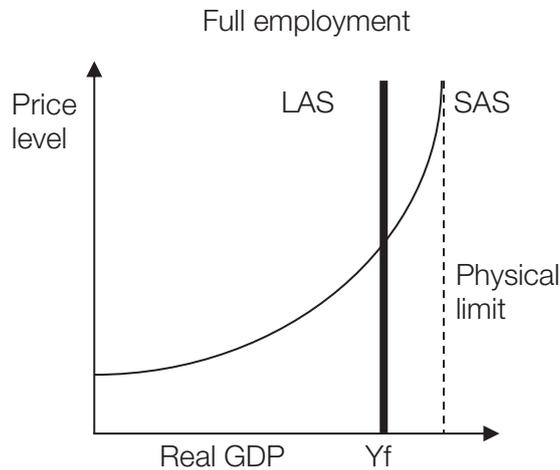


Figure 5.13

Full employment, the minimum level of unemployment realistically obtainable, is only achieved when labour markets are in equilibrium. This occurs in the long run. In the short run, labour markets are not in equilibrium, because the price of labour, wages, do not quickly adjust to changes in demand and supply of labour.

The long run is a purely theoretical concept. It is a sufficient amount of time for all markets, including labour markets, to adjust to any shifts in demand and supply. In the long run, wages adjust and equilibrium occurs, and the natural rate of unemployment prevails.

The vertical line, then, at a level of GDP to the left of the physical limit, is labelled LAS (long run aggregate supply) or  $Y_f$  (the full employment level of GDP). The line is vertical because it represents a level of GDP, the full employment level.

### Macroeconomic equilibrium

Aggregate demand and aggregate supply interact to determine the economy's macroeconomic equilibrium position. When the total quantity of goods and services demanded is supplied, with no shortages or surpluses, production in the economy is in equilibrium and there is no tendency for change. The SAS curve, in figure 5.14, is the short run aggregate supply curve. The equilibrium level,  $Y_e$ , is the level of income and output that occurs at equilibrium.

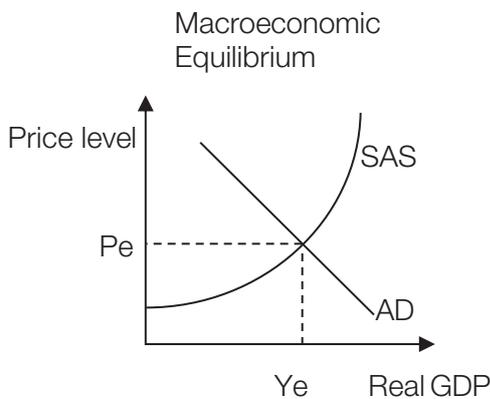


Figure 5.14

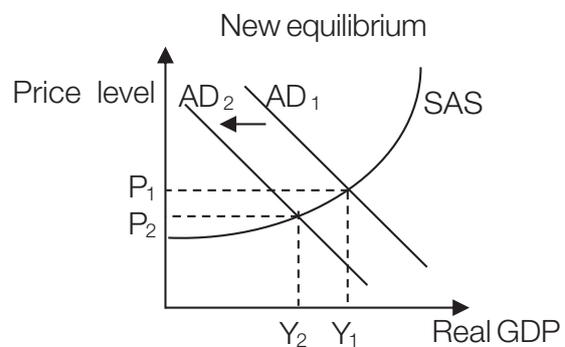


Figure 5.15

The economy is in macroeconomic disequilibrium if the general level of prices is above or below the equilibrium level. When aggregate demand falls and the price level falls below equilibrium, there will be surplus production because suppliers want to supply more than buyers demand. Suppliers in many markets will notice their stock levels increasing and will drop prices, to  $P_2$  in figure 5.15, to clear their surplus. They will also reduce production to avoid future surpluses, reducing GDP to  $Y_2$ . This market response to disequilibrium will eliminate a surplus and restore equilibrium.

An increase in AD will create shortages that will entice suppliers to raise their prices and supply more. In this way, market forces eliminate surpluses and shortages, moving to new equilibrium positions.

## Shifting the curves – Aggregate demand

The model is particularly useful for analysing the effects of economic changes on the levels of price and real GDP. It is a very powerful model as it enables economists to advise governments on economic management. A change in one of the factors that shifts aggregate demand will move the AD curve, and a change in a factor affecting aggregate supply will shift the SAS curve. Some of the supply factors shift only the normal or upward sloping section of the SAS curve, while some factors shift the whole curve. When AD or SAS change, a new equilibrium occurs, at higher or lower levels of real GDP and prices.

## Causes of aggregate demand shifts

Aggregate demand (AD) increases or decreases when one or more of its components change. If consumption spending increases, then so does the total of  $C + I + G + X - M$ , and AD increases.

## Consumption spending (C)

Consumption spending makes up about 60% of total aggregate demand.

## Factors affecting consumption spending

### Consumer confidence

Consumer confidence is measured by surveys in which consumers are asked about the confidence they have in their future job security and likely future spending. These factors affect their willingness and their ability to spend.

### Income

The level of income, including wages and salaries, will affect a household's spending power. If real wages rise—that is, wages rise faster than prices—then consumption spending will increase, and therefore aggregate demand will rise.

### Income tax

If income tax is increased, household's disposable income—the amount after tax that they can spend or save—is reduced, and vice versa.

### Economic security

Belief that the economy is in good health, and in particular that jobs are secure, boost consumers' confidence and willingness to spend.

### Interest rates

Interest rates affect the cost of borrowed funds, which in turn affects household consumption of durable goods such as houses, cars, furniture, and so on, as these are often funded by loans. Interest rates also change the cost of repaying existing loans. If higher interest has to be paid, less income is available for consumption.



## Factors affecting investment spending (I)

### Business confidence

Investment spending is affected by factors influencing firms' willingness to spend on capital goods. Surveys ask firms to predict their future investment and labour requirements, based on their confidence of future sales and profits. Economic expectations are a common focus for business. Expectation of increased sales and profits is the most powerful influence in investment decisions.



### Profits

The current and expected levels of profits affect the amount of funds firms can use to invest.

### Government policies

Government policies on matters such as taxation, tariffs, interest rates, industrial relations and business assistance affect the funds firms have and expect to have, and so policies have a profound effect on investment decisions.

### Interest Rates

If interest rates are increased, the rise in borrowing costs will reduce both consumption and investment spending. Central banks acting on behalf of governments raise interest rates to act as a brake on total spending.



## Factors affecting government spending

### Economic conditions

Governments adjust their spending in response to economic conditions, to achieve macroeconomic objectives. For example, if inflation is low but economic growth needs a boost, governments will try to increase their spending. A boom period that delivers a high level of taxation revenue can provide extra money for governments to spend, whereas worse economic conditions make it harder to spend.

### Global conditions

Domestic economic conditions are in turn affected by global conditions. For example, a global downturn might require an economic boost from increased government spending. Reduced prices for exports, or a rise in the exchange rate are other external changes that affect domestic economic conditions.

### Advice

Reports from bodies commissioned to study aspects of the economy, such as the tax system or productivity, will recommend changes that might include changes in government spending, for example on infrastructure or research and development. Regular government advisers and department officials also give advice to governments.

#### *Politics*

Political conditions, such as elections promises to keep, and the popularity or otherwise of types of government spending, can affect spending decisions.

## Factors affecting trade (X – M)

The difference between export earnings and import spending can be referred to as net exports. When net exports rise, the AD curve will shift to the right and vice-versa. Several international factors contribute to changes in net exports, as discussed earlier.

## Global demand

The level of world economic activity, but especially the economies of our trading partners, affects demand for domestic exports. During the Asian economic crisis of the mid 1990s, demand for Australian exports fell sharply, reducing aggregate demand for Australian goods and services.

## Exchange rate

The exchange rate affects the price paid for both imports and exports. If the value of Australian dollars rises, for example, Australians will need to supply fewer Australian dollars to buy imports, making them cheaper to buy. Imports will therefore be preferred to some locally produced goods and services. Foreigners, on the other hand, will need to pay more of their own currency to buy each Australian dollar, making exports more expensive. Again, other countries' goods and services will be preferred to Australian. A rising exchange rate, therefore, will worsen the trade balance, reducing the value of (X–M) and switching spending away from domestic production. Aggregate demand will fall. A falling exchange rate, though, will increase aggregate demand.

## Inflation

Inflation rates overseas, but particularly inflation in the economies of trading partners, affect demand for both imports and exports. If Australia's inflation rate is higher than those of its trading partners, the level of import spending will increase and the level of export earnings will decrease. As buyers in Australia and overseas try to buy at the lowest possible price, other countries' goods and services will be preferred as Australian prices rise.

## Growth rate

High rates of domestic economic growth increase demand for imports of both consumer and capital goods. Consumers' demand for many goods and services may be too great to be satisfied by domestic suppliers. In addition, producers need more imports of capital equipment and materials and components of their own products.

## Effects of aggregate demand shifts

A change in the level of spending in any of the components of aggregate demand will cause the AD curve to shift. For example, if consumers decide to save less and spend more, irrespective of the price level, then the aggregate demand curve will shift to the right.

## Increased aggregate demand

A shift to the right of the aggregate demand curve in figure 5.16 represents an increase in demand at every price level. Suppliers will notice stocks decreasing. They will respond in two ways. Prices will rise as suppliers are able to charge more. Real GDP will also increase as suppliers increase their output of goods and services to eliminate shortages. A new macroeconomic equilibrium will form at a higher price level,  $P_2$ , and a higher level of real GDP,  $Y_2$ .

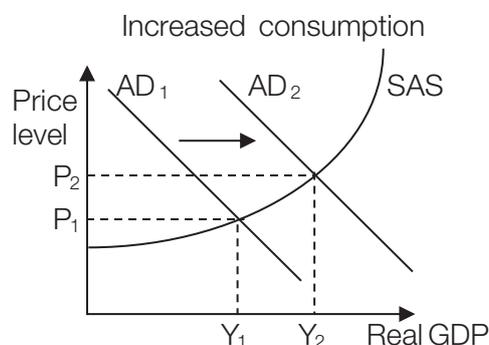


Figure 5.16

## Economic growth

The move to a higher level of real GDP is, by definition, economic growth

## Employment

Increased production requires increased demand for resources, including labour. If production increases after a period of recession, at first unused labour capacity will be used and over time will pick up, as workers stood down will be recalled to work and part-time employees will get more hours. If the increase continues, new jobs will be created.

When employment increases, unemployment is likely to decrease, depending on any change in the labour force participation rate at the same time (see Topic 4).

## National income

An increase in real GDP indicates economic growth, defined as growth in production of final goods and services by domestic firms. Because firms buy resources in order to produce, and pay households for them, any increase in real GDP indicates an increase in national income.

## Inflation

Prices increase as demand grows and the rate of inflation will rise, as suppliers are able to charge more, and also may need to raise prices to ration scarce goods and services while they increase production to keep up with demand.

## International competitiveness

Price inflation, if domestic prices rise faster than our trading partners' prices, makes exports harder to sell as they become relatively more expensive. It also makes imports cheaper, relative to domestic production. Increased aggregate demand will therefore reduce international competitiveness. A worsened trade balance will in turn have a negative impact on external balance.

Notice that increased aggregate demand will help the economy achieve two of its four macroeconomic objectives, but worsen progress towards the other two. Economic growth and employment will be boosted but price stability and external balance will be worsened.

## Demand-pull inflation

The AD-AS model also helps us analyse the causes of inflation and unemployment, and hence to suggest some solutions. Inflation occurs when the price level increases. This, according to our model, can happen when AD shifts to the right, demonstrated in figure 5.17. When inflation is driven by increased aggregate demand, it is known as demand-pull inflation.

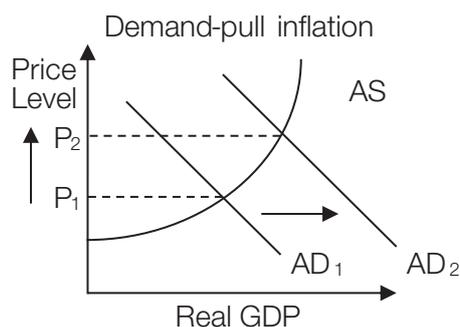


Figure 5.17

## Policy implications

Since there are two groups of causes of inflation, it will be necessary to decide which type is operating in order to be able to reduce it. The policy response to demand-pull inflation is to try to reduce aggregate demand, and the cure for cost-push inflation is to increase aggregate supply. The government has much more influence on aggregate demand than on aggregate supply. Currently it uses monetary policy—control of interest rates—to keep a lid on aggregate demand, and hence on inflation.

## Rapid inflation

It is possible for the economy to operate at a production level above  $Y_f$ , such as  $Y_e$ , in figure 5.18 where SAS cuts  $AD_2$ . In such a situation, rapid inflation is a particular problem.

## Inflationary gap

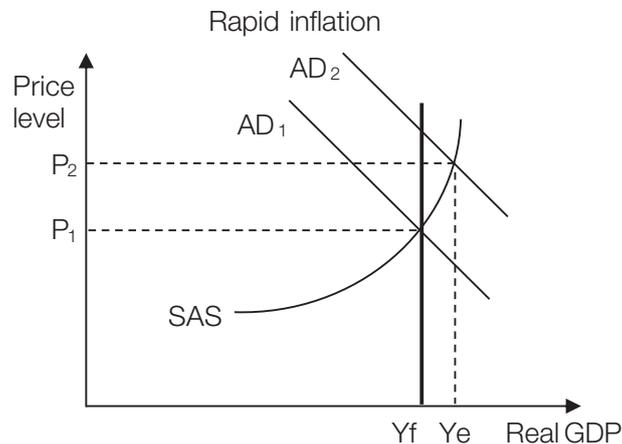


Figure 5.18

The gap between  $Y_e$  and  $Y_f$  in figure 5.18 can be referred to as an inflationary gap. The term is used because, when such a gap exists with  $Y_e$  at a higher level of output than  $Y_f$ , the rate of inflation is very high. Notice that the price level  $P_2$  at  $Y_e$  is very much higher than  $P_1$  at  $Y_f$ . Aggregate demand has climbed up the steepest section of the SAS curve, and that is why inflation accelerates to rapid rates when output exceeds the full employment level. Any increase in aggregate demand beyond  $Y_f$  will simply increase the general level of prices of goods and services.

In this situation, very high prices are paid for very scarce resources. Owners of resources that are in great demand are able to charge high prices, and producers will compete with each other to buy. Labour resources in particular skill areas, for example, will be hard to find and very high wages will be paid. For example, to employ a city-dwelling structurally unemployed engineer in a mine in a remote area, above-normal wages will have to be offered, and perhaps several flights home each year will also be offered to secure the labour.

A wage-price spiral may be generated whereby workers put pressure on employers to grant pay rises, citing rising prices and rising costs of living as their justification. Employers are prepared to agree to wage rise demands because their profits are high and so is their need for resources. To maintain their profit margin, they put up prices in the knowledge that high levels of demand will allow high prices. When wage earners demand further increases to cover the further cost of living rise, sellers will put prices up again, and so on.

## Policy implications

The solution is to close the inflationary gap, by decreasing aggregate demand. It takes too long to increase aggregate supply. Aggregate demand can be reduced in the short term, using contractionary monetary policy. When demand is successfully reduced, sellers with rising levels of stock will have to reduce prices, reducing demand-pull inflation.

## Decreased aggregate demand

Similarly, a fall in the amount of one aggregate demand component  $C$ ,  $I$ ,  $G$  or  $X$  or increased  $M$  would lead to a decrease in aggregate demand, represented by a leftward shift of the curve. Suppliers would notice stocks increasing. They will reduce prices to clear excess stocks and they will reduce production. The general level of prices would fall to  $P_2$  in figure 5.19 as suppliers tried to sell their surplus goods and services. GDP would decrease to  $Y_2$  as suppliers reduce production to avoid future surpluses.

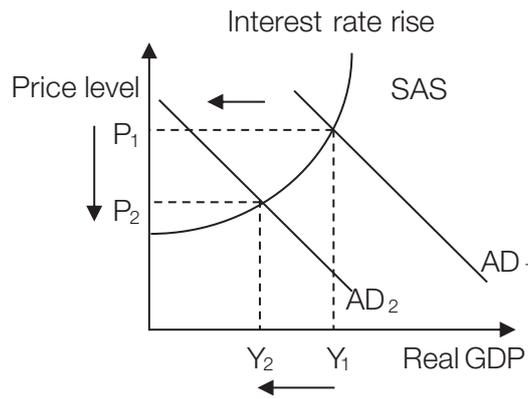


Figure 5.19

Decreased aggregate demand, and increased aggregate demand, will assist achievement of two out of the four macroeconomic objectives. In the case of decreased AD, price stability and external balance are improved but economic growth and employment are worsened.

Increase in interest rates – a special case

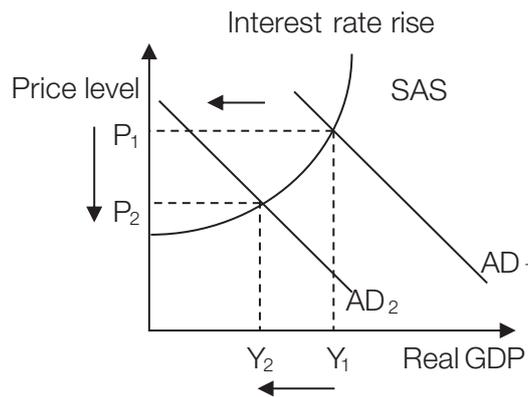


Figure 5.20

### The demand effect

Higher interest rates will increase the cost of borrowing and so will reduce the quantity of goods and services demanded by both households and firms. Since consumption and investment spending are components of aggregate demand, when spending on both decreases, aggregate demand decreases, represented in figure 5.20 by the AD curve shifting to the left.

As aggregate spending declines, the price level will fall to  $P_2$  on the model, and output will fall to  $Y_2$ . Fewer resources will be needed, and so employment and national income will decrease. In reality, prices may not actually fall, but the rate of increase will fall.

### The supply effect

There will be a small impact on aggregate supply as well, because higher interest rates increase firms' interest expenses, pushing up production costs. This decreases SAS. However, the change in AD far outweighs the effect on SAS, and so we simplify the effect of interest rates to a shift in aggregate demand only. The net effect on the general level of prices and real GDP is shown in figure 5.21.



### Policy implications

Governments around the world raise interest rate to cool off aggregate demand and bring down prices, or at least reduce the rate of inflation. Unfortunately, economic growth suffers too. The shift from  $Y_1$  to  $Y_2$  in figure 5.20 will in practice be seen as a lower rate of economic growth, rather than an absolute fall in real GDP. Unemployment may increase as fewer labour resources are demanded to produce fewer goods and services. Although the model

does not show the impact of curve shifts on trade, we can expect lower inflation to improve the trade balance, as comparatively lower prices improve international competitiveness and external balance.

At other times, in different economic conditions, governments reduce interest rates in order to increase aggregate demand and thus economic growth.

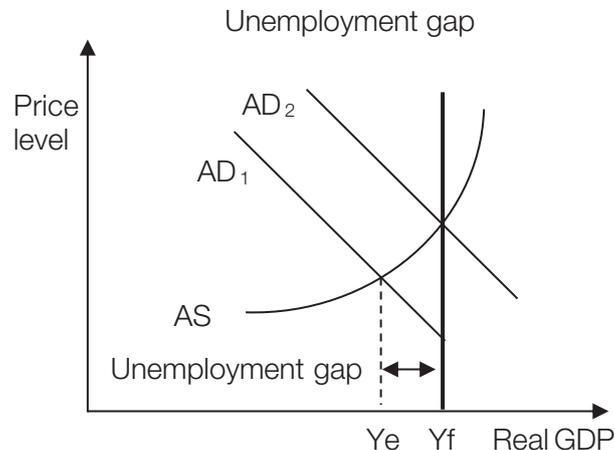


Figure 5.21

## Unemployment

When equilibrium occurs at levels of income below full employment, such as  $Y_e$  in figure 5.21, unemployment is present. Unemployment of labour occurs because the level of production is too low to create enough work for full employment.

## Unemployment gap

The gap between  $Y_e$  and  $Y_f$  in figure 5.21 can be referred to as an unemployment gap, or a recessionary gap. It is the difference between the equilibrium level of production, and the level achieved at full employment. Unemployment occurs because, as the level of output is less than that at full employment, so the demand for labour is less than that at full employment.

## Policy implications

The concept of an unemployment gap is useful because it suggests that, to solve the problem of unemployment, it is necessary to close the unemployment gap. This can be done with policies that increase aggregate demand or supply, so that the equilibrium level of production is sufficient to employ all those who want to work, except for those still out of work at the natural rate of unemployment.

The above analysis suggests that it is necessary to achieve economic growth in order to solve unemployment. Growth from  $Y_e$  in figure 5.24 would close the gap to the left of  $Y_f$ , thereby reducing unemployment. Throughout the 1990s economists believed that a growth rate of 4% was the minimum required to reduce unemployment. To do this, governments have tried to stimulate aggregate demand, whenever there was no danger of inflation, and they have also tried to encourage suppliers to achieve growth in aggregate supply.

## The business cycle

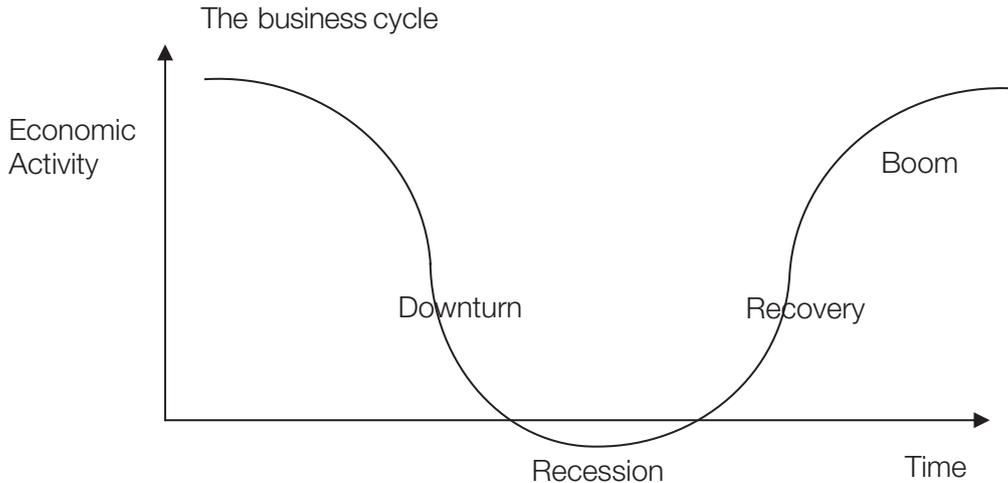


Figure 5.22 The business cycle

The aggregate demand, aggregate supply model can be used to understand how the level of economic activity changes through the business cycle, shown in figure 5.22. Real GDP is used as the best measure of economic activity and the horizontal axis of the AD-AS model represents this.

It is predominantly aggregate demand that moves up and down to create the business cycle.

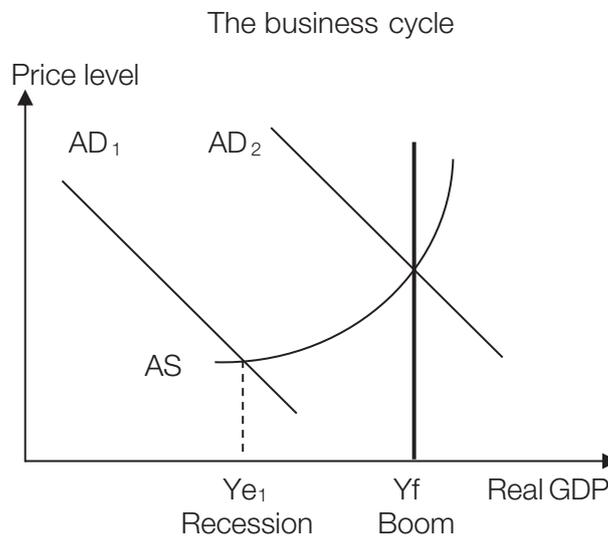


Figure 5.23

### Recession

Figure 5.23 shows that a trough in economic growth occurs when equilibrium is at a low level of GDP, such as  $Y_{e_1}$ . A trough is a period of low economic activity, and this is represented by  $Y_e$  at a position to the left of  $Y_f$ , as the equilibrium level of real GDP will be less than the full employment level. The price level is also relatively low.

Note that a recession is, technically, a period of two or more consecutive quarters of negative growth. The point  $Y_{e_1}$  in figure 5.23 simply represents a position of low economic growth.

Note also that the AD-AS model shows a level of real GDP and price, but it is not able to indicate rates of growth, either economic growth or inflation.

### Boom

A boom period occurs when aggregate demand is high, such as at  $AD_2$  in figure 5.23. Macroeconomic equilibrium is at a high level of GDP, though not necessarily at full employment. A boom peak can occur above or below full employment.

### Downturn

In a downturn, the rate of economic growth slows and employment growth slows with it. In figure 5.24,  $Y_e$  begins to move to the left, further away from  $Y_f$ . The rate of inflation and import spending should also slow. During a downturn in the business cycle, the equilibrium level of income is moving to the left.

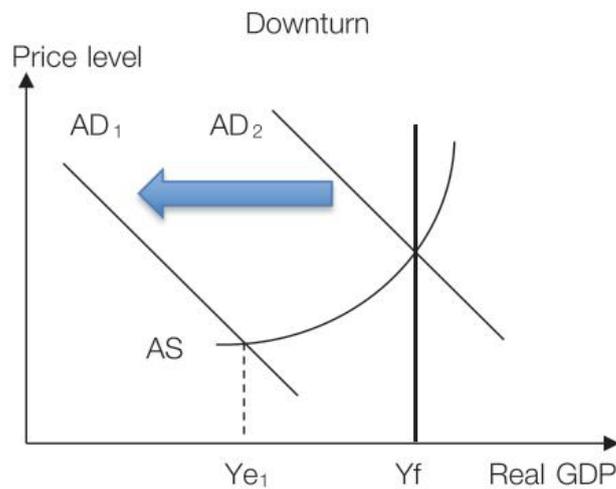


Figure 5.24

### Recovery

In the recovery phase, spending recovers, represented by the AD curve moving to the right to  $AD_2$  in figure 5.25, and  $Y_e$  moves to the right. Employment picks up, giving households more income and allowing more spending to give momentum to the recovery. Aggregate demand increases. The economy grows more rapidly, illustrated by a movement of  $Y_e$  to the right, closer to  $Y_f$ . Prices rise and the trade balance begins once again to suffer from greater import spending. During a recovery phase, aggregate demand grows and the equilibrium position moves to the right.

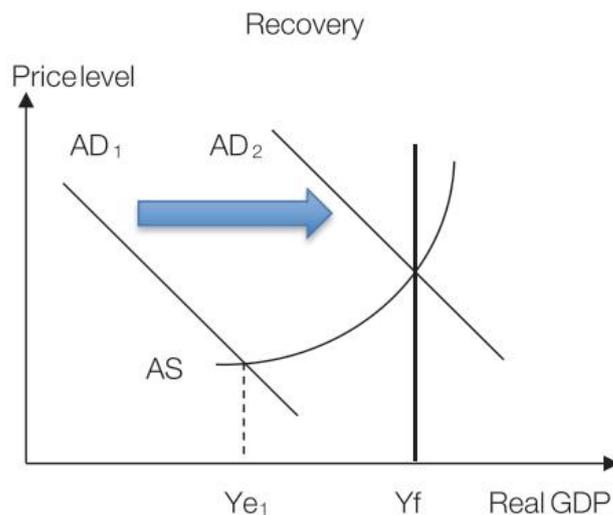


Figure 5.25

## Shifting the curves – Aggregate supply

### Causes of aggregate supply shifts

#### Shifting the normal range curve

The aggregate supply schedule will shift when factors affecting aggregate supply change. These factors are *not* in response to a price change, but caused by factors affecting production costs and resource availability. Such factors include:

- wage rates
- interest rates
- prices of raw materials
- availability of resources  
(Note: the resources exist but availability has changed)
- government taxes and charges.



#### Shifting the entire curve

The physical capacity of the economy can grow. The level of resources can grow, and new technologies can be incorporated into production. Such growth has already been represented in Topic 1 by an outward shift of the production possibilities curve, shown as a shift from  $PPC_1$  to  $PPC_2$  in figure 5.26. It is also represented by a rightward shift of the whole aggregate supply curve, including the vertical section, from  $SAS_1$  to  $SAS_2$  Consumer goods

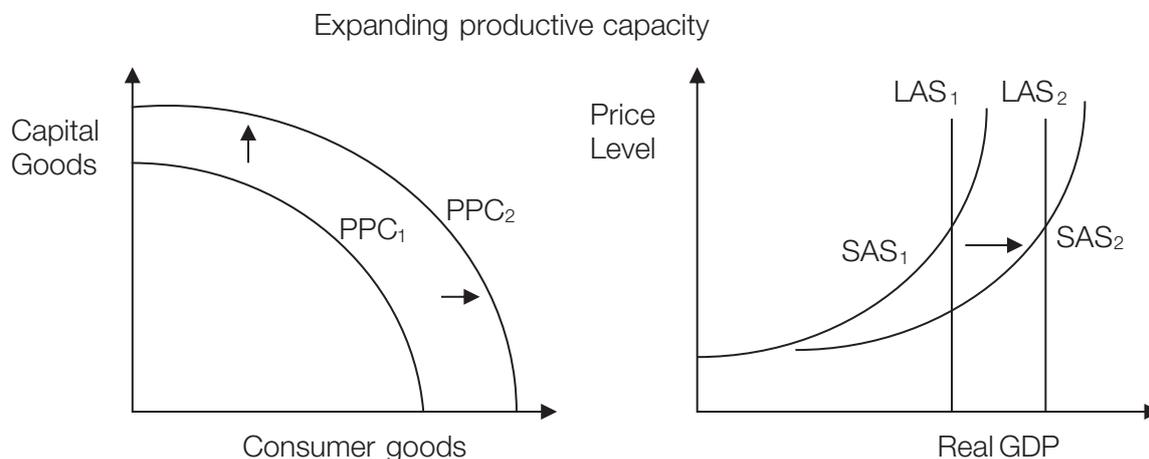


Figure 5.26

There are two factors that will expand the productive capacity of the economy.

- **Increased resources**, such as the labour force and the stock of capital goods, will allow the economy (suppliers in total) to produce a higher level of goods and services. Labour resources grow over time with population growth and immigration. The stock of capital goods will grow with investment spending. As resources increase, productive capacity increases. If resources are lost, productive capacity will decrease.
- **Improvements in technology** allow existing resources to be used more productively. This will also expand the productive capacity of the economy. As firms improve their methods and buy better machines, they are able to produce more output from each unit of resources. In other words, they increase the *productivity* of their resources. Productivity increases when more output is achieved with the same resources, or the same output is achieved with fewer resources.

## Effects of aggregate supply shifts

### The normal range

Although the SAS curves shifts to the right, the vertical section cannot go further to the right than the physical limit of the economy’s resources will allow. Note that the physical limit range of the SAS curve does not move. The SAS curve therefore appears to shift downward and outward in figure 5.27. The movement of the equilibrium position signifies that suppliers have decided to supply a greater quantity at every price level.

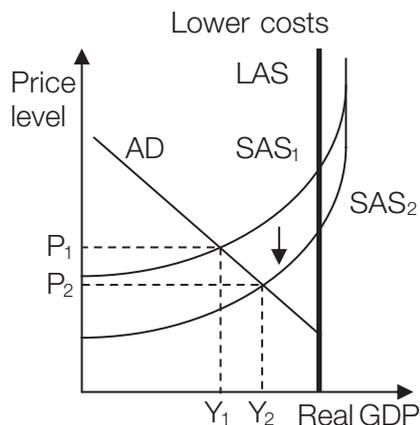


Figure 5.27

The SAS shift could be a result of one of the factors in the list above, for example, cheaper raw materials leading to a fall in production costs. As suppliers experience lower production costs, they drop prices to  $P_2$  to encourage more sales, and increase output to  $Y_2$  to meet the greater demand for domestic production, making more profit in the process.

Alternatively, aggregate supply could decrease, represented by of the aggregate supply curve up, to  $SAS_2$  in figure 5.28. Note that the physical limit section does not move. Such a shift would be caused by one of the above factors, say a rise in company taxes. Suppliers would respond by increasing their prices to  $P_2$  to cover the extra taxes, to maintain their profit margins. They would also need to reduce their production to  $Y_2$ , as demand would fall in response to higher prices.

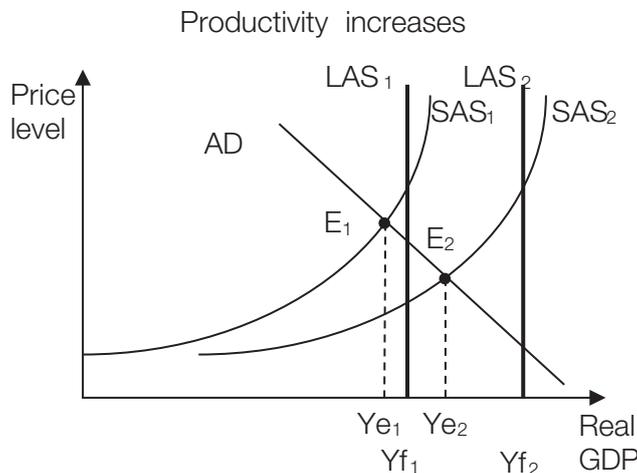


Figure 5.28

### The whole curve

Either of the two factors that change the productive capacity of the economy will cause the shift shown in figure 5.29. The short run aggregate supply curve shifts as a whole, taking the LAS curve with it, in its customary position slightly to the left of the physical limit section of SAS. For example, if the amount of resources increases, suppliers will increase their production and lower prices to encourage more sales, at the new equilibrium position  $E_2$ . Alternatively, if the shift is caused by widespread productivity improvements across the economy, output will increase and then lower costs can be passed on to buyers.

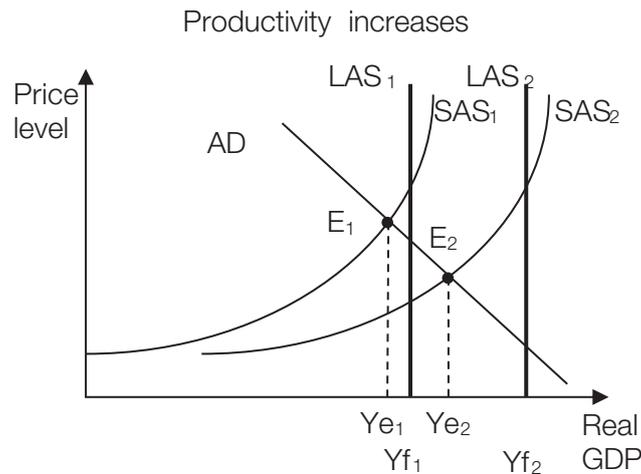


Figure 5.29

The normal, upward-sloping section of the short run aggregate supply curve will move down and to the right, to represent greater output at each price level. The vertical section of the curve will shift right. The full employment level of output will also increase, represented by the LAS curve shifting to LAS<sub>2</sub>. As the economy’s productive capacity increases, so does its full employment level of output.

The effect on unemployment is interesting. There is debate about the effect of increased productivity on unemployment. In some firms and industries, unemployment increases because reducing staff is a common way of reducing production costs. Also, using new equipment often requires less labour. However, jobs are created in new areas such as in manufacturing and servicing new equipment and training in different skills for the workplace. It is not certain to what extent, or even whether, productivity reforms will increase the unemployment rate. To illustrate this, figure 5.29 shows a lift in the full employment level of real GDP from Y<sub>f1</sub> to Y<sub>f2</sub>. The model is not sophisticated enough to show the size of these changes, however. (Refer to ‘Limitations’, at the end of this chapter.)

*Increase in wage rates – a special case*

When wage rates increase, both demand and supply will be affected. Rather than shift both curves, analysis is simpler if only one curve is shifted. Wage rates will affect aggregate supply more than aggregate demand because wages are a considerable proportion of production costs. Therefore, the net effect can be shown by a shift in the supply curve only.

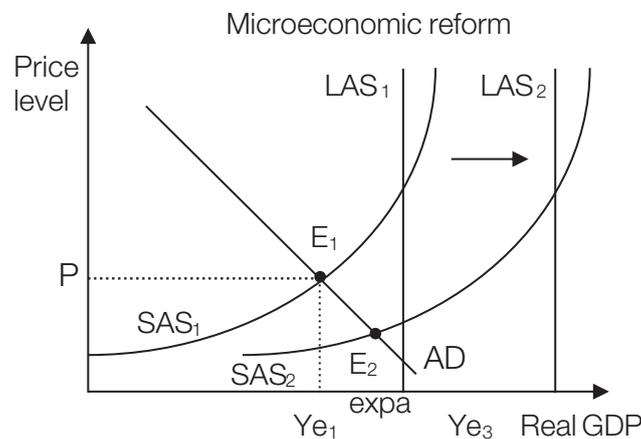


Figure 5.30

When wage rates increase, production costs increase and producers will supply a lesser quantity at each price level. The supply curve is shifted to the left to represent this. However, the vertical section of the curve, representing the physical limit of the economy, does not change. It is therefore preferable to think of the SAS curve moving up. The resulting new equilibrium position is both up and to the left of the previous equilibrium.

The model in figure 5.30 shows the result of a decrease in aggregate supply. The rate of inflation will rise, shown on the model as the price level increasing from P<sub>1</sub> to P<sub>2</sub>. Prices rise as sellers try to preserve their profit margin in the face of increased wage costs, and aggregate demand contracts in response to higher prices. Lower aggregate

demand leaves unsold stock and production is reduced in response. Economic growth will slow as GDP and income fall from  $Y_1$  to  $Y_2$ .

## Cost-push inflation

The general price level can increase, according to our model, when SAS shifts left, demonstrated in figure 5.30. Cost-push inflation occurs when the price level increase is caused by rising production costs.

## Policy implications

The response to cost-push inflation is to try to increase aggregate supply. However, the governments do not have much control over firms' production costs and the prices they charge. It can only encourage and regulate, by various means, to try to keep the SAS curve moving to the right. Various policies to achieve this are discussed in the next chapter.

## Microeconomic reform

Microeconomics refers to firms, industries, and government bodies. Microeconomic reform means improvements to achieve greater productivity. As a result of microeconomic reforms, more goods and services can be produced without using extra resources. The aim of microeconomic reform is to achieve reforms across the whole economy: that makes it a macroeconomic policy.

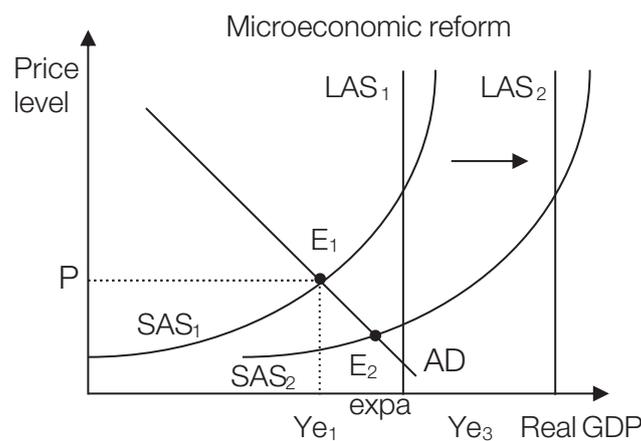


Figure 5.31

Such reforms have two effects. They reduce the cost of each unit of production. They also increase the productive capacity of the economy, moving the production possibilities curve outwards. Both of these effects can be shown on the AD-AS model.

## Better technologies

As better technologies reduce production costs in many industries throughout the Australian economy, aggregate supply increases at every price level. This is represented by a rightward shift of the normal range of the SAS curve, shown in figure 5.31.

## Productive capacity increases

At the same time, the productive capacity of the economy increases. This is represented by the vertical section of the SAS curve shifting to the right. Therefore the whole SAS curve shifts. The LAS curve moves with it, maintaining the gap behind the physical limit, assuming that the natural rate of unemployment does not change at the same time. Note that aggregate demand can now increase without inflationary impact, as the SAS shift has reduced inflationary pressure.

## Policy implications

Both aggregate demand and aggregate supply need to be increased to achieve maximum economic growth, and to achieve maximum improvement in all macroeconomic objectives. Economic growth is achieved and hence employment should grow. Price stability is also achieved and this should help external balance. **Hence, all macroeconomic objectives are achieved if both aggregate demand and supply can be increased.**

## Limitations of the AD-AS model

The AD-AS model is very useful in providing a big-picture understanding of the economy and assisting analysis of economic changes and their effects on the levels of output and prices. However, it is necessary to understand the model's limitations.

### Magnitude of change

It is a coarse model and is not capable of measuring the magnitude of change. It can not show how far the curves move or by how much inflation, and production will change. Also, the slopes of the curves are not known. Only the direction of curve shifts and the direction of change of price and output levels can be determined.

### Unemployment

The model can not accurately determine the impact of changes in aggregate supply and demand on the rate of unemployment. The participation rate might change at the same time as the number of people employed. Substitution of capital for labour will also have an effect on the unemployment rate.

There will also be a time lag between a change in aggregate demand or supply, and any resultant change in employment.

### External balance

Although it helps to explain how three of the major economic objectives might be achieved, the model gives no direct assistance in determining impact on external balance. However, a change in price level will usually have a predictable impact on import spending and export earnings as domestic production is always in competition with foreign production. A change in the level of real GDP would also cause a change in external balance, as increased income will result in more import spending.

#### Focus Questions

1. What is meant by the term 'equilibrium level of income'?
 

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2. Why are the levels of total national income and total (gross) domestic production theoretically the same?
 

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3. (a) What is full employment equilibrium?
 

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(b) Why is it seen as a worthwhile goal?
 

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4. Why are fewer Australian goods and services demanded when the general price level in Australia increases?
 

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5. (a) Explain the importance of interest rates to firms' investment spending plans.

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(b) How would a rise in social security payments change consumption spending?

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6. What is meant by:

(a) unemployment gap?

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 .. .. .  
 .. .. .  
 .. .. .

(b) inflationary gap?

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7. Why is Australia's trade performance important in reducing unemployment in Australia?

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8. What is meant by the term 'wage-price spiral'?

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9. Show on a diagram and explain the effects of an increase in aggregate demand when equilibrium is:

(a) below the full employment level of income

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(b) beyond the full employment level of income.

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10. Define the term 'business cycle'.

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11. Use the AD-AS model to explain how the economy grows after a recession.

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12. Why are producers' prices likely to decrease during a downturn phase of the business cycle?

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13. How and why do producers' stock levels change during a downturn?

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14. How well are the four major economic objectives better met during a boom?

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15. Identify and explain the impact of each of the following changes on the levels of price, production and employment. Use a diagram to assist each analysis.

(a) Reduced income tax

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(b) A rise in interest rates

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(c) A fall in the exchange rate

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16. Why do producers supply greater quantities at higher price levels?

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17. Explain why there is a difference between the slope of the SAS curve in the normal range and its slope at the economy's production capacity.

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18. How can the economy's production capacity expand?

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19. Some supply factors shift the whole SAS curve and some shift only the normal range of the curve. Draw a diagram to show a new supply curve to represent the effects of each of the following changes on the aggregate supply curve:

(a) an increase in wage levels

(b) a decrease in the labour force

(c) increased productivity.

20. (a) Distinguish between cost-push and demand-pull inflation.

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(b) How does the AD-AS model help governments to combat inflation?

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21. Use the AD-AS model to help you explain how microeconomic reform is able to:

(a) increase aggregate supply at every price

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(b) expand the economy’s production possibilities.

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22. (a) In what economic circumstances should governments try to increase economic growth by boosting aggregate supply instead of boosting aggregate demand?

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(b) Suggest a reason why a government would favour supply-side over demand-side policies.

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(c) Suggest a reason why a government would favour demand-side policies.

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**Examination revision**

1.

**US confidence drops**  
 Confidence among consumers fell to a low level, during a recent recovery in the United States’ business cycle, and a respected economist said it was a worrying sign that the recovery might not be sustained.

(a) Draw an AD-AS diagram and display and explain the spending shift needed for recovery from a recession, referring to the diagram in your explanation.

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(b) Use the aggregate demand – aggregate supply model to explain the effect of falling consumer confidence on price and output, assuming all other factors remain unchanged. Do not draw a diagram for this question, but you may refer to the diagram in your answer to question (a) above.

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2.

**Queensland floods’ economic costs**

The Queensland floods of 2011 forced hundreds of thousands of people out of their homes and cut off major cities. Premier Anna Bligh recalled her ministers early to deal with the crisis.

The floods cost the coal industry \$1 billion dollars of lost shipments, as it took weeks to pump floodwater out of the mines. Lack of coal supplies slowed production in the steel industry, not only in Australia but in other countries that relied on Queensland coal. Flooding also disrupted the supply of grains, costing further reduced exports.

ANZ economist Ivan Colhoun estimated that the floods reduced Australia’s gross domestic product by about a quarter of a percent.

- (a) Which part or parts of the short-run aggregate supply curve – depression range, normal range, or physical limit – were affected by the Queensland floods? Explain your decision.

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- (b) Draw an AD-AS diagram and show on it the curve shift you stated in question (a) above. Also show the effects of the floods on price and output.

- (c) Explain the effects of the floods on inflation.

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# Topic 6: Economic Policy

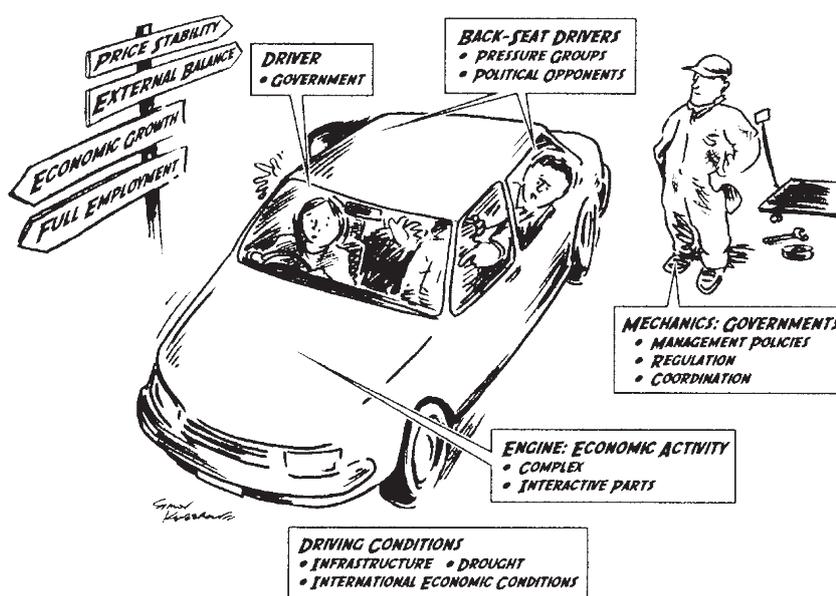
## 6.1 Macroeconomic management

### Introduction

Governments use a range of policies to meet objectives for the overall welfare of all participants in the economy. The circular flow model sectors provide a useful list of the main players in the economy. These players act principally in their own interests. The role of government is to coordinate, regulate and manage economic activity in order to meet its economic objectives. Globalisation has led to governments across the globe seeking similar macroeconomic outcomes and therefore enacting similar policies. This section will use Australian examples that are typical of policies in most countries.

### An analogy

The economy can be seen as a complex vehicle with interactive parts that needs to be routinely maintained and carefully operated. The government needs to keep this vehicle operating as efficiently as possible in order to reach the destinations of the four macroeconomic objectives. In this analogy, the economy vehicle has certain controls like buttons, pedals and levers that the government can use to control and drive it. Monetary and fiscal policies are used to brake or accelerate economic growth. Laws and government bodies regulate the conduct of households and firms that participate in economic activity.



Government must use the controls at their disposal to manage the economy and try to maintain strong economic performance. It is the role of governments to create an environment that supports business and encourages innovation. National governments set targets for each of the major economic objectives and tries to achieve these. It uses a range of economic indicators to measure how well targets are being achieved, just as a motor vehicle is designed to give a constant stream of information.

Table 6.1 An analogy of economic management

Car	Economy
Driver information	Economic data
Windscreen shows changes that need driver response	Leading indicators
Side windows and dashboard information	Coincident indicators
Rear window and mirrors	Lagging indicators

Its windscreen, other windows, mirrors and dashboard indicators give information about the direction and speed of the vehicle and lots of other data about the vehicle's performance. There may be other passengers, or pressure groups in the case of the economy, who provide advice and encourage the driver to go in their desired direction. Just as the vehicle supplies a range of controls, a range of economic policy instruments is available to the government who must choose the best combination of policies, with reference to the current economic situation and current government policies.

Economic conditions change and policy responses must be designed to steer the economy back on course, just as a car is steered or slowed to adjust its direction or speed. For example:

- rising oil prices and security responses to international terrorism helped to push up the rate of inflation in the early 2000s. When the rate threatened to climb above the target range, government responses included the use of interest rates to reduce aggregate demand to slow the economy's spending
- when the global financial crisis slowed economic activity in 2008, government responses included accelerating government spending and easing of interest rates.

## A range of policies

*A summary of policies*

	<b>Economic policies</b>	<b>Designed to</b>
<b>Demand management policies</b>	Fiscal Policy	Boost national savings
	Monetary Policy	Control inflation
<b>Supply management policies</b>	Tariff reduction	Reduce prices, improve competitiveness
	Competition policy	Reduce prices, improve competitiveness
	Labour market reform	Improve labour productivity
	Deregulation	Remove impediments to efficiency
	Privatisation	Improve production efficiency
	Taxation	Improve labour productivity

The economic impacts of increased and decreased aggregate demand can be analysed using the AD-AS model and the Circular Flow of Income model.

## 6.2 Demand management – Fiscal policy

### 1. Introduction

National governments use a range of policies to influence aggregate demand in order to try to achieve macroeconomic objectives. Fiscal and monetary policy are demand management policies because they are designed to increase or decrease aggregate demand.

### Objectives

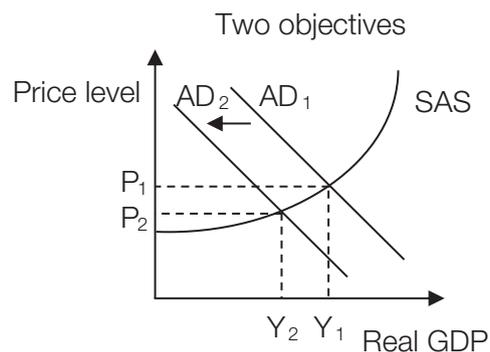


Figure 6.1

Unfortunately, **only two of the macroeconomic objectives can be improved** with each shift of AD – the other two objectives are made worse! For example, if AD is decreased:

- inflationary pressures are reduced to  $P_2$ , improving the **price stability** objective
- international competitiveness and hence **external balance** is improved as lower domestic prices increase export earnings and decrease import spending
- reduced spending also reduces **economic growth**,
- in turn reducing demand for labour and hence **employment**.

Vice versa, increased aggregate demand improves economic growth and employment, but worsens price stability and external balance.

### Counter-cyclical policies

Demand management policies are used as counter-cyclical policies. That is, they are used to counter the effects of the extremes of the business cycle; boom and recession. In a boom period, inflation and economic growth are both likely to be increasing, and so it might be important to reduce aggregate demand to lessen inflationary pressures while a brake on economic growth is acceptable. In a recession, an increase in aggregate demand will probably be needed to boost economic growth, and there is little danger of increasing the rate of inflation above its target rate.

## 2. Fiscal policy

### 🔑 Ecoterm

Fiscal policy consists of national government plans and actions to influence aggregate demand through government spending and taxation.

Fiscal policy is implemented through a government's annual budget. In fact, it is useful to think of fiscal policy as budgetary policy. For example, the Australian Government announces its budget, in May each year, for the coming financial year, July 1 to June 30. The budget is the government's plan for taxation and government spending for the coming 12 months. State budgets follow soon afterwards.

#### *Types of government spending and taxes*

Government spending	Taxes
<ul style="list-style-type: none"> <li>welfare payments</li> <li>defence</li> <li>tertiary education</li> <li>training</li> <li>infrastructure</li> <li>regulation</li> </ul>	<ul style="list-style-type: none"> <li>goods and services</li> <li>income tax</li> <li>excise tax</li> <li>company tax</li> <li>import tax</li> <li>fringe benefits tax</li> </ul>
<ul style="list-style-type: none"> <li>environment programs</li> <li>the legal system</li> <li>Medicare</li> <li>industrial relations</li> <li>agricultural policies</li> <li>general administration</li> </ul>	

## Budgets

There are **three possible budget outcomes**.

### Balanced budget

A budget is balanced if government spending = taxation receipts ( $G = T$ ).

### Deficit budget

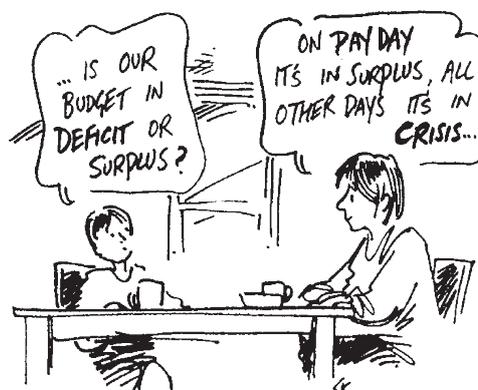
A budget deficit will occur when government spending is planned to exceed taxation revenue ( $G > T$ ). It is referred to as a deficit because the government will be in deficit when it spends more than its revenue.

Deficit budgets are best used when the economy requires an expansionary boost. This will be the case during a severe or prolonged recession.

**Deficits need to be financed.** Each method of finance used creates a problem as the difference needs to be borrowed.

Methods of financing a deficit:

- Borrow from the public by issuing government bonds. Households and firms lend to government, a safe way of investing for them. However, the money they lend cannot be used for their own spending. Therefore, government spending takes the place of some consumption and investment spending, which it 'crowds out'.
- Borrow from overseas. While this solves the problem of crowding out consumption and investment spending, it re-creates the problem of foreign debt and interest payments, worsening external balance. The federal government has ruled out this financing method since the 1990s.
- Borrow from the Reserve Bank. This solves both the crowding out problem and the external balance problem, but stimulates inflation. Because it uses money that was not previously in circulation in the economy, it adds to aggregate demand and pushes up prices. It may be acceptable to increase inflationary pressures during a recession, but there are other times when it may not.



## Surplus budget

A budget surplus is achieved when **tax revenue exceeds spending** ( $G < T$ ). Governments manipulate their budgets for economic management purposes, that is, to influence the level of aggregate demand. Surplus budgets are used, in times of sound economic growth, to save for more difficult years in the future. Surpluses are also used to support monetary policy in controlling inflation, as total spending is reduced by a surplus budget.

## 3. Impacts of fiscal policy

Fiscal policy has an impact on aggregate demand in two ways.

1. **Government spending** is a component of aggregate demand, which is the aggregate of  $C + I + G + X - M$
2. **Taxation** impacts on the first two components,  $C$  and  $I$ . Income tax changes affect consumption spending whereas goods and services tax, excise tax, payroll tax and company tax affect investment spending.

### Contractionary fiscal policy

Contractionary fiscal policy is used to **reduce total spending** or to create a budget surplus. Fiscal policy is said to be contractionary when the difference between government spending and taxation revenue is planned to decrease from the previous fiscal year (from May to May). To put this another way, fiscal policy is contractionary if the budget is planned so that  $(G - T)$  decreases. Either government spending will decrease, or taxation will increase, or a combination of both.

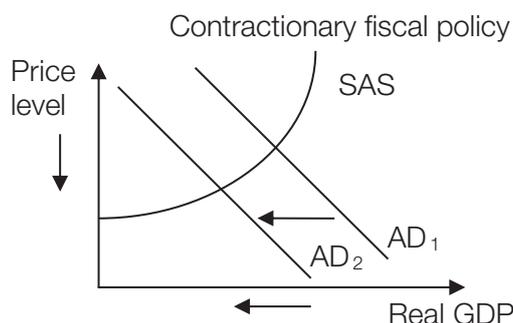


Figure 6.2

Greater taxation will reduce consumption and investment spending, represented by  $C + I$  in the aggregate demand formula, and reduced government spending will of course decrease the  $G$  component of aggregate demand. Contractionary fiscal policy will therefore reduce aggregate demand.

The AD curve in figure 6.2 has moved to the left to  $AD_2$  to represent this change. Reduced demand will be noticed by suppliers as a build-up of stocks. This will cause them to drop prices and reduce production and employment. This result is represented on the model by a new macroeconomic equilibrium at a lower price level and a lower level of real GDP.

In terms of the Circular Flow of Income model, lower levels of combined consumption, investment and government spending will reduce injections into the circular flow. Firms will receive less revenue, produce fewer goods and services and therefore use fewer resources. In this way firms will pay less income to domestic households. Increased taxation leakages will add to that effect on income.

### Expansionary fiscal policy

Fiscal policy is expansionary when the difference between government spending and taxation revenue is planned to increase. To achieve this, government spending will increase and/or taxation will decrease, boosting consumption, investment and government spending. When these components of aggregate demand increase, so does aggregate demand, represented in figure 6.3 by the move to  $AD_2$ , raising the levels of inflation and economic growth.

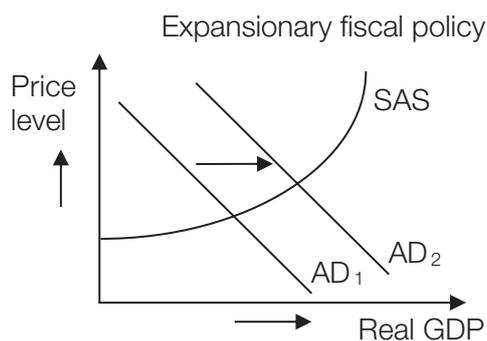


Figure 6.3

In terms of the circular flow of income model, higher levels of combined consumption, investment and government spending will increase injections into the circular flow. Firms will receive more revenue, produce more goods and services and therefore use more resources. In this way firms will pay more income to domestic households. Decreased taxation leakages will add to that effect on income.

However, remember that a deficit needs to be financed, and each financing method chosen creates a problem (see “Methods of financing a deficit”, above). Borrowing from the public will ‘crowd out’ consumption and investment spending, reducing the impact of increased government spending in raising the level of aggregate demand. Borrowing from the Reserve Bank will increase inflation.

Multiplier process

The multiplier process will also have an effect of any change in fiscal policy, contractionary or expansionary, by multiplying the effect on aggregate demand.

## 4. Fiscal policy strategy

### Budget balance

Modern fiscal policy is a medium-term policy, unless an economic shock such as the global financial crisis of 2008 requires an immediate fiscal response. The medium term is five years and over: the primary objective of fiscal (budgetary) policy is to achieve a balanced budget over the business cycle.

### Surplus and deficit

A secondary objective is to maintain surpluses while growth prospects are sound and to use deficits to stimulate economic activity when necessary, such as after 2008. From 1998 to 2008, during a period of strong economic growth, the Australian Government maintained surpluses that averaged 1% of GDP, in order to build up savings. Since 2008, a unbroken series of deficit budgets has been necessary to stimulate total spending.

### Infrastructure

Spending on infrastructure is an ongoing economic need so that transport and communications are maintained at a level that allows business to be conducted efficiently. The Australian Government, for example, has funded a number of road projects and the National Broadband Network has been a significant communications infrastructure project.

### Short term effect

Fiscal policy is more effective than other policies in the short term as it is able to have an immediate impact. For example, tax cuts have had immediate impact on consumption spending, and government spending can be implemented as soon as the budget is agreed to by Parliament.

## Targeted impact

Fiscal policy is also capable of directing spending to certain regions or social groups. For example, stimulatory spending in response to the global economic crisis was directed to education. Spending can also target regions that need greater assistance, such as those damaged by natural disaster.

## Counter-cyclical

'Auto correction' is not a deliberate policy, but budget strategists need to keep in mind that it will happen. While fiscal policy is the deliberate manipulation of government spending and taxation, the budgeted amounts can be changed by economic circumstances. In a recession or period of low economic growth when employment levels fall, governments will receive less income tax and other tax revenue but will pay more unemployment benefits and other social security payments. The effect is to reduce the size of a planned surplus or increase a planned deficit. The opposite will happen during boom periods or periods of strong economic growth. Fortunately, these effects make fiscal policy more expansionary during low growth and more contractionary during strong growth and are referred to by economists as automatic stabilisers.

## 5. Modern monetary policy

Modern monetary policy is to have politicians interact with central banks. Such cooperation makes demand management policy more effective. In Australia, this would show as government issuing bonds to raise money for fiscal spending, but the bonds bought by the Reserve Bank of Australia. In this way, it is the central bank and not households who are saving their money and firms who are investing, allowing them to spend more, taking advantage of lower interest rates.

### Focus Questions

1. What macroeconomic objectives do governments try to achieve in their macroeconomic management?
 

.. .. .

.. .. .
2. (a) Explain the difference between a surplus and a deficit budget.
 

.. .. .

.. .. .

(b) If the 2017 federal budget was balanced, describe a 2018 budget that would expand the economy.

.. .. .

(c) In what sort of economic situation would a government choose to finance a budget deficit by borrowing from the central bank instead of from the public?

.. .. .

.. .. .
3. (a) Explain the effect of a contractionary budget on prices and real GDP, with reference to an AD–AS diagram.
 

.. .. .

.. .. .

(b) Suggest an economic condition in which a contractionary budget would be an effective policy.

.. .. .

.. .. .

Examination revision

Priority projects funding

The Building Australia Fund, part of the original Future Fund, holds federal government money to finance priority infrastructure projects such as road, rail, ports, communications, water and energy.

(a) Explain the value to the economy of spending on infrastructure. Refer to an example in your response.

.. .. .  
 .. .. .  
 .. .. .  
 .. .. .

(b) Draw new curves on an AD-AS diagram to show the effects on price and output of

(i) government spending on infrastructure: label this curve A

(ii) production cost savings created by infrastructure: label this curve B.

(c) Explain why the size of the Building Australia Fund is likely to decrease during a recession.

.. .. .  
 .. .. .

## 6.3 Demand management – Monetary policy

### 1. Monetary policy

#### Ecoterm

Monetary Policy is central bank action to change interest rates in order to influence the level of aggregate demand.

A country's central bank, for example the Reserve Bank of Australia, Bank Negara Malaysia, The People's Bank of China and the Bank of America, have responsibility to decide monetary policy and to put it into practice. This arrangement is meant to leave interest rates in the hands of a non-political body. In the hands of the governing political party, interest rates could become a political as well as an economic tool. For example, if a general election were coming up, the government might want to keep interest rates low to win votes, but a low level of interest rates may not be a good economic policy at that point in time.

The primary aim of monetary policy is to maintain price stability, to preserve the value of money. Its secondary aim is to encourage economic growth and general economic prosperity. Since 1993 the Reserve Bank of Australia has set a target of 2% to 3% inflation over the medium term – that is, on average over the business cycle. This means that the rate of inflation can drift below 2% or above 3% for a short period. The secondary aim of monetary policy is to stimulate the economy when it is necessary and appropriate to do so.

The reserve Bank in Australia meets on the first Tuesday of every month to consider a large number of economic indicators and make the decision to

- increase interest rates
- decrease interest rates or
- leave interest rates at the current level

Once a policy decision has been made to, say, increase interest rates, the following steps are taken:

1. The central bank announces its intention to increase the official interest rate (the 'cash rate').
2. It then sells government securities (bonds) to commercial banks.
3. The cash supply is thus reduced to  $S_2$ , increasing the interest rate for (price of) cash to  $P_2$  in Figure 6.4.
4. Financial institutions charge higher rates on loans to maintain their profit margins and offer higher rates on deposits to compete for funds.
5. Households and firms reduce their borrowing and spending.
6. Lower aggregate demand reduces inflationary pressures.

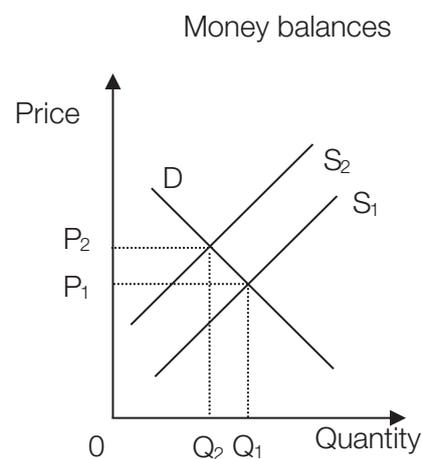


Figure 6.4

## 2. Impacts of monetary policy

When the Reserve Bank pushes up interest rates, borrowing for consumption and investment spending is held down. Both households and firms also pay more interest on existing loans. In addition, higher interest rates encourage saving. As a result, aggregate demand decreases. The process will also work in reverse. If the RBA reduces interest rates, aggregate demand will increase.

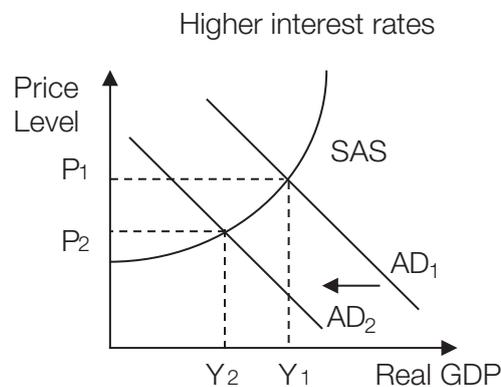


Figure 6.5

Figure 6.5 shows the effect of higher interest rates on aggregate demand. Faced with climbing stock levels due to falling demand, suppliers produce less to avoid surpluses. They also keep their prices down to encourage more spending. Hence, lower aggregate demand reduces the rate of increase of prices – that is it reduces inflation, shown by the fall to  $P_2$ . The rate of increase of production – that is, economic growth – is also reduced, represented by the level of real GDP moving to  $Y_2$ .

In times of recession, monetary policy can be used to expand economic activity by increasing economic growth. To do this, interest rates are pushed down to encourage borrowing and spending. Extra spending increases aggregate demand and hence the general level of prices and real GDP. The effect of monetary policy on inflation and economic growth is illustrated in figure 6.6. The lower rates encourage increased aggregate demand, increasing economic growth and employment.

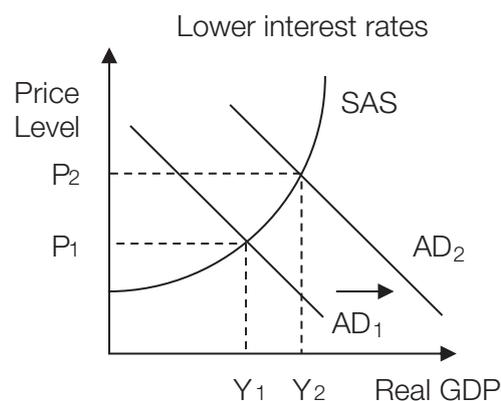


Figure 6.6

Monetary policy is very effective in changing total spending in the economy, but there is an impact lag. In other words, there is a time delay before aggregate demand changes. The impact lag seems to average about 18 months.

### 3. Monetary policy strategy

#### The decision

Central banks' boards, or interest rate committees, meet regularly to consider a wide range of economic data, and make a decision on the cash rate ('official rate'): whether to

- raise it
- lower it or
- leave it unchanged.



It has found that making small changes to interest rates is effective in changing spending without other, adverse effects. It usually makes a change of a quarter of a per cent. An exception to this practice occurred in response to the global financial crisis in 2008, when rates were changed by a half or whole per cent, for a quicker, greater impact than normally required.

#### Inflation management

The primary aim of monetary policy is to manage inflation by affecting aggregate demand. In times when strong economic growth presents the danger of rising inflation, monetary policy is used to reduce aggregate demand. Monetary policy is tightened to reduce inflation, meaning that interest rates are pushed higher. The effect of higher interest rates is to curb consumption and investment spending. Interest rates can also be lowered to encourage spending and thus economic growth, but this is a secondary aim.

#### Counter-cyclical

Monetary policy is also used as a counter-cyclical policy. This means that it is used to counter the business cycle to moderate the extremes of booms and recessions. Monetary policy can be tightened – by increasing interest rates—to slow down rapid economic growth, or it can be eased – by reducing interest rates – to encourage growth in times of recession.

#### Impact lag

Monetary policy is slow to act. For example, for a while it had little effect in reviving the economy after the early 1990s recession. There is an impact lag – a period of time between a change in interest rates and its impact. The Reserve Bank estimates an average 18-month gap between implementation and impact. It has used monetary policy effectively in recent years by changing it well ahead of expected changes in economic conditions, and making small changes, usually of a quarter of one per cent each time. Monetary policy is effective but slow: like an elephant, it moves slowly but leaves big footprints!

#### Focus Questions

- Name the three fiscal and monetary controls available to government in their economic management.  
 ..  
 ..
  - Why are fiscal and monetary policies regarded as counter-cyclical policies?  
 ..  
 ..  
 ..
  - Suggest a monetary policy appropriate to expand the economy.  
 ..  
 ..
    - Suggest a demand management policy appropriate to stimulate the economy of a particular region of the country.  
 ..  
 ..

2. Which government body is responsible for monetary policy?

.. .. .  
 3. The central bank’s task is to keep inflation within its target range. Explain how monetary policy can be used to reduce inflation, incorporating an AD-AS diagram in your answer.

.. .. .  
 .. .. .  
 .. .. .

4. Why does the government leave monetary policy to the central bank?

.. .. .  
 .. .. .

5. At the beginning of the 1990s recession, the official interest rate (cash rate) was 17.5%. By the end of that recession, by January 1993, it was 4.5%. In contrast, early in the 2020 COVID-19 recession the rate was cut by the RBA to 0.25% (Australian Financial Review July 25-26 2020 page 14). Argue how different the monetary policy task would have been in 2020 compared with 1990.

.. .. .  
 .. .. .

**Examination revision**

**Governments try to heal global economy**

Massive government spending and deep interest rate cuts around the world hold hopes of a rebound in global economic growth. Central banks and national governments have taken rare steps to protect their economies from the most dangerous economic crisis since the Great Depression. Recent economic data showed rapidly falling economic activity in the United States, Europe and Asia.

*Reported in The Australian Financial Review in January 2009*

(a) (i) Identify one example of each of fiscal policy and monetary policy mentioned in the article.

.. .. .  
 .. .. .

(ii) What is the expected impact lag of these policies?

.. .. .  
 .. .. .

(b) (i) Show on an aggregate demand – aggregate supply diagram the effects of “massive government spending and deep interest rate cuts” on output and price level.

(ii) Explain the process by which higher interest rates reduce inflation.

.. .. .  
.. .. .  
.. .. .

(c) (i) Explain the effect of “rapidly falling economic activity in the United States, Europe and Asia” on Australia’s aggregate demand.

.. .. .  
.. .. .

(ii) Is the policy mix outlined in the article an effective response to the global downturn? Justify your opinion.

.. .. .  
.. .. .

## 6.4 Supply management

### 1. Structural policy and microeconomic reform

#### Ecoterm

Microeconomic reform is government action to improve industry efficiency, productivity and international competitiveness.

Microeconomic reform is reform at the micro level, that is, at the level of individual firms and government bodies, at industry level and in infrastructure. Structural policy is designed to achieve microeconomic reform across the whole economy: this makes it a macroeconomic policy. It aims to encourage firms and government bodies to reform or restructure their production, and to remove barriers to efficiency. The aim is to use resources as efficiently as possible, to improve productivity and to improve international competitiveness, both at home and abroad. Efficiency and productivity are improved by reducing production costs and employing better production technologies, shifting the whole short run aggregate supply curve to the right.

#### Impacts of supply policy: aggregate demand – aggregate supply model

The AD-AS model helps us analyse the effects of microeconomic reform. Each supply policy is outlined below, with an explanation of how it specifically achieves lower prices and increased productive capacity for the economy. Figure 6.5 represents the impact of lower prices combined with increased productive capacity by shifting the **whole SAS curve to the right**. The analysis can be split into two sections.

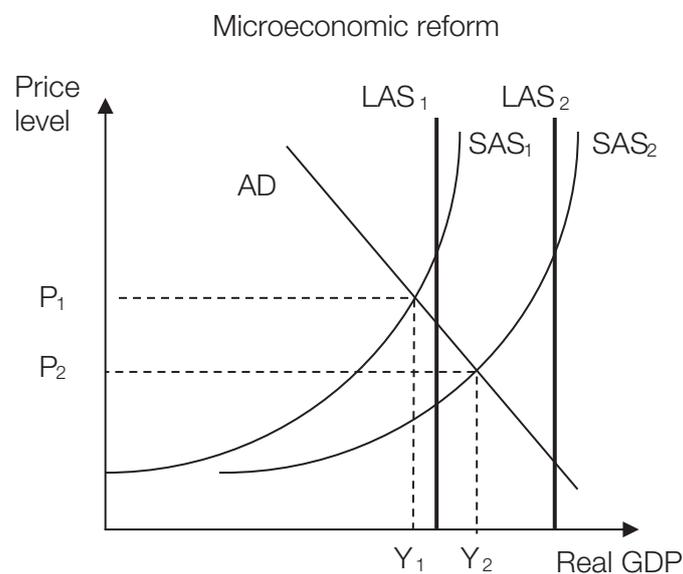


Figure 6.7

#### Lower prices

Each of the supply management policies allows goods and services to be produced more cheaply and efficiently. Lower prices are achieved by more intense competition, better labour productivity, lower tariffs and deregulated agricultural markets. As prices are pushed down, the 'normal' section of the short run aggregate supply curve will shift to the right. The normal section is the upward sloping section, in figure 6.7.

#### Production capacity

Each of the supply policies also improves productivity through better technologies, increasing the productive capacity of the economy as more goods and services are produced with the same level of resources. The reforms are often accompanied by increased use of capital resources, further increasing the productive capacity of the economy.

This is represented by shifting the vertical section of the SAS curve to the right to the right, as shown in figure 6.7. The normal, upward sloping section shifts as a result of lower production costs for producers. The vertical section, representing the economy's physical limit, also shifts to the right as a result of increased productivity and better technology contributing to more productive use of existing resources, and bringing new capital resources into use. To help understand this, it is useful to recall that the vertical section of AS represents the same concept as a production possibilities curve, and shifts for the same reasons.

The combined effect of lower prices and greater production possibilities is represented by shifting the whole SAS curve to the right to  $SAS_2$ . The long run aggregate supply curve shifts with it, representing a higher level of real GDP to achieve full employment at  $LAS_2$ . The gap between  $SAS'$  vertical section and  $LAS$  remains the natural rate of unemployment, the lowest level of unemployment achievable without accelerating inflation.

## Objectives

As aggregate supply increases, the equilibrium level of income increases to  $Y_2$  as the price level falls to  $P_2$ . Unlike demand management policy, increasing aggregate supply achieves progress on all objectives.

- **Inflation** is better controlled as a result of microeconomic reform, whether it is achieved by reducing production costs or by increasing productivity of resource use.
- **Economic growth** is achieved with increased real GDP.
- **External balance** is assisted with lower prices improving international competitiveness and therefore the trade balance.
- Increased production creates increased demand for labour, improving the **full employment** objective, unless investments in capital have caused structural unemployment.

Microeconomic reform thus makes progress in **all four economic objectives**.

## Impacts of supply policy: circular flow of income

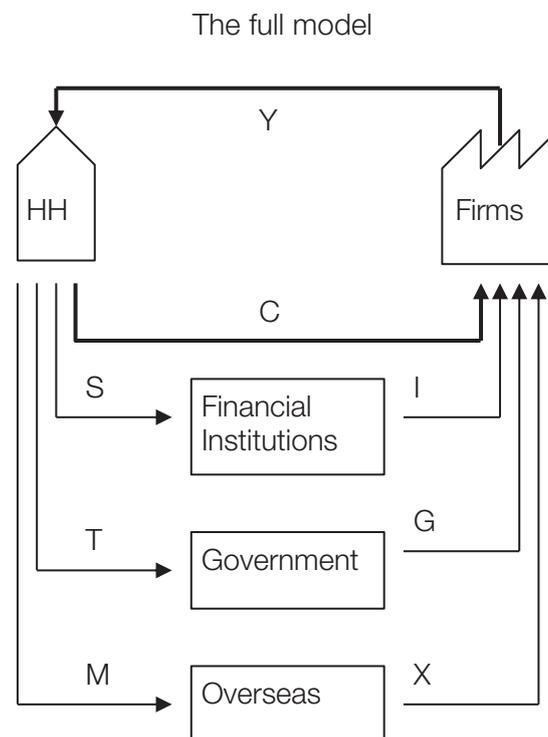


Figure 6.8

In terms of the Circular Flow model, better productivity and lower prices should increase domestic firms' sales, increasing consumption spending. The two improvements should also improve their competitiveness with foreign producers, increasing export earnings and decreasing import spending. Investment spending should also increase as domestic firms expand. Some government expenditure should also switch to domestic producers. Hence, all the components of total spending (aggregate demand) should increase, raising production levels. As production rises, so does the need for resources, and so more income is paid to domestic households.

## A collection of policies

Microeconomic reform consists of a wide range of government measures designed to force, encourage or assist industries to achieve reforms. These measures are also known as structural policy because the expected outcome is to improve the structure of Australian production.

Structural policy cuts across other policy boundaries in that it is a collection of measures from several policy areas. The measures are all designed to reform the structure of the Australian economy so that it is more efficient and more competitive. It includes the following policies and measures:

- tariff reduction
- competition policy
- labour market reform
- deregulation of industries
- privatisation of government enterprises
- taxation reform

## 2. Tariff reduction

A tariff is also a tax, a tax on imports, but tariff reduction deserves a section of its own, rather than as part of the section “Tax reform”. It has been the most powerful microeconomic reform policy.

### Ecoterm

A tariff is a tax on imports.

A tariff is usually expressed as a percentage of the imported good's value. For example, Australian car importers have to pay a tariff of 5% of the price of the car, except for imports from countries with a Free Trade Agreement. The current rate is considerably lower than the 40% rate that had to be paid in 1990.

The tariff reduction policy is aimed at increasing competition in markets, by making imports cheaper. Domestic firms have to work harder to compete against cheaper imports, to find ways to reduce their costs and therefore their prices, and at the same time improve the quality of their goods and services. It is a tough policy that forces, rather than encourages, firms to compete, and some have left the market, unable to do so successfully.

Tariff policies are in line with each signatory country's commitment to the World Trade Organisation (WTO), whose agreements include reducing tariffs. (Topic 7 deals with trade agreements in detail.) Each WTO country has trade agreements with its trading partners and these agreements have to comply with WTO rules, including reducing tariffs and removing all other forms of protection of domestic firms against imports.

The policy has caused the exit of inefficient industries, as they failed to compete in international markets. It has also reduces costs of imported capital goods. Further trade liberalisation occurs when free trade agreements are signed with specific countries, removing each signatory countries' tariffs from most goods and services.

## Impacts of tariff reduction

Of all supply management policies, tariff reduction has had the biggest impact on the economies of most participating countries. Tariff reduction has substantially increased the level of competition in most markets, domestic and global, increasing aggregate supply.

## 3. Competition policy

### Introduction

Competition policy is action by the national government to achieve effective competition in each market. Governments aim for every market to be competitive. Competitive markets are likely to produce high quality products, choice of suppliers and reasonable prices as firms compete for market share. Firms try for technical efficiency to reduce costs to allow prices to be competitive. There is incentive to use the latest and best technologies through research, reform, innovation, and investment in new capital equipment.

Industries that compete successfully at national level can be internationally competitive, too. The more open an economy is to international competition, the more important it is to that economy to be competitive, to maximise export earnings and minimise import spending, and so maximise national income.

A number of reforms have been put in place by governments to achieve increased productivity through greater market competition. The following are Australian examples, but in the modern, globalised world, they are very similar to those in other countries. They are all important for increased productivity to repair falling international competitiveness for strong economic growth.

## Law reform

Legislation needed to be reformed. The **Competition and Consumer Act 2010** applies to **all** producers, including government business enterprises and the professions such as medicine, law and so on. It empowers the Australian Competition and Consumer Commission to act as a watchdog over businesses and markets so that they comply with the Act. Heavy fines, and clear, stricter laws have made competition law more effective. The Abbott Government has undertaken further reform of the Act to better prevent collusion and make better decisions in regulating mergers and takeovers.

Australian governments have also agreed to review all laws and to reform them, to remove any restrictions to competition, unless they can be shown to bring a net benefit to Australia. Any new laws must also comply with this principle. A lot of 'red tape' (administrative requirement for paperwork) should be removed. For example, the time taken for council approval of building proposals has been streamlined. Reducing the degree of compliance with regulations reduces businesses' costs and allows them more freedom.

## Infrastructure

### Ecoterm

Infrastructure is an economy's structure of facilities that are used by the community as a whole.

The range of infrastructure facilities includes transport, communications, utilities, energy supplies and medical services. The government's role is to provide infrastructure, or regulate those private companies that own it. Either way, it is the government's task to make sure that the economy's infrastructure is of a high standard and available to all firms and households that need to use it.

### Costs reduced

Improvements in infrastructure are part of microeconomic reform because they **reduce costs for business**. Infrastructure makes transport, communication and so on, easier and more efficient, reducing the cost of its use. Two South Australian road projects provide an example. One such project was to straighten and improve the South-Eastern Freeway into Adelaide from the south-east, and the other, more recent, was the South Road Superway, a north-south elevated freeway to take road traffic through the whole city. These infrastructure reforms reduce costs for transport firms and households, such as the amount of petrol used, wear and tear on vehicles and reduced frequency of accidents.



*Improvements to the South-Eastern Freeway through the Adelaide Hills has reduced costs for transport companies.*

### Capacity increased

Infrastructure reform also increases the economy's productive capacity. Spending on a new Spencer Gulf port is also needed to develop mining by facilitating export of iron ore from Eyre Peninsula. The new port facility will expand production in the mining industry, expanding the economy's production capacity.

### Access to infrastructure

National competition policy provides access to certain infrastructure, owned and operated by private firms, to all competitors in a market.

The infrastructure targeted is railway lines, electricity and telephone cables, port facilities such as grain handling and storage, airports, and gas pipelines. It is inefficient for each firm in a market to duplicate existing infrastructure, for example to build a second railway line from the same mining area to the same port, or a second set of telephone cables between the same locations. Both the ACCC and the Essential Services Commission have

roles in managing access, from deciding to grant access to regulating the price competitors will pay to the firm owning the infrastructure. Telstra was forced to sell access to its existing cables to Optus and AAPT, for example, when the telecommunications market was first opened to competition, but Rio Tinto Australia was more recently denied access to a railway line constructed by BHP Billiton as BHPB argued that they used it virtually full time. All electricity-generating companies have been granted access to the single grid of power lines across the country.

As a result of improved access, barriers to entry are considerably lowered for new firms entering markets such as electricity, telecommunications and mining. (In practice, existing firms fight hard against regulators and new competitors to maintain their market share and their profits to keep shareholders happy.) Access allows more firms to compete in these markets, increasing competition and forcing all firms in the industry to improve their technical efficiency and quality, increasing aggregate supply.

## 4. Labour market reform

### Enterprise bargaining

Reforms in industrial relations have replaced centralised wage decisions with enterprise bargaining. The purpose was to decentralise and deregulate workplace relations and wage negotiations. The government wants individual enterprises to negotiate their own wages and conditions to suit their own cost structures, in order to best compete with other firms in the same industry.

In this way, decisions on wages and conditions can be agreed between workers and employers, whereby both sides can negotiate to have their needs met. Employers have agreed to wage rises, leave entitlements, better conditions, more work or more flexible hours of work, in return for changes to work practices that increase productivity. Workplace agreements can link wage increases to productivity gains and require employees to undergo training to upgrade their skills, and to use more productive technologies. Written agreements can reduce strikes and improve workplace relations: agreements between workers and their employers, jointly agreed to and recorded, are more likely to be adhered to. The aim is for firms to improve labour productivity and hence competitiveness in domestic and global markets, increasing aggregate supply



## 5. Deregulation

Governments around the world have pursued a policy of deregulation. Their aim is to encourage greater productive efficiency by freeing firms from regulations that

- misallocate resources in markets
- restrict competition
- create monopolies
- create barriers to entry
- keep prices high.

### Agricultural markets

Agricultural markets were heavily regulated in most countries until late last century. Since then, deregulation has removed most government intervention in agricultural markets. However, in 2007, global food prices began to rise, increasing world hunger and malnutrition and highlighting the need for further action.

Direct price intervention has been removed in most agricultural markets in most countries, to remove quotas and price support that assisted producers' incomes by keeping prices up. Deregulation forces producers in these markets to compete or leave the market. In this way, prices have been reduced and resource misallocation has been eliminated.

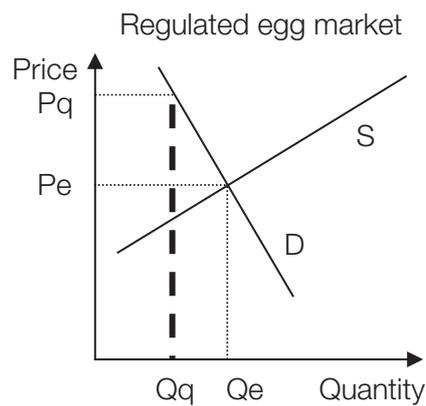


Figure 6.9

The Australian egg market provides an example. Before May 1992, the SA Government maintained a quota on egg producers, restricting SA farmers to a maximum number of hens. This means that resources are not efficiently allocated. The quota kept egg prices at  $P_q$  in figure 6.9, to give producers a reasonable income. However, consumers were paying more than the market price,  $P_e$ , and the quantity of eggs traded was at  $Q_q$ , below the equilibrium quantity  $Q_e$ . To produce less than the market quantity is to allocate insufficient resources to eggs, and consumer wants were not entirely satisfied.

Deregulation consisted of removing the quota. The price of eggs was allowed to fall to  $P_e$  in figure 6.9 and the quantity trade increased to  $Q_e$  as lower prices encouraged more sales. Market equilibrium was restored. After deregulation the egg market was more competitive, and more resources were allocated to egg production.

Similar deregulation in agricultural markets increases supply in those industries and lowers prices. In other words, aggregate supply increases.

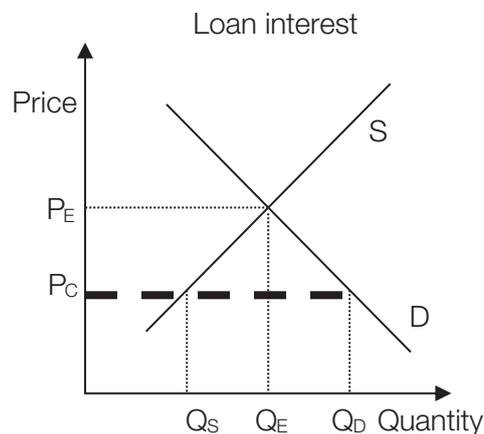


Figure 6.10

## Financial markets

Financial deregulation has occurred in most developed economies. In Australia, it was completed by the end of the 1980s. A number of controls over financial institutions were removed, especially banks, in the 1980s.

- Freed of some central bank controls, banks are better able to compete with non-bank financial institutions. As a result, financial markets are more competitive, pushing interest rates down.
- Foreign banks are allowed to operate in Australia. Increased competition has helped lower interest rates and increase choice and range of products for consumers.
- The exchange rate was floated in 1983, which means that it is now determined by market forces, rather than by government decree. Australian companies were forced to compete with the world, and to improve their productivity – they did and aggregate supply increased.
- Maximum prices (price control) are no longer set for bank loans. In figure 6.10, control is represented by the dashed line. At the controlled price  $P_c$ , banks were willing to supply only  $Q_s$  loans. Once this control was removed, banks were able to increase their rates to  $P_e$  but were also willing to supply increase funds for lending to  $Q_e$ , as the market reverted to market price and quantity.

As a result of greater competition in financial markets, interest rates have come down and more funds are available for borrowing. Loans are more easily available and there is a greater choice of lenders, especially of home loans. However, the Australian banking market is still an oligopoly, dominated by four big banks. The roles of financial institutions (see chapter 5) are all more powerful as a result of deregulation.

Greater competition has allowed more supply of funds by an expanded financial institutions industry. Lower interest rates allow borrowing firms to supply their own goods and services at lower prices. At the same time, more, cheaper finance allows firms to expand their supply. Aggregate supply is increased.

## Airlines

Airline deregulation has also resulted in greater competition and lower prices. There are fewer country-owned airlines, like Singapore Air, and fewer monopolies, although Australia's domestic air services market is still a duopoly, consisting of Virgin Australia and Qantas. US deregulation began in 1978 and Europe's in the early 1990s. Many countries have 'open sky' agreements allowing each signatory country's airlines to compete in each of their domestic markets.

Prices have fallen significantly as a result of deregulation; for example, US prices dropped 40% from 1978 to 2010. Barriers to entry are also significantly lower in deregulated countries. There is more non-price competition, too, such as frequent flyer loyalty programs. Increased competition has lowered prices, and satisfied more wants, increasing aggregate supply.

## 6. Privatisation

### Privatisation policy

#### Ecoterm

Privatisation is the sale of government-owned businesses, or shares in them, to private owners

Early Australian examples of privatisation included Telstra and the Commonwealth Bank of Australia at the national level, and state-owned utilities such as water and electricity supply.

The privatisation movement is based on two beliefs.

- Private producers are more cost efficient because they are driven by the profit motive. Salaried managers of government funds are less likely to be as careful and innovative with costs.
- Private producers feel the pressure of competition more than government producers, who are exempt from problems such as insurance, tax and the need to survive in the market.



*Telstra was sold to private shareholders.*

The pace of privatisation has substantially slowed in the new century, simply because most government assets that can be sold, have been sold.

Outsourcing, though, is a way of handing more government production to the private sector, and government bodies and business enterprises have lifted their use of private firms by handing out aspects of their management such as accounting, legal services and property management (for example, buildings are sold and leased back to outsource the expertise of property management). Governments have also entered into partnership with private firms to build infrastructure such as toll roads. All of these reforms are focussed on better productive efficiency, increasing aggregate supply.

# 7. Taxation

## Tax reform

Tax reform is a major component of microeconomic reform. Its aim is to provide greater incentive to work harder and produce better, increasing labour productivity.

The Australian Government, for example, introduced a Goods and Services Tax (GST) was in 2000, a tax of 10% on almost all goods, and to services as well. It replaced other taxes that added costs to some industries and these taxes were abolished at the same time. A series of income tax cuts compensated for the tax on spending tax. In addition, company tax and capital gains tax rates were reduced.

Income tax cuts are also aimed at compensating for ‘bracket creep’. Bracket creep refers to the movement higher up the tax brackets as workers’ incomes increase. As income increases, higher rates of tax apply, and incomes continually increase. As wages have climbed progressively over the brackets separating tax rates, taxpayers have paid progressively higher rates of tax. If income tax rates were not altered, eventually nearly all workers would pay the highest rate of tax.

## Impact of tax reform

### Income tax

Income tax is paid by employees and by small businesses. The purpose of income tax cuts is to encourage workers to improve their skills in order to win jobs and promotions. In this way, labour productivity should improve. With lower rates of income tax to pay, more people may be motivated to work, and workers may be more motivated to strive for promotion and to improve labour productivity, as wage rises are linked to labour productivity gains.

### Business taxes

The second source of productivity improvement is from taxes on businesses that have been reformed to encourage business success. Improved labour productivity increases aggregate supply.

- **Income tax** paid by businesses can be reduced by deductions allowed for research and development.
- **Company tax** has been reduced to allow bigger profits, allowing firms to accumulate funds for investment into new plant and equipment for future growth. New and better machines and equipment allow the workers who use them to be more productive. Better profits also allow firms to maintain or increase their labour levels, protecting jobs.
- **Capital gains tax** has been halved, also encouraging investment spending.

### Focus Questions

1. (a) Give an example of microeconomic reform.
 

.. .. .

.. .. .
- (b) State one way in which a government might stimulate microeconomic reform.
 

.. .. .
- (c) Draw an AD-AS diagram to show the effects of microeconomic reform.

2. (a) What are the major benefits of increased competition in markets?

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.. .. .

(b) List the main ways in which governments try to encourage competition.

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.. .. .  
.. .. .

(c) Competition reforms placed emphasis on access to existing infrastructure, such as telephone lines. Explain how access to infrastructure increases competition.

.. .. .  
.. .. .  
.. .. .

(d) Explain how competition policy could increase aggregate supply.

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.. .. .

3. Explain the effects of labour market reform on macroeconomic objectives, incorporating an AD-AS diagram in your answer.

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.. .. .  
.. .. .

4. Explain how lower income tax can increase productivity.

.. .. .

5. How do lower tariffs place competitive pressure on Australian industries?

.. .. .  
.. .. .

6. Explain the policy shift away from regulation.

.. .. .  
.. .. .  
.. .. .

7. How can infrastructure reform reduce business costs? Use an example to illustrate your answer.

.. .. .  
.. .. .

8. Why has the Australian Government chosen to privatise airports instead of reforming their own administration of them?

.. .. .  
.. .. .  
.. .. .



9. Josh Frydenberg, Australian Treasurer, said he would push for reforms to help the economy’s recovery from the COVID-19 downturn in 2020. “It is important to go to the supply side” he was quoted as saying in the Australian Financial Review (25-26 July 2020 page 3). “Supply side can actually help create and strengthen the economy”. He also promised to “provide a boost to aggregate demand where appropriate”. The October budget 2020 was expected to include industrial relations reform, tax incentives and deregulation.

(a) Support Frydenberg’s argument in favour of supply side growth to improve economic growth. Incorporate an AD-AS diagram to illustrate your answer.

.. .. .  
 .. .. .

(b) Explain one problem with using supply side policies to achieve economic growth.

.. .. .

10. Complete the following table.

Summary of policy measures and their effects on the economy: use upward arrows to indicate improvement and downward arrows to indicate worsening.

		Price Stability	External Balance	Economic Growth	Full Employment
FISCAL POLICY					
Government spending	Decrease				
Income taxation	Decrease				
MONETARY POLICY					
Interest rates	Increase				
SUPPLY MANAGEMENT POLICIES					
Wages costs	Decrease				
Tariffs	Decrease				
Competition	Increase				
Deregulation	Increase				
Infrastructure costs	Decrease				
Privatisation	Increase				

Examination revision

1.

Governments try to heal global economy

Massive government spending and deep interest rate cuts around the world hold hopes of a rebound in global economic growth. Central banks and national governments have taken unusually big steps to protect their economies from the most dangerous economic crisis since the Great Depression. Recent economic data showed rapidly falling economic activity in the United States, Europe and Asia.

Reported in The Australian Financial Review in January 2009

(a) Explain one reason why the governments would not use supply management policies as their first response to the global financial crisis.

.. .. .

(b) Explain one reason why the governments would continue to maintain supply management as well as demand management policies, in their response to a severe downturn.

.. .. .

(c) (i) State one supply management policy that could be used.

.. .. .

(ii) Explain how the supply management policy you named in (i) above, could improve supply.

.. .. .

(iii) Explain how that same supply policy could improve economic growth.

.. .. .

2.

Business warns IR reform crucial

Since 2010, business groups have challenged the federal government to reform industrial relations to improve labour productivity in manufacturing. Their calls were renewed in the wake of car firms announcing the end of manufacturing in Australia in 2017.

(a) Explain how labour market reform (industrial relations reform) can improve labour productivity.

.. .. .

(b) Explain how improved productivity shifts the aggregate supply curves.

.. .. .

.. .. .

(c) Explain the impact of improved labour productivity on prices and output, incorporating an AD-AS model in your answer.

.. .. .

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.. .. .

## 6.5 Problems of policy

It is useful to continue the analogy of economic management and operating a car, an analogy that has been used by others. Managing the economy, though, has more problems than driving a car. 'Driving' the economy has been likened to driving a car with the front and side windows blackened, because future and even present economic conditions are uncertain. The controls, such as steering wheel and brake, which represent policies, may take effect only after a time lag. Add to these problems a back seat full of pressure groups, advisers and government opposition all yelling different instructions and criticisms, and this analogy tells us clearly that successful management of the economy is not easy. We rely on their expertise to avoid a crash!

### Magnitude of action

One problem is that it is not always clear just how much interest rates need to rise, how big goods and services tax should be, or how high a ceiling price needs to be, and so on. For example, interest rates could be increased to control inflation, but could be too high, or left high for too long, reducing economic activity and triggering a downturn. Similarly, a carbon tax on polluting producers might be set too high, limiting investment spending as well as domestic producers' ability to compete with foreign firms.

### Objectives clash

When governments pursue policies to achieve a particular macroeconomic objective, progress towards other objectives may be hampered.

#### Full employment and price stability objectives conflict

In order to stimulate economic growth and move towards full employment, governments pursue policies designed to increase demand for goods and services. At  $AD_2$  in figure 6.11, the equilibrium level of national income rises to  $Y_2$ . However, the price level also rises to  $P_2$ , increasing inflationary pressure.

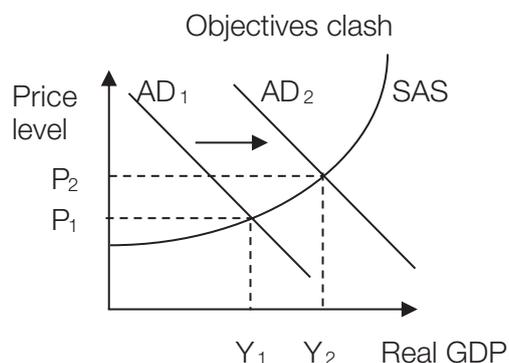


Figure 6.11

Governments have to choose which of these objectives to prioritise. Once inflation is under control, economic growth can be encouraged to reduce unemployment, in a controlled way without re-inflating prices.

#### Full employment and external balance objectives conflict

Expansionary policies, designed to create more jobs, raise demand for goods and services. Again, figure 6.11 represents the paired effects of economic growth and raised price level. Increased domestic prices allow imports to compete better with domestic production, and some consumption spending switches to imports that are now cheaper than their domestic substitutes. Exports also compete less favourably with foreign products. Also, when spending levels are high, producers find it harder to satisfy demand, and import spending increases. These effects of increased aggregate demand make external balance harder to achieve.



## Mix of policies

It is difficult to know which mix of policies to use. Should monetary policy be relied upon to reduce aggregate demand or should fiscal policy also be tight? High interest rates are politically unpopular but a budget deficit creates government debt. Should demand management or supply management policies be used? Demand movements improve some objectives but worsen others. Increased aggregate supply achieves all four but only take effect over the long term.

## Pressure groups

**Pressure groups are groups of people who put pressure on decision-makers to influence decisions in their own interests.** Groups who try to influence the decisions of economic managers vary from banner-waving protesters to representatives whom governments consult. Environmentalists such as the Australian Conservation Foundation, social representatives such as the Australian Council of Social Services, employer groups such as the Business Council of Australia, and workers' groups such as the Australian Council of Trade Unions are examples of pressure groups. Their ideas are needed, but they present a problem because their wants often conflict.

## Advice

Economic managers receive advice from economists, government department officials and government colleagues. Their advice is not always the same, their information is not always correct, and some advice has to be ignored. For example, should the federal government heed advice to wait for higher values before selling assets such as railways and airports? When advice conflicts, choices must be made about whose is the most reliable, what their sources of information are, and how the advisers' objectives differ. Managing the economy with conflicting advice is like driving a car with several back-seat drivers giving different instructions.

## Changes in economic conditions

### Global economy

Even when an effective group of policies has been set, changes in the global economy can occur that might be unexpected and disruptive. Shocks can come from overseas and can be beyond the ability of governments to avoid or control. The global financial crisis began in the USA and spread globally, reducing the ability of financial institutions around the world to lend funds, and reducing in turn the ability of firms and households to spend.

Fluctuations in the exchange rate affect external balance and incomes. Low dollar values boost export sales and increase the value of foreign debt, but also push up the rate of inflation through high import prices. Central banks' plans for interest rates had to take this into account.

Fluctuations in commodity prices also affect domestic economies by changing the value of exports. These impact on external balance as measured by the current account deficit.

### Erratic factors

Sometimes events occur that are very difficult to predict. Droughts and floods, for example, have profound effects on the national economy; devastating crops and cutting export earnings. This has a considerable effect on external balance, helping to drive the current account deficit towards a dangerous level.

### Knowledge

Economic theory has developed from the classical ideas of theorists like Adam Smith to John Maynard Keynes' ideas about macroeconomic equilibrium. However, economic theory is still not adequate to explain everything that happens or to predict the effects of policies and expected changes. If economic knowledge could improve, policies could be set with much greater confidence and much higher expectation of successful results.

### Political objectives

Economic objectives can clash with political objectives. Increased taxes and high interest rates are both particularly effective at losing votes. It is to avoid this problem that central banks have been given responsibility for monetary policy. It would be too tempting for a government, approaching an election, to keep interest rates low, even when increasing rates is the appropriate economic policy. The different political parties have different views, too. A socialist government might spend a lot of money on families and workers, but a conservative government might spend less on social reforms.

### Inadequate statistics

Statistics measuring prices, unemployment, the value of retail sales and other indicators are gathered in ways that create inaccuracies. Surveys are used to compile unemployment statistics and the state and national rates are based on the responses of a sample group. For example, the unemployment rate gives no information about underemployment or hidden unemployment and can understate the unemployment problem. Decisions are based on statistics that are not absolutely reliable, but the best available. Another problem is that trends do not always point in the same direction. It is difficult to plot the economy’s position on the business cycle when, for example, retail sales are on the rise, but housing loans are declining and unemployment figures seem to be fluctuating without a discernible pattern.

### Lagging effect of policies

Like the brake and steering wheel that do not take immediate effect, it may be necessary to wait for the effects of policy settings to become known. Tight monetary policy may not slow spending for 18 months, by which time a global recession or some other external shock might also have an impact on the economy.

### Lagging indicators

Some of the indicators used in planning policy are lagging indicators, confirming the path of the business cycle but not providing information about future or even current conditions. Unfortunately, the main indicators fall into this category. The Consumer Price Index, the Balance of Payments, and the unemployment rate are all lagging indicators. It makes managing the economy like driving a car without being able to see out of the windscreen or side windows, relying only on the rear vision mirror.

### Focus Questions

1. What problems make it difficult to predict the effects of policies?
  - .. .. .
  - .. .. .
2. Explain why demand management policy can never satisfy all four major macroeconomic objectives at once.
  - .. .. .
  - .. .. .
  - .. .. .
  - .. .. .

3. Explain the “magnitude of action” problem.

.. .. .  
 .. .. .  
 .. .. .

4. Give an example of a lagging indicator and explain the problem this can cause for economic policy decisions.

.. .. .  
 .. .. .  
 .. .. .

5. Explain what is meant by an implementation lag.

.. .. .  
 .. .. .

6. Give an example of an external shock to the domestic economy, and suggest what change it would require to economic management.

.. .. .  
 .. .. .

**Examination revision**

**Politics of projects**  
 Infrastructure Australia, adviser to the Australian Government, has criticised federal and state governments for their lack of progress in planning and financing major infrastructure projects. It said that infrastructure is important in lifting productivity, even though some may be “politically sensitive”. One state Labor government gave advice on which projects should be given priority, which differed from IA’s advice to the federal Liberal government.

(a) Why do government decision-makers receive conflicting advice and pressure?

.. .. .  
 .. .. .

(b) Name a pressure group and outline its area of interest.

.. .. .  
 .. .. .

(c) Explain one other problem that can impede the success of economic policies.

.. .. .  
 .. .. .

**Helpful online resources**

National Competition Council  
**www.ncc.gov.au**



Reserve Bank of Australia  
**www.rba.gov.au**



# Topic 7: Globalisation

## 7.1 The Globalisation process

### 1. Globalisation

#### Ecoterm

Globalisation is the process of integration of national economies.

Globalisation is the continuing process of economic integration, aided by rapid developments in transport, information and communication technology. Communication, goods, money, and people move internationally with increasing ease and decreasing cost. Countries increasingly interact in economic ways, in the production, consumption and distribution of goods and services. In particular, the volumes of exports and imports as well as international capital flows are rapidly increasing. More and more prices are set in global markets, more companies export and more operate in several countries. Economic conditions in one economy or region have more impact on other national economies. Less developed countries are able to access foreign investment, which brings with it new production technologies. Huge multinational trade and banking corporations grow even bigger. Africa now has 700 million mobile 'phone subscribers. Globalisation is creating dramatic economic change and is also facilitating social and cultural exchange.



*A container ship in Melbourne's docklands*

All sectors of the economy are impacted by globalisation. Private **firms** pursue profits from expansion into other countries. **Governments** facilitate and encourage their efforts, in pursuit of export earnings, by negotiating trade agreements, deregulating the exchange rate, removing restricting regulations from banks, and generally smoothing the way for private enterprise. **Financial institutions** play their part by providing financial services enabling international money movements; they do this in pursuit of their own profits. **Households** buy more, cheaper imports.

## 2. Aspects of globalisation

### Trade

World trade has continued to grow in the new century, by about 6% a year, at a greater rate than world production, until the global financial crisis. Since then it continued to increase but at a slowing rate. Unfortunately, the 50 poorest countries contribute in total less than half a percent of world trade. Each country is part of the global economy and cannot successfully isolate itself from global economic forces. We know from the circular flow model that income is not only generated from domestic transactions.

### Investment

Each economy's 'overseas sector' provides trading partners and is also an essential source of funds for investment in domestic industries. For many economies, there is a gap between the amount of money saved and the amount spent on investment. The difference is borrowed from overseas and it is referred to as the 'savings gap'. Other countries often find the same savings gap problem and, like Australia, turn to foreign investment to close it. Foreign investment is an important source of economic development, for well-developed as well as developing economies. A bonus is that new technologies are often imported along with investment finance.

### Labour mobility

It is increasingly easy to work in another country, assisted by improved transport and communication technology. The growth of transnational corporations has stimulated labour movement. Employees of such firms as transnational hotel chains and oil companies are able to work in several countries and professionals such as accountants, engineers and medical practitioners find their skills in demand all over the world.

However, the movement of labour is not as easy as the movement of capital. This means that firms can move production to its most efficient global locations but workers find it much more difficult to follow. As a result, much of the world's manufacturing has moved to low-income countries.

## 7.2 Free trade

### 1. Free trade

#### Ecoterm

Free trade exists between nations when all obstacles to trade, such as tariffs, are removed.

**The march of globalisation is fuelled by a widespread belief in the economic advantages of free trade, based on the concept of economic advantage.** Free trade means removal of all the devices that national governments put in place to protect domestic industries from international competition. Nearly every country in the world is a signatory to trade agreements that reduce barriers to trade, in the movement towards free trade. Free trade agreements remove the most trade barriers, and these agreements are bilateral, that is, between two countries. However, even these are not completely free of trade restrictions as they make some exclusions.

### 2. For interest – Comparative advantage

*Author's note: The section on comparative advantage is not required by the curriculum statement, but is useful in understanding the recent focus on trade liberalization by all countries interested in the growth and efficiency of their economies.*

#### Ecoterm

A national economy has a comparative advantage over another economy, in the production of a particular good or service, when it has a lower opportunity cost than the other country.

**The concept of comparative advantage is possibly the most influential of all economic concepts.** In simple terms, it is the idea that world production will be the most efficient, and each country will have the highest standard of living, if each country produces what it makes best and trades. Each country would focus production on those good and services in which it has a comparative advantage, and export the surplus. It would use export earnings to import the goods and services that other countries produce more efficiently.

A country is defined as having a comparative advantage in production of a good if it has a lower opportunity cost than its trading partners. Advantages leading to lower opportunity cost include the type and quality of the country's resources of land, labour and capital. The level of technology available in each type of production also helps determine its opportunity cost.

Any pair of countries will have different opportunity costs, depending on their respective resources and technology.

Australia, for example, focuses more on production of wine whereas Japan focuses more on production of television sets. Figure 7.1 shows different PPCs for Japan and Australia for two goods, TVs and wine.

Japan has a lower opportunity cost than Australia in production of television sets. Using the illustrative numbers in the diagram, Japan's opportunity cost of producing 10 million more TV sets is the loss of 100 million litres of wine, or about 9% of its wine production. Australia's opportunity cost of the same increase, 10 million TV sets, is a relatively big 400 million litres of wine, 25% of its wine production. 25% is a bigger opportunity cost than 9%. Because Japan has a lower opportunity cost, it has a comparative advantage in the production of TV sets.



*Japan has a comparative advantage in TV set production.*

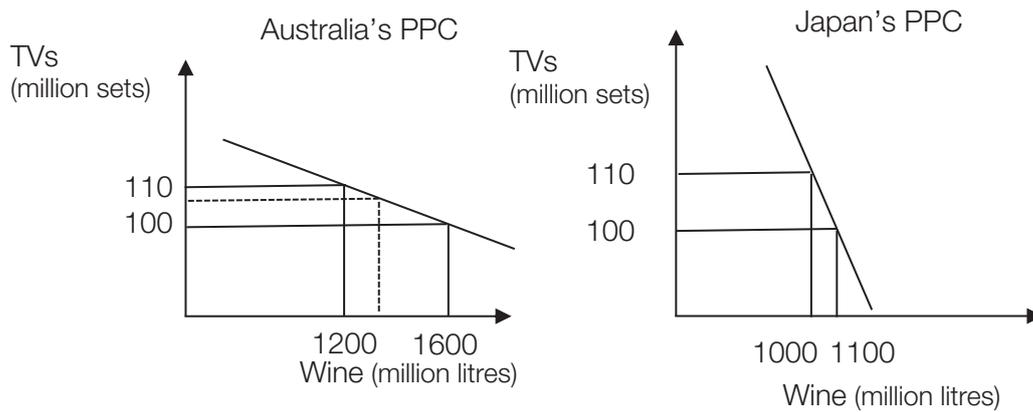


Figure 7.1

On the other hand, Australia has a lower opportunity cost than Japan in production of wine. For Japan to produce 100 million more litres of wine, an increase of 10%, would cost 10 million TV sets, about 9% of its TV production. For Australia to increase its wine production by 10%, to 1320 litres, would cost only a few million TV sets, about 3% or 4% of its TV production. The dashed line represents this. Because Australia has a lower opportunity cost, it has a comparative advantage in the production of wine. A similar comparison could be made with Australian mining and Japanese computer production.



Australia has a comparative advantage in wine production.

It follows that each nation would be better off if it specialised in producing those goods and services in which it has a comparative advantage, meaning the goods in which it has a lower opportunity cost than its trading partner. Japan should focus on television sets and Australia should focus its resources on wine production. The two countries should trade, so that Australia uses its earnings from wine exports to buy television sets from Japan, and Japan uses TV exports to import wine from Australia. Fewer of the planet's resources would be used. Each nation could consume more goods and services than if they each produced everything they needed and did not trade.

It further follows that each nation will be better off if there are no barriers to trade—that is, if free trade is allowed. The benefits of the concept of comparative advantage are accepted by all nations. Consequently, there has been a global movement to reduce levels of protection. However, each nation still wants to protect certain industries from overseas competition, and so, completely free trade does not exist. For example, Australia still protects its cheese industry and Japan protects its rice production.

### 3. Benefits of free trade

#### Standard of living

Governments will only agree to reduce or dismantle tariffs and other protective measures for trade partners who reciprocate by reducing theirs. This creates export opportunities and makes imports cheaper as there is no tax, or less tax, to be paid.

#### Income

Exports generate extra income as domestic firms expand their sales to other countries. The multiplier effect of export earnings means that increased income is translated into even greater demand for domestic production, as well as a bigger savings pool for investment.

#### Prices

Cheaper imports allow everyone's income to buy more goods and services. Competitive pressure is also placed on local producers, keeping down prices of local goods and services. The third factor reducing prices is cheaper imported capital goods, such as commercial vehicles, allowing local producers to lower their costs.

Lower prices for imported and domestically produced goods and services leaves consumers with more disposable income for other spending or saving, increasing purchasing power and raising domestic standard of living.

#### Choice

In addition, a greater variety of goods and services is available with more imports. A wider range of goods and a wider range of suppliers are both available. Greater choice contributes to standard of living. More suppliers also means more competitive markets.

#### Efficient production

Cheaper imports both force and assist producers to be more competitive. Imported materials, such as chemicals, are cheaper. Capital goods, such as equipment, machinery, software and transport, are also cheaper. Cheaper imported inputs keep down production costs for domestic firms, encouraging increased investment spending and employment.

At the same time, some domestic producers face greater competition from cheap imports, sometimes made by the world's best producers. Competition leads to microeconomic reforms to reduce costs, embrace the best technologies and strive for improved quality and better marketing, to satisfy customer wants and preferences in a global market. Producers are forced to adopt the world's best practices to successfully compete.

The removal of protection has forced domestic producers to be more efficient. The pressure of globalisation inspires innovation, that is, new products or new methods. Inefficient firms cease to operate. In this way each country has focused its resource use on its most efficient production. Firms that can improve their methods become more competitive. For example, South Australian tuna fisheries benefitted from a local innovation in fish farming that reduced fishing costs substantially.

Exports also improve efficiency. Freer trade gives local suppliers access to new overseas markets. Expanded sales not only allow economies of scale, but also bring expanded profits to buy new technologies.



#### Income distribution

Removal of protection methods and reduction or removal of import tax cuts prices for consumers but also cuts sales for formerly protected industries, increasing consumers' spending power but reducing incomes of resources owners.

## International relations

Countries have an interest in maintaining good relations with trading partners to protect the growing value of their trade. As trade is so important to a country's economic health and income, leaders will work harder to avoid conflict.

Protection, on the other hand, can lead to conflict. Australia, for example, has been criticised in the past by the Association of South-East Asian Nations (ASEAN) for its protective barriers to imports from Asian countries. Japan and the US have been in dispute over the low level of imports of American cars into Japan. Australia has protested against US subsidy of its wheat farmers. These kinds of problems are reduced with lower trade barriers.

International travel and cultural exchange are encouraged by trade relations, and a greater level of interaction between populations of trading partners is likely to lead to better international understanding.

Not all conflicts have disappeared, however. Wealthier nations are still accused of hypocrisy for, on the one hand, providing aid to less developed countries but on the other hand, maintaining barriers to imports from them. In particular, tariffs on agricultural products still discriminate against developing countries. Neither will all international conflicts of an economic nature be prevented. Many wars have been fought over trade and economic dealings. Cooperation in the Organisation of Oil Exporting Countries (OPEC) did not prevent Iraq's invasion of Kuwait, nor has Australia's military assistance in East Timor prevented a conflict between those two countries over undersea gas deposits.

## 4. Costs of free trade

### Unemployment

Reducing or removing trade restrictions gives foreign producers the opportunity to replace domestic production. They can win customers away from local suppliers with substitutes that are now cheaper. If domestic firms are unable to compete, governments will not assist them, not only preferring efficient resource allocation and lower prices, but to comply with trade agreements.

Losses of firms will cost employment. In particular, much manufacturing has shifted to the developing world, leaving structural unemployment in higher-paid economies. Almost the entire Australian textile, clothing and footwear, and the car manufacturing industries have been lost to cheaper manufacturing in Asia. Those who retained their jobs in successfully competing firms are likely to be working harder than before. However, job losses in some industries needs to be balanced against the overall increase in employment due to globalisation.

### Loss of industries

Losing industries reduces a nation's diversification, leaving open the danger of recession if a narrow range of essential remaining industries strikes hard times. It also increases the risk of economic problems in the event of difficulties with trading partners, as loss of industries reduces self-sufficiency and increases reliance on trade. This will especially apply to economies that rely on a very narrow range of industries, perhaps only one or two. It is less of a problem in countries with very large, affluent populations and a broad range of successful industries, such as the US. Almost the entire Australian textile, clothing and footwear, and the car manufacturing industries have been lost to cheaper manufacturing in Asia, particularly China. Blundstones, a well-known Tasmanian boot maker, announced in January 2007 that it would close down, saying it could no longer afford to operate in Australia. In 2014 all of the remaining Australian car manufacturers, announced that they would cease manufacture by 2017 or 2018.

The twin fears of unemployment and company closures make governments hesitate before committing themselves to trade agreements. There will be powerful pressure applied by domestic industries to keep protection, arguing the need to protect employment. Australia's car industry won freedom from lower tariffs and continuation of government assistance for many years; its most compelling argument was the likely loss of jobs.

### Infant industries

The infant industry argument in favour of protection says that infant industries will find it very difficult to survive in the fierce competitive environment of free trade. Infant industries are new to an economy and so need some time to solve problems of management, technology and 'know-how'. They will need to train personnel, get finance, find markets for their products and improve production techniques that at first are nearly always inefficient and costly. Governments are asked to provide assistance and the traditional form of assistance has been a protective tariff, driving up the price of competitors' products from other countries.

However, this argument is not a strong one. Some infant industries never mature beyond infancy, crying out for continued protection, often able to disguise their ability to get along without it. They take tax revenues away from more productive uses to prop up an inefficient industry. The other problem is that protection in the form of subsidies distorts income distribution, diverting tax from households and other firms to boost profits for owners of firms in assisted industries.

## External balance

Another argument against free trade suggests that protecting domestic industries with tariffs will reduce import spending and so improve an economy's balance of trade. Improving the trade balance will in turn improve the current account balance.

However, protection increases prices of imports by the amount of the tariff, increasing inflation. The efficiency argument in favour of free trade, improving competitiveness and so improving external balance in this way, seems a stronger one.



## Dumping and cheap foreign labour

### Ecoterm

Dumping refers to the sale of very large volumes of imports below cost price, or substantially below domestic prices.

### Dumping

Large volumes of unfairly cheap goods will be able to be dumped in a country with low protection barriers. The result is to undercut the price of domestically produced substitutes, damaging the local industry. Indeed, the purpose of the dumping may be to win market share away from local firms. Imports of very cheap Brazilian orange juice concentrate into Australia have damaged Riverland growers in the past, causing them to throw away whole crops of oranges. However, it is important to differentiate between dumping and selling imports at competitive prices.

### Cheap foreign labour

Workers in developing nations are often paid wages much lower than in developed nations. Developed countries can use tariffs to protect domestic industries, but the World Trade Organisation agreement allows differential treatment for developing countries, allowing them a higher level of tariffs.

## 5. Economic objectives

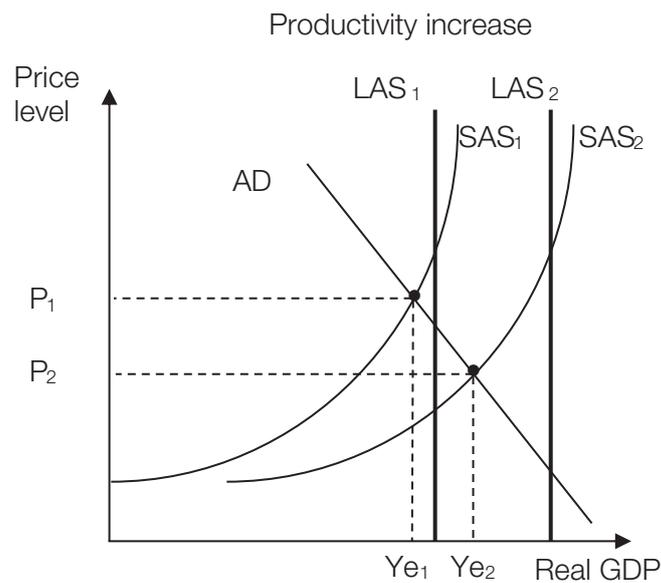
Free trade can help achieve all the four main macroeconomic objectives. The general record of economies that have participated in free or freer trade strongly suggests that competitiveness will improve, economic objectives will be better achieved and economic development will move forward.

### Price stability

Reduced tariffs and abolition of other forms of protection will reduce import prices and increase competition from imports. As a result, there will be reduced pressure of inflation, improving price stability.

### Economic growth

Countries' experiences in the wake of trade agreements have demonstrated that economic growth is very likely to follow. A proliferation of further trade agreements is evidence of this. The theory of comparative advantage also leads us to expect economic growth to follow increased trade.



Domestic firms' responses to increased competition result in greater productivity, as they specialize in areas of comparative advantage. The model in figure 7.2 represents economic growth resulting from the SAS and LAS curves shifting to the right. As well as prices falling to  $P_2$ , real GDP and national income increases from  $Y_2$ .

## Full employment

Given that economic growth is likely to result from free trade, increased labour will be needed. There is likely to be some initial loss of employment, as firms adjust to greater competitive stress when trade barriers are lowered or removed. As some firms shed staff to reduce costs, and as other firms close their doors in the face of global competition, some firms and employees will experience structural unemployment.

## External balance

### Trade

Expanded export earnings may or may not exceed expanded import spending. In Australia, for example, factors such as drought and global commodity prices are powerful determinants of export earnings. China's demand for raw materials to feed its factories has grown along with its exports of manufactures. If the trade balance (the difference between export earnings and import spending) worsens, so will the current account deficit (excess of current outflows over inflows). If the trade balance improves, the current account deficit will reduce.

### Exchange rate

If free trade increases export earnings and import spending equally, there will be no effect on the exchange rate: the exchange rate will not change, all other factors remaining the same (*ceteris paribus*). The effect of free trade on export earnings is to increase the exchange rate, as demand for local currency, to pay for the exports, increases. The effect of free trade on import spending is to decrease the exchange rate, as supply of local currency, to pay for the imports, increases.

However, trade agreements also facilitate foreign investment, and foreign investment increases the exchange rate. This has certainly happened in Australia, as inflows of foreign capital increase demand for the domestic currency.

**Focus Questions**

1. Define:
  - (a) free trade  
.. .. .
  - (b) protection.  
.. .. .
2. (a) Outline the concept of comparative advantage.  
.. .. .  
.. .. .
- (b) Give examples of goods and services in which Australia has a comparative advantage.  
.. .. .  
.. .. .
3. Explain how international trade assists
  - (a) consumers  
.. .. .  
.. .. .
  - (b) producers  
.. .. .  
.. .. .
  - (c) relationships between nations.  
.. .. .  
.. .. .
4. Explain two ways in which free trade improves efficiency of production.  
.. .. .  
.. .. .  
.. .. .  
.. .. .
5. In what circumstances will free trade improve a country's external balance?  
.. .. .  
.. .. .
6. How does free trade create unemployment and loss of industry?  
.. .. .  
.. .. .  
.. .. .
7. What are some non-economic benefits of free trade?  
.. .. .  
.. .. .  
.. .. .
8. What is meant by 'dumping'?  
.. .. .  
.. .. .

Examination revision

Cheap factory labour

There has been a change in the lives of Chinese factory workers, many of whom lived in workers' dormitories in huge industrial areas of China's eastern coastal cities. The Australian Financial Review reported the change in June 2010.

Increasingly, workers found themselves in a position to demand higher wages and better conditions; and they got them.

(a) Explain a reason why Chinese manufacturers might welcome free trade?

.. .. .

(b) How has the 'cheap foreign labour' argument changed, in relation to Chinese imports?

.. .. .

(c) Explain and evaluate one other argument against free trade.

.. .. .

(d) What do you think is the strongest argument for free trade? Evaluate the argument.

.. .. .



## 7.3 Protection

### 1. Forms of protection

#### 🔑 Ecoterm

Protection is government assistance for domestic firms to compete against foreign competition.

Governments have used a range of measures to protect domestic industries from competition against foreign firms. Patriots, domestic firms and their labour forces want governments to protect local firms from losing market share, and hence income and employment, to foreigners.

#### Tariffs

#### 🔑 Ecoterm

A tariff is a tax on imports, usually stated as a percentage of the price.

Tariffs constitute the only form of protection agreed to by the signatories of the World Trade Organisation (WTO). This allows the level of protection to be clearly identifiable.

Tariffs raise the price that local buyers pay for imported goods and this gives local producers an advantage. Figure 7.3 illustrates the effect of a tariff on a domestic market, in this case the rice market.

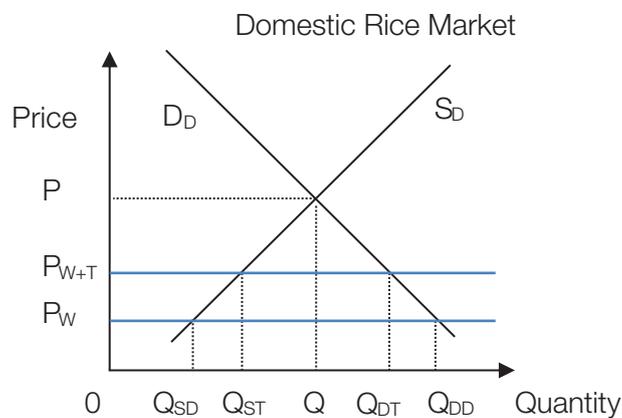


Figure 7.3

Without trade, the market equilibrium price and quantity are  $P$  and  $Q$  in figure 7.3. Suppose international trade is accepted, and the world price of rice is  $P_W$ . At this price, the quantity supplied by domestic rice producers would be  $Q_{SD}$  but the quantity demanded would be  $Q_{DD}$ , and the shortage, between  $Q_{SD}$  and  $Q_{DD}$  would be imported.

If a tariff were imposed, the price would rise to  $P_{W+T}$ . At this new price, the quantity supplied by domestic rice producers would be  $Q_{ST}$  but the quantity demanded would be  $Q_{DT}$ , and the shortage, between  $Q_{ST}$  and  $Q_{DT}$  would be imported. Note that the quantity supplied domestically increases, and the quantity imported falls.

## Other forms of protection

### Quotas

A quota, imposed by government, sets a maximum amount that can be supplied to the market. Quotas limit the number of a particular good that can be imported. The effect of a quota is to restrict the quantity of imports allowing the domestic market to cater for the balance in demand. Australia maintains quotas only on cheese and tobacco.

### Subsidies

A subsidy is a payment by government to suppliers to a particular market, to reduce their production costs. Subsidies are paid by governments to domestic producers. The Australian Government, advised by the Productivity Commission, can decide that a particular industry needs assistance. A subsidy is one way of providing assistance and it gives firms a cost advantage over imported rival products. They are able to market at a lower price because the subsidy reduces their production costs.

European Union (EU) countries still use subsidies to promote dairy and other agricultural products. The US Government pays subsidies to American wheat producers. The Australian government says it pays no subsidies to export industries and complains loudly to its trading partners if they violate the WTO agreement by subsidising some of their export industries. These are a major source of international contention. The artificially low costs of production can lead to surpluses that are eventually dumped into other nations, straining their domestic industries in competition against the cheap, dumped imports.



Subsidies are used usually for social justice reasons. For example, child care and pharmaceuticals are subsidised in Australia, to avoid financial difficulties for working mothers and the sick, respectively.

### Embargoes

An embargo is a ban on importation of a particular good. Drugs and wildlife still attract embargoes for non-economic reasons, but there are no existing embargoes on trade goods. In the past, an embargo on sugar protected the Australian sugar industry.

Other rules and practices of international trade can restrict imports, and from time to time, trading partners accuse each other of deliberately using these as a form of protection rather than their stated purpose.

### Quarantine

Quarantine is the isolation of some imported plants and animals, or the products of plants and animals, to prevent the spread of disease. The term of quarantine needs to be long enough to allow the suspected disease to run its course. Quarantine costs importers time and money and it can therefore serve as a barrier to trade.

### Technical specifications

Technical specifications require that goods sold in domestic markets conform to that country's standards. Cars sold in Australia, for example, must comply with emission standards and must be right-hand drive. Technical specifications can be manipulated to act as a trade barrier. US car manufacturers have expressed frustration at Japan's refusal to accept some car imports because they do not meet the Japanese industry's specifications.

## Effects of protection

### Promotion of domestic industries

The protective measures outlined above are designed to protect domestic industries from the pressure of competition from imports. Promoting a nation's local production in this manner secures employment for its citizens. It also increases domestic production as consumption spending prefers the cheaper, local goods, and local producers attract investment spending. The result of such a shift in AD is economic growth, to  $Y_2$  in figure 7.4. This is the strongest argument for protection.

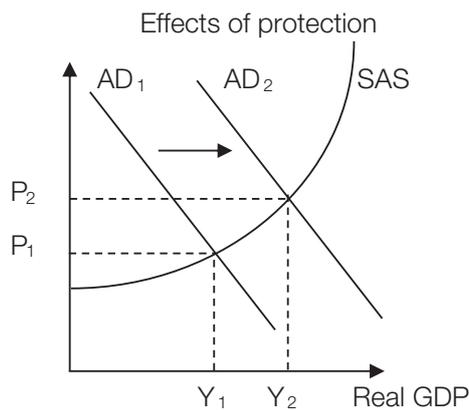


Figure 7.4

However, increased economic growth, comes at the cost of increased prices to  $P_2$ , costing consumers and other producers more for local goods and reducing export sales. Protection of local industries also allows them to perform less efficiently.

### Reciprocal protection measures

In the current global climate of trade liberalisation, protection measures are unpopular and could bring retaliation in the form of reciprocal protection measures imposed by trading partners.

The effects of protection are roughly the opposite of the effects of free trade: that is, the benefits and costs of protection are the costs and benefits of free trade. Refer to a full discussion of these in the previous section, 7.2.

#### Focus Questions

1. (a) What is a tariff? State an example.
 

.. .. .
- (b) How does a tariff redistribute income?
 

.. .. .

.. .. .
- (c) Outline one argument in favour of increasing the tariff on imported wine.
 

.. .. .

.. .. .
- (d) Explain, with the aid of a diagram, the effect of a tariff on the domestic fruit juice market.
 

.. .. .

.. .. .
  
2. Explain how a quota can promote the establishment and growth of a domestic industry.
 

.. .. .

.. .. .
  
3. Explain how protection can foster inefficiency; use section 7.2.
 

.. .. .

.. .. .

**Examination revision**

1. Refer to the article below.

**Dumping controls tightened**

The Australian Government has toughened controls over dumping of cheap goods by foreign companies. As reported in The Australian Financial Review in June 2011, there had been an increasing number of investigations, particularly investigations of Chinese imports, making competition even more difficult for Australian manufacturers.

The new law was introduced by independent Senator Nick Xenophon who was concerned that cheap imported paper products were being dumped

- (a) Dumping refers to the importation of goods
  - A in large volumes at a price much cheaper than locally produced goods
  - B at a price below that in their home country
  - C inferior to locally produced goods
  - D in very large volumes

(b) Explain the difference between normal competitive behaviour and dumping.

.....  
 .....

(c) The article says that “cheap imported paper products” will be “costing hundreds of jobs”. Explain how this could happen.

.....  
 .....

2. Refer to the article below.

**Rudd rejected “Buy Australian”**

Kevin Rudd rejected union demands the government favour local companies when spending and refused to support a “Buy Australian” policy, the Weekend Australian reported in July 2009. He warned that when protectionists “closed their borders to imports from abroad...What happens? The entire global economy shrinks”.

He said “we need to avoid any form of protectionist measure that invites retaliatory protectionist measure from economies around the world”.

(a) Define protection.

.....  
 .....

(b) Explain two types of protectionist measures that a government might use.

.....  
 .....

(c) To what “retaliatory protectionist measures” might Mr. Rudd have been referring?

.....  
 .....

(d) (i) Explain why “the entire global economy shrinks” when nations “close their borders to imports from abroad”.

.....  
 .....

(ii) Evaluate this argument.

.....  
 .....



## 7.4 Trade agreements

### 1. Introduction

There has been a rapid expansion of trade agreements in recent decades as both developed and developing countries try to expand and strengthen their economies and improve their standard of living. The number of international trade agreements is still growing.

In addition to issues of tariffs and trade in goods, agreements now often include a broader list of trade-related issues: trade in services, investment, intellectual property, trade facilitation, competition, and so on. Furthermore, many trade agreements include elements of broader political, social and economic association agreements.

International agreements have nearly abolished non-tariff forms of protection and reduced tariff rates. In practice, however, the European Union, the USA, Japan, and other developed countries still subsidise traditional or politically sensitive industries, in contravention of these agreements. For example, the USA subsidises wheat farmers to keep down the price of their wheat, and hence to protect their overseas markets. Japan places an import tax of almost 100% on imported rice, referring to their need for self-dependence of that staple food. Protection is also still prevalent in developing countries but this is tolerated by developed economies. On the other hand, governments of developed economies still protect their agricultural industries, fearing loss of votes if they do not.

Trade agreements stimulate microeconomic reform. Reduction of trade barriers, including reduced import taxes, subjects domestic firms to foreign competition and forces them to adopt reforms in order to compete successfully. Foreign competition also erodes the ability of firms to wield market power and allows consumers access to a greater variety of goods and services at lower cost.

### 2. The World Trade Organisation

In 1995 the World Trade Organisation was formed to incorporate the General Agreement on Tariffs and Trade, which it replaced. It had 160 members in June 2014 accounting for over 90% of world trade.

The World Trade Organisation's website states that it is 'the only international organisation dealing with the global rules of trade between nations. Its main function is to ensure that trade flows as smoothly, predictably and freely as possible.' It does this by:

- administering trade agreements
- acting as a forum for trade negotiations
- settling trade disputes
- reviewing national trade policies
- assisting developing countries
- cooperating with other international organisations.

At its heart are the WTO agreements that are the legal ground-rules for international commerce and trade policy. There are several clear rules and principles to which member nations sign their agreement.

#### No discrimination

The application and administration of export charges and import duties is to be consistent between nations. Members cannot give more favourable terms to one country than another. If Australia, for example, gives one country special access to particular markets, all WTO members must be given the same access. Exceptions are allowed when countries make free trade agreements with other countries in their region.

The controversial aspect of this 'most favoured nation' principle is that foreigners and locals should be treated equally. It means that consumers must pay the export price for some goods and services. Wines that are exported, for example, sell for the same price in Australia as overseas. This only applies to exported goods and services.



## No quantitative restrictions

Protection is limited to tariffs and no other forms of protection are to be used. This enables the level of protection to be clearly identified and to foster international competition. There are to be no quantitative restrictions on imports. Non-tariff barriers such as subsidies, quotas and embargoes are to be eliminated. However, countries that are experiencing balance of payments difficulties can use these restrictions on a temporary basis.

To develop a stable basis for trade, tariffs, once negotiated, are to remain binding among signatories of a contract of trade. Members make binding agreements not to raise tariffs above a specified level.

## Settlement of disputes

Settlement of differences is to be implemented through consultation and negotiation. The WTO provides mechanisms and procedures for the settlement of disputes. A recent dispute involved the European Union and the Russian Federation. Russia placed a tax on imports of light commercial vehicles from Germany and Italy claiming the tax was an anti-dumping levy.

## Rounds of talks

Negotiations on trade issues are conducted in rounds of talks with agenda items. The most recent of these, based in Doha, was abandoned in 2006 when agreement could not be reached on the major agenda item, that of reducing tariffs on agricultural goods. While the WTO has been successful in liberalising international trade in manufactures, agriculture is still relatively protected. This seriously disadvantages developing nations that generally rely on agricultural exports, whereas developed nations have improved their wealth by increasing exports of manufactured goods.

## 3. Regional trade agreements

Most WTO members have also signed regional and bilateral agreements; there are almost 400 regional agreements (2014).

### Regional agreements

- remove or reduce tariffs and other restrictions on trade of goods and services
- allow freer movement of citizens by removing visa requirements
- increase foreign investment by reducing restrictions on movement of capital
- improve competition rules
- harmonise standards.

### Asia-Pacific Economic Cooperation (APEC)

Since its formation in 1989, APEC has expanded to become the primary vehicle for promoting freer international trade and investment and economic cooperation in the Asia Pacific Region. It acts as a regional forum for most Pacific Rim countries.

#### *APEC Members*

Australia	Japan	The Philippines
Brunei Darussalam	Republic of Korea (South Korea)	Russia
Canada	Malaysia	Singapore
Chile	Mexico	Chines Taipei (Taiwan)
People's Republic of China	New Zealand	Thailand
Hong Kong, China	Papua New Guinea	The United States
Indonesia	Peru	Vietnam

Membership of the WTO is important, but its activities occur on a global scale and therefore may not allow specific regional concerns to be addressed. For instance, some East Asian countries provide restricted access to specific areas of trade through high tariffs on specific goods, concealed by an overall low average tariff rate. These problems may be relatively insignificant to WTO discussions, but are fundamentally important to APEC countries. Regional trade negotiations, such as APEC, allow points of view to be heard in the region, and are conducted to be compatible with the WTO agreement.

## 4. Bilateral agreements

A bilateral agreement is an agreement between two countries, whereas a multilateral agreement is one signed by more than two countries. Most bilateral trade agreements are now known as free trade agreements. The WTO counts 380 FTAs worldwide and another 190 were in negotiation in early 2014.

### Free trade agreements

A bilateral free trade agreement is an agreement between two countries to remove tariffs from imported goods. These agreements need to be checked by the WTO to ensure that they comply with WTO rules.

However, free trade agreements are not completely free of trade restrictions. There are some goods on which a tariff remains. For example, Australia's FTA with the US excluded pharmaceuticals, and tariffs on commodities such as beef will take some time to phase out.

An example of a bilateral free trade agreement is that signed in February 2014 by Australia and South Korea. This agreement uses the two countries' comparative advantages to benefit each.

- Tariffs have been removed, or in the case of agricultural goods, reduced. Korean exports to Australia include cars (Hyundai and Kia are the biggest brands), and consumer electronics (Samsung, LG). Australia exports mainly food and minerals.
- Standards are harmonized: this means that standards for, say, manufactured whitegoods, with respect to power use, water use, sizes and so on, are the same in both countries.
- Movement of citizens between the two countries has been liberalised, allowing Koreans to look for work in Australia, and vice-versa.

Movement of capital is also freer allowing infrastructure, resources, companies or utilities such as electricity, gas, and water to be owned by a foreign firm.

#### *Free Trade Agreements*

<b>Australia</b>	<b>Malaysia</b>	<b>China</b>
New Zealand	Japan	ASEAN
Singapore	Pakistan	Chile
The United States	New Zealand	Hong Kong
Thailand	India	Macau
Chile	Chile	Pakistan
ASEAN	Australia	Peru
Malaysia	Turkey	New Zealand
Republic of Korea		Costa Rica
Japan		Singapore
China		Taiwan
Trans-Pacific Partnership		Iceland
Hong Kong		Switzerland
Peru		Australia
Indonesia		South Korea
		Georgia
		Maldives

## 5. Impacts of trade agreements

International trade agreements have had the effect of liberalising trade between signatory countries, removing barriers to trade, freeing international markets from regulations and making it easier for firms to buy and sell internationally. Firms now have more access to markets overseas, but also experience greater competition in their own country from a greater volume of imports that are cheaper than ever before.

The benefits and costs of trade agreements are essentially those already discussed in section 7.2 as the benefits and costs of free trade. The main benefits are repeated below.

### Benefits of trade agreements

#### Efficiency

By specialising in goods and services in which it has a comparative advantage, producers are more cost efficient, and therefore more internationally competitive. More of these goods and services will be produced than the domestic economy demands and the surplus can be exported. Export earnings will enable the economy to afford imports, giving both consumers and producers access to goods and services in which it has a comparative disadvantage. Producers can also use inputs that Australia does not produce, for example a crude oil that is light enough for aircraft fuel.

#### Productivity

Specialisation and competition combine to improve productivity. Focusing more on production that is well suited to an economy's resources improves productivity, increasing output per unit of input. Competing harder with cheaper imports also forces domestic firms to improve production methods that also increase output per unit of input.

#### Standard of living

Each economy boosts its standard of living by specialising and trading. Consumers can choose from a range of goods and services expanded by imports, and reduction or removal of tariffs allows them to pay lower prices. They therefore can consume a greater number of goods and services, raising their standard of living. The economy should be able to achieve economic and employment growth.

Countries achieving export-led development, such as China, have experienced reduced poverty with sustained rapid economic growth. The Chinese population has increased its average income and can afford to buy more goods and services. China is now the world's second biggest economy, increased trade playing a significant part in that rapid growth.

#### Global production

Global production is greater as a result of increased trade because each country produces more efficiently. Economic growth, national income, and employment are all significantly increased as a result.

#### Economies of scale

Exporting to world markets allows producers to increase sales, and hence increase the scale of their production, enabling them to benefit from economies of scale. For example, larger scale production allows firms to buy raw materials and components in bulk, reducing costs per unit.

#### Foreign investment

Trade agreements include clauses that remove barriers to investment in each country's economy. Greater access to foreign investment enables domestic firms to gain from the introduction of new technologies and skills. When capital moves freely between countries, funds for investment are more easily acquired. The comparative advantage argument applies to capital, too, as funds are able to move to their most efficient use.

#### International relations

International trade promotes peace by helping to foster and promote positive political and strategic relations between countries. Trade assists in overcoming possible hostilities between nations and helps to encourage trading nations to assist each other in times of disaster.

Free trade removes tariff protection retaliation. When one country tries to protect its industries against imports, it is not uncommon for other countries to retaliate with protection from that nation's exports.

## Costs of trade agreements

Globalisation is not without its opponents. Anti-globalisation protesters, their faces masked and wearing white anti-chemical suits, fought police during a meeting of G20 delegates in Melbourne in November 2006. A newspaper cartoon has suggested that protesters are like tiny creatures trying to stop the progress of an enormous globe rolling down a steep hill. What do the opponents of globalisation fear?

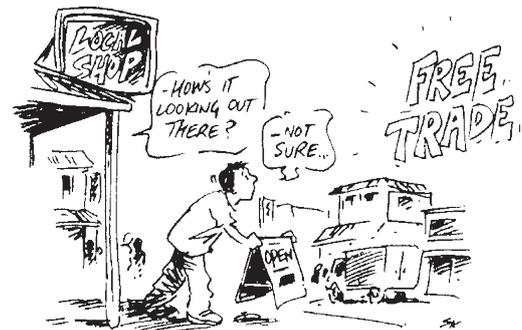
## Human rights and exploitation

Freer international trade fosters enormous multinational companies, and these companies can make a big difference to small, developing economies. Foreign companies operating locally are expected to provide assistance to small economies, rather than imposing damage. Governments of such countries are tempted to ignore exploitation of their indigenous labourers or abuses of the environment or human rights in order to encourage large companies to operate there. Clothing companies such as Nike and Gap have been accused of labour exploitation. Oil and mining companies have been accused of environmental vandalism.

## Market share and employment

Employment initially falls as protection is reduced because domestic industries lose market share to imports. The four Australian car manufacturers' share of the new car market fell from 80% in the mid 1980s to 60% in the mid 1990s to 21% in 2006. Hurried by removal of government assistance, the whole industry will be gone by 2018.

If local firms and industries are able to compete successfully, employment in those areas may increase again, and exports may even grow. This should happen if comparative advantage can be used. However, if competitiveness is not improved, then employment is reduced and market share of local firms falls in favour of foreign firms. Unemployment in industries that compete with imports is structural unemployment and hopefully short term. The unemployment cost in the short term should bring the benefits outlined above in the long term.



## Foreign ownership

Foreign ownership of domestic resources increases with foreign investment and sales of domestic firms to foreign owners. Countries lose sovereignty over their resources. They may also be pressured to provide cheap power and other concessions to win the presence of a large multinational company, vital to its development and employment. Companies will make decisions in their shareholders' interests and these may not be in the best interests of their host country.

Many foreign competitors are feared by particular industries because they are very large and powerful multinational companies. Some of them have annual sales figures higher than the GDPs of many small nations. General Motors is an example. There is concern about the ability of such companies to exert political pressure and that, acting in their own interests, they may make decisions that are unfavourable to the local economy.

## Infant industries

Infant industries are industries that are newly developing. They tend to face much higher costs of production in the early years. In an industry that has not previously operated in a country, firms have to develop their own technologies. There are limited opportunities for economies of scale and higher overheads in setting up and training. It is assumed that with protection, firms in new industries will eventually be able to become competitive on the world market. However, in the absence of protection, firms in infant industries may be severely limited in their attempts to enter markets in competition with large established companies.

There is an opposing argument. Evidence has suggested that many industries have become over-reliant on this form of protection and have not become efficient but can continue to operate inefficiently behind a protective barrier.

## Dumping

Dumping by large overseas companies of massive quantities of goods into the domestic market, possibly below the cost of production, is a danger that is enhanced when import duties and other trade restrictions are reduced. Dumping of a large volume of very cheap goods can drastically cut sales of local firms, cause them to reduce staff, throw away tonnes of products or even close down. It is against WTO rules and a country can lodge a protest with the WTO; penalties can apply.

## Government revenue

Government revenue is reduced when tariffs and import licenses are reduced or removed.

## Unequal gains from trade

Protection has been reduced on manufactures by most countries. However, agricultural protection has not experienced the same reduction. This favours developed countries that manufacture and export the bulk of internationally traded manufactures. Developing economies still rely generally on agricultural production and still have difficulty exporting them.

### Focus Questions

1. Explain the effects of a country's participation in trade agreements on:
  - (a) import spending
 

.. .. .

.. .. .
  - (b) inflation
 

.. .. .

.. .. .
  - (c) national security
 

.. .. .

.. .. .
  - (d) microeconomic reform.
 

.. .. .

.. .. .
2. Outline two similarities and two differences between the World Trade Organisation and the Asia-Pacific Economic Cooperation agreement.
 

.. .. .

.. .. .

.. .. .

.. .. .
3. State four things a country agrees to do as a member of the World Trade Organisation.
 

.. .. .

.. .. .
4. (a) Which of the costs of trade agreements is the most damaging, in your opinion? Support your decision.
 

.. .. .

.. .. .
- (b) Which cost is the weakest argument? Again, support your decision.
 

.. .. .

.. .. .

.. .. .



Examination revision

Free Trade Agreement

The ASEAN Australia New Zealand Free Trade Agreement, signed on January 1 2010, Included reduced import taxes in ASEAN countries, such as the Philippines, on goods such as wine and copper.

The fast-growing Asian region is increasingly hungry for a wide range of quality goods and services from Australia and New Zealand.

(a) Explain the expected impact of the ASEAN Australian New Zealand Free Trade Agreement (FTA) on sales of Australian wine to the Philippines.

.. .. .

(b) (i) Outline two benefits the Agreement might provide for the Philippines.

.. .. .

(ii) Outline two costs the Agreement might impose on the Philippines.

.. .. .

(c) Explain how you would expect the FTA to affect Australia's

(i) economic growth

.. .. .

(ii) rate of inflation.

.. .. .

(d) State two ways in which the FTA is different to the World Trade Organisation agreement.

.. .. .

## 7.5 Transnational corporations and capital mobility

### 1. Transnational corporations

#### Ecoterm

A transnational company controls production in more than one country.

Transnational companies are registered and own or control operations in more than one country. They will have a head office and, for example, manufacturing, sales or service divisions in each country. Technically, they do not consider any particular country their home (BusinessDictionary.com). However, the term is almost always used in the same way as 'multinational company' (for example, Oxford Dictionary). Coca-Cola, Ford, IBM, Toyota, General Motors, Nike, Nestle, Unilever, British Petroleum, Royal Dutch Shell and Microsoft are examples of transnational companies. Ford Motor Company, for example, has its headquarters in the US, but car parts are manufactured in a variety of countries and different Ford cars are assembled in different countries. Transnationals move their operations to where they can operate the most cheaply and efficiently. Tax rates or labour costs may attract a multinational to a particular country. Governments so value investment by these vast corporations that they compete to host them by offering incentives. Several multinational corporations have annual turnovers much larger than the GDPs of many countries.



*Ford Motor Company is a transnational company.*

### Impacts of transnational corporations

#### Investment

Transnational corporations (TNCs) have the power to make an impact on any economy, and to make a major difference to a small, late-developing economy. Governments welcome foreign investment and are particularly fond of direct investment, such as that provided by TNCs.

TNCs provide jobs and can increase the income of local workers and also pay taxes to governments. They bring management knowledge, new technologies, and marketing networks with them, contributing to economic development. Exports can be generated and import-replacing production can also result from direct investment by these big companies.

Transnational financial corporations provide much-needed funding for capital investment that develops resources, such as in mineral exploration and mining, where large, risky projects are difficult to finance with domestic savings. Lloyds, a shipping insurance company, and Barclays, a merchant bank, both based in the UK, are examples of transnational finance companies.

#### Profit repatriation

On the negative side, the profits and dividends of TNCs are paid to owners of the companies, most of whom live elsewhere, meaning that much of their profit leaves the host country. Income outflows add to any current account deficits but can be offset by the new firms' export earnings.

#### Unpatriotic decisions

TNCs can pull their operations out of a country if there is better profit to be made elsewhere. Multinational financial institutions will do the same, but faster—money can be moved out of a country faster than machinery.

## Competition

These huge companies have the financial power and economies of scale to be formidable competitors. It will be difficult for a fledgling information technology company to win market share in its own country in competition with Microsoft, for example. In this way, multinational companies can keep domestic firms small with the barriers to market entry that they have the market power to erect and maintain.

## Global bullies?

Among the concerns that create hysteria and spawn hostile websites and protests against globalisation are the fears that MNCs can out-muscle governments of small economies and perpetrate injustice and environmental damage without answering to any national government. There have been some notorious abuses, both of human rights and of the natural environment, from South-East Asian clothing sweatshops to chocolate slave labour in West Africa. Nike found that some sub-contracting companies in South-East Asia were using child labour to make their shoes. The Big Australian, BHP, caused environmental damage to the Ok Tedi River in Papua New Guinea while mining for copper. China has experienced dumping by some multinationals. Coffee growers in Peru are paid about fifty cents for each large bag of coffee beans, a tiny proportion of their eventual value.

But irresponsible and unethical behaviour by business is not confined to transnationals. Small businesses might also behave poorly in their desperate struggle to survive commercially. Scandalous conduct by the very big firms is simply much more noticeable and becomes known worldwide. It is not only McDonalds that produces packaging that lasts only a few minutes, to then become litter. Other firms do so too, but McDonalds produces enormous amounts of it, and is a well-known transnational company.

Nor are transnationals all-powerful. They can fail, as WorldCom, Enron and Arthur have demonstrated. Many multinational companies are struggling to make their overseas subsidiaries profitable. They often have little control over their international operations, let alone over governments or the process of globalisation.

It is true that some big corporations have the ability to monster small governments, who may allow environmental degradation and labour exploitation in their bid for economic growth. Shell's operations in Nigeria provide an example of this. The lesser-developed nations are unlikely to have sophisticated laws and regulations to deal with these problems.

## Need for regulation

Governments, in the end, are more powerful than companies, however big. However, a system of laws to effectively regulate big business is needed. Developed economies already have some laws and regulations to control how companies exploit the environment and deal with labour and other firms. Many developing countries, like Papua New Guinea, have less developed business regulation. China is working on ways to control dumping. The European Parliament is taking the first steps by government to regulate the conduct of multinational companies based in Europe as they operate in other countries, so that they can deal with labour and environmental abuses in developing countries. Governments of developing countries need assistance to build a system of commercial laws and regulations.



## 2. Impacts of capital mobility

Capital flows are money flows for capital purposes, that is, for investment. Growth of transnational companies and multiple trade agreements by most nations have significantly increased capital mobility. This means that money for investment purposes flows increasingly easily and in increasing volumes. Money is more quickly, easily and cheaply moved, electronically, across national boundaries and distance is not a problem. It is having considerable impacts on economic growth and external balance in most countries on the globe. It is speeding up the process of globalisation by further connecting national economies.

### Benefits of foreign investment

#### Growth and development

Investment stimulates economic growth, with the added effect of the expenditure multiplier (refer to chapter 5.2). Firms, including transnationals, are able to expand with the use of investment capital, and affected economies grow with them.

Investment expands existing industries, creates new industries and builds infrastructure for economic development.

As a result of greater economic activity, employment is created; total incomes and standard of living both increase; aggregate demand increases; and tax receipts for governments increase, paid by new firms and increased employed labour.

#### Technology and markets

New technologies and training are often transferred to domestic firms along with direct investment by foreign firms. New markets also become available as a parent firm shares its markets and marketing expertise.

#### Microeconomic reform

Better technology and increased competition from a greater number of businesses should create microeconomic reform, increasing aggregate supply.

### Costs of foreign investment

#### Income is repatriated

Interest payments on loans, profits and dividends are paid to owners of capital who live in other countries, meaning that a percentage of national income leaks away from the domestic population.

#### Government incentives

To encourage foreign investment, governments offer incentives that offset the gains from extra tax receipts.

#### Foreign ownership

Foreign investment results in foreign ownership of companies or shares in companies. Investment in infrastructure results in foreign ownership of infrastructure. In terms of economics, this should present no problems, apart from repatriation of profit. However, giving up sovereignty over resources causes concern.

#### Foreign decisions

Foreign owners of businesses will sometimes make business decisions in the interests of that company, rather than in the interests of the host economy, when those interests clash. This can happen if it becomes financially less viable to keep operating in the host economy, and the foreign company begins to shed labour or even close down its operations altogether. Most developed nations have met that problem as manufacturing is moved to a cheaper location, usually a less developed country.

#### Direction of capital flows

When capital is free to flow, it flows to its most efficient uses, wherever in the world that is. It will be most efficiently used in production that is in demand, and producers will be able to pay the best rate of return. There is competition for capital between those who need funds for investment. To attract foreign investment, governments

sometimes offer tax concessions or tax holidays for a specified time, as Ireland did to stimulate its period of rapid growth in the early 2000s.

Because private capital is supplied where the best rate of return is available, combined with the lowest risk, developing countries often miss out on needed capital because lenders regard their political or security situation as risky. Global institutions, in particular the International Monetary Fund and the World Bank, discussed in the section 7.6, are more likely sources for troubled countries.

### External balance

Inflows of capital make a big impact on a country's external balance. As discussed in chapter 4.4, capital inflows create demand for the domestic currency and push up the exchange rate. However, income repatriation as investment turns into profit creates current account outflows, worsening external balance in future years.

#### Focus Questions

1. (a) What are transnational corporations?  
 .. .. .
- (b) Give a few examples.  
 .. .. .
2. Why do governments encourage transnational corporations to operate in their country?  
 .. .. .  
 .. .. .  
 .. .. .
3. Are the costs of profit repatriation to owners of transnational corporations greater than the economic growth benefits that they bring?  
 .. .. .  
 .. .. .
4. For what reasons do people fear transnational corporations?  
 .. .. .  
 .. .. .  
 .. .. .  
 .. .. .  
 .. .. .
5. In what ways should the operations of transnational corporations be controlled?  
 .. .. .  
 .. .. .
6. Summarise the impacts of international capital flows.  
 .. .. .  
 .. .. .  
 .. .. .  
 .. .. .

**Examination revision**

**Ring of fire**

Philippines law has, in the past, been confused about whether to allow foreign firms to operate mines in its country. The Government is keen to encourage capital flows from foreign sources but a number of Philippines organisations have campaigned against exploitation by foreign capitalists.

An “Economist” article in 2004 explained that the country sits on the Pacific volcanic “ring of fire”, and so “there should be plenty to dig up”.

(a) Explain what is meant by “capital flows from foreign sources”.

.....

(b) (i) Explain two reasons why the Government is hoping for “a surge in foreign investment”.

.....

.....

(ii) Explain two reasons why other organisations might fear “exploitation by foreign capitalists”.

.....

.....

(c) Explain one effect of foreign investment on the Philippines balance of payments.

.....



## 7.6 Global Institutions

### 1. Introduction

The two major global institutions working for economic development in poor countries are the International Monetary Fund and the World Bank. Both of these institutions advance loans on favourable terms, either cheap loans or even grants. Even so, the poorest countries generally have the heaviest debt burdens and struggle to repay loans on any terms. They both also provide technical expertise and training to governments as well as policy advice.

Their names are confusing; as John Maynard Keynes said at its inauguration, the Bank should be called a fund and the Fund should be called a bank.

*Roles of IMF and World Bank*

IMF	World Bank
<ul style="list-style-type: none"> <li>Promote global financial stability</li> <li>Encourage exchange rate stability</li> <li>Act as forum for international cooperation</li> <li>Other financial assistance to help with balance of payments problems</li> </ul>	<ul style="list-style-type: none"> <li>Promote long-term economic development</li> <li>Project financing including infrastructure, energy, education, health</li> </ul>

### 2. International Monetary Fund (IMF)

#### The fund

**The IMF is a global institution set up to lend money to governments for the twin purposes of stabilising currencies and maintaining order in international financial markets.**

It is a specialised agency of the United Nations (UN), set up in 1945 to help promote the health of the world economy. The governments represented at a 1944 UN conference decided on the IMF as the central part of a framework for economic cooperation that would avoid the disastrous economic policies that had resulted in the Great Depression of the 1930s. Its headquarters is in Washington D.C., and it is governed by representatives of its member countries. It has 184 members, a near-global membership. Its website address is <http://www.imf.org>

#### Aims

The IMF works for global prosperity and to avoid crises. Its first Article of Agreement sets out its main responsibilities in its role as a global central bank. These are:

- promoting international monetary cooperation
- facilitating balanced growth of international trade
- promoting exchange rate stability
- assisting in establishing a multilateral system of payments.

#### Roles

To achieve these aims it has four main functions:

##### Central bank

The IMF is the central bank of the international monetary system, operating in much the same way as each country's central bank. It coordinates a system of international payments and currency exchange that allows business to take place between countries. It tries to eliminate restrictions that hamper international business and world trade. Its establishment was a reaction to some combative pre-war policies, to replace these with international cooperation. It acts to maintain a stable set of exchange rates and a supportive international monetary environment.

##### Monitoring and policy advice

The IMF monitors economic and financial developments around the globe as well as the policies of its members. It dispenses policy advice in line with achievements of its goals. For example, in 2013 it urged the Japanese government to control budget deficits and use structural reforms to improve productivity (more supply policy and less demand policy).

## Lending

It lends to members with balance of payments problems. That is, a country might have problems affording its essential imports as well as making its loan repayments and other income transfers. For example, a loan of an extra \$52 million dollars was approved to Kenya to help it cope with a severe drought. Kenya was already in receipt of a three-year \$193 million loan as part of the IMF's Poverty Reduction program. Such loans to low-income countries are made at concessional interest rates.

## Technical assistance

The IMF strives to be the centre of competence for international finance and sends technical advisers to work with national governments. The IMF helps governments set up and manage effective financial systems and deal with change. For example, when the Soviet Union collapsed, Russia and other former members of the USSR had to make the transition from a planned economy to a market economy. They also had to change from one centrally organised union to several sovereign countries. The IMF helped these countries to set up treasury systems for their central banks.

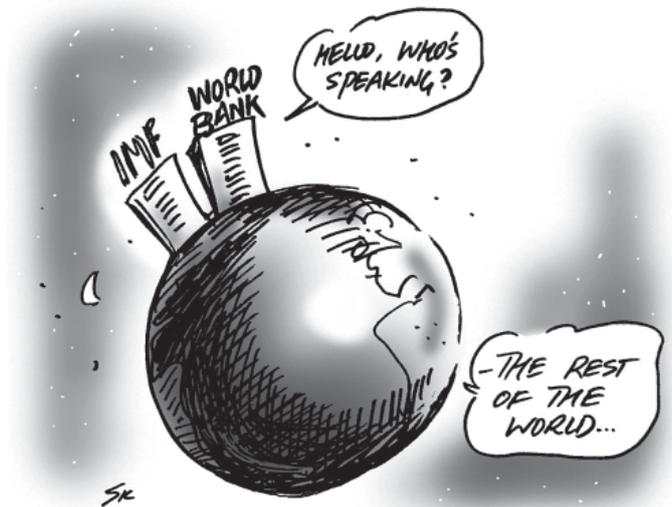
## 3. World Bank

### The bank

The World Bank is governed by representatives of its 188 member countries, in the same way as the International Monetary Fund. However, in practice it is run by a small number of economically powerful countries.

It is not a bank in the usual sense as it does not operate to make a profit, aiming instead to assist economic development of poor countries. It is funded by member country contributions and by shareholders who invest their money by buying World Bank bonds and receive a return on them.

It provides funds to countries too poor to raise private investment. Its three types of funding are low-interest loans, interest-free loans and grants. The type of funding is determined by the level of need. The World Bank has set Millennium Development Goals and funds projects designed to achieve these goals. Besides providing funds, the World Bank offers advice to governments and also conducts research to analyse poverty issues and the performances of projects and governments. Its website address is [www.worldbank.org](http://www.worldbank.org)



### Aims

Its mission statement is:

- to fight poverty
- to help people help themselves and the environment

### Loans

Loans are advanced for two main purposes:

- investment loans for capital works or production of goods and services
- social development projects.

### Administration of loans

The process:

- A borrower has to prepare a project proposal and apply for funds. Projects might be building schools or health centres, providing water or electricity, fighting disease or protecting the environment.
- The Bank and borrower agree on the development objective of the project.

- They then jointly set performance indicators that will measure to what extent the project is achieving its stated objective.
- To be approved, an environmental assessment needs to be undertaken by all projects.
- The Bank supervises the use of funds in the project, to ensure that it is economically, financially, socially and environmentally sound.
- It finally evaluates the project's results.

### Analysis and advice

The Bank undertakes research into broad issues such as poverty, the environment, trade and globalisation. It can analyse a country's economic prospects or its financial sector performance. It studies the degree and causes of poverty, trade enhancement and social safety issues.

The World Bank Institute is a source of learning; it conducts programs to enhance the skills of its clients, conducting courses, supplying policy consultants and coordinating knowledge networks. In these ways, it tries to promote environmentally and socially sustainable economic development, including health, nutrition, population, finance, law and justice.

## 4. Impacts of global institutions

### Development

The International Monetary Fund and the World Bank have lent money for development. Countries that use such funds usually have problems such as large current account deficits, low levels of foreign reserves, high foreign debt burdens and over-valued exchange rates. Some economies in transition from command to market systems have been customers.

Programmes funded by these two global institutions are usually effective in improving a country's external balance. They are also successful in generating sustainable economic growth, although there has often been an early period where growth has suffered due to restraints on government spending.

### Incomplete projects

A large proportion of programmes funded by these institutions are not successfully completed, due in part to domestic political conditions that hinder the chances of economic reform. Some countries borrow several times. Successful programmes reduce the need for further assistance.

### Conditions attached

The recipients of the funds are instructed to employ economic policies designed to restore a sustainable balance of payments in the short run while encouraging long-term growth. Sometimes the conditions are unduly restrictive and sometimes the advice is poor.

### Future investment

An agreement to participate in such a programme reassures private investors that the country is willing to undertake reform. Funded programmes are designed to encourage a flow of private lending but this does not usually happen. However, creditors have been more willing to reschedule the country's external debt.

### Focus Questions

1. What is the International Monetary Fund?  
.. .. .
2. (a) What is meant by the central bank function of the IMF?  
.. .. .  
.. .. .  
.. .. .

(b) Outline its other three functions.

.. .. .  
 .. .. .  
 .. .. .

3. (a) What is the World Bank?

.. .. .

(b) What types of funding does it provide?

.. .. .

4. (a) To whom is funding provided by the World Bank?

.. .. .

(b) Where does the World Bank get its finance?

.. .. .

5. Why does the World Bank involve itself in the projects it funds?

.. .. .  
 .. .. .  
 .. .. .

6. Summarise the impacts of programmes funded by global institutions.

.. .. .  
 .. .. .  
 .. .. .

 **Helpful online resources**

Asia-Pacific Economic Cooperation (APEC)

**www.apec.org**



World Trade Organisation

**www.wto.org**



World Bank

**www.worldbank.org**



International Monetary Fund

**www.imf.org**



Australia's Department of Foreign Affairs and Trade (for concepts, arguments and details to explore trade agreements and free trade arguments)

**www.dfat.gov.au/trade**



# Topic 8: Poverty and Inequality

## 8.1 Economic development

### Ecoterm

Economic development is a process that generates and sustains widespread improvements in the welfare of a large proportion of the population.

Economic development relies on economic growth, but is more than economic growth. Economic growth increases consumption of goods and services but development also improves aspects of welfare such as health, education and employment opportunities. When economic development occurs, poverty and inequality are both reduced.

### 1. Economic growth

**Economic growth is the key to economic development.** It improves a country's standard of living, defined as the value of goods and services consumed. Consumption of basic goods and services frees people from the struggle to survive and allows them to become involved in society. Increased production of goods and services increases the general standard of living as it satisfies more wants than in the previous period.

It also generates increased income to improve people's ability to buy more goods and services. Some of the extra income is taken by the government in taxation, which provides more revenue for spending on public services. In these ways, economic growth drives human progress and reduces poverty.



### GDP per capita

The benefits of increased production diminish if the population rises at the same rate as GDP or higher. Economic growth must surpass population growth for increased GDP per capita (per person). GDP is divided by the population to give GDP per capita, an indication of the value of goods and services produced by the economy available to each person on average.

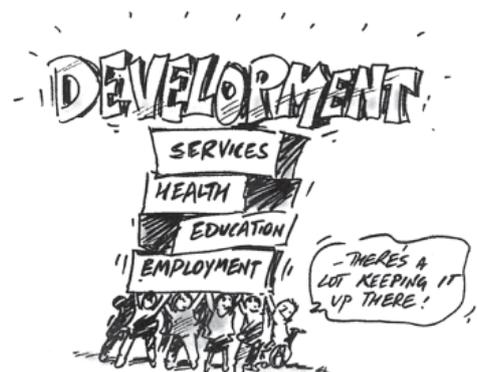
GDP per capita must increase for economic development to occur. However, the GDP per capita measure can be misleading if there is a high degree of inequality between social groups. GDP per capita tells us nothing about how equitably national income is distributed. Some oil-rich countries of the Middle East have a great divide between those few who have made immense fortunes and the overwhelming majority of the population who are quite poor. If an increase in national income is enjoyed by a minority while the majority are no better off, then according to the definition we have used, economic development has not taken place.

### 2. Welfare aspects

The United Nations 'Human Poverty Index' lists literacy, malnutrition in children, early death, poor health care and access to safe water as aspects of poverty that are *more* important to alleviate than increased income. Improvement in human welfare, and poverty reduction, require more than growth in per capita income.

Welfare aspects of economic development include:

- Access to quality education
- Access to health services, clean water and control of diseases
- Participation in international trade
- Capable, transparent economic management
- Capital accumulation
- Investment in industries
- Investment in human capital
- Compliance with principles of ecologically sustainable development
- Reduction of poverty and
- Reduction of inequality





*Access to clean water in Africa*

## 8.2 Poverty and inequality

The first major focus of development is to remove poverty and the second is to improve equality. Poverty and inequality are the focus of most global programs and reports dealing with development, and the focus also of measurements of development. For that reason it is useful to look more closely at these two concepts.

### 1. Poverty

#### Key Ecoterm

Deprivation of essential assets and opportunities to which every human is entitled. (The Asia Development Bank's definition [www.adb.org](http://www.adb.org))

#### Absolute poverty

The above definition is often referred to as *absolute* poverty; this is to distinguish it from *relative* poverty, meaning poor in relation to other groups in society. Our discussion of poverty will be confined to absolute poverty. Relative poverty will be discussed in the section on inequality.

Poverty means poor nutrition and lack of access to basic housing and education and primary health services. It may entail lack of clean water and sanitation. The lives of the poor are often shaped by decisions of others, as it is usually not possible to participate fully in society.

#### Poverty line

#### Key Ecoterm

The poverty line is a level of income below which one is defined as poor by government standards. ([www.merriam-webster.com/dictionary](http://www.merriam-webster.com/dictionary)).

**Development has only occurred if, as a result, fewer people live below the poverty line.** It is useful to think of poverty as an income below that needed to afford basic standards of food, clothing, shelter, health care and education. It is an income below which full participation in society is not possible. Full participation includes voting, education, work, cultural knowledge and access to current information.



The World Bank has identified two global poverty lines.

- In the lowest developed countries, primarily in Africa, those living on less than \$US1 per day are living below the level of income that will allow them access to the basic goods and services essential to live. There are 1.2 billion people in this category, out of a global population of about 6 billion (worldbank.org 2014).
- The other poverty line refers to those people in middle income countries, for example in East Asia and Latin America, living on less than \$US2 a day. There are 2.8 billion of these. In Australia, the ABS uses a measure of half the median Australian income or \$300 a week for a single person (2011). Clearly, it is more expensive to live in some countries than in others.

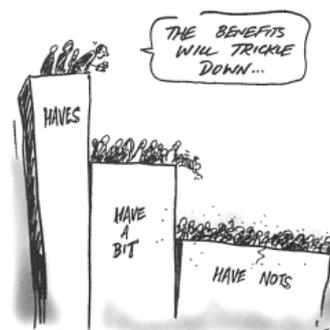
For an economy to afford to support people on inadequate incomes, **most people's incomes need to be the result of work**, rather than government handouts, as government benefits are paid for from taxes received from those who do work. Therefore, development must involve expanded employment opportunities.

### 2. Inequality

**Inequality refers to a wide gap between high and low incomes.**

#### Domestic inequality

Inequality exists in a particular country if there is a wide difference between the wealthiest and poorest groups.

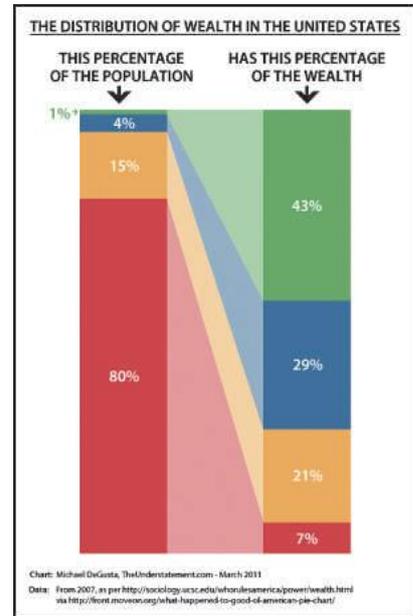


## International inequality

Inequity between nations has caused a great deal of international friction and created some of the world's greatest challenges. The richest fifth of the world's population earn 85% of the world's income, whereas the poorest fifth receive 1.4%!

### A little economic history

Before 1700, there was not the division between rich and poor countries that exists now. Most countries had very similar per capita incomes. This was because 97% of people were farmers and all used much the same technology. Since then, there have been enormous technological changes, which began with the Industrial Revolution, and proceeded through amazing inventions such as electricity to the computer revolution, leading to today's knowledge-based society with six key technologies: microelectronics, computers, telecommunications, man-made materials, robotics and biotechnology. Those countries that industrialised early are today the wealthiest countries and the technologies in these areas are well advanced. Some countries have not yet developed their economy much beyond subsistence agriculture, and there most people produce barely enough to live on with no surplus to sell. Others are in the process of developing their economies and participating in the technology revolution and the process of globalisation. The US, an early developer, still has an average income forty times that



### Helpful online resources

Source of the chart:

<http://theunderstatement.com/post/3999331289/us-wealth-distribution-visualized>



### Focus Questions

- Explain the concepts:
  - (a) economic development .....
  - (b) absolute poverty .....
  - (c) inequality .....
  - (d) governance .....
- Why is economic growth regarded as central to development?
 

..

..
- What is wrong with income inequality?
 

..

..

..
- What aspects of governance are important to economic development?
 

..

..

..

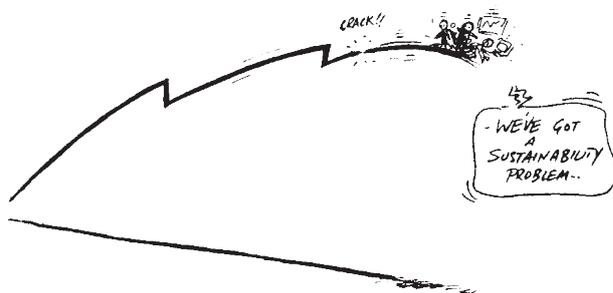
## 8.3 Ecologically sustainable development

### 1. What is ecologically sustainable development?

#### Ecoterm

Ecologically sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (from the 1980 World Commission on Environment and Development report *Our Common Future*: [www.worldbank.org/depweb/english/whatis](http://www.worldbank.org/depweb/english/whatis))

**Economic growth without restraint is unsustainable.** The very term ‘ecologically sustainable development’ (ESD) suggests that **development is possible without damaging the environment**. It emphasises the necessary integration of economy and environment. For development to be sustainable, **resources need to be protected** from depletion and degradation, to support future growth. Some of the benefits of economic growth are beneficial for the physical environment. Some of the costs of growth, however, need to be deliberately and creatively avoided for the growth itself to be sustainable. The first step is for these citizens, governments and producers to better understand the free market system and its environmental impacts.



#### Negative externalities

Focusing on growth can allocate insufficient resources to environmental development, resulting in its benefits being eroded. Market participants – consumers and producers – act in their own interests. Producers will only consider private costs when setting their prices, ignoring external costs. Therefore, external costs of production need to be dealt with by governments.

Unsustainable production can, at worst, degrade resources and cause deaths.

- The Chernobyl disaster of 1986 released radioactive wastes to contaminate food and water supplies in the Ukraine and surrounding republics of the then USSR, and three million children are still being treated for cancer.
- Two hundred years of sewage discharge, polluted stormwater run-off from rubbish tips, and effluent from paper mills have reduced life in the Derwent River estuary in Tasmania to 4% of its sparkling, whale-friendly, oyster-laden condition before European settlement.

Environmental impacts include:

- global warming
- air pollution
- deterioration of water systems
- land degradation
- deforestation
- depletion of the ozone layer and
- loss of biological diversity.

It will be **more difficult for the poorer countries to avoid negative external costs of production**. They will have more immediate priorities, such as clean water, production and distribution of sufficient food, surviving war and stabilising government. Resources must be used to protect the environment, and poorer countries can least afford the costs. It is often cheaper to pollute the environment than to protect it.

There is some fear that strict environmental standards will scare away prospective investors, denying economic growth. Governments can lead the way, however. The California Clean Air Act of 1970 resulted, not in reduced investment in California, but increased environmental standards in other states.

## 2. Extended circular flow model

The circular flow of income model can be extended to show the relationships between producers and consumers, on the one hand, and the environment on which they depend for their resources and into which wastes are ejected, on the other. Households and firms use resources provided by the physical environment—the air, waterways, oceans and land—and dispose of wastes into these same resources.

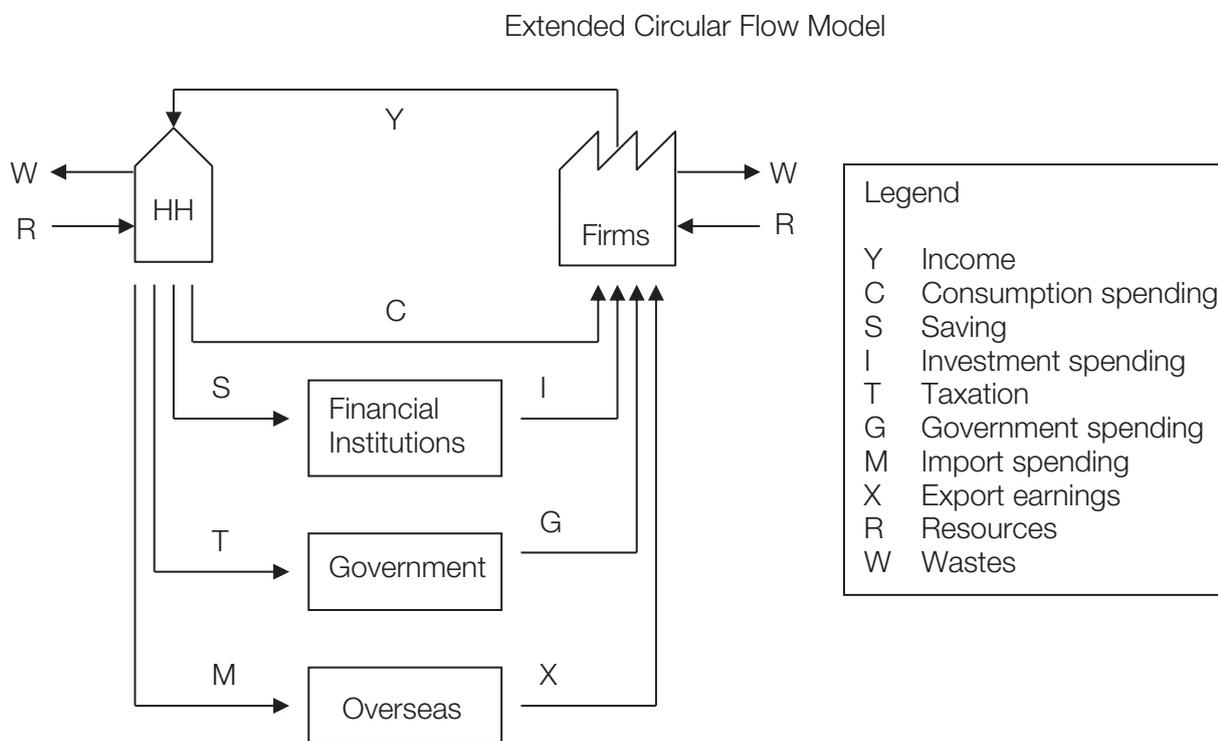


Figure 8.1

## 3. Principles of ESD

### Precautionary principle

The purpose of the precautionary principle is to avoid serious or irreversible damage to the environment. To follow this principle, economic decision-makers must avoid any project whose environmental impact is uncertain. Governments take a cautious approach to approving activity, placing the burden of proof on industrialists to demonstrate that their projects are ecologically sustainable.



### Intergenerational equity

This principle is to maintain productivity of the environment for future generations. The present generation should leave the environment as healthy and diverse for the next generation by conserving the existing natural environment and its species of plants and animals. This will require halting the loss of species and habitats destroyed by increasing economic activity.

### Conservation of biodiversity

All economic activity needs to be limited by the need to conserve the diversity of species and to protect ecological systems. External environmental costs of production need to be internalised. For example, polluters need to build environmental costs into their own production costs –the polluter pays principle.

## Sustainable use of natural resources

Natural resources need to be used so that they are not degraded for future use, and wastes need to be discarded at a rate that can be accepted without degradation. For example, fishing limits have to prevent over-fishing, and air pollution limits have to be set to maintain air health.



## 4. Achieving ESD

### Economic growth

There is no need to reduce economic growth. The more economic growth is accomplished:

- more taxation funds will be available for environmental programs,
- higher environmental standards can be set and
- further environment-friendly technologies will develop.

### Global forces

There are other compelling reasons to avoid over-exploiting resources and harming the environment. **To gain entry to trade groups** and to win investment and assistance from international bodies and partner governments, environmental programs as well as laws and regulations usually need to be established as a condition of acceptance. Further, as integration into the global economy advances, there are increasing requirements to sign **international environmental agreements** and greater regulation of environment exploitation.

### Population

The world's population has increased from about 6bn in 2000 to about 7.2bn in 2014, a rate of about 10% in the last 10 years. The rate of increase has been slowly declining and this trend is expected to continue. In the same time, each person's income, and therefore consumption of goods and services, has also increased at about the same rate. As a result, there is a much bigger impact on the planet's resources now than fifty years ago.

**Our ecological 'footprint'** can be measured by the fraction of the planet's resources used per person. The developed countries leave the bigger footprint. The most significant factor contributing to the ecological footprint of highly developed economies is carbon dioxide emissions from burning fossil fuels. The measure used in Table 8.1 is global hectares per person (Gh/person).

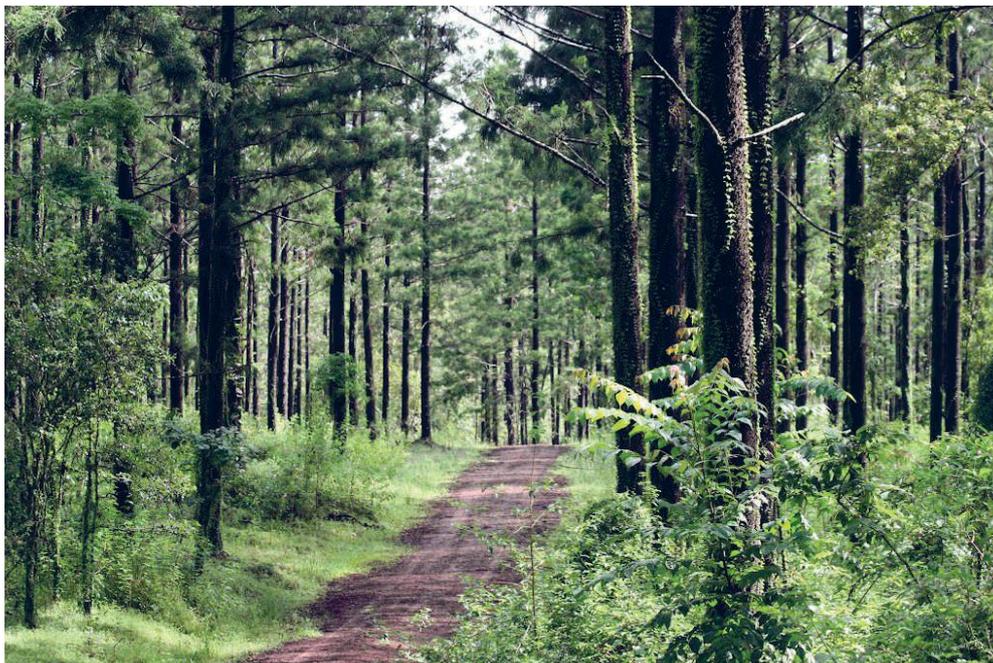
Table 8.1: Ecological footprint (Sources: data.footprintnetwork.org 2019 en.wikipedia.org 2013)

Country	Gh (m)	Ranking 2019	Gh/ person		Country	Gh (m)	Ranking 2019	Gh/ person	
			2019	2013				2019	2013
China	5,200	1	3.6	2.2	Vietnam	201	19	2.0	1.7
USA	2610	2	7.9	8.2	Egypt	173	22	1.7	2.2
Russia	743	4	5.1	5.7	Australia	160	26	6.4	9.3
Japan	574	6	4.6	5.0	Malaysia	122	31	3.8	4.0
South Korea	305	10	6.0	5.7	Iraq	65	44	1.6	1.9
UK	287	12	4.2	7.9	New Zealand	22	93	4.4	5.6

Population increase needs to be controlled. Factors that have assisted population control include improved education of women, their increasing tendency to postpone marriage, more mobile family structures and, most important, a growing awareness and effective use of modern contraceptives. Governments play an important role in education and easy availability of birth control procedures.

## Resource conservation

Economic growth requires increased resources and some **are non-renewable**. Examples of these are minerals and very long-term organic deposits such as crude oil. It is unlikely that we will use so much oil that our planet will run out of it altogether, but only because its price will continue to rise with demand. It will reach levels where alternative energy sources become cheaper, as its remaining deposits fall and costs of finding them rise. For example, China's rapid industrial growth from the start of the 1990s requires increasing amounts of industrial metals, a demand which grew by 25% in 2003. China was consuming 30% of the world's current supply of iron ore, 20% of copper, and 18% of aluminium.



*Using timber from a plantation conserves a scarce resource that is slow to renew itself.*

**Other resources are slow to renew** and need to be managed to avoid their extinction and protect **biodiversity**. These include particularly fisheries and forests. For continued economic development, technology needs to win the race against depletion of non-renewable resources.

**Market forces help**. As their supply gets smaller, their prices will rise. This will add incentive for producers to find alternative, cheaper resources.

Governments need to impose regulations on **resources without markets**, resources that were once regarded as owned by everyone in common – water, air and fish, for example. Licences and limits are imposed on fisheries to maintain fish stocks and on irrigators to maintain river flow. Miners can be required to leave the exploited land in good condition after deposits are exhausted, for example by stockpiling topsoil and replacing it at the end of operations, ready for replanting of trees and other vegetation.

## Pollution abatement

Pollution reduces the productivity of resources and creates health problems, limiting sustainability of economic development. Governments have the power to protect the environment and can use taxation and regulation to abate (reduce) pollution. A number of strategies can be used.

**Pollution licences** can be issued. The heaviest polluter in South Australia, for example, is (understandably) the sewerage treatment firm SA Water. Each polluting firm pays an annual licence, costing a few hundred thousand dollars, to allow them to discharge polluting substances. Note the underlying assumption that it will not be possible, or even desirable, to eliminate all pollution or to shut down all producers that pollute. It is easy and



*Pollution from motor vehicles makes city air unhealthy.*

cheap to remove some pollution, but the costs of abatement of 100% of pollution would exceed the benefits. Their licences are held on the condition that they spend more money implementing Environment Improvement Programs. Firms are thus encouraged to find and use recycling and pollution-reducing technologies to keep their licenses.

**Taxes** are used to reduce pollution that arises as external costs of production, to force firms to internalise these costs. They will be passed on to consumers in the form of higher prices, so that those who buy oranges, for example, help pay to prevent river water salination from irrigation water flowing back into the river. There is very widespread acceptance of the **polluter pays principle**.

**Laws** are used to prevent pollution. The Australian Environmental Protection Authority (EPA) requires Environmental Impact Statements for projects that might impact on the natural environment, and other countries have similar regulations. Emission controls on motor vehicle engines are another example of the use of legislation to control or abate pollution. The Kyoto Protocol, an international agreement to reduce production of gases that thicken the earth's atmosphere, has helped promote ESD principles globally.

## Alternative technologies

Alternative energy sources and production technologies are needed to avoid both pollution and depletion of scarce resources. Governments can add to the incentives provided by market forces. **Grants and tax concessions encourage research and development** in addition to direct funding of research through the Commonwealth Scientific and Industrial Research Organisation (CSIRO).



*This Melbourne power station has been converted from coal to gas, reducing harmful emissions.*

**The excise tax on petrol**, supposed to discourage use of a scarce resource and reduce emission of greenhouse gases, should act as a further price incentive to encourage development of alternative fuels.

Coal and oil create greenhouse gases and hydro-electric power is not always available. Nuclear power, solar energy, wind and even wave action provide **alternative energy sources**. Solar energy has successfully been used in the Australian outback in areas remote from electric power stations. The Australian Government's 2004–2005 Budget subsidised households to introduce wind and solar power, with the ability to sell excess power back to the national electricity grid. Wind farms are increasingly common, amid protest from some locals. These are clearly visible as forests of enormous propellers on high poles, capable of providing clean electricity. Hot rocks five kilometres beneath the surface of the earth are capable of heating water to produce steam to drive turbines that generate electricity. Nuclear power stations are proliferating in China and many other parts of Asia, replacing coal-fired and oil-fired electricity generation. Nuclear power does not deplete non-renewable resources, but it does create another problem: radioactive waste materials are difficult to store safely.



## Focus Questions

1. What is ecologically sustainable development?

.. .. .  
 .. .. .

2. Cite three examples of environmental degradation and explain in each case why it makes economic growth ecologically unsustainable.

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 .. .. .

3. Why is it more difficult for poorer countries to follow the principles of ESD?

.. .. .  
 .. .. .

4. Explain four principles of ESD.

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 .. .. .  
 .. .. .  
 .. .. .

5. Outline the main types of environmental damage caused by economic activity.

.. .. .  
 .. .. .

6. (a) Give examples of non-renewable resources.

.. .. .

(b) Will they run out? Support your answer with reasons.

.. .. .  
 .. .. .

7. Explain an example of a resource that needs to be conserved.

.. .. .

8. Explain how economic growth is able to lift environmental standards.

.. .. .  
 .. .. .

9. Explain two ways in which firms can be made to pay for negative externalities caused by their production.

.. .. .  
 .. .. .  
 .. .. .  
 .. .. .

10. Outline some examples of technologies to provide energy sources that do not rely on non-renewable resources.

.. .. .  
 .. .. .

11. Explain two reasons why alternative energy sources are necessary.

.. .. .  
 .. .. .

12. In short, what are the implications for human progress of following the principles of ESD?

.. .. .  
 .. .. .

13.

**EU commits to global warming**

In late 2010, European Union leaders were committing themselves to donating €100 billion to help developing countries fight carbon emissions. At the same time, a completely emission-free source of electricity was being developed. Geothermal electricity is generated using the volcanic heat of rocks kilometres below ground.

(a) Use a definition of ecologically sustainable development (ESD) to decide whether policies to “fight global warming” comply with the principles of ESD.

.. .. .  
 .. .. .

(b) Explain one ESD principle met with geothermal generation of electricity.

.. .. .  
 .. .. .

(c) Will economic growth that complies with ESD principles reduce poverty? Make three points.

.. .. .  
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## 8.4 Indicators of development

How can governments ensure that economic growth not only occurs but is also accompanied by overall development that will enable equity and sustainability? First they have to know what conditions exist and how these are changing as a result of policies. There are several indicators available to measure economic performance. It is generally accepted that, while economic growth is central to economic development, economic development is broader than economic growth, and that growth alone will not ensure development.

### 1. Gross domestic product (GDP)

#### Ecoterm

GDP is the value of goods and services produced by the domestic economy in a period.

The best available and most used measure of economic growth, used all over the world, is the percentage increase in real GDP.

GDP is often used as a measure of economic development. Most governments have the data available to them, requiring firms to submit it in reports such as taxation summaries. It is the best measure available of national production and income and can be used for international comparisons, once figures are changed into a common currency (usually \$US) and exchange rates are taken into consideration. Different prices between countries should also be accounted for.



### Gross national income (GNI)

#### Ecoterm

GNI is the total income received by all households, including that earned in foreign countries.

It is more common in international comparisons to use gross national income (GNI) rather than GDP. GDP measures income received from domestic firms and organisations, whereas GNI also includes income from other countries. Australia's GDP per capita was \$US67,442 in 2012 but its GNI per capita was \$US59,260, reflecting the net outflow of income to foreign investors. (data.worldbank.org)

### Purchasing power parity (PPP)

International comparisons using GDP and GNI are made more meaningful by converting them to purchasing power parity. \$US100 in poorer countries buys a lot more than \$US100 in richer countries. Conversion to purchasing power parity is done by measuring the amount of national income required to purchase the same amount of goods and services and correcting GDP and GNI figures according to purchasing power ratios.

### GNI per capita

The next step in international comparison is to take each country's population into consideration, as two countries with the same GNI, but different populations, will have different average incomes. The World Bank (databank.worldbank.org) publishes GNI per capita (per person) figures, dividing GNI by the population using the purchasing power parity method, for the best international comparison. Table 8.2 gives some examples, including the top and bottom 5 countries, using 2019 figures.

Table 8.2 GNI comparisons (Source: databank.worldbank.org\* purchasing power parity)

Country	Ranking	GNI per capita* (\$US)	Country	Ranking	GNI per capita* (\$US)
United States	7	65,880	Malaysia	53	28,680
Australia	16	51,560	Russia	55	28,270
United Kingdom	25	48,040	China	81	16,740
Japan	26	44,780	Egypt	110	11,810
South Korea	29	43,430	Iraq	114	11,280
New Zealand	30	42,710	Vietnam	127	7,750

## Limitations

Does GNI measure economic development? The answer is no. It was never designed to do so. Comparisons on the basis of GNI only compare people's ability to buy goods and services. Development is defined as improvements in welfare and welfare is more than simply a measure of a household's ability to consume goods and services.

A number of factors highlight the difference between economic development and a GDP or GNI measure.

GDP includes	GDP does not include
<ul style="list-style-type: none"> <li>production that harms the environment</li> <li>production that does not improve welfare, such as car accidents, pollution and crime, are included as they nevertheless increase GDP</li> </ul>	<ul style="list-style-type: none"> <li>how much leisure time workers enjoy</li> <li>distribution of income among social groups. Two countries with identical measures of GNI per capita may have widely differing income distribution.</li> </ul>

Several measures have been developed in response to the need for a broader measure that takes into account important aspects of human welfare apart from purchasing power.

## 2. Human development index (HDI)

The Human Development Index (HDI) is a composite indicator developed, measured and reported on by the United Nations Development Program (undp.org) It aims to measure well-being, or welfare. It is based on three basic aspects of human welfare—a long and healthy life, education and a decent standard of living. Giving a reasonably close correlation with real GDP per capita, it measures:

- life expectancy at birth in years
- knowledge measured by enrolments in education (one third weighting) and adult literacy rate (two thirds weighting).
- income measured in real GDP per capita

Table 8.3: HDI rankings (Source: hdr.undp.org)

Country	Ranking	HDI	Country	Ranking	HDI
Australia	6	0.938	Russia	49	0.824
New Zealand	14	0.921	Malaysia	61	0.804
United States	15	0.920	China	85	0.758
United Kingdom	15	0.920	Indonesia	111	0.707
Japan	19	0.915	Vietnam	118	0.693
South Korea	22	0.906	Iraq	120	0.689

In the 2019 United Nations Development Program Report, Administrator Achim Steiner said “The wave of demonstrations sweeping across countries is a clear sign that, for all our progress, something in our globalized society is not working.”

The top 10 and bottom 10, as well as Malaysia and China, are listed in table 8.3. It is noticeable that the order of ranking is not exactly the same as rankings using GNI per capita. This shows that they measure different things.

### 3. Genuine progress indicator (GPI)

The Genuine Progress Indicator (GPI) **attempts to measure economic activity that genuinely assists economic welfare**. Its mission statement was to shift economic public policy towards sustainability. It measured the increase in GPI per capita for the US from 1950 to 2006 at 1.33% per year, while GDP per capita rose at a rate of 3.81% per year, concluding that GDP overstates the increase in welfare from economic growth. While GDP measures economic activity, GPI is a measure of changes in welfare.

Like other indicators of development improving on GDP, the GPI adjusts GDP by 23 factors.

It **adds the value of**

- volunteer and community work
- housework such as caring for children and the elderly
- external benefits of higher education

and **deducts the costs of**

- crime
- resource depletion
- environmental damage
- pollution
- loss of leisure time
- accidents and commuting to work

It also adjusts for income distribution, increasing the measure when income distribution becomes more equitable and reducing it when it becomes less equitable.

A study for Australia found that, since 1950, while GDP increased at an average of 2.1% per year, the GPI rises at an average of 1.3% per year. More dramatically, from the late 1970s to 1997, the GPI showed no increase at all. This suggests that we may have been no better off in 1997, despite 20 years of economic growth. Reasons given are:

- unsustainable rises in foreign debt
- reductions in the national level of capital stock and
- environmental problems, mainly increasing carbon emissions.

(The Australian Institute [www.tai.org.au](http://www.tai.org.au))

### 4. Limitations of composite development indicators

These are composite indicators, and that is why they are useful, more useful than a key indicator such as GNI, as a measure of human progress. However, they share some common limitations.

- The components of a particular composite indicator will not always indicate the same level of development. For example, a country may have a low per capita income but a high literacy rate. The composite sum of these indices will give that country a certain rating that is neither high nor low.
- The various components have weights applied to them to reflect the importance of each one. For example, the income per capita component will have a different weighting to the literacy rate component. The numbers used to indicate the relative importance are chosen carefully but not in a scientifically justifiable manner.
- The different indicators will also give different weightings to the same components.
- The measures of income are not always calculated to take into account the different costs of living in each country, that is, they are not always calculated using purchasing power parity.
- It is also difficult to collect statistics.

For these reasons, the indicators are only a rough measure of the level of development.

**Focus Questions**

1. (a) Define GNI.
 

.. .. .

.. .. .
- (b) Why is GNI per capita a better measure of development than simply GNI?
 

.. .. .

.. .. .
- (c) Outline its limitations as a measure of welfare.
 

.. .. .

.. .. .

.. .. .
2. Name and describe measures that attempt to make up for the limitations of GDP.
 

.. .. .

.. .. .
3. Which of the measures of development do you think is the more accurate? Why?
 

.. .. .
4. How closely do the countries with the highest and lowest GNI per capita figures correlate with those with the highest and lowest HDI figures? Suggest reasons for this.
 

.. .. .

.. .. .

.. .. .
- 5.

*Country profiles: human development indicators*

	Australia	Iraq
Human development index–rank	2	132
Health (life expectancy at birth – years)	81.9	69.0
Education index (expected and average years of schooling)	0.981	0.491
Income (GNI per capita)	\$34,431	\$3,177
Demography–population	22.6m	32.6m

*Source: International Human Development Indicators  
 hdrstats.undp.org/en/countries/profiles accessed*

- (a) Choose the letter corresponding to the best answer:  
 Which of the following is not measured in the Human Development Index?
  - A health
  - B education
  - C income
  - D population
- (b) Choose the letter corresponding to the best answer:  
 Gross National Income (GNI) does not include:
  - A wages and salaries
  - B proceeds from the sale of a business
  - C income earned in other countries
  - D dividends

(c) Name and describe one indicator of development other than the Human Development Indicator.

.. .. .  
 .. .. .

(d) (i) Explain the concept of poverty.

.. .. .  
 .. .. .

(ii) How well does the HDI measure poverty?

.. .. .  
 .. .. .

(e) Explain why the HDI is a better indicator of poverty and inequality than gross domestic product (GDP).

.. .. .  
 .. .. .

(f) Using only the information given about Iraq, suggest a three-point plan to improve economic development.

.. .. .  
 .. .. .  
 .. .. .

## 8.5 Causes of poverty and inequality

### 1. Poverty circle

Many of the poorest countries generate low incomes and this in itself can make economic development difficult. There is often a reliance on agriculture to create income in countries with poor technology and little surplus to sell. The major problem is low levels of productivity.

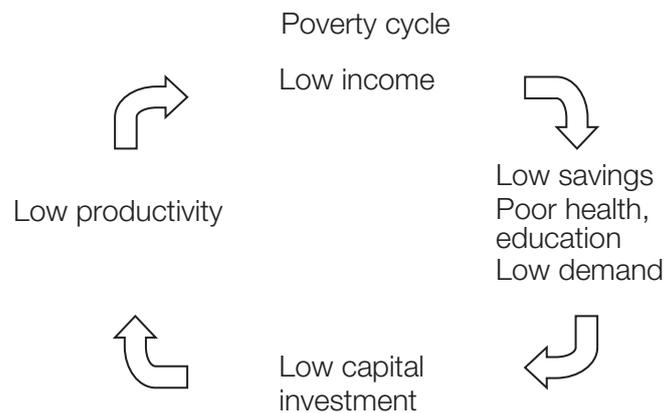


Figure 8.2:

On the supply side of labour markets, workers' productivity is low because they lack access to good quality health and education services. Low incomes also leave few savings and therefore low levels of funds available for investment in better technologies, keeping productivity low. Poor productivity makes it difficult to make globally competitive goods and services for export which in turn makes it difficult to pay for loans and imports from foreign countries.

On the demand side, low incomes mean low domestic demand for goods and services. As a result, there is little interest in investing in the country's industries, by foreigners or by residents, even if a good pool of savings existed. Low levels of production, employment and productivity are perpetuated.

Another vicious circle exists in the relationship between poverty and the environment. Degraded environments injure people's health. Access to clean, unpolluted water is particularly important to health, but polluted air and severe deforestation also create problems. Poor health reduces labour productivity and if a lot of time and energy needs to be spent gathering timber, water and other essential goods, less can be spent on farming and other productive pursuits. Surplus production is less likely and economic development is denied.



In turn, poverty can degrade the environment, as people who are struggling to survive day to day will not be motivated to preserve natural resources or avoid pollution. Such environmentally responsible activity may be seen to require too much extra effort and cost.

To reverse the vicious circle of poverty, a virtuous circle of investment in human capital is needed. This is done with improved health and education standards, provision of effective transport and communications infrastructure, rapid take-up of new technology and willingness of local entrepreneurs to invest in new businesses, innovations and expansions. The essential ingredients, however, are health and education, to improve individuals' chances of finding employment, and the productivity of their work.

### 2. Inequality

Inequality, relative poverty, can reinforce the self-perpetuating poverty problems outlined in Figure 8.2. When a section of the population is much wealthier than the majority and in a position of power, that group is able to maintain its social position to the detriment of economic development. It can dominate production and exercise political power and keep food prices and wages down. It can fail to update poor technology while indulging in conspicuous consumption such as suits, windows and air conditioning, to emulate its wealthier Western counterparts. This group may invest in unproductive monuments, grand buildings and the like, instead of capital goods and health

and education. The dominant group is also likely to prefer luxury imports to spending on domestic production. It may invest more in urban areas rather than in projects that benefit a large rural population.

### 3. Population

Population is a two-edged sword. On the one hand, increased population gives birth to more labour resources, increasing an economy's productive capacity. It also creates demand for domestic production, increasing national income and enabling further economic development.

On the other hand, it creates more mouths to feed and bodies to clothe and shelter. Production is therefore shared among a greater number of people, and lower GNI per capita figures will reflect this. So, when is population a barrier to development, rather than a contributor?

### Dependency ratio

This depends on the structure of the population. A high dependency ratio of dependent children to workers will make development difficult, as workers have to meet the consumption needs of dependents. A high dependency ratio keeps family incomes and savings low and makes it difficult to sufficiently educate and train all potential workers. It also requires children to start work early in life, reducing their opportunities for education. A family may want a lot of children to contribute to the family's income and to provide for parents and grandparents when they can no longer work. Another problem with a large proportion of children is the potential for them to soon have children of their own, perpetuating the dependency rate problem. **A high birth rate will maintain a high dependency ratio.**

### 4. Poor governance

#### Ecoterm

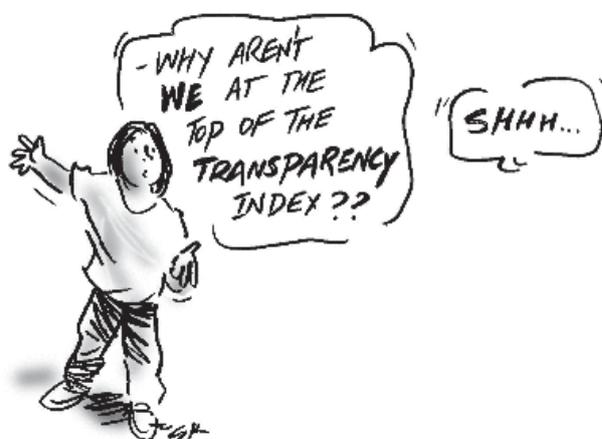
Governance is a government's method of management of its people and their resources.

### Dominant groups

Poor governance can maintain the power of particular groups in society. Dominant groups may prevent change to keep their own privileged social position in society of power and high incomes. These groups can include farmers, political, military or religious leaders or owners of a vital industry. They may act to prevent the formation of trade unions that would fight to improve workers' incomes, or they may vigorously oppose participation of women in the workforce. They may be a landowning class who are able to block land grants and land redistribution and keep food prices and agricultural wages low. Such a group can perpetuate low incomes and poor technology for large proportions of the population, preventing a large number of potential workers and entrepreneurs from contributing to economic development.

### Corruption

Another aspect of poor governance is a high level of bribery and corruption that reduces foreign investment, which would bring with it new technology. Financial support is less likely to be extended to corrupt governments. Corruption prevents national wealth, for example in oil-rich countries, from being spread through the population. Most corruption occurs in political parties, the courts and the police. Australian investors in Indonesia, for example, have sometimes experienced the need to bribe an Indonesian public official to get an application for investment approved. International companies will make payments to governments to secure investment and concessions such as cheap electricity, or perhaps to turn a blind eye to labour exploitation or environmental damage. Governments cover up internal corruption by failing to disclose the sources of government revenue,



or account for their spending. Tax revenues can be spent on expensive vanity projects, such as statues of the president, or diverted into the secret offshore bank accounts of politicians and public officials.

While corruption will not entirely block foreign investment, it will keep it low. Investors experience difficulties in obtaining approval and support, and lack confidence in the safety of their investment.

Table 8.4: Transparency Index (Source: *cpi.transparency.org* 2019)

Transparency International Corruption Perception Index		
Ranking	Country	Score/100
2	New Zealand	87
12	Australia	77
12	United Kingdom	77
18	Japan	73
23	United States	69
39	South Korea	59
51	Malaysia	53
80	China	41
85	Indonesia	40
96	Vietnam	37
137	Russia	28
162	Iraq	20

Corruption can thrive when people in power fail to reveal their decisions, the reasons for them, their costing and results. They have a responsibility to do this as they are spending taxpayers money and are trusted to govern in the best interests of the whole population.

Well-developed countries have the highest rankings on Transparency International's Corruption Perceptions Index, indicating low levels of corruption. Some of the poorest countries have the lowest rankings. Scores range from 0 for a very corrupt public service to 100 for a very clean one.

## Competence

Poor governance can involve simply a lack of governing competence. Unpredictable policy making and low-quality government services can create a business environment that is not conducive to commerce, holding back development. For example, a government office might take a year to approve construction of a building or lose the builder's application. A Thai tourist guide waited a year for her licence to be processed. Poor budgetary management and accountability, political instability and violence are barriers, too. A high level of tax evasion can squander revenues for governments that could be used to provide transport and communication infrastructure to smooth the path for business.

## Investment in human capital

Lack of investment in human capital is another problem that must be left to governments to solve. They need to use taxation revenues to provide schools and teachers as well as leadership in valuing and participating in education. With low levels of literacy and education, a workforce remains at low levels of training and productivity. Education helps each individual achieve his or her potential. Entrepreneurial skills as well as labour skills will flow from this.

## 5. Lack of access to international markets

Many poor countries do not try to participate in international markets. Others find it difficult to profit from trade. Export-led growth is most country's preferred option for economic growth and development. Export sales generate income with which to buy imports of both capital and consumer goods and services. China's is a good example of export-led growth.

### Reliance on agriculture

Some countries experience barriers to export sales. The major barrier is having little or nothing to sell, due to a lack of resources, poor productivity or reduced demand for their main products. Many of the least developed countries produce largely agricultural goods, such as bananas, rice, sugar, coffee, timber, rubber and cotton, and some rely on a single product.

World supply of agricultural commodities has kept pace with world demand, for which there is fierce competition. This means that prices stay low, compared to import prices for manufactured goods. As a result of import prices rising faster than export prices, exports can buy fewer imports.



### Trade agreements

To gain access to international markets, governments need to make trade agreements, but some governments fail to do so. Even signing trade agreements has a downside for poorer countries. As globalisation gathers momentum, exporters of agricultural products join in the process of liberalising trade by reducing tariffs and other protection, leaving themselves open to global competition for manufactured goods while agricultural tariffs remain high. The World Trade Organisation allows the least developed countries to maintain higher tariffs than their more developed trading partners, but even the richest countries find ways of protecting their own farmers. The US and the European Union, the two biggest trading entities, maintain high tariff protection and supply subsidies for their farmers.

### Foreign capital

Economic development requires capital to fund investment and poor countries need foreign capital. Access to foreign capital has created growth as capital moves increasingly easily between nations. Many countries welcome foreign investment, but at the loss of some control and ownership of national resources and companies into foreign hands. Foreign-sourced loans fund investment but need to be repaid with interest. Many poor countries have high levels of foreign debt so that much of their export earnings are used in servicing debt instead of buying vital imports. Problems in repaying debts can also result in a low international credit rating, making it harder to raise future loans. These problems are sometimes lessened with debt forgiveness, grants and cheap loans.

#### Focus Questions

1. (a) Explain the concept of a poverty circle.

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(b) How could it be converted from a vicious circle to a virtuous circle?

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2. How can inequality be a barrier to development?

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3. (a) "Population is a two-edged sword." Explain why.

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(b) What is a high dependency ratio and how does it slow economic development?

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4. What aspects of poor governance in a country become a barrier to economic development?

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5. Suggest reasons why a government might fail to adequately invest in human capital.

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6. (a) How does poor access to foreign markets inhibit economic growth?

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(b) Is foreign investment also a two-edged sword? Explain your answer.

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7.

**Afghanistan: War and corruption**

The Age newspaper in Melbourne published an article in 2011 by Amin Saikai, Professor of Political Science, Australian National University. His article made several criticisms of Afghanistan's President Karzai.

He said that "President Karzai's repeated promises to improve governance and the rule of law, to enhance democratic practices, to bring about economic and social development, and to minimise corruption and heal Afghanistan's tribal, ethnic and sectarian divisions in order to generate national unity" have not been met.

"After nine years in office, he has little to show in any of these areas. In order to remain in power, he has promoted the politics of patronage, nepotism, corruption and disregard for the rule of law. He has aided, protected and enriched a circle of family members and cronies to secure a dominant share in the political and business spheres."

(a) What is meant by governance?

.. .. .

(b) Select two examples of poor governance from Professor Saikal's criticisms and explain separately how each of those aspects of poor governance can hold back progress on reducing poverty.

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(c) State which of the examples you chose in (b) above creates the worse problem for economic growth and explain your view.

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(d) While Afghanistan has been affected by internal war, there has been little investment in economic or human capital. Explain the effect of lack of investment in each of these areas on economic development.

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## 8.6 Promoting economic development

There is no reliable formula for promoting economic development. Each country has to choose a path that suits it. However, there are a number of avenues to growth that are common. Underdeveloped countries that have achieved good growth in economic development have:

- Exploited the world economy
- Maintained macroeconomic stability
- Achieved high rates of savings and investment
- Let markets allocate resources and
- Been led by committed, capable and transparent governments.

### 1. Economic management

Economic growth is essential for economic development.

#### Capital accumulation

All developed nations are industrialised, and industry needs a lot of capital investment. Accumulation of capital resources is widely recognised as a key factor in economic development. It allows production to keep improving its productivity.

Underdeveloped economies dependent on agriculture will need to use capital equipment to make agriculture more productive, so that surplus labour can be released for development industries. More capital is then needed to build industries, so that economic development can continue.

Governments provide some capital, paid for with taxes, spending much of it on infrastructure. Some comes from savings, but accumulating savings is slower in the poorer countries. Governments can assist by focussing on employment and allowing tax incentives for saving. The rest must come from foreign investment and foreign aid. There are costs associated with foreign investment, of course: profit and interest are paid to foreign owners and foreign debt rises. Despite this, foreign investment is an important source of investment capital.

#### Infrastructure

Infrastructure is essential national capital, to provide transport and communication for businesses, households and organisations. Spending on transport infrastructure of roads, railways, wharves and airports encourages trade and reduces costs for businesses. Communications infrastructure, telephone networks, postal services, radio and television all assist production and consumption of goods and services as well as creating employment. Information technology allows the use of the latest technology in industry, distance education and communication. Governments can use up-to-date technologies themselves, and also promote and assist new businesses, especially potential exporters.

#### Employment

Economic management needs to focus on employment. It is important, to save households as well as the government from supporting a large, non-working section of the population. Employment also provides taxation revenue that governments can use to spend on infrastructure and other programmes. It is a key to reducing poverty.

Employment is also important to allow individuals to determine their own living standards, and to accept responsibility for them. Employment often defines a person—we often know people by their occupation and begin conversations by asking what job a person does. It generates self-respect and builds skills and social contacts, as well as income.

#### Environmental performance

Good governance reduces risks of environmental damage. Resources need to be conserved for production to be sustainable, continuing into the future. This is done with environmental protection laws and government bodies to enforce them. Government business enterprises and the public service can model good environmental practice. Development needs to be much more mindful of sustainability than it has been in the past. International pressure comes from trading partners, the World Trade Organisation, and financial and aid institutions such as the International Monetary Fund, the World Bank, and the Asia Development Bank.

## 2. Investment in human capital

Investment in human capital means spending money on health and education. A combination of health and education is necessary to break the vicious circle of poverty and to reduce inequality. Such a combination is the major reason why some formerly poor countries such as India, China and Egypt have achieved economic development, while others such as Bangladesh, Malawi and Zambia have stayed in the poverty trap. The second group will require radical changes to their education and health institutions.

Educated parents, particularly mothers, are more likely to bring up educated and healthy children, ensuring a return on investment in human capital.

Table 8.4: Literacy rates (Source: worldatlas.com 2020)

Country	Rate %
South Korea	100
Australia	99
United Kingdom	99
Japan	99
United States	86
Egypt	72
Malaysia	93
China	95
Indonesia	93
Vietnam	94
Iraq	79

### Education

Spending on education, in particular, is an investment in human capital that ensures future economic development. Broadening education improves people's employment opportunities but increasing the quantity of education will not guarantee better economic conditions. It is improved education quality that can increase individual earnings, improve equitable distribution of income and generate economic growth. There is an enormous gap between the cognitive skills in developed and undeveloped economies. In many developing countries less than 10% of the population have passed basic literacy tests and the structure of their education system needs to change.

**Education raises workers' productivity**, an essential ingredient of economic development. Educated workers are better at learning new skills, including management skills, and adopting new technologies, and innovating. Education increases income that will then be spent to raise the level of demand for domestic production. It also strengthens key institutions – government, law, finance and medicine.

A World Bank Policy Research paper in February 2007 found that high teacher quality is the most important factor in providing quality education, and that a school system needs to provide incentives and competition between schools, having autonomous local decision-making with a complementary system of accountability. (openknowledge.worldbank.org)

Education of girls and women has been neglected in countries with low levels of human development, and so it presents an opportunity: it leads to better family health and nutrition, better birth spacing and better education of children. The post-war Sierra Leone Government is paying tuition fees for girls so that parents can send both boys and girls to school, postponing motherhood and making careers possible.



Girls' education in Afghanistan, banned under the Taliban

## Health

Basic health services are essential to economic growth and development and may well need to be given the highest priority, even by the poorest countries. It will not be easy, or even possible, for children to participate in education without maintaining their health. The same applies to employment and training. Many of the world's poor have no ready access to clean water. Water supply, sanitation infrastructure and control of diseases such as heart, lung, diarrhoeal diseases and HIV/AIDS are the responsibility of governments, but partnerships with private enterprise and foreign aid play their part.

**Improved health raises workers' productivity.** It improves their physical capabilities, such as endurance and strength, and also increases mental capacity, such as thinking and reasoning ability. Healthier workers earn higher wages and are also less likely to be absent from work.

## Population

Population growth needs to be reduced if the ratio of dependents to workers is too high. Rapid population growth does not increase the labour force substantially because it limits the participation of women in the labour force as they are busy with childcare. In addition, it is difficult to create enough jobs when population is rising rapidly.

They are not able to *force* change in family planning but can supply those services and can influence traditions. Lower fertility rates is an important condition for economic development as it allows governments and families to **invest more per person** in education and health, improving the productivity of the labour force.

Recognising the need to reduce population growth, an increasing number of governments of developing countries have pursued family planning programs in combination with pushing economic growth. Reducing population growth through lower fertility rates helps economic growth. In addition, economic growth reduces fertility rates as employment and education replace some child-rearing.

It is interesting to look at population pyramids of different countries to see their different age structures. See [populationpyramid.net](http://populationpyramid.net). You could try Australia, Malaysia, China, Congo, Italy,

## 3. Foreign Aid

In 1970, the world's richest countries agreed to give 0.7% of their GNI in development aid but have since donated 0.24%. They could have been more discriminating in where they spent that money, some of it wasted on corrupt governments and some in failed programs. There seems to be no compelling evidence that foreign aid inevitably leads to economic development. It depends on where the aid is placed and what it is used for.

### Who should get foreign aid

For foreign aid to be effective, the government and people of the nation receiving the aid need to support change, and to take responsibility for the funded programs. Governments need to continue to consult with their people: for example, the Zambia Government moved fast with reforms to get them in place before they could be opposed, but the changes were poorly understood and failed. Foreign aid is now widely believed to be ineffective in countries that avoid economic reforms. Nor is there any point in applying conditions to aid in order to try to force change. Unstable politics and conflict will, of course, render foreign aid ineffective in bringing economic development. Donors need to offer only technical assistance and policy discussions until the country makes its commitment to reform.

### Benefits

Foreign aid can free up resources for a poor country to use. For example, if medicines and medical training are donated, then export earnings can be used to pay for other essentials. Aid used for infrastructure can develop the economy and help create exports. Foreign aid *can*:

- increase the number of years spent in school
- increase investment
- reduce poverty
- increase life expectancy
- improve health

in the right circumstances.

## Sources

The richer, more developed nations include foreign aid to poorer countries in their budgets, usually in their own region. For example, Australia takes responsibility for aid to Papua New Guinea. Aid is also available from international institutions for countries with a low level of development. The International Monetary Fund and World Bank make funds available at low interest rates to governments. The Asia Development Bank (ADB) invests in projects that increase employment and broaden access to education and health services, population control, water supply and sanitation and other essential services. Charities such as World Vision, Oxfam and Red Cross raise large amounts of funds to provide similar, smaller scale assistance. The United Nations works in a variety of ways to provide assistance from bodies such as the United Nations Development Program ([www.undp.org](http://www.undp.org)), World Health Organisation ([www.who.int](http://www.who.int)), and the United Nations International Children's Fund ([www.unicef.org](http://www.unicef.org)). The Global Environmental Facility ([www.gefweb.org](http://www.gefweb.org)) will help with finance for environmental protection projects. These bodies, along with governments of more developed countries, will also provide consultants and technical assistants. They will work with governments and businesses and coach local consultants to improve their technical qualifications. When disaster such as floods, famines or earthquakes strike, developing countries rarely have the resources or funds to cope. Charities and governments pitch in to help in circumstances such as these.

## 4. Trade and foreign investment

Making trade agreements is vital for export-led growth. Such agreements reduce barriers to both imports and exports and free up the flow of international funds for capital investment.

### Trade

In the modern view of development, expanding international trade is the greatest support that the developed countries can provide for developing countries. Removal of trade barriers is at least important as foreign aid.

Countries that pursue export promotion policies instead of import replacement policies have achieved better economic development. They are able to import those goods that are difficult and expensive to produce, and pay for them with foreign exchange from export earnings. In addition, but equally importantly, producing and exporting those goods in which the country has a comparative advantage results in using resources more efficiently.

Developing countries need to pursue trade opportunities, become a member of the WTO, and sign regional trade agreements and that bring down trade barriers. Applications to join trading groups, such as the WTO, Asia-Pacific Economic Community (APEC), or the European Union (EU), will usually be successful. Membership imposes rules and regulations but opens new markets to exports as well as reducing tariff barriers for exports to jump over. The WTO employs a General System of Preference to allow lower tariffs for manufactures of developing countries. Of course, tariff reduction is reciprocal, and so a new member country will have to agree to eventually reduce its tariffs on imports from its new trading partners.

The key benefits of trade for developing countries are:

- generating economic growth through increased trade opportunities
- reduced import prices, which in turn reduces input costs of production
- increased choice for consumers and lower prices due to a combination of lower import prices and the competition that this generates in domestic markets
- foreign investment, liberalised signing through trade, allows development of domestic industries and brings with it know-how, new technologies as well as research and development
- diversified exports through access to new markets and thus less reliance on one or a few exports
- increased employment and higher wages
- improved international relations.

(European Commission: [trade.ec.europa.eu](http://trade.ec.europa.eu))

### Foreign investment

A developing country usually encourages foreign investment, particularly if its domestic savings are low. Greater use of domestic savings means fewer obligations to other countries and their banks. Foreign funds develop domestic resources and create employment and income. Direct foreign investment is preferable to portfolio investment. Portfolio investors are not very interested in assisting the success of the venture they invest in and will take their money and run if danger of losses looks likely. Direct foreign investment involves foreigners taking continuing interest in, and ownership of, firms. The technological know-how, production methods, clever capital goods, marketing and management skills that accompany direct foreign investment are invaluable for future growth.

To attract foreign investment, governments may offer, as China did, cheap land, concessional tax rates, cheap labour, cheap power, tariff exemption, less regulation and an increasingly educated labour force. China's development has increased incomes, lifting a large proportion of the population out of poverty. It also created a middle class with enough income to build demand for domestic production.

Foreign investment is valuable in a number of aspects of economic development. It develops resources, especially in funding large and risky projects that would not go ahead if only domestic finance was available. Foreign companies bring technology with them and create employment for locals. New industries grow and new businesses are set up with ideas and finance made available, often to provide services and components to foreign-owned companies. The level of competition in each market increases with new businesses. Developed and underdeveloped countries alike welcome foreign investment, whose benefits are seen to outweigh the costs.

## Debt reduction

Foreign investment, vital though it is, creates foreign debt. The lack of a pool of residents' savings means more reliance on foreign investment to fund industrial projects. Loans need to be repaid with interest, foreign-owned shares in domestic companies require outgoing payment of dividends, and outright foreign ownership creates outflows of profits. A high level of interest payments and profit repatriation can use up export earnings that need to be spent on imported raw materials, capital goods and perhaps other essential imports. Debt servicing costs can be reduced by rescheduling loan repayments, and assistance from global bodies such as the International Monetary Fund may be available. Developing nations are often able to reduce their foreign debt by establishing environment protection measures or reducing trade protection. Another strategy to reduce foreign debt is to sell government owned infrastructure and other enterprises to private companies to raise money to pay off overseas loans.

## 5. Tax and finance reforms

### Taxation

Taxation is a vital resource for governments who need to use it to invest in infrastructure and human capital, in addition to the other aspects of effective government. It needs to be efficiently collected and spent. China under Deng Xiao Ping, for example, shifted the power to collect taxes from provincial governments to the central government. This improved efficiency of collection and reduced tax evasion, increasing available funds, as well as simplifying spending decisions. Reducing public service inefficiency and wasteful spending further improves governments' ability to fund infrastructure.

Discipline in spending tax revenues should improve the focus on growth of production and development in the broader sense. Responsible fiscal policy consists of careful and transparent budgeting to reduce corruption and channel spending to productive areas. Transparency means that revenues and spending plans are all made public, so that it is less likely that taxpayers' money might 'disappear', and is less likely to be wasted on such things as statues of the political leader or palaces and grand public buildings that are designed to impress, albeit expensively.

In some developing countries, the size of the public service may need to be reduced to make it cheaper and more efficient.

### Savings

Availability of domestic savings for investment means less reliance on overseas loans and foreign aid, which can have strings attached. It also means that interest, dividends and profits stay in the country to supply further income and savings and to lock in future development. Strategies to increase national savings can include tax incentives for savings, excise tax on luxury items, and perhaps taxes on residential buildings as well. Tax incentives can also encourage businesses to reinvest their profits rather than borrow from others' savings.

### Financial institutions

Financial institutions need to be encouraged to offer attractive interest rates to savers. They also need to be regulated so that they do not unduly risk depositors' funds. Public confidence in the finance sector needs to be maintained. Competition between banks and other financial institutions will improve efficiency and keep loan rates down. Most economies have had success with deregulation of the financial sector. It means that financial markets (also known as capital markets) function efficiently and competitively, mobilising funds from households to firms to facilitate investment.

## 6. Governance

Countries with effective economic management achieve better development, measured by performances in the aspects described so far in this chapter. For an underdeveloped country to achieve development requires transformation of political, social and economic structures to improve their governance. Middle-income countries tend to have achieved economic growth but still need to improve many aspects of governance and economic management.

Governments that do not try to accumulate capital or invest in human capital or allow private ownership of resources hold their countries back from economic development. Powerful ruling groups and a high level of corruption can be major factors in preventing good governance.

Governments need to set the rules of the economic game, providing the commercial environment for businesses to flourish.

### Private ownership

Private ownership of resources and a market system need to be facilitated. Land needs to be made available to private firms, either by release from government ownership or the more difficult redistribution from a dominant landowning social group. For example, Kenyan farmers and shopkeepers do not own their land and so they do not make improvements to it. Resources will flow to their most valuable use, and are best used if they are privately owned, providing returns for owners who embrace new technology and innovation and easily sell them to alternate uses in an efficient capital market.

#### Focus Questions

1. (a) Why are domestic savings important to economic growth?  
 .. .. .
- (b) How can the level of national savings be boosted?  
 .. .. .
- .. .. .
- .. .. .
2. Why is it important for employment to provide most family income?  
 .. .. .
3. What do you understand by the phrase ‘investment in human capital’, and what investments need to be made in human capital for development to proceed?  
 .. .. .  
 .. .. .  
 .. .. .
4. Why might it be important for a country to reduce its birth rate?  
 .. .. .  
 .. .. .  
 .. .. .  
 .. .. .
5. Explain, separately, why health and education are important to development.  
 .. .. .  
 .. .. .  
 .. .. .
6. (a) What must a country do to open itself to international trade?  
 .. .. .  
 .. .. .  
 .. .. .

(b) Why is it so important to do so?

.. .. .  
 .. .. .  
 .. .. .

7. Why is direct investment preferred to portfolio investment?

.. .. .  
 .. .. .  
 .. .. .

8. What strategies are used to reduce foreign debt?

.. .. .  
 .. .. .

9. What tax reforms assist development?

.. .. .  
 .. .. .  
 .. .. .

10. Outline the main aspects of governance that need to be improved to achieve development.

.. .. .  
 .. .. .  
 .. .. .

11.

### The population issue

A report by the United Nations Population Fund, reported in the economist in July 2012, concluded that, to overcome poverty, countries must deal with the population concerns and fight poor reproductive health, unwanted births, illiteracy and discrimination against women.

The UN report said that views on population control had changed in the previous few decades. The important focus is the age structure of the population, rather than population growth itself.

*Economist, 07/12/2012*

(a) (i) Explain one advantage of population growth for reducing poverty.

.. .. .  
 .. .. .  
 .. .. .

(ii) Explain one disadvantage of population growth for reducing poverty.

.. .. .  
 .. .. .

(b) Explain whether you agree or disagree with the statement in the article “the important focus is the age structure of the population, rather than population growth itself, in promoting economic and human development”.

.. .. .  
 .. .. .

(c) The UN report says that countries must deal with illiteracy. Explain how reducing illiteracy is expected to reduce

(i) poverty

.. .. .  
 .. .. .

(ii) inequality.

(d) Do you think that reducing discrimination against women is likely to improve economic development? Explain your view.

.. .. .  
 .. .. .

 **Helpful online resources**

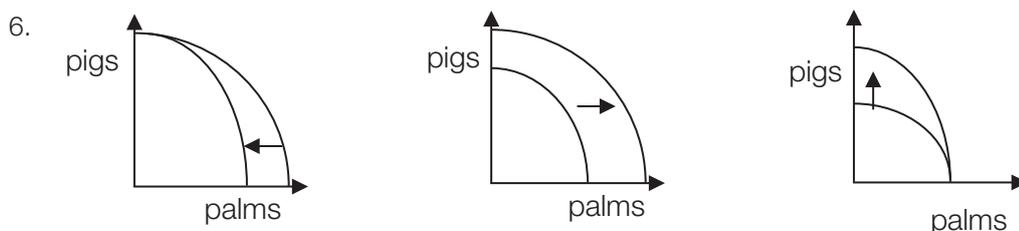
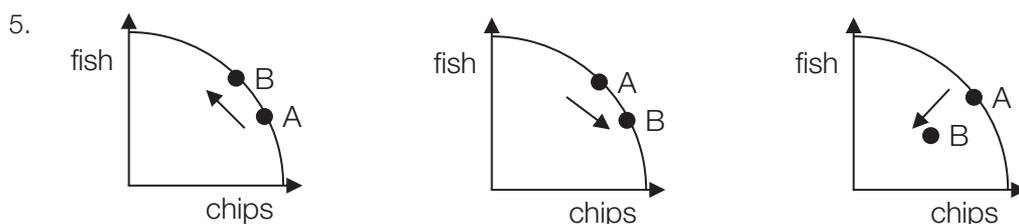
<p>World Bank  <b>www.worldbank.org</b></p>	
<p>Asia Development Bank  <b>www.adb.org</b></p>	
<p>United Nations Development Program  <b>www.undp.org</b></p>	
<p>The Australian Institute  <b>www.tai.org.au</b></p>	
<p>Friends of the Earth  <b>https://friendsoftheearth.uk/</b></p>	
<p>World Vision International  <b>www.wvi.org</b></p>	
<p>Transparency International Corruption Index  <b>www.transparency.org</b></p>	
<p>World Health Organisation  <b>www.who.int</b></p>	
<p>United Nations International Children’s Emergency Fund  <b>www.unicef.org</b></p>	

# Solutions

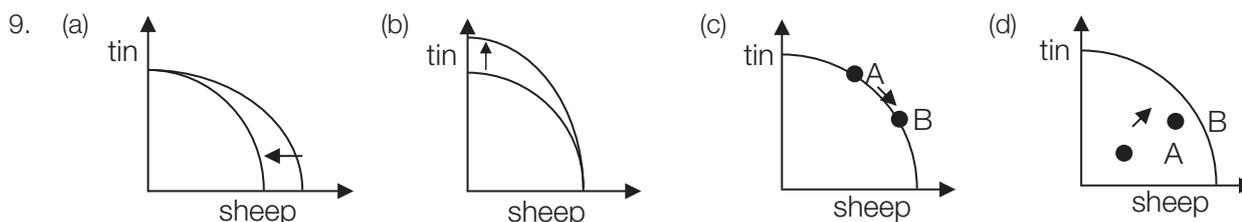
## Topic 1: Identifying The Economic Problem

### Focus questions 1.1

- Economics is the study of how a society uses its scarce resources to satisfy its unlimited wants.
  - The economic problem is that resources are scarce relative to unlimited wants.
  - Productivity is a measure of the quantity of goods produced per unit of resources used.
  - A resource is an asset or a person used in production of goods and services.
- Toothbrush: individual
  - Garbage collection: collective
  - Parklands: collective
  - Adelaide-Darwin railway: collective
- It is difficult to charge a price and thereby make a profit.
- An economist: labour; advice to government
  - Hammer: capital; furniture
  - Toasting machine: capital; toast
  - DVD: capital; wedding videos
  - Wheat: land; bread
  - Bricklayer: labour; house
  - Solar energy: land; electricity
  - Lawn: land; oval



- No solution given
- A production possibilities curve shows the quantity of each of two products that can be produced by an economy using all its resources with the best known methods.
  - Opportunity cost is what is given up to get something else.



## Examination revision 1.1

City Cyclists gear up

- (a) D
- (b) D
- (c) 0.3 million cars
- (d) There were not enough resources to produce the combination of cars and bikes at D.

## Focus questions 1.2

1. If I buy a tennis racquet I give up the opportunity to buy concert ticket of about the same price.

2.

Example	What, How or For Whom?	Reason
Tax changes favour middle and high income earners.	Who	it is about distribution of income
Banks provide electronic banking and reduce the number of bank workers.	How	different resource mix used in production of bank services
Digital video technology creates demand for digital video equipment.	What	it is about what will be produced – DV equipment
The SA Government charges an emergency services levy.	Who	people's disposable income is reduced by different amounts
Law requires smoke alarms to be fitted to all new houses.	What	more smoke alarms will be produced

3. (a) Opportunity cost: the next best alternative foregone.  
 (b) Consumer sovereignty: consumers dominate the 'What' decision in a market economy.  
 (c) The 'What' question: what will be produced and how much of each good and service.  
 (d) The 'How' question: what mix of resources will be used in production.  
 (e) The 'For Whom' question: how goods and services will be distributed to determine everyone's share of the economy's production.
4. The world's best rock stars own a resource that is very scarce and a lot of people want to buy the service that it is used to produce. Because so much of that service is produced, and the rock star is the main resource, a lot of income is distributed to him or her.

## Examination revision 1.2

Woolies cut cage eggs

- (a) (i) A  
 (ii) The decision is to change what to produce and how much of each.  
 (iii) In a predominantly market economy like Australia, the 'What' decision is made in the market, by consumers deciding what they will buy.
- (b) (i) Management is a labour resource used in production of free-range eggs.  
 (ii) Free-range eggs use more land resources than cage eggs, making them more expensive.  
 (iii) Land
- (c) (i) A  
 (ii) Eggs are economic goods because they command a price.

## Focus questions 1.3

- The government of a planned economy appoints a central planning committee to make each of the basic economic decisions. In a market economy, these decisions are made in markets.
  - Australia is a mixed economy because elements of each of the three market systems are present in its decision-making.
- A planned economy has no private ownership of resources, in contrast to a market economy. There is therefore no possibility that private individuals or groups in a planned economy can begin businesses and invest in private companies, as they do in market economies. In a planned economy employment is guaranteed and everyone has access to basic shelter, food and clothing; employment has to be won in a market economy. There is very little inequality of income in a planned economy, but a high degree in a market economy. Production and economic management tend to be more efficient in a market economy as there is incentive for individuals and firms to improve their skills and technologies, respectively.
- Economic systems change as their cultures change, as their governments change, and as different economic theories prevail.
- Political change caused Russia's system change from a planned to a market economy. The political change was to remove the communist government. Russians were dissatisfied with economic planning whose results included inefficiency, poor transport and communications, slow technical change, pollution and too many consumer wants left unsatisfied.

The early effects of the system change include introduction of private ownership of resources, including privately owned banks. Inflation became a problem as demand exceeded the ability of the new system to supply. Unemployment, previously unknown, occurred as Russians, unaccustomed to winning work, had to apply for jobs in a struggling economy. A gap between the wealthy and the poor rapidly increased. Consumer sovereignty meant that producers had to plan how to satisfy consumer wants, rather than be given production targets.

## Examination revision 1.3

Cubans to own their own homes

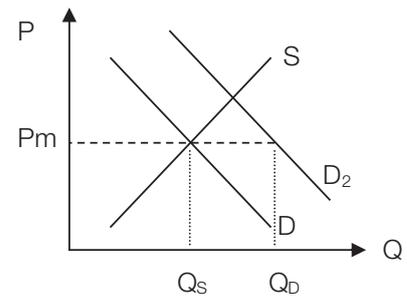
- C
- D
  - In transition, the economy is a mix of planned and market systems; there will also be an element of tradition in economic decision-making.
- Consumers now have more influence in 'What' decisions.

## Topic 2: The Market Mechanism

### Focus questions 2.1

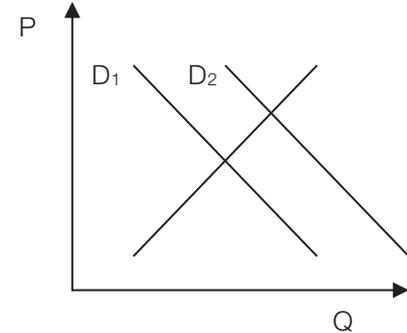
- The competitive market model is a theory and an explanation of how prices are determined in markets.
- A market is a system of exchange between buyers and sellers of a particular good or service.
  - The law of supply says that as prices increase the quantity that producers will supply increases.
  - Market demand is the quantity that buyers want and will pay for at each price.
  - Market quantity is the quantity that sellers will supply and consumers will buy at the same price.
  - A supply curve shows the quantity supplied at a range of prices.
- When the price is above equilibrium the quantity supplied is greater than the quantity demanded. The difference is a surplus. It occurs because suppliers make good profits at high prices but buyers are put off.
  - If a surplus occurred, sellers would lower their prices to clear their stocks of unsold doughnuts. They would also reduce the quantity produced to avoid further surpluses. This process would continue while a surplus existed, until price and quantity were once more at market equilibrium level.

- In a market economy, sellers respond to shortages and surpluses by changing their prices in order to eliminate those shortages and surpluses.
- When demand increases, to  $D_2$  on the diagram, there is a shortage at the old price,  $P_m$ . This occurs because the quantity demanded at that price ( $Q_D$ ) is greater than the quantity supplied ( $Q_S$ ). In response to the shortage, suppliers will increase both their prices and their quantity of production for higher profits.



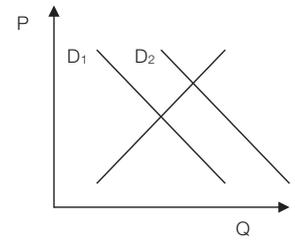
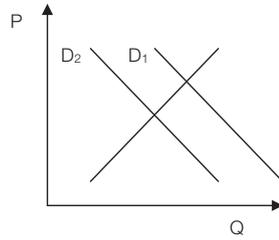
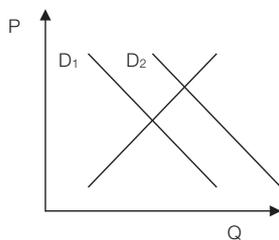
**Focus questions 2.2**

- An increase in the demand for coffee, to  $D_2$  in the diagram, will allow suppliers to raise their prices. They will also supply more to keep up with demand and increase their profits. The new price and quantity are indicated by the intersection of the new demand curve and the supply curve.
- A decrease in supply of bananas will raise the price and consumers will therefore demand a lower quantity at the new, higher price. Note that the demand curve does not move – buyers move to a new position on it as the supply curve moves.
- Both price and quantity will increase.
  - Price will decrease and quantity traded will increase.
  - Price will increase and quantity traded will decrease.

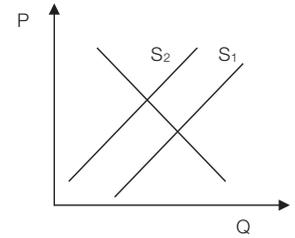
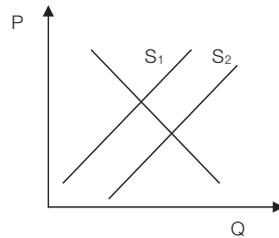
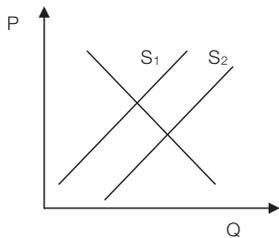


Changes in the market for beef	Demand or supply?	Increase or decrease?	Right or left?	Effect on price?	Effect on quantity?
A drought in beef producing areas	supply	decrease	left	increase	decrease
B advertising promoting beef	demand	increase	right	increase	increase
C an increase in income tax	demand	decrease	left	decrease	decrease
D a rise in the price of lamb	demand	increase	right	increase	increase
E a fall in the price of cattle food	supply	increase	right	decrease	increase

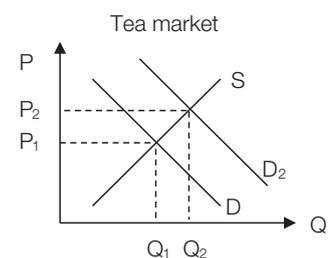
- Unley bread market
  - Unley bread market
  - Unley bread market



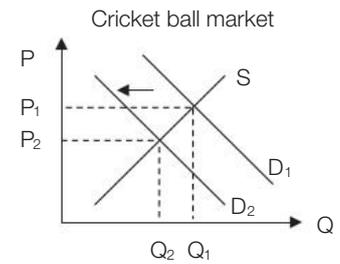
- Unley bread market
  - Unley bread market
  - Unley bread market



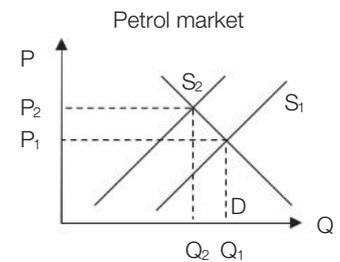
- An increased price of coffee will increase demand for its substitute, tea, according to the theory, as the substitute is now relatively cheaper. This is represented in the move to  $D_2$  in the diagram opposite.
  - The result of the shift in demand will be to increase the price of tea to  $P_2$  in the diagram opposite, and increase the quantity traded in the market to  $Q_2$ .



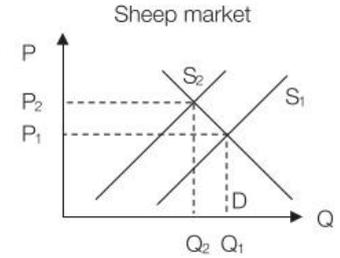
7. (a) An increase in the price of cricket bats will contract demand for cricket bats and decrease demand for cricket balls, as these two goods are complements. The demand curve for cricket balls moves to  $D_2$  in the diagram opposite.
- (b) The price of cricket balls will decrease to  $P_2$  in the diagram opposite as suppliers try to eliminate the surplus.



8. (a) Increased excise tax increases petrol production costs, shifting the supply curve in the diagram opposite to the left to  $S_2$  at every price.
- (b) Suppliers will increase their price to  $P_2$  in the diagram opposite to maintain their profit margin, passing the extra costs on to consumers.



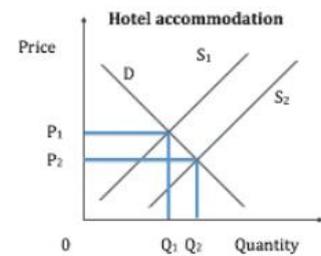
9. (a) Farmers who supply both wheat and sheep will respond to an increase in the price of wheat by using more of their land and other resources to supply wheat, reducing the quantity of sheep supplied. This is represented in the diagram opposite by a leftward shift of the supply curve for sheep.
- (b) Buyers will bid up the price of sheep to  $P_2$  in the diagram opposite as they compete for a lesser quantity.



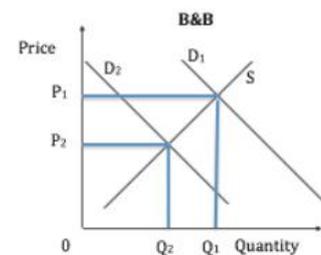
### Examination revision 2.2

#### 2m hotel plan

- (a) (i) The price mechanism is the process by which prices change in markets.
- (ii) A demand curve's downward slope shows that, as the price decreases, the quantity demanded expands.
- (b) (i) Refer to the diagram opposite.
- (ii) Two new hotels increase the amount of hotel accommodation supplied to the market, represented by the curve  $S_2$ .
- (iii) With two new hotels providing increased competition, suppliers will drop their prices to  $P_2$  to encourage more sales, represented by  $Q_2$ .



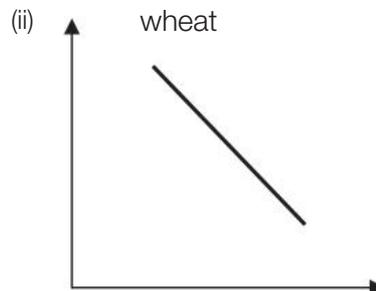
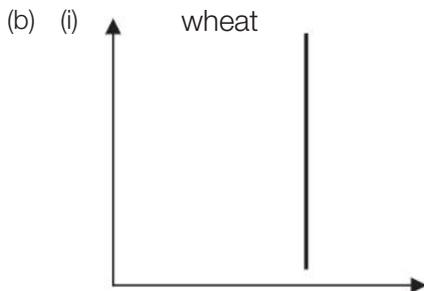
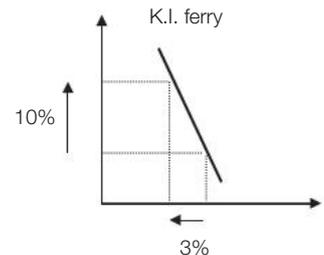
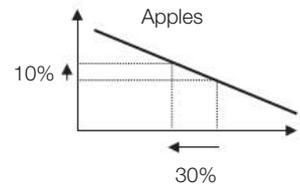
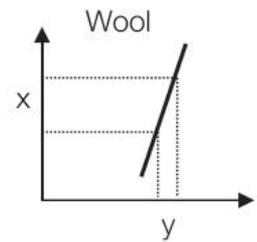
- (c) Refer to the diagram opposite.
- (d) Increased supply of hotel accommodation, driving its price down, will switch visitors' demand away from B&B accommodation, reducing demand for it and causing B&B suppliers to reduce their price to  $P_2$  in the 'B&B' diagram.
- (e) (i) The article says that the population is growing; the other demand factor mentioned is the impending resources boom that will increase income.
- (ii) Each of the factors mentioned in (e) (i) above will require more hotel accommodation as more people visit Adelaide. Suppliers will supply a greater quantity of accommodation to meet demand, and will take the opportunity to raise their prices, too.



- (f) Market demand determines the 'What' question, and suppliers in competitive markets supply what consumers want, in the quantity they demand.

### Focus questions 2.3

- When the price increases by  $x$  the quantity supplied will only change by  $y$ . The change in quantity is proportionally less than the change in price.
- Demand for goods such as pears is price elastic because a change in price of 10% will cause a proportionally greater change in quantity demanded, that is, greater than 10%. Buyers respond so much to a price change because there are so many substitutes for pears.
- Demand for apples is relatively price elastic because there are lots of substitutes. Therefore, when the price of apples increases, buyers will switch to other fruit, and the quantity traded will decrease by more than 10%, say 30%.
- Buyers of durable products are able to wait until the price goes down before they buy a replacement. For this reason, the quantity of durable products demanded is relatively price elastic, as there is a proportionately big response to a change in price.
- Refrigerators: demand is relatively price elastic because they are durable and buyers are able to defer their purchase until the price falls. For example, when the price decreases consumers will take the opportunity to buy.
  - Tomatoes: demand is relatively price elastic because there are many substitutes for tomatoes, such as other salad vegetables.
  - Cigarettes: demand is relatively price inelastic because cigarettes are habit-forming and so they are seen as necessary.
  - Pencils: demand is relatively price inelastic because pencils are inexpensive and a very small proportion of income, and so buyers will be unlikely to respond to an increase in price.
- When a firm has excess capacity, it has the capacity to increase its production, possibly by running machines for more hours each day and hiring more staff. This enables the firm to respond to an increase in price by increasing their supply, making supply relatively price elastic.
- If the ferry operator increases the price by 10%, island residents and visitors have few substitutes for the ferry and most will not reduce their demand for ferry rides by very much at all, say by 3%. The operator's revenue will increase by a 10% increase in price multiplied by only a 3% decrease in quantity sold.
- Gold: supply is relatively price elastic because it can be stored.
  - Cars: supply is relatively price elastic because they can be stored and also because the resources used to make them can be transferred to other production. For example, labour resources can be changed quickly in the case of car production.
- After a wheat crop has been planted, the quantity of wheat supplied by that farmer can not be changed, even if the price of wheat increases. This means that the farmer's price elasticity of supply is zero within the 12-month production period. This is represented by diagram (i) below. However, in subsequent years, more land can be made available for wheat and more planted, to take advantage of higher prices. This is represented by diagram (ii) below.

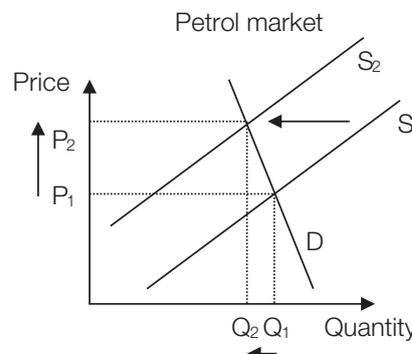


- Relatively inelastic.

## Examination revision 2.3

Excess petrol excise tax?

- Price elasticity of demand is the response of quantity demanded to a change in price.
- Price elasticity of demand for petrol is relatively inelastic because
  - it is a complement to an expensive good, a car and
  - it has very few substitutes.
- Refer to the diagram opposite.
- Sellers sales receipts will increase because the price increases by proportionately more than the quantity traded, and so the revenue gained through the price rise exceeds the revenue lost due to the reduced quantity demanded.
  - Some of the sellers' revenue will have to be paid in extra taxation and so the taxation revenue will also rise.
- Halving the excise tax will increase supply pushing the supply curve in the opposite direction to that shown in the diagram, and sales revenue will fall, reducing the amount of taxation collected by the Government.



## Topic 3: Markets in Practice

### Focus questions 3.1

- Conditions of perfect competition:
  - Many buyers and sellers
  - No influence on price
  - Homogeneous product
  - No barriers to entry
  - Perfect knowledge
- Perfectly competitive firms are 'price takers'. This is because if they raise their price they will lose their entire market share. Therefore, they have no influence on price.
- No solution given.

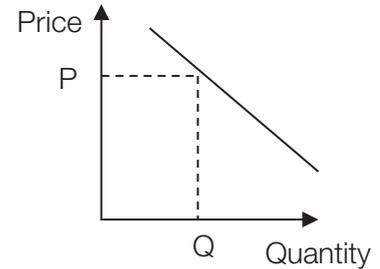
Number of sellers	Influence on price	Product differentiation	Barriers to entry
Several in each area	A little, depending on customer loyalty and other product differentiation	<ul style="list-style-type: none"> <li>Hands-on treatment</li> <li>Sports injuries</li> <li>Health insurance</li> </ul>	<ul style="list-style-type: none"> <li>Qualifications required</li> <li>Need to be different from others</li> </ul>

- Oligopoly features include few firms, high barriers to entry (such as brand loyalty eg Coke), product differentiation (e.g. through advertising), non-price competition (such as advertising and sponsorship), little price competition.
  - Waterfords, Woodroofes, Halls, in Adelaide.
  - Ice cream firms use advertising, product differentiation, new products, packaging as competitive tactics.
- Oligopoly
  - Whirlpool was trying to expand its market share.
  - Yes: firms in the white goods market are interdependent. Each firm's action affects the others substantially. If they did not follow by extending their own warranty, they would lose market share to Whirlpool.
  - If Whirlpool had dropped their prices, the price drop would be followed by the other firms to protect their market share. This would result in a price war. The effect would be that each firm would maintain much the same market share but sell at lower prices – none of them would gain.
  - Few firms, influence on price, product differentiation, high barriers to entry, non-price competition, interdependence.
  - It is barriers to entry that give monopoly power to firms in an oligopoly.

- 7. You would not follow, allowing your competitor to lose market share to you.
- 8. Barriers to entry in the car industry include set-up costs, research and development to differentiate the product, brand loyalty, and economies of scale.

Interdependence: as one manufacturer developed some differentiation, such as air bags, CD players, four wheel drive versions or ABS brakes, other manufacturers followed.

- 9. (a) Market price increases and the quantity demanded decreases, in response to the supply curve shifting up and to the left.
- (b) Collusion is an agreement not to compete, usually on the basis of price. It is illegal under the Competition and Consumers Act.
- 10. A patent is the legal right, granted by the government to an inventor, to produce the invention exclusively, without competition, for a certain period of time. It is a barrier to entry because it prevents entry to that invention's market until the patent period is over.



- 11. Portable buildings, foods and drinks that require refrigeration, explosives, and furniture are goods with high transport costs.
- 12. A monopolist faces a downward sloping demand curve. If it chooses a particular price P in the diagram opposite, it will have to supply the quantity demanded, Q. If it chooses a particular quantity Q, it will have to charge the price P at which buyers will buy that quantity.
- 13. No solution given.
- 14. (a) The purpose of game theory is to understand how firms compete.
- (b) A dominant strategy equilibrium is one in which each player plays its dominant strategy, whereas a Nash equilibrium exists when each player's strategy is the best response to the other players' strategies.
- 15. (a) (i) One Nash equilibrium, in the bottom right.
- (ii) One Nash equilibrium, in the top left.
- (iii) Two Nash equilibria, top left and bottom right.
- (iv) One Nash equilibrium, bottom right and a dominant strategy in the right column.

(i)		(ii)		(iii)		(iv)	
9,9	1,10✓	7✓,6✓	5,5	8✓,7✓	4,6	5✓,6	2,7✓
10✓,1	2✓,2✓	4,5✓	6✓,4	6,5	7✓,8✓	4,3	3✓,4✓

(b) The first firm to advertise usually wins some market share.

16.	Perfect Competition	Monopolistic competition	Oligopoly	Monopoly
<b>Features</b>				
Many sellers and buyers	Many sellers and buyers	Few sellers	One seller	
No influence on price	Little influence on price	Considerable influence on price	Control of price or quantity	
Homogeneous product	Differentiated product	Differentiated or homogeneous product	No close substitutes	
Perfect knowledge	Low entry and exit barriers	High entry barriers	Blocked entry	
No entry or exit barriers				
<b>Close Australian examples</b>				
Wheat, wool, apples, oranges	Women's clothing, restaurants, hairdressers	Beer, cigarettes, whitegoods, cars, cement, minerals	Letter delivery	

## Examination revision 3.1

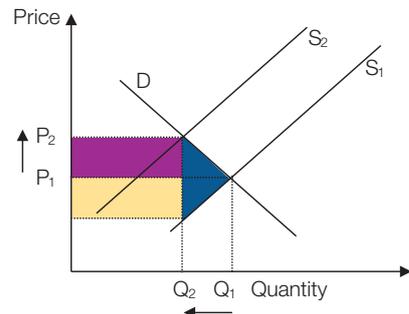
1. Big fish
  - (a) (i) A
  - (ii) Characteristics of this market that mirror perfect competition include homogeneous products, many small producers, and most producers having little influence over price and conditions of sale.
  - (iii) As a perfectly competitive market, the fish market should provide low prices, choice of suppliers, efficient allocation of resources and fair profits.
- (b) In a perfectly competitive market, each producer has almost no influence over price or the conditions of sale, because each producer's goods are the same as every one else's, and any attempt to extract a higher price or some form of customer loyalty would probably result in the customer buying from a competitor. The demand curve faced by each competitor would be almost horizontal.
2. Mobile money
  - (a) The banking market in Australia is dominated by only four big banks and each have considerable influence on price and conditions of sale. Their size and market share provide high barriers to entry. They are interdependent, following each others' successful innovations such as mobile banking. They seem to avoid price competition—for example, their credit card charges are all similar—in favour of non-price competition.
  - (b) (i) NAB will use mobile bankers as a form of non-price competition.
  - (ii) Another type of non-price competition used by banks is sponsorship of sports teams.
  - (c) Oligopolists tend to compete very vigorously because any successful competitive strategy could result in a change in market share, impacting significantly on profit. However, they avoid price competition because, as all oligopolists will follow a price cut, price competition results only in lower revenue for all firms.

## Focus questions 3.2

1. Competition puts pressure on producers to cut costs and improve quality. It also provides greater choice.
2. Resources are allocated efficiently if they are used to maximise consumer satisfaction.
3. Consumers want the latest technology to make their consumer goods cheap, effective and fitted with desirable features. Producers want technical innovation to make production cost efficient, to be able to keep prices low and thereby capture increased market share.
4. The quality of goods is likely to be high in oligopoly markets because there is a high level of non-price competition, providing the incentive to compete on quality. Oligopolists also have enough profit to be able to afford research and development into new technologies.
5. A monopolist sets barriers that block entry of competitors. Consumers have no other choice of suppliers and there are no close substitutes for the product. They are able to set either the price they want or the quantity they want, but not both, as they face a demand curve, and having set one, must accept the other.
6. Firms making super-normal profit benefit at the expense of buyers who pay high prices, and potential suppliers who face barriers to entry to the market. Firms making normal profits are likely to stay in the market and satisfy demand.
7. Markets encourage the use of new technology through competition. Production technology can keep costs down and quality up, in order to maintain or increase market share.
8. Perfect competition keeps prices low and provides choice of sellers for consumers, satisfying maximum wants. Producers make normal profits and information about production techniques is freely available in a perfectly competitive market.
9. (a) Prices of soft drinks are kept high and there may be only a few sellers from which to choose. Knowledge is not freely available.
- (b) Owners of big, dominant companies receive good returns on their investments, but consumers pay high prices. Small firms in an oligopoly often struggle against competition with big firms.

### Focus questions 3.3

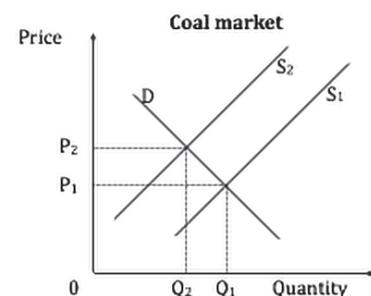
1. (a) Market failure occurs when resources are not allocated efficiently.  
 (b) In these cases, markets have not failed, as objectives have been met. However, despite the efficient operations of the relevant markets, the outcomes are undesirable.
2. (i) Private firms fail to provide street lighting because people can use street lighting without paying.  
 (ii) Public transport to remote areas does not generate sufficient profit for private firms to provide.
3. (a) Producer surplus is the difference between the price a producer is prepared to sell for, and the price received, multiplied by the quantity traded. This is represented by the area above the supply curve and below the price, on a demand and supply diagram.  
 (b) Producer surplus is maximised at market equilibrium when no externalities are present.
4. (a) When externalities exist, overproduction or underproduction occurs and resources are not allocated efficiently, that is to maximise satisfaction of wants.  
 (b) See diagram  
 (c) When a negative externality is present, consumer surplus is reduced by the area marked in purple and producer surplus is reduced by the orange section. Deadweight loss is shown by the blue triangle.
5. When an individual buys health insurance, the insurance supplier lacks information about the individual's health history and therefore is not able to accurately calculate the relevant risk.
6. Unequal incomes are usually seen to be desirable to the extent that they provide incentive to work hard and acquire skills and education. However, too great a disparity in incomes is seen as undesirable in most societies.
7. When market power is exercised, barriers to entry are raised, keeping some firms out of the market. While producers make super-normal profits, consumers pay high prices with reduced choice. Therefore fewer wants are satisfied, meaning that resources are inefficiently allocated.



### Examination revision 3.3

#### Carbon emissions plan criticised

- (a) (i) Market failure occurs when resources are not allocated efficiently.  
 (ii) Carbon emissions are an example of negative externalities.  
 (iii) Carbon emissions are not considered in production costs. As a result, a greater quantity of resources are used to produce goods with carbon emissions than would be demanded if the costs were included, and instead insufficient resources are allocated to environmental quality, leaving some environmental wants unsatisfied.
- (b) (i) Refer to diagram opposite.  
 (ii) The carbon tax imposed on coal suppliers will increase the price of coal to  $P_2$  as they try to cover their increased costs. Buyers will respond by reducing the quantity traded to  $Q_2$ .



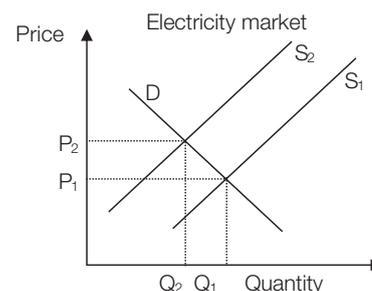
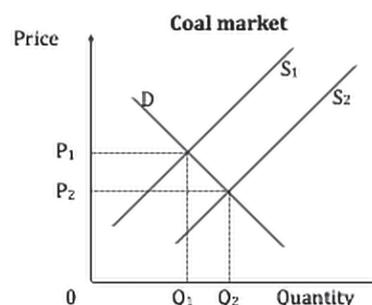
## Focus questions 3.4

1. The Commonwealth Bank – to provide competition in the banking market.
2. It is difficult to charge people to enter a park, and so privately-owned parks find it difficult to make a profit.
3. Producers who pollute may spend money on reducing their pollution to avoid paying the tax, making the cost of pollution abatement their private cost. Note that this will only work if the tax is greater than the cost of clean-up. Those who prefer to pay the tax will also incur high costs, but in this case pollution abatement would be left to government.
4. Price fixing is an example of collusion.
5. The ACCC has had success in bringing firms to justice, and producers are now more careful of their competitive practices. However, it is difficult to gather enough evidence to win cases. Also, regulators sometimes err in their judgements, for example, of whether to allow mergers.
6. The purpose of deregulation was to introduce competition into the telecommunications market so that prices would fall and quality of service would rise.
7. Consumers are protected from misleading advertising, unfair trading practices and unjustified price rises.
8. If successful, the Australian Consumer Law should increase competitive pressures on firms to
  - (a) keep prices down
  - (b) make normal profits and
  - (c) use the best known technologies.
9. (a)
  - income inequality: income tax and social service payments
  - undesirable goods: criminal law
  - asymmetric information: requirements to provide information, for example a form needs to be displayed on the window of a used car giving certain details
  - monopoly power: Competition and Consumer Act and Australian Competition and Consumer Commission
  - externalities: pollution laws and licences
 (b)
  - income inequality: the unemployed lose self respect and remain poor
  - undesirable goods: drug addicts and their families suffer
  - asymmetric information: buyers of used cars face big repair bills
  - monopoly power: competing firms are damaged and consumers pay high prices
  - externalities: other firms use polluted land resources

## Examination revision 3.4

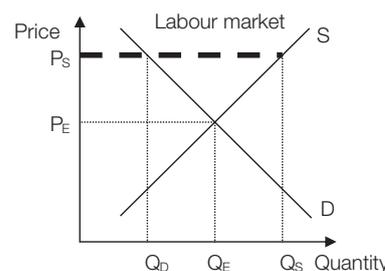
### 1. Fossil fuels conversation

- (a) (i) A subsidy is a payment by government to an industry to reduce firms' production costs.
- (ii) The subsidy will shift the supply curve to the right, to  $S_2$  in the diagram opposite, reducing the price of coal to  $P_2$  and increasing the quantity traded to  $Q_2$ .
- (iii) The removal of the subsidy would reverse the supply curve shift shown in the diagram opposite, moving the market back to its original equilibrium position.
- (iv) Adding a carbon tax to electricity production costs would move the electricity supply curve back to  $S_2$  in the diagram opposite. The price of electricity would rise to  $P_2$ . The tax acts as an incentive for electricity producers to find cleaner sources of energy and reduce external costs.



### 2. The minimum wage

- (a) B
- (b) (i) see diagram opposite
- (ii) The minimum wage,  $P_s$  in the diagram opposite, increases the lowest wage that can be paid from  $P_E$ . The effect on employment is to create a surplus, consisting of an excess of those offering their labour compared to the quantity demanded at  $P_s$ , represented by the distance  $Q_D Q_s$ . This surplus is the quantity of workers unemployed as a result of the government's intervention.
- (iii) Businesses now have to pay more to their lowest paid workers, increasing production costs.
- (c) Removing the minimum wage, a form of price support for those selling labour, would be to reverse the effects described above, as the labour market would revert to the former equilibrium wage,  $P_E$ , and the quantity both demanded and supplied at that wage,  $Q_E$ .



## Topic 4: Economic Objectives

### Focus questions 4.1

1. (a) Full employment is realistically defined as the natural rate of unemployment.
- (b) The natural rate of unemployment is the lowest rate of unemployment without accelerating inflation.
- (c) The labour force consists of all those working or actively seeking work.
- (d) The unemployment rate is the percentage of the labour force who are not working in paid employment and are actively seeking a job.
2. Frictional unemployment includes people who are temporarily between jobs or entering or re-entering the workforce, but structural unemployment occurs as a result of structural change in industry. Those structurally unemployed have skills not in demand in their area and may need to retrain.
3. The hidden unemployed are those who would like to work but are not actively seeking employment. Examples include people with child or aged care responsibilities, lacking transport, or discouraged from seeking employment.
4. The LFPR increases when more people actively seek work.
5. 10% [ $1/(6+3+1)$ ]
6. When a large number of job seekers first enter the labour market, encouraged by improved economic conditions, most are unemployed at first, increasing the unemployment rate.

7. (a) Janice: structural  
(b) Glenys: frictional  
(c) Morris: general/ cyclical  
(d) Renee: frictional  
(e) Bob: structural
8. The definition does not include anyone working more than one hour per week, which leaves out the underemployed. It also leaves out the hidden unemployed who are not actively seeking work.
9. No solution given.

## Examination revision 4.1

Not enough working hours

- (a) (i) Underemployment refers to workers who want more hours of work per week.  
(ii) C
- (b) (i) The participation rate is the percentage of those eligible to work who are either employed or unemployed.  
(ii) D
- (c) Casual workers do not have to be offered work, and when offered have the option of refusing.
- (d) If inflation is accelerating at an unemployment rate of 4.7%, then full employment has been achieved.
- (e) People underemployed may not be earning enough weekly income to avoid poverty.
- (f) The underemployed are employed, and therefore not counted in unemployed statistics.
- (g) A reason for the trend towards part-time work is the extra competitive pressure on businesses as a result of increased freedom of trade, reducing import prices. Businesses want to cut their wage bill down to compete with lower prices, and so try to pay employees only when they are needed.
- (h) Another changing employment trend is the increasing prevalence of flexible working arrangements. Employees can increasingly choose their working times and work from home.

## Focus questions 4.2

1. (a) Inflation is the rate of increase in the general level of prices.  
(b) Percentage increase in the Consumer Price Index.
2. Price stability
  - prevents increased import spending and loss of export sales
  - protects fixed incomes
  - avoids erosion of spending power of incomes and saving
  - removes the need for wage rise campaigns and interest rate rises.
3. The total price of a basket of goods that represents average consumer spending patterns.
4. The CPI reflects average spending patterns of Australians and this differs from Granny May's spending pattern.
5. (a) Inflation reduces the spending power of income and so fewer goods and services can be bought as prices increase, if those incomes do not also rise.  
(b) Australian goods and services become more expensive than foreign products as Australian prices increase, and these are therefore less competitive with foreign goods and services.
6. Cost-push inflation is the result of increased production costs, whereas demand-pull inflation is the result of increased demand.
7. Borrowers and organised investors gain from inflation whereas savers and exporters lose.
8. Inflation is imported by importation of goods and services at high prices. This increases the general level of prices, both consumer and producer goods, and also allows domestic producers to raise their prices, as competitive pressure is reduced.

9. When income tax is reduced, households have more money to spend. Increased consumption spending increases total spending, pushing up the general level of prices.
10. No solution given.

## Examination revision 4.2

Monetary policy statement 7 February 2014

- (a) (i) The RBA's inflation target for Australia was being achieved in 2013 as it "remained consistent with the 2-3 per cent target".
- (ii) An inflation rate of 2.7% means that the general level of prices, as measured by the Consumer Price Index, has increased by 2.7% over the previous 12 months.
- (b) Reason #1: Inflation increases export prices, reducing the nation's international competitiveness and therefore reducing export earnings.  
Reason #2: Inflation reduces the value of household income, reducing spending and therefore reducing GDP.
- (c) Low interest rates lower the repayments for borrowers, leaving more money for spending on goods and services. This is a demand factor increasing inflation. A cost-push factor is higher import prices, as many materials and capital goods used in production are imported.

## Focus questions 4.3

1. Economic growth increases people's standard of living and creates employment.
2. (a) GDP is the total value of all final goods and services supplied by Australian producers in a period, usually a year.
- (b) Real GDP is GDP adjusted by statistically removing the effect of inflation.
- (c) Economic growth is the increase in real GDP, expressed as a percentage change.
3. The two basic sources of economic growth are increases in resources – more land, labour, capital – and improvements in the efficiency of resources use.
4. The income, production and expenditure methods.
5. (a) The rate of economic growth decreased steeply in 1991 to become negative by the end of that year.
- (b) More goods were produced in December than in January 1985 because, although the rate of growth decreased during the year, there was still some positive growth.
6. The benefits of economic growth are so valuable that they outweigh the costs. Economic growth is able to improve living standards, including environmental standards, as well as to reduce poverty. It is therefore able to alleviate environmental degradation and some social costs with the technological improvements that come from economic growth.
7. No solution given.

## Examination revision 4.3

Japan's GDP growth rate

- (a) (i) Economic growth
- (ii) December 2011
- (iii) "% change previous 12 months" means that the figures shown on the vertical axis represent the percentage change in GDP over the 12 months previous to the quarter shown. For example, the bar for the June quarter 2008 shows 0.6, meaning that GDP increased by 0.6% from the June quarter 2007 to the June quarter 2008.
- (b) (i) 2009
- (ii) GDP was greater in the December quarter 2013 because there had been a net increase since the March quarter 2012.

### Focus questions 4.4

1. External balance is the balance between money inflows to Australia and money outflows.

International transactions by Australians recorded in:	Current account			Capital & financial account	Inflow or outflow?
	goods	services	income		
(a) wine exports	X				inflow
(b) purchase of a UK bank				X	outflow
(c) interest payment on loan			X		outflow
(d) loan repayment				X	outflow
(e) purchase of Singapore Airlines flight		X			outflow

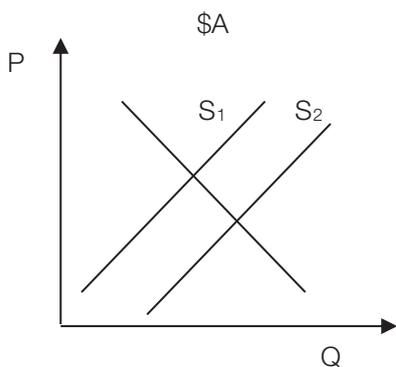
3. The income section

4. When foreigners buy Australian exports they need to pay for them with Australian dollars, and so they need to buy Australian dollars. This adds to demand for Australian dollars.

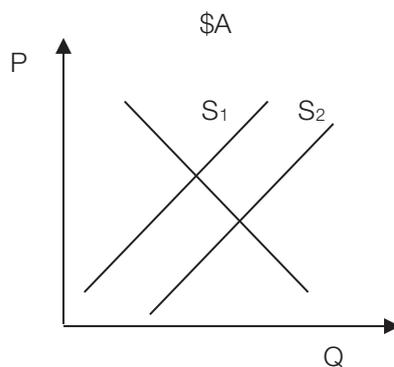
5. Australians

6. When Australians reduce their spending overseas, for example on imports, overseas travel or investment in other countries, supply of Australian dollars is reduced.

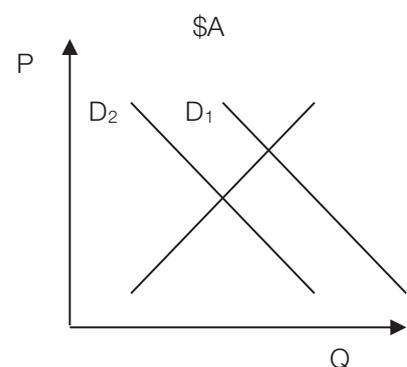
7. (a)



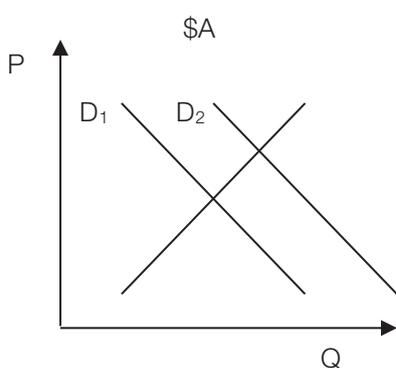
(b)



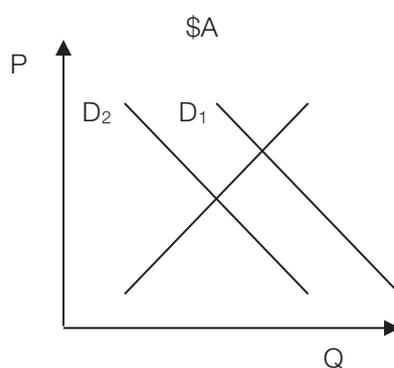
(c)



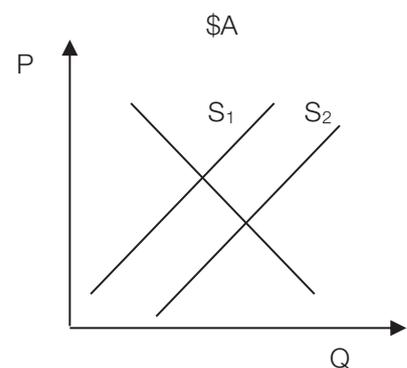
(d)



(e)



(f)



8. Direct investment refers to foreign investment that results in more than 10% ownership of a business, for example setting up a new company. Portfolio investment refers to foreign investment that results in less than 10% ownership, for example purchase of a number of shares in a company, but less than 10% of the company's shares.

9. (a) Direct investment (more than 10% ownership of Fortescue Metals)

(b) (i) The investment will not be recorded in the current account, and so will have no influence.

(ii) In future periods, when Fortescue Metals pays dividends on Valin's shareholdings, the income section of the current account will record the payments and will reduce, or worsen, the current account balance.



## Examination revision 4.4

1. \$A devalued
  - (a) (i) A falling Australian dollar indicates a net outflow of money, a net increase in supply of \$As.
  - (ii) Lower export prices and lower foreign investment mean less money flowing into Australia and therefore a fall in demand for \$As, reducing the price of the Australian currency.
  - (b) (i) A lower exchange rate will make it easier to buy \$As with foreign currency, and so Australian exports are cheaper for foreigners to buy, increasing export sales and improving the balance of trade.
  - (ii) An improved balance of trade in turn improves the current account balance, as more export earnings add to total current inflows, reducing any current account deficit.
  - (iii) It is more expensive for Australians travelling overseas to buy foreign services such as accommodation and transport in other countries, as they have to supply more \$As to buy foreign currency.
2. Top credit rating at risk
  - (a) Foreign investors will be less keen to invest in Australian economic activity.
  - (b) Current account deficit and foreign debt, both as a percentage of GDP, are both indicators of external balance.

## Focus questions 4.5

1. (a) 719  
(b) 120
2. D
3. Linear regression is used to try to establish a relationship using a set of data in the form of coordinates.

## Topic 5: Determination of Output and Price Level

### Focus questions 5.1

1. (a) Indicators measure achievement of economic objectives and describe current conditions, providing information used in making decisions and setting policies to improve economic outcomes.
- (b) A change in the exchange rate indicates net international money flows. A fall indicates net outflows and a rise indicates net inflows.
2. (a) A recession is two or more consecutive periods of negative economic growth. A downturn is a period of declining economic activity.
- (b) a boom
- (c) a recession
3. (a) Seasonal adjustment of indicators involves the statistical removal of the effects of known seasonal influences.
- (b) A cyclical pattern is a repeated series of peaks and troughs.
- (c) A composite indicator is one that consists of a number of indicators combined together to give broad economic information.
4. A leading indicator, such as factory overtime or housing approvals, is one that indicates activity levels that occur before actual production; it is used to predict production levels.

## Examination revision 5.1

1. US manufacturing orders
  - (a) (i) A
    - (ii) Leading indicators are used to indicate upcoming economic activity, especially production, in the near future.
  - (b) Each indicator gives different information about the economy, and many economists want the broadest possible view, with different economists interested in different areas of the economy.
  - (c) (i) The graph shows a repeated pattern of peaks and troughs.
    - (ii) The number of US manufacturing orders dropped steeply in 2008, suggesting a much lower level of manufacturing in 2009.
    - (iii) One problem in using this graph for prediction is that the decline shown in the graph may not continue; it could even be reversed in the next period.
2. Expectations of recession
  - (a) A recession is a low point in the business cycle, measured as a low level of GDP. Technically, it is two or more consecutive quarters of negative growth.
  - (b) In a recession unemployment would rise to a relatively high level because there would be a low level of production and so a reduced level of demand for labour. All types of unemployment would occur, including cyclical unemployment.
  - (c) Recovery or upturn
  - (d) Retail sales
  - (e) A key indicator consists of a single measure, such as the unemployment rate, whereas a composite indicator is a combination of two or more measures.

## Focus questions 5.2

1. (a) The five major sectors are households, firms, financial institutions, government and overseas.
  - (b) Each of the sectors is dependent upon the others. For example, households are dependent on income from firms and firms are dependent on households for their resources.
2. Firms pay all their profits to households as income, as households own firms.
3. Income is defined as payments to households for their resources.
4. Households spend part of their income on domestically produced consumption goods and services, and they also use it to save, pay tax and spend on imports.
5. (a) Injections are investment spending, government spending and export earnings. These spending types inject money into firms and hence generate production, use of resources and therefore income. Leakages are savings, taxation and import spending that reduce the consumption spending flow to firms, and hence reduce production, use of resources and therefore income.
  - (b) Injections add to the circular flow of income. Leakages reduce the income flow.
6. Saving is a leakage from the circular flow because it is income that is not spent. Only spending generates production and therefore income. Investment is spending by firms on capital goods and additions to their stocks.
7. This view is too simple because, for example, the rest of the world has a much bigger role in the Australian economy than merely buying exports and supplying imports. International transactions also include investment, foreign aid and income transfers.
8. (a) Total expenditure consist of consumption spending, investment spending, government spending and export earnings, less import spending.
  - (b)  $AD = C + I + G + X - M$
9. Exports earn income for domestic producers from foreign buyers; whereas imports are included in consumption, investment and government spending and need to be subtracted from these to calculate spending on domestically produced goods and services.

10. According to the circular flow model, the foreign sector buys exports and sells imports to the domestic economy.
11. The government could increase spending to increase the level of income.
12. A financial intermediary acts as a medium between savers and borrowers, accepting deposits from savers and supplying loans to borrowers.
13. Financial institutions accept a lot of small deposits and lend relatively few large amounts. A large number of savers therefore contribute to each loan. In this way, each saver risks only a small amount if a borrower defaults on a loan.
14. Economic growth is stimulated when financial institutions lend money which is then spent, generating production of goods and services.
15. (a) The expenditure multiplier is the process by which any autonomous increase in aggregate demand will have a multiplied effect on national income.  
(b) Induced consumption refers to consumption spending that is induced by an increase in household income, rather than by other factors.
16. If households were not induced to increase consumption spending when income increases, the multiplier process would not operate at all. National income would increase by the amount of any autonomous increase in spending, and no more than that.
17. As leakages from the circular flow of income increase, such as increased savings, taxation or import spending, the size of the expenditure multiplier is reduced, because induced consumption spending is reduced.
18. Consumption spending, such as the purchase of a car, increases total spending and income is increased, but by some multiple of the autonomous spending increase. The purchase of a \$30 000 car will increase total production, and therefore national income, by some multiple of \$30 000.
19. If spending decreases by \$100m, production and therefore income will also decrease by \$100m. Households receiving less income will be induced to reduce their consumption spending, but by some fraction of \$100m, say \$80m. They won't reduce consumption spending by the full \$100m as they will pay less tax, save less and buy fewer imports too. Firms produce \$80m less goods and services and so households receive \$80m less income. They will then further reduce their consumption spending by, in this example, 80% of the new decrease in income, and so on, until total leakages amount to \$100m. Aggregate demand will be eventually reduced by some multiple of \$100m, in this case \$500m. Note: it is not necessary to calculate the final change in aggregate demand.

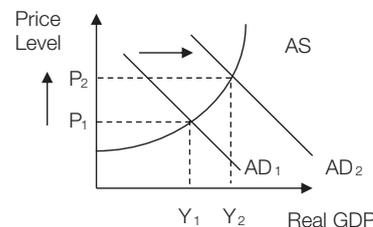
## Examination revision 5.2

Bankers' lending attitudes are changing

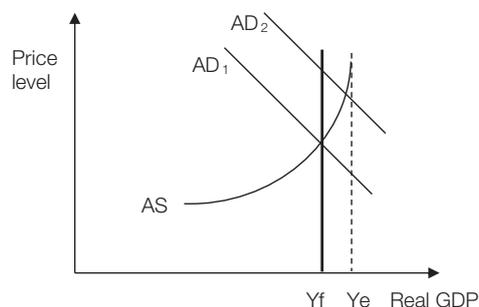
- (a) Role 1: Banks lend money hence encouraging spending and stimulating economic growth.  
Role 2: They spread the risk of default on large loans over a large number of people's small deposits.
- (b) The level of household saving is affected by the level of income and the level of consumption spending.
- (c) Increased saving increases leakages from the circular flow of income, reducing the amount of total spending and therefore the total value of resources used, which reduces household income.
- (d) C
- (e) Reduced lending to households and businesses will result in less consumption and investment spending, reducing total production. Firms will produce less, buying fewer resources and so will pay less income to households.

## Focus questions 5.3

- The equilibrium level of income is the level of real GDP at which the quantity of aggregate demand is the same as aggregate supply.
- Firms produce and sell a total value of goods and services in a year, known as total or gross production. The circular flow model assumes that all the sales receipts of firms are paid to households. They pay households for resources in the form of income, and therefore total income is, according to circular flow theory, the same as total production.
- Full employment equilibrium is the level of GDP, or income (theoretically the same), required in the economy to generate full employment.
  - It is a major government economic objective because it maximises economic output and employment without accelerating inflation. Three macroeconomic objectives are achieved and the economy is operating as close to its capacity as possible.
- When Australian prices climb higher than those charged for substitute goods and services from other countries, Australian producers lose export sales and import spending increases. In addition, higher prices reduce spending power, and so fewer goods and services can be bought by Australians.
- Interest rates are prices of various loans. If interest rates increase, borrowing becomes more expensive and investment spending decreases. Further, increased interest payments on existing loans increase production costs, reducing profit and hence the ability to invest. Interest rates have a substantial effect because 50% of investment spending by Australian firms is financed by borrowed funds.
  - A rise in social security payments will increase total income received by households and so household spending, which is consumption spending, will increase.
- An unemployment gap is the difference between the equilibrium level of real GDP and that generated at full employment, when equilibrium occurs at a lower level of real GDP than at full employment.
  - An inflationary gap occurs when macroeconomic equilibrium is beyond the level of full employment. Again, it is the difference between the equilibrium level of income and the full employment level.
- If the trade balance,  $X - M$ , can be increased, AD will increase and the AD curve will shift right. Production will have to rise and hence more resources, including labour, will be used.
- A wage-price spiral occurs when workers demand pay rises to cover rising costs of living; in response, firms raise their prices to preserve their profit margins. Workers follow these price rises with further demands, and firms again respond with price increases. As this process is repeated, wages and prices both spiral upwards. This usually occurs in boom times, when pay rises are easily affordable and aggregate demand is high.
- An increase in aggregate demand at every price level will create shortages. This will cause suppliers to increase their production, increasing real GDP to  $Y_2$ , and will also allow them to increase their prices, to  $P_2$  in the diagram opposite.

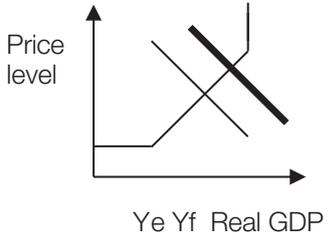
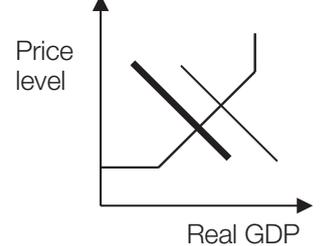
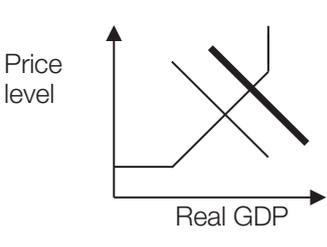


- An increase in aggregate demand above the full employment level of national income, that is, below the natural rate of unemployment, will increase inflation rapidly. This is because firms need to pay very high prices for labour to increase their production. The AD curve moves up the steepest part of the SAS curve to illustrate this, in figure 2 opposite.



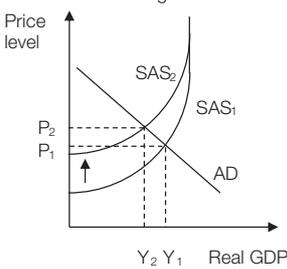
- The business cycle is a repeated series of booms and troughs in the level of economic activity.
- After a recession, aggregate demand increases, often sparked by investment spending that was halted during the recession. Producers increase their output in response, increasing economic growth.
- During a downturn phase, aggregate demand decreases, creating surpluses. To avoid these, producers drop their prices to encourage spending.

13. During a downturn phase, aggregate demand decreases, creating increases in stock levels. To clear surpluses, suppliers decrease their prices to encourage spending.
14. During a boom, aggregate demand increases, increasing prices and production. As a result, economic growth is assisted and so is employment, as more resources are needed. However, higher prices worsen price stability as well as external balance.

<p>15.</p>  <p style="text-align: center;">Ye Yf Real GDP</p>	<p>(a) Reduced income tax:</p> <p>Reduced income tax will induce increased consumption spending, causing a rightward shift of AD, moving the level of national income closer to the full employment level and increasing employment and prices. Note that a straight-line SAS curve is used in the diagram because there is only need to refer to its normal phase.</p>
 <p style="text-align: center;">Real GDP</p>	<p>(b) A rise in interest rates:</p> <p>Higher interest rates increase the cost of borrowing for households and firms, reducing consumption and investment spending. The AD curve moves left. Production, prices and employment will all fall.</p>
 <p style="text-align: center;">Real GDP</p>	<p>(c) A fall in the exchange rate:</p> <p>A cheaper Australian dollar will boost export sales as overseas buyers need to use less of their currency to buy AUDs. At the same time, import sales should decrease as Australians need to pay more AUDs for the same volume of goods and services. The improved trade balance shifts AD right, increasing prices, production and employment.</p>

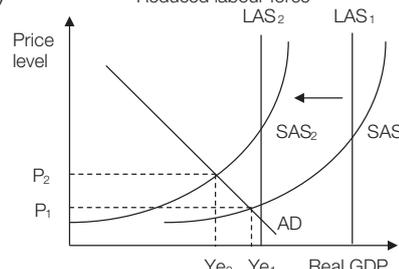
16. At higher prices, producers make more profit and so they are prepared to use more resources to supply more.
17. In the normal range, supply will increase as higher prices give rise to greater profits. Hence real GDP increases with the price level. At the economy's physical capacity, it is not possible to increase output, even in response to higher prices, as no more resources are available. Therefore in this range real GDP can not increase as prices go up.
18. When new resources become available, or more productive methods of using existing resources are used, the economy's productive capacity expands.

19. (a) **Wage rise**



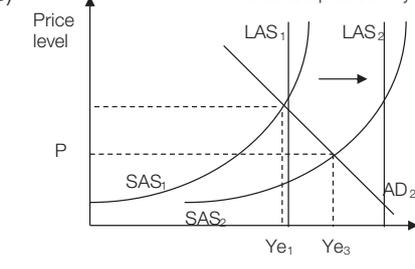
Ye<sub>2</sub> Ye<sub>1</sub> Real GDP

(b) **Reduced labour force**



Ye<sub>2</sub> Ye<sub>1</sub> Real GDP

(c) **Increased productivity**



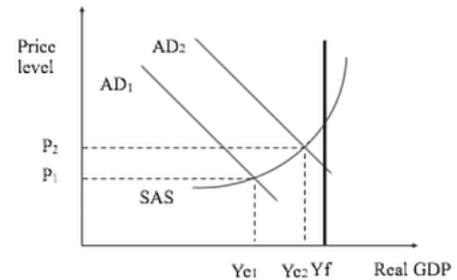
Ye<sub>1</sub> Ye<sub>3</sub>

20. (a) Cost push inflation is caused by increased production costs, demonstrated by a shift of the normal range of the SAS curve to the left. Demand-pull inflation is caused by an increase in aggregate demand, shown by a shift of the AD curve to the right. Both increase prices but have opposite effects on real GDP.
- (b) The model shows that there are two groups of causes of inflation and the implications for policy are to distinguish between the two. The solution is then the reverse of the cause. Cost-push inflation needs to be combated with reduced production costs, whereas demand-pull inflation needs demand reducing policies.

21. (a) Microeconomic reform reduces production costs. This allows suppliers to reduce their prices to gain market share, increasing supply at every price level.
- (b) It also improves production technologies, producing more output with the same level of resources and hence expanding the economy's productive capacities.
22. (a) When inflation is a problem, boosting aggregate demand will worsen it, and so economic growth needs to be increased by increasing aggregate supply, not demand.
- (b) Supply-side policies help achieve all four macroeconomic objectives whereas demand-side policies, whether increasing or decreasing aggregate demand, are able to assist with only two objectives.
- (c) Demand-side policies act in the short to medium term, and so they would be preferred to supply policies if an impact were needed as soon as possible.

### Examination revision 5.3

1. US confidence drops
- (a) Spending needs to increase to shift aggregate demand to  $AD_2$  in the diagram opposite, to cause real GDP to rise to  $Ye_2$ .
- (b) Falling consumer confidence will cause any rightward shift in demand to falter, or even reverse, similarly affecting any rise in GDP.
2. Queensland floods' economic costs
- (a) Assuming that the damage is reversible, the normal range of the SAS curve would shift, because the resources affected by floods are temporarily unavailable. Even crop damage is reversible, as long as the land is capable of future production, and so the productive capacity of the economy, represented by the LAS curve, is not affected. (Note that a different answer is acceptable with a different assumption).



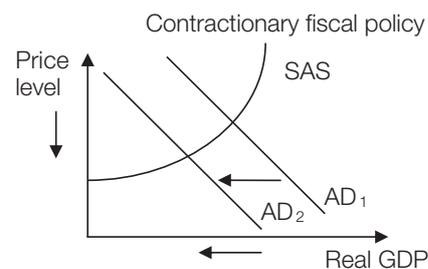
- (b)
- 
- The diagram shows a graph with 'Price level' on the vertical axis and 'Real GDP' on the horizontal axis. A vertical line represents the Long-Run Aggregate Supply (LAS) curve at output  $Y_f$ . A downward-sloping curve represents Aggregate Demand (AD). Two upward-sloping curves represent the Short-Run Aggregate Supply (SAS):  $SAS_1$  and  $SAS_2$ , where  $SAS_2$  is to the left of  $SAS_1$ . The initial equilibrium is at the intersection of AD and  $SAS_1$ , corresponding to price level  $P_1$  and output  $Ye_1$ . The new equilibrium is at the intersection of AD and  $SAS_2$ , corresponding to price level  $P_2$  and output  $Ye_2$ . Dashed lines indicate these equilibrium points.
- (c) The floods destroyed the supply of grains and flooded coal mines, reducing export earnings and hence GDP fell to  $Ye_2$ . However, as supply fell, demand did not and so suppliers raised prices to try to maintain their profits, increasing the price level to  $P_2$ .

## Topic 6: Economic Policies

### Focus questions 6.2

1. Governments' major macroeconomic objectives are price stability, economic growth, full employment and external balance.
2. (a) A surplus budget is one that plans to spend less than its taxation receipts. A deficit budget plans more spending than taxation receipts.
- (b) A deficit budget in 2018 would expand the economy.
- (c) Because borrowing from the central bank increases the amount of money available in the economy, stimulating new spending, inflation would have to be under control.

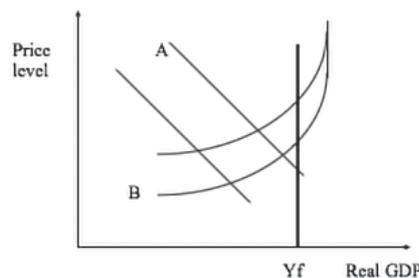
3. (a) A contractionary budget is one that plans to reduce aggregate demand, with a mix of lower government spending and increased taxation. Lower AD causes producers to reduce their prices as well as their production levels.
- (b) Contractionary fiscal policy is effective in reducing inflationary pressure, as long as economic growth and employment are both reasonably strong.



### Examination revision 6.2

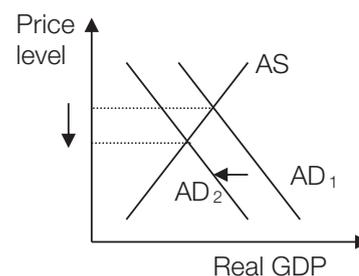
Priority projects funding

- (a) Infrastructure reduces production costs for businesses, reducing inflation and stimulating economic growth. For example, the national broadband network has reduced information and communication costs for businesses.
- (b) (i) Curve A in the diagram opposite.  
(ii) Curve B in the diagram opposite.
- (c) During a recession fiscal spending is likely to be directed to spending that will help employment to grow.



### Focus questions 6.3

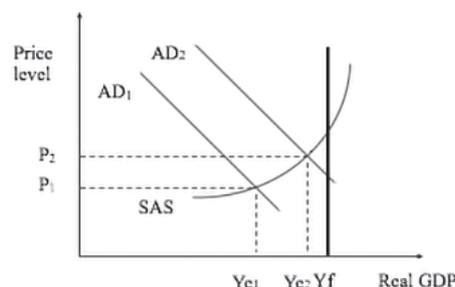
1. (a) A government can use government spending, taxation and interest rates to manage aggregate demand.  
(b) Fiscal and monetary policies are mostly used to expand the economy in times of low phase of the business cycle, but to contract it in times of rapid growth and inflation.  
(c) (i) Reducing interest rates will encourage households and firms to borrow and spend. Therefore if the Government wants to expand the economy by increasing real GDP, the appropriate monetary policy is to ease monetary conditions with lower rates.  
(ii) Government spending in a particular region will stimulate that local economy.
2. The Reserve Bank of Australia is responsible for monetary policy.
3. Higher interest rates will decrease aggregate demand because households and firms are discouraged from borrowing to finance spending on consumer durables and investment projects. In addition, interest payments on existing loans increase. Firms will reduce prices in response to reduced demand, reducing the rate of inflation.
4. The Commonwealth Government has political objectives as well as economic and other objectives. If it were in charge of monetary policy, it would be tempted to use interest rates to win votes.
5. In the 1990s interest rates were reduced by 13%, an enormous boost to demand. In 2020, with the rate 0.25%, there was no scope to provide a demand boost by reducing the cash rate.



### Examination revision 6.3

Governments try to heal global economy

- (a) (i) Fiscal policy: "massive government spending plans"  
Monetary policy: "aggressive interest rate cuts"
- (ii) Fiscal policy: from less than one up to five years  
Monetary policy: about 18 months
- (b) (i) See diagram opposite  
(ii) Higher interest rates will decrease aggregate demand because households and firms are discouraged from borrowing to finance spending on consumer durables and investment projects. In addition, interest payments on existing loans increase. Firms reduce prices in response to reduced demand, reducing the rate of inflation.



- (c) (i) "Rapidly falling economic activity" in our trading partners will reduce export earnings from those countries, and thereby reduce aggregate demand, export earnings being a component of aggregate demand.
- (ii) The policy response, of expansionary fiscal and monetary policy, is the right response, as aggregate demand was in need of substantial stimulus to lift economic activity and employment.

## Focus questions 6.4

- (a) An example of microeconomic reform is labour market reform, which aims to improve producers' efficiency by negotiating with employees to use improved methods and better technology that will reduce costs and compete better with other countries.

(b) Governments stimulate microeconomic reform with competition policy to encourage more efficient use of resources.

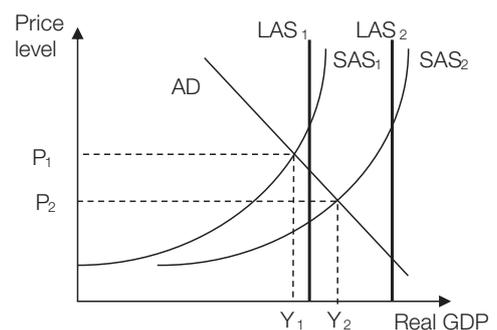
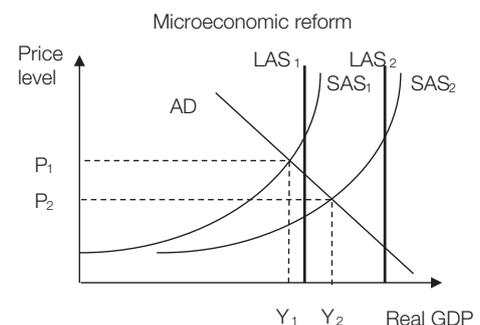
(c) More efficient use of resources shifts the long-run aggregate supply curve to  $LAS_2$  in the diagram opposite.
- (a) Competitive markets achieve most market objectives. They deliver the best combination of price, choice and quality, they allocate resources efficiently to maximise satisfaction, and they encourage technical innovation. In addition, reduced production costs increase aggregate supply, assisting the macroeconomic objectives price stability, economic growth, full employment and external balance.

(b) Governments have reduced tariffs, strengthened competition policy, legislated to allow access to infrastructure, reformed the labour market, deregulated agriculture and airlines markets, privatised their own enterprises and used taxation to encourage competition.

(c) Access to existing infrastructure allows new firms to enter markets, increasing competition. It also avoids duplication of expensive equipment. It thus increases aggregate supply, which enables progress in all of the four major macroeconomic objectives.

(d) Competition policy should result in microeconomic reform, improving international competitiveness and thus aggregate supply.
- Labour market reform reduces production costs, increasing short-run aggregate supply to  $SAS_2$  in the diagram opposite. It also expands the economy's production possibilities with more efficient use of resources, increasing long-run aggregate supply to  $LAS_2$  in the diagram to the right.
- Lower income tax encourages workers to seek promotion by improving their skills, thus labour productivity.
- Lower tariffs make imports cheaper, forcing domestic firms whose products compete with imports to lower their prices to protect their market share.
- Governments believe that market outcomes will be improved if markets are less regulated. An example is the removal of a floor price (minimum price) from an agricultural market. It results in lower prices and more efficient resource allocation because price and quantity move to their equilibrium levels.
- Reform of infrastructure such as railway lines, trains and related services can reduce freight and passenger charges by improving efficiency.
- The Australian Government has privatised airports in the belief that the private owners will produce air travel services more cheaply and efficiently because they are driven by the profit motive and will better manage costs.
- (a) To support Frydenberg's supply side argument, you could refer to the AS curve shift in your diagram and explain that it enables lower prices as well as more production.

(b) One problem with supply side policies is that they take a long time to show results.



10.

		Price Stability	External Balance *	Economic Growth	Full Employment
<b>FISCAL POLICY</b>					
Government spending	Decrease	↑	↑	↓	↓
Income taxation	Decrease	↓	↓	↑	↑
<b>MONETARY POLICY</b>					
Interest rates	Increase	↑	↑	↓	↓
<b>SUPPLY MANAGEMENT POLICIES</b>					
Wages costs	Decrease	↑	↑	↑	↑
Tariffs	Decrease	↑	↑	↑	↑
Competition	Increase	↑	↑	↑	↑
Deregulation	Increase	↑	↑	↑	↑
Infrastructure costs	Decrease	↑	↑	↑	↑
Privatisation	Increase	↑	↑	↑	↑

\*External balance arrows indicate better or worse current account balance

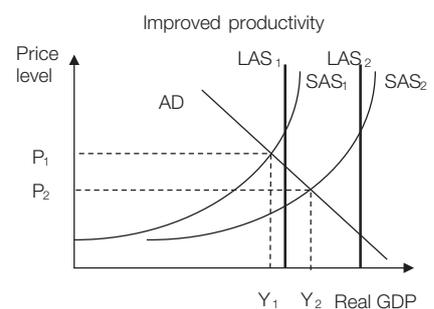
### Examination revision 6.4

1. Governments try to heal global economy

- (a) Supply management policies are long-term policies, and a very rapid impact was needed as economic activity had fallen rapidly.
- (b) Supply management policies should also continue because they increase supply, assisting with all four major macroeconomic objectives.
- (c) (i) Competition policy could be used.  
 (ii) Competition policy is aimed at maintaining an effective level of competition in every market to minimise prices and maximise productive efficiency.  
 (iii) It also tries to maximise supply by ensuring that each market has a good number of suppliers, with minimal barriers to entry.

2. Business warns IR reform crucial

- (a) Labour market reform makes more productive use of labour resources, as it encourages employees to use more productive technologies.
- (b) Improved productivity increases production per unit of resources used. This expands the production capacity of the economy and so shifts the long-run aggregate supply (LAS) curve to LAS<sub>2</sub> in the diagram opposite. Improved productivity also reduces production costs, as it uses fewer resources for more production. This is represented in an AD-AS diagram opposite by also shifting the short-run aggregate supply curve to SAS<sub>2</sub>.



- (c) The new equilibrium position is to the right of and below the former equilibrium, representing a lower price level P<sub>2</sub> and a higher level of real GDP Y<sub>2</sub>. Greater labour productivity gives producers the opportunity to reduce their prices in markets competing with imports, increasing sales and GDP.

## Focus questions 6.5

1. It is difficult to predict the effects of policies because of problems of lagging indicators and lagging effects of policies, inaccurate statistics, inadequate knowledge and unexpected changes.
2. Expansionary demand management policies (fiscal and monetary policies) that improve economic growth by stimulating aggregate demand, economic growth and employment, also encourage suppliers to raise their prices, making exports more difficult to sell. Contractionary demand policies have the opposite effects. In both cases, two macroeconomic objectives are assisted while two are impeded.
3. It is difficult to know what magnitude of action to select in each policy. It is also a problem to choose the right mix of policies. Knowledge of economic theory is not good enough to be certain of the impacts of policies whose selection is considered. Political objectives can clash with economic objectives.
4. The rate of inflation is a lagging indicator and by the time it is apparent that inflation needs to be controlled, it has already caused problems such as reducing firms' international competitiveness and households' spending power.
5. An implementation lag is a time before a selected policy can be put into practice, or implemented. An impact lag is a time after implementation, before its impact is noticeable.
6. The COVID-19 pandemic of 2019-20 was a major shock to the economies of most countries. Governments needed to respond by rebuilding confidence and spending.

## Examination revision 6.4

Politics of projects

- (a) Advice comes from a variety of sources, and similarly, there is a wide range of pressure groups wanting the government to undertake varying policies and actions.
- (b) A union is a pressure groups that wants governments to pass laws that protect and improve their rights, and their power of negotiation with employers.
- (c) It is difficult to know what magnitude of action to select in each policy. Increasing government spending too much can cause a debt problem for later budgets to deal with, especially if the economic situation worsens.

## Topic 7: Globalisation

### Focus questions 7.2

1. (a) Free trade exists between nations when all obstacles to trade, such as tariffs, are removed.  
(b) Protection refers to measures that assist domestic firms to compete against foreign competition.
2. (a) Comparative advantage is the advantage one country has over another in the production of a particular good or service. A country has a comparative advantage if it can produce a product at a lower opportunity cost than its trading partner.  
(b) Australia has a comparative advantage in the production of wheat, wool, wine, gold, coal, iron ore and alumina.
3. (a) International trade increases choice for consumers who have greater access to the best goods and services produced around the world. In addition, competition from imports keeps Australian prices competitive.  
(b) Producers have access to world markets to sell their exports, and also have imported components available.  
(c) Nations that trade with each other are more likely to maintain good relations to protect their trade.
4. Cheaper imports apply the pressure of global competition, forcing firms to improve efficiency. Cheaper imports of components assist cost-cutting and cheaper imports of capital goods also helps improve productivity.  
Greater access to foreign markets allows producers to increase the scale of their operations, spreading fixed cost over a larger volume of goods and services and thereby achieving economies of scale.
5. If domestic firms successfully compete in global markets, they will sell more exports and more substitutes for imports. Increased export earnings and decreased import spending will improve external balance.

- If domestic firms do not successfully compete in global markets, they will lose market share, meaning less production and less demand for labour. Some industries may even be lost as firms fail to compete. This seems to be happening to the clothing, footwear and textiles industry.
- Free trade improves international relations, as trading partners want to protect their trade. International travel as well as labour and cultural exchange should increase as communication and transport between trading partners improves.
- Dumping refers to the practice of selling goods, at very low prices or even below cost price, in another country, potentially damaging that country's domestic market.

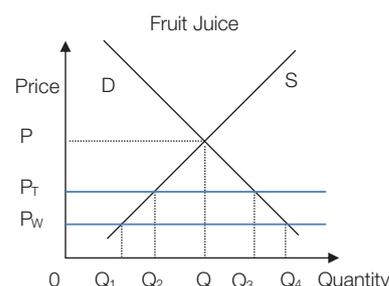
## Examination revision 7.2

### Cheap factory labour

- Chinese manufacturers who enjoy cheap labour benefit from free trade because they have a cost advantage over most competitors.
- Workers on China's east coast are now getting higher wages and improved working conditions. This will push up prices of goods imported from that area, providing a lower level of price competition with domestic produce. Such wage increases and reduced price competition will weaken the "cheap foreign labour" argument.
- Another argument in favour of protection is the infant industry argument. Although infant industries suffer from early high costs compared with established, often multinational companies, they demand government protection from foreign competition as long as they can get it, sometimes without ever becoming efficient enough to compete without that protection. The argument is weakened by the on-going temptation for infant industries to remain inefficient.
- Perhaps the strongest argument for protection is that protecting domestic firms also protects employment. All governments want to be able to provide increased opportunities for employment, making it a very strong argument. The argument against this is that protection of domestic industry attracts retaliatory protection by trading partners of their local industry, making imports dearer, pushing up domestic prices, and reducing the amount of trade.

## Focus questions 7.3

- A tariff is a tax on imports, usually expressed as a percentage of the import price. An example is a 5% tax on cars imported into Australia.
  - A tariff is a tax paid by importing firms and passed on to those who consume imports. It allows import-competing firms to make more sales. Therefore, income is distributed from import consumers to import-competing producers.
  - A tariff on imported wine will increase its price allowing domestic producers to be more competitive and to sell more wine.
  - Imposing a tariff on imported fruit juice will raise the price from the world price,  $P_w$ , to the world price plus the tariff,  $P_T$ , making rice buyers want fewer imports, from  $Q_1Q_4$  to  $Q_2Q_3$ , and buy more Australian fruit juice, from  $Q_1$  to  $Q_2$ .
- A quota limits the quantity of imports, allowing domestic producers to achieve some market share, make improvements to their production techniques and increase their sales.
- Protection allows domestic producers to be shielded to an extent from competing with foreign substitutes. As a result, they can let their prices drift up without keeping costs at a minimum.



## Examination revision 7.3

- Dumping controls tightened to compete with foreign firms
  - A
  - Normal competition involves importation of normal volumes at normal prices, whereas dumping is in large volumes and at very low prices.
  - Loss of all or most sales for a period, due to dumping, can cause local businesses to stand down employees while production ceases or slows, for the period or even permanently.

2. Rudd rejected “Buy Australian”
  - (a) Protection is government assistance for domestic firms to compete with foreign competition.
  - (b) Giving government purchasing preference and granting subsidies are two protection measures to assist domestic firms.
  - (c) Foreign trading partners could respond to a country’s protection policy by imposing their own forms of protection on that country’s exports.
  - (d) (i) When trade is reduced, each country produces what it needs, instead of countries focussing production on those goods and services for which it has a comparative advantage. As a result, production around the world is less efficient, and there is less total global production.
  - (ii) This competitive advantage argument is a very good argument, and is the reason for the recent and current expansion of world trade.

## Focus questions 7.4

1. (a) Trade agreements remove impediments to trade and so more imports become available at lower prices. As a result, import spending increases.
  - (b) Lower import prices reduce the general level of prices in Australia. Not only are imports cheaper, but competition from imports keeps Australian prices low and imported capital goods, such as components, are cheaper too.
  - (c) Maintaining good relations is more likely when there is trade to be protected. Hence trade improves national security.
  - (d) Competitive pressure from the presence of more, cheap imported substitutes for Australian goods and services keeps Australian firms keen to implement microeconomic reforms.
2. Both the WTO and APEC aim to foster international trade, remove barriers to trade and improve the standard of living in each member country. The WTO is a worldwide organisation that sets rules for trade and provides a system for settlement of disputes whereas APEC, a regional body, does not aim to provide either of these services.
3. A country agrees to limit its protection to tariffs, to favour no nation in trade, to avoid discrimination in its trade with other countries, and to reduce its tariffs.
4. (a) The unemployment argument is a strong one. By agreeing to remove and reduce trade barriers, some spending by Australians has switched to imports and unemployment and firm closures have resulted.
  - (b) The argument that trade agreements result in abuses of human rights and exploitation seems a weaker argument as world opinion is becoming harder to ignore, putting pressure on companies to comply with expectations of legal compliance and fairness, and as countries improve their own laws.

## Examination revision 7.4

### Free Trade Agreement

- (a) The FTA will remove import taxes by all countries involved, and so Australian wine will be cheaper for people of the Philippines to buy, increasing sales.
- (b) (i) Benefit 1: People of the Philippines would be able to buy cheaper imports improving their standard of living.  
Benefit 2: People of the Philippines would be able to sell more exports, increasing their economic growth.
- (ii) Cost 1: Cheaper imports will take sales away from domestic suppliers and some local businesses might fail.  
Cost 2: Cheaper imports will also reduce employment opportunities in domestic firms.
- (c) (i) Australia’s economic growth should increase as exports grow from exposure to new trading partners without tariffs.
- (ii) The rate of inflation should decrease as Australians buy cheaper imports.
- (d) The FTA is a regional agreement whereas the WTO is global, and it is unlikely to provide a means of settling disputes, as the WTO does.

## Focus questions 7.5

1. (a) Transnational companies have operations in more than one country.  
(b) Examples include Coca Cola, General Motors, Shell and BHP-Billiton.
2. Governments want the economic activity that transnationals bring to their country, increasing employment as well as new technology and knowledge. They provide competition for local companies and generate tax revenue for the government.
3. Profits paid to foreign owners increase outflows in the form of income transfers overseas, worsening the current account balance. However, the advantages outlined in the previous answer seem to outweigh these costs.
4. Transnational corporations are very large companies and often diverse, and so they can take losses while competing very aggressively, potentially driving smaller firms out of their market. They also have the power to influence governments to make decisions in their favour, and not necessarily in the interests of the country in which they operate. It is also feared that they will behave unethically, damaging workers or the environment, for example. Any firm has the potential to do so, but larger firms have a proportionally larger impact.
5. Governments need to make laws protecting their interests, particularly labour and environmental laws, and effectively enforce them.
6. Capital is easily able to flow electronically across international borders, and so is able to move to its most productive investments, in terms of return on investment for the owners of capital. Those countries that compete successfully for capital experience faster economic growth and short-term improvement in external balance. However, in subsequent years, repatriation of income earned by the investors worsens the current account balance.

## Examination revision 7.5

Ring of fire

- (a) Capital flows are transfers of money for capital purposes, that is to invest in capital goods.
- (b) (i) The government will expect that increased foreign investment will provide more employment in the mining industry as well as the potential for increased mining exports.  
(ii) They fear that they will influence the government to allow unwanted environmental damage in their mining areas, or exploitation of local workers through unsafe work practices.
- (c) Foreign investment will be recorded in the capital and financial account as inflows, increasing its surplus or decreasing its deficit.

## Focus questions 7.6

1. The IMF is an agency of the UN set up to promote global economic health in order to avoid a recurrence of the Great Depression.
2. (a) In its role as a global central bank, the IMF's aims are to promote international monetary cooperation, facilitate trade, help exchange rate stability, provide a system of international payments and assist member countries in balance of payment difficulties.  
(b) The other three roles of the IMF, apart from its central bank role, are to monitor economic and financial developments around the globe and offer policy advice, lend money to member countries with balance of payment difficulties and offer technical assistance to governments.
3. (a) The World Bank is a non-profit, global organisation set up to assist economic development of poor countries.  
(b) It provides three types of funding. These are low-interest loans, interest-free loans and grants.
4. (a) The World Bank provides funds to low-income and middle-income countries, depending on need.  
(b) It obtains its finance from sales of World Bank Bonds and from donors.
5. The World Bank involves itself in the projects it funds to monitor the uses of its funds. It does this by setting objectives and performance indicators, supervising the project's use of funds and evaluating the project's achievement of its objectives.
6. Programs funded by the World Bank and the International Monetary Fund reliably improve the recipient country's external balance. Usually they also result in sustainable economic growth, after an initial period

of spending restraint. They do not stimulate further private investment but creditors are usually happy to reschedule the country's external debt.

## Topic 8: Poverty and Inequality

### Focus questions 8.2

- Economic development is a process that generates and sustains widespread improvements in the welfare of a large proportion of the population.
  - Absolute poverty means deprivation of essential assets and opportunities to which every human is entitled.
  - Inequality refers to a wide gap between high and low incomes.
  - Governance is a government's method of management of its people and their resources.
- Economic growth increases standards of living, reducing absolute poverty and creating employment. It also generates tax revenues for governments.
- Income inequality is not fair when it means that some social groups have a lower standard of living through no fault of their own. It causes conflicts and even wars. It is argued, though, that individuals who work effectively should rightly be rewarded with higher incomes.
- For economic development, good governance involves reduced corruption, improved quality of government services and business enterprises, laws to control abuse of the environment and labour, control of violence and crime, stable and predictable government and confidence in financial institutions.

### Focus questions 8.3

- Ecologically sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
- Pollution of a waterway such as the Patawalonga River in Adelaide reduces its value as a resource. Its main value is for water sports and tourism and therefore pollution impairs the desirability of using it. Retail and accommodation businesses suffer accordingly.  
Air pollution in Port Pirie has increased lead levels in residents' blood and caused ill health. Apart from the personal cost, their labour becomes less effective.  
Loss of topsoil and increased salt levels in South Australia's Murray Mallee region has in the past reduced the value of affected land in producing crops.
- There are costs involved in allocating resources to environment protection. Poorer countries find it more difficult to afford many ESD measures, and have more immediate priorities, such as producing enough food to live on.
- The precautionary principle is to avoid any project that could cause environment damage.  
The intergenerational principle is to leave environment resources in a healthy condition for future generations to use.  
The principle related to conservation of biodiversity is to conserve the diversity of species and protect ecological systems.  
Sustainable use of natural resources means to use natural resources so that they are not degraded, so that they can continue to be used in the future.
- Economic activity causes air, sea and waterway pollution, depletion of non-renewable resources and land degradation. Air pollution includes reduction of the atmosphere's ozone layer and global warming.
- Crude oil and minerals are non-renewable.
  - They are very unlikely to run out completely because as they become very scarce their price increases, and therefore firms work hard to find substitutes to avoid rapidly rising costs.
- River water needs to be kept clean for users both downstream and those in future years, by avoiding further pollution.
- Economic growth creates more tax revenue for governments; this could be spent on environmental programs. It also raises the level of acceptable environmental standards.

9. Pollution licences are paid for by firms who find it difficult and expensive to avoid pollution, but as a licence condition must keep reducing their pollution levels.  
A pollution tax also makes polluting firms pay, and they need to keep improving the sustainability of their production techniques to avoid the tax.
10. Alternative energy sources include solar power and wind power. Hydroelectric and nuclear power stations are less new but also avoid depletion of non-renewable resources.
11. Alternative energy sources are needed to avoid pollution such as carbon emissions, and also to escape depletion of natural, non-renewable energy sources such as coal, oil and gas.
12. Human progress will be enhanced by better sustaining development, as resources will be more effectively preserved.
13. EU commits to global warming
  - (a) Fighting global warming is meant to preserve the air and its resources for future generations, and so complies with the definition of ESD.
  - (b) Sustainable use of natural resources is an ESD principle that is complied with by geothermal generation of electricity.
  - (c) Sustainable economic growth will reduce poverty by providing employment, creating income, providing taxation revenue and generating capital resources, all of which will continue into the future.

### Focus questions 8.4

1. (a) GNI is a measure of all income earned nationally, including from foreign sources, whereas GDP measures only income earned from domestic firms.  
(b) GNI per capita indicates the value of goods and services available per head of population. This is a better measure of development than simply GNI which does not take into account the number of people who have to share it.  
(c) It is not appropriate to use GDP as a measure of welfare because it does not measure important components of welfare such as life expectancy, education and personal safety. The amount of leisure enjoyed and income distribution are not considered. It also includes some economic activity that reduces welfare, such as car crashes and crime.
2. The Human Development Index, the Genuine Progress Indicator and the Index of Sustainable Economic Welfare all try to improve on GDP as a measure of welfare.
3. This is a personal choice, but should be supported with reference to the details of the various measures.
4. The correlation is not close. Those countries with high GNI per capita are countries that do not share the income as evenly as those with the highest HDI, as HDI includes two factors in addition to income in its measurement. However, some countries are at the bottom of both lists.
5. Country profiles: human development indicators
  - (a) D
  - (b) B
  - (c) The Genuine Progress Indicator attempts to measure development that genuinely assists economic welfare, including in its measurement volunteer work, housework and the external benefits of higher education.
  - (d) (i) Poverty can be defined as a level of income below that necessary to provide for life's essential goods and services.  
(ii) The HDI gives a reasonable measure without being able to specify what income level is essential in each country.
  - (e) The HDI is better at indicating poverty than GDP because poverty involves more than just income, but also life expectancy and education, which the HDI includes.
  - (f) The Iraqi Government could work on improving life expectancy, perhaps by negotiating an end to war and improving governance for all.

It should spend on education, especially on increasing the time spent at school.

Economic growth needs to be increased, possibly by encouraging foreign investment.

## Focus questions 8.5

1. (a) Poverty involves very low income and this creates the very problems that make it difficult to escape poverty. These include difficulty for individuals to access employment and education and a low level of technology in the economy, keeping production, employment opportunities and income low, thereby keeping productivity low. Low productivity perpetuates low incomes.
- (b) Investment in human capital is needed to increase access to education, training and employment, and thus improve productivity.
2. Inequality can retard development if a wealthy group acts to preserve its position of social and economic dominance. This can prevent large sections of the population from contributing fully to economic development and from achieving their own potential.
3. (a) Population growth provides increased labour resources, but it also uses more resources to satisfy increasing wants, and reduces GNI per capita, perpetuating poverty.
- (b) A high dependency ratio is a high ratio of dependant people – children and retirees – to people of working age. Such a ratio imposes a heavy burden on those who receive income and need to maintain the rest, reducing per capita income.
4. Poor governance can perpetuate low agricultural prices, keeping incomes down. Bribery and corruption can prevent fair distribution of income and discourage foreign investment. Incompetent civil service also holds back economic development by failing to facilitate commerce. Lack of investment in human capital impairs improvement in education, training, employment and productivity. Lack of investment in physical infrastructure makes production more costly.
5. Corruption might result in lack of investment in health and education, to maintain a dominant group's position. Lack of taxation receipts is another cause.
6. (a) If producers have difficulty accessing foreign markets, they fail to make maximum export earnings and cannot achieve cost savings from increased scale of production. They also lack access to imported capital equipment and the latest technology.
- (b) Foreign capital is valuable in funding investment for economic growth. On the other hand it increases income outflows in the future as well as foreign ownership of national resources. However, its benefits greatly outweigh its costs.
7. Afghanistan: War and Corruption
  - (a) Governance is the culture and processes of government.
  - (b) Saikal criticises Karzai for protecting a circle of family and friends from the law to maintain its dominance of politics and business. He has also promoted the politics of corruption and disregard for the law.
  - (c) Maintaining dominance of a small group holds back the majority of the population from achieving economic development.
  - (d) Lack of investment in economic development prevents income from increasing. Lack of investment in human capital similarly prevents people from improving their knowledge, skills and health; thus maintaining a low level of labour productivity.

## Focus questions 8.6

1. (a) Domestic savings provide a pool of funds for investors to borrow.
- (b) Domestic savings can be encouraged by tax incentives for savers and for firms, excise taxes on luxury goods and light taxing of superannuation funds.
2. Employment income provides for families without using taxation receipts. It also builds skills for future production.
3. Investment in human capital means to spend money on health, education and training to increase labour productivity and improve people's access to better living standards. It can also involve social reforms, increased participation in economic activity by women and measures to reduce population growth.
4. If the dependency ratio is high, reduction in a country's birth rate will reduce spending on dependents. GNI per capita and hence productivity will be higher.

5. Health improves welfare, an important aspect of economic development, as well as labour productivity. Education improves individual's ability to participate fully in society and make informed decisions, as well as improving access to employment and boosting the economy's labour productivity.
6. (a) A country needs to participate in trade agreements in order to engage in more international trade. To do so, it may have to undergo some reforms in order to comply with requirements of membership. It will also need to liberalise its protection measures as a condition of the trade agreement.  
(b) It is important to engage in international trade to expand its firms' opportunities to export. Lower protection levels will also place greater competitive pressure from imports upon domestic producers. Foreign investment will be increased as an aspect of trade agreements, increasing production and improving technology.
7. Direct investment means more than 10% ownership of a domestic firm, and so the investor will have a sufficient interest in that firm to work for its success. Portfolio investment consists of loans and share purchases that are not accompanied by such a level of commitment.
8. Foreign debt can be reduced by rescheduling loan repayments, selling assets to foreign owners or with assistance from global bodies such as the IMF. Fiscal policy can also be used to pay off government debt.
9. Efficient tax collection and reduction of tax evasion improves government revenue. It also raises an economy's national savings, reducing reliance on foreign investment and financing physical infrastructure. Careful, transparent fiscal budgeting aids efficiency and management of aggregate demand as well as reducing corruption.
10. Good governance will improve efficiency of the government services, provision of transport and communication infrastructure, laws and regulations to prevent environment and labour abuses and to maintain a healthy economy. It may result in government enterprises participating in production and economic development.
11. The population issue
  - (a) (i) Population growth increases labour resources, increasing a country's productive capacity. Moreover, it increases aggregate demand and therefore GDP and employment opportunities, and also allows businesses to more easily achieve economies of scale. (any one of these will answer the question)  
(ii) Population growth increases the number of child dependants and can increase the dependency ratio.
  - (b) Either decision is defensible with logical argument based on accurate explanation.
  - (c) (i) Reducing illiteracy makes employees easier to train and thus improves labour productivity, increasing economic development which involves generating more income.  
(ii) Reducing illiteracy allows formerly illiterate people to train and win work with income.
  - (d) Reducing discrimination against women is likely to lead to increased employment of women, increasing domestic production, including health and education services, and national income.

## Glossary of economic terms

<b>Accord:</b>	the Accord was an agreement between the Labor Government, business owners and unions to make joint decisions on wages and working conditions.
<b>Aggregate demand:</b>	total planned spending on Australian goods and services in a period
<b>Aggregate demand curve:</b>	the relationship between the total value of Australian goods and services demanded, and the general level of prices
<b>Aggregate supply:</b>	total value of goods and services that Australian producers are willing and able to supply
<b>Aggregate supply curve:</b>	the curve represents the relationship between the value of Australian produced goods and services supplied, and the general level of prices
<b>Appreciation:</b>	appreciation of the exchange rate is an increase in the value of the Australian dollar
<b>Australian Workplace Agreement:</b>	an agreement on wages and conditions between an individual employee and his or her employer
<b>Award:</b>	award rates of pay, set for each type of employment, apply to employees who have not made an agreement on wages and conditions of work with their employers
<b>Balance of payments:</b>	a report summarising all money flows between Australia and the rest of the world, in a period. It is reported monthly.
<b>Barriers to entry:</b>	any circumstances that make it difficult for a firm to begin to produce and sell a particular good or service—that is, to enter a market
<b>Benefit-cost analysis:</b>	this is a study of all the benefits and costs, both private and external, of an economic activity
<b>Budget:</b>	the Commonwealth Government's planned spending and taxation receipts for the coming twelve months. It is announced in May each year.
<b>Budget deficit:</b>	a budget deficit is planned when government spending will exceed taxation receipts in the coming fiscal year
<b>Budget surplus:</b>	a budget surplus is planned when taxation receipts will exceed government spending in the coming fiscal year
<b>Business cycle:</b>	a repeated pattern of booms and recessions in the level of economic activity
<b>Capacity:</b>	the capacity of a firm, industry or economy is the quantity of goods and services it is able to produce when using all its resources and best available technologies
<b>Capital:</b>	capital goods are any produced goods used in production of other goods and services
<b>Capital:</b>	The word capital is also used to mean money for capital purposes
<b>Capital account:</b>	the capital account of the balance of payments is a summary of international transactions involving money for capital purposes and non-produced, non-financial assets
<b>Capital-intensive:</b>	capital-intensive production uses a high proportion of capital compared to the proportions of land and labour resources used
<b>Carbon tax:</b>	a tax on carbon gases emitted, carbon monoxide and dioxide, generated by burning fossil fuels
<b>Certified Agreement:</b>	an agreement between a group of employees and their employer which has been certified by the Australian Industrial Relations Commission (AIRC)
<b>Ceteris paribus:</b>	all other factors remain unchanged

<b>Circular flow of income:</b>	the circular flow of income model summarises money flows between the sectors of the economy
<b>Clean float:</b>	determination of the exchange rate by market forces, free of government intervention
<b>Coincident indicator:</b>	a coincident indicator measures current levels of economic activity
<b>Collusion:</b>	an illegal agreement between suppliers to fix prices at an agreed level, or some other agreement not to compete
<b>Command economy:</b>	in a command, or planned economy the government make all the basic economic decisions i.e. it answers the 'what', 'how' and 'who' questions
<b>Commodities:</b>	non-manufactured goods that are traded internationally. Examples include agricultural and mining products.
<b>Complements:</b>	complementary goods and services are consumed together to satisfy a want. For example, tennis balls and tennis racquets are complements because they are used together to play tennis.
<b>Comparative advantage:</b>	a national economy has a comparative advantage over another economy, in the production of a particular good or service, when it has a lower opportunity cost. That is, it can produce that good or service with more efficient resource use.
<b>Composite indicator:</b>	a composite indicator is compiled from a number of indicators
<b>Consumer:</b>	consumers are householders who buy and consume household goods and services
<b>Consumer Price Index (CPI):</b>	the CPI is the price of a basket of goods and services, representing average consumer spending in Australia, converted to index points
<b>Consumer durables:</b>	goods bought by households that last a long time, such as houses, cars, furniture and white goods
<b>Consumer sovereignty:</b>	this term represents the idea that, in a market economy, consumers rule the decision of what to produce, and in what quantities
<b>Consumer surplus:</b>	consumer surplus is the value difference between the highest price the consumer was willing to pay and the market price they paid
<b>Consumption spending:</b>	money spent by households on goods and services to satisfy wants
<b>Copyright:</b>	the exclusive right to control copies of a literary, musical or artistic work
<b>Corporatisation:</b>	the process of reforming a government business enterprise so that it operates like a private corporation
<b>Cost-push inflation:</b>	inflation caused by rising costs of production
<b>Credit:</b>	credit refers to money immediately available to borrow
<b>Credit multiplier:</b>	the credit multiplier is the number of times the final change in the money supply is greater than the initial change in deposits or lending that caused it
<b>Current account:</b>	the current account of the balance of payments is a summary of international trade transactions, income transfers and other current transfers
<b>Current account deficit:</b>	a current account deficit exists in a period when outflows of money from Australia, for goods, services, income transfers and other current transfers exceed inflows
<b>Cyclical unemployment:</b>	cyclical unemployment occurs as a result of a cyclical downturn or recession in the level of economic activity
<b>Demand:</b>	demand for a good or service is the quantity that buyers are willing and able to buy at a particular price
<b>Demand curve:</b>	a line representing the quantity of a good or service demanded at a range of prices. It is drawn on a graph of the relationship between price and quantity

<b><i>Demand-pull inflation:</i></b>	inflation caused by increasing demand
<b><i>Depreciation:</i></b>	depreciation of the Australian dollar is a decrease in its value
<b><i>Depression:</i></b>	a period during which economic activity is at a very low level
<b><i>Deregulation:</i></b>	deregulation is the process of removing or reducing government regulation
<b><i>Differentiated oligopoly:</i></b>	an oligopoly in which the firms differentiate their products from each other
<b><i>Direct investment:</i></b>	foreign investment in an Australian firm resulting in ownership of 10% or more of that firm
<b><i>Dirty float:</i></b>	determination of the exchange rate in the market, when government intervention exists; hence the market is not free, or 'clean'
<b><i>Dividends:</i></b>	payments to shareholders of shares in a firm's profit
<b><i>Dominant strategy:</i></b>	a dominant strategy is a strategy that, no matter what their rivals do, brings them the best payoff
<b><i>Dominant strategy equilibrium:</i></b>	a dominant strategy equilibrium occurs when each player plays its dominant strategy
<b><i>Downturn:</i></b>	a period when levels of economic activity decrease after a period of higher levels
<b><i>Dumping:</i></b>	selling goods in another country at a price below their cost of production or well below that country's prices
<b><i>Economic development:</i></b>	a process that generates and sustains widespread improvements in the welfare of a large proportion of the population
<b><i>Economic growth:</i></b>	the rate of increase of real Gross Domestic Product (GDP).
<b><i>Economic problem:</i></b>	a society's resources are scarce in relation its unlimited wants
<b><i>Economic system:</i></b>	the pattern of ideology, institutions and policies that determine how a country makes the basic economic decisions
<b><i>Economics:</i></b>	the study of how a society uses its scarce resources to satisfy its wants
<b><i>Economies of scale:</i></b>	cost reductions as a result of increased scale of production
<b><i>Elasticity:</i></b>	see price elasticity of demand, price elasticity of supply
<b><i>Embargo:</i></b>	a ban on importation of a particular good
<b><i>Enterprise:</i></b>	1. See entrepreneurship 2. an existing business, operating to make a profit
<b><i>Enterprise bargaining:</i></b>	the process of determining wages and conditions of employees of a particular enterprise, by negotiation between those two parties
<b><i>Entrepreneurship:</i></b>	the skill of combining resources to produce goods and services for a profit
<b><i>Equilibrium:</i></b>	see equilibrium price, equilibrium quantity, market equilibrium and macroeconomic equilibrium
<b><i>Equilibrium price:</i></b>	the price at which the quantity that sellers will supply is the same as the quantity that buyers demand
<b><i>Equilibrium quantity:</i></b>	the quantity at which the price that sellers charge is the same as the price that buyers will pay
<b><i>Exchange rate:</i></b>	the value of one Australian dollar, usually expressed in terms of United States dollars: that is, the number of \$US that can be exchanged for \$A1
<b><i>Excise tax:</i></b>	a tax imposed on products to limit their use
<b><i>Exclusive dealing:</i></b>	the illegal practice of supplying goods to a reseller, on the condition that the purchaser must not acquire goods from any other supplier

<b>Expenditure multiplier:</b>	the number of times the final change in aggregate demand is greater than the initial change in expenditure that caused it
<b>Exports:</b>	Australian-produced goods and services sold overseas
<b>External balance:</b>	external balance is achieved when the economy receives enough inflows from foreign countries to buy imports and make overseas income payments in the long term
<b>External benefits:</b>	external benefits of an economic activity are benefits received by people other than those undertaking the economic activity
<b>External costs:</b>	external costs of an economic activity are costs borne by people other than those undertaking the economic activity
<b>External policy:</b>	a set of government measures designed to manage external balance
<b>Externalities:</b>	see External benefits and External costs
<b>Financial Account:</b>	the Financial Account of the Balance of Payments is a summary of international transactions involving loans, investments and reserve assets
<b>Financial institutions:</b>	firms that accept deposits from savers and lend to borrowers
<b>Firm:</b>	an organisation that combines resources to produce goods and services
<b>Fiscal policy:</b>	government plans and actions relating to taxation and government spending
<b>Floating dollar:</b>	since 1983 the price, or exchange rate, of the Australian dollar is determined by the forces of demand and supply; it 'floats' on those market forces
<b>'For whom' question:</b>	what share of the economy's goods and services each person will consume
<b>Foreign exchange:</b>	the exchange of one nation's currency for another's
<b>Foreign investment:</b>	investment by foreigners in Australian firms
<b>Free trade:</b>	free trade exists between nations when all obstacles to trade, such as tariffs, are removed
<b>Frictional unemployment:</b>	frictional unemployment occurs when there are people temporarily between jobs or entering or re-entering the labour force
<b>Full employment:</b>	full employment of labour occurs at the lowest rate of unemployment possible without accelerating inflation
<b>Game theory:</b>	game theory is a mathematical analysis of businesses' competitive strategies
<b>Globalisation:</b>	the process of integration of national economies
<b>Goods:</b>	tangible products that satisfy wants or are used in production of other goods and services
<b>Goods and services tax (GST):</b>	a tax added to the purchase price of all goods and services except basic foods and some other exemptions. It is a set percentage of the price, currently 10%.
<b>Governance:</b>	a government's method of management of its people and their resources
<b>Government bonds / Government securities:</b>	loans to governments, consisting of certificates signed on behalf of a government, promising to repay a loan on a stated date at a stated rate of interest
<b>Gross Domestic Product (GDP):</b>	the total value of production by domestic (for example, Australian) producers, in a period
<b>Hard core unemployment:</b>	unemployment existing because job seekers have personal characteristics that discourage producers from employing them
<b>Hidden unemployed:</b>	those not counted as unemployed by official statistics, because they are not actively seeking work in the survey week

<b>Household:</b>	a group of one or more people who consume goods and services and provide resources
<b>'How' question:</b>	is what combination of resources will be used in production
<b>Imports:</b>	goods and services produced overseas that are bought by Australian households, firms and governments
<b>Income:</b>	income is payment to households, by firms and governments, for resources. The five forms of income are wages and salaries, interest, dividends, rent and profit.
<b>Indicator:</b>	measurement of a particular aspect of the economy
<b>Inequality:</b>	a wide gap between high and low incomes
<b>Inflation:</b>	an increase in the general level of prices
<b>Inflation rate:</b>	the rate of increase in the general level of prices. It is most commonly measured by the percentage increase in the Consumer Price Index.
<b>Infrastructure:</b>	an economy's structure of facilities that are used by the community as a whole. The range of these facilities includes transport, communications, utilities, energy supplies and medical services.
<b>Injections:</b>	investment spending, government spending and export earnings inject money into the circular flow of income
<b>Interest / Interest rate:</b>	interest is payment for the use of money. It is expressed as a rate, that is a percentage of the amount borrowed.
<b>Investment spending:</b>	spending by firms on capital goods in order to make future profits, plus any additions to inventories (stocks)
<b>Key indicators:</b>	those that indicate the performance of the economy with respect to economic objectives, and measure one aspect of economic activity
<b>Labour:</b>	any human effort, used in the production of goods and services, is classified as labour. In this text, it includes entrepreneurship, sometimes given its own resource classification.
<b>Labour force:</b>	the labour force consists of those who are either employed or actively seeking employment
<b>Labour force participation rate:</b>	the percentage of those eligible to work who are employed or actively seeking employment
<b>Labour-intensive:</b>	labour-intensive production uses a high proportion of labour compared to the proportions of land and capital used
<b>Lagging indicators:</b>	lagging indicators measure economic activity that occurs after production has occurred
<b>Land:</b>	natural resources used in production of goods and services
<b>Law of demand:</b>	the quantity demanded of a good or service increases as its price decreases
<b>Law of supply:</b>	the quantity supplied of a good or service increases as its price increases
<b>Leading indicators:</b>	leading indicators measure economic activity related to production, before production occurs
<b>Leakages:</b>	saving, taxation and import spending leak money from the circular flow of income
<b>Levy:</b>	a compulsory collection of money
<b>Linear regression:</b>	linear regression is a linear approach to modelling the relationship between two variables.
<b>Liquidity:</b>	<ol style="list-style-type: none"> <li>1. liquidity of an asset is the ease with which an asset can be converted to cash</li> <li>2. the availability of cash</li> </ol>

<b>Macroeconomic equilibrium:</b>	macroeconomic equilibrium occurs at a price level where the value of aggregate demand is equal to aggregate supply
<b>Macroeconomics:</b>	a study of issues that relate to the economy as a whole
<b>Market:</b>	any form of exchange of a particular good or service between buyers and sellers
<b>Market economy:</b>	in a market economy the 'what', 'how' and 'who' questions are decided by markets
<b>Market equilibrium:</b>	a market is in equilibrium when there are no shortages or surpluses and there is no tendency for the price to change
<b>Market failure:</b>	market failure occurs when resources are not allocated efficiently
<b>Market mechanism:</b>	the process by which prices are determined in markets
<b>Market power:</b>	a firm has market power if it is able to significantly influence the market price and conditions of sale
<b>Market price:</b>	see equilibrium price
<b>Market quantity:</b>	see equilibrium quantity
<b>Market structure:</b>	market structure is determined by the number, size and market power of firms supplying the market. Four market structures are perfect competition, monopolistic competition, oligopoly and monopoly.
<b>Merger:</b>	a merger between two firms results in a single firm in which both former firms share decision making power.
<b>Mean:</b>	the mean of a set of values is the sum of those values divided by the number of items in the set.
<b>Median:</b>	the median of a set of values is the middle item of the set arranged in ascending order.
<b>Merit goods:</b>	merit goods are goods regarded by society as worth of public finance
<b>Microeconomic reform:</b>	any improvement in production methods to reduce production costs or improve the quality of goods and services
<b>Microeconomics:</b>	a study of issues that relate to individuals, firms and industries
<b>Mixed economy:</b>	one that uses elements of market, command and traditional systems in answering the 'what', 'how' and 'who' questions
<b>Model:</b>	a theoretical representation and a simplification of the real process. It is a theory that simplifies the real world.
<b>Monetary policy:</b>	government plans and actions to influence interest rates and hence aggregate demand. Its major purpose is to control inflation.
<b>Money supply:</b>	the amount of money available for use in exchange for goods and services and settlement of debt. It must be in liquid form and consists of notes and coins and deposits in financial institutions.
<b>Monopolistic competition:</b>	a market structure in which there are many small firms that differentiate their products but have little influence on price. Barriers to entry are low.
<b>Monopoly:</b>	a market supplied by a single firm: there are no close substitutes and entry to the market is blocked
<b>Monopoly power:</b>	see market power
<b>Multinational company:</b>	one with operations in more than one country
<b>Nash equilibrium:</b>	a Nash equilibrium exists when each player's strategy is the best response to the other player's strategy

<b>Natural rate of unemployment:</b>	the lowest rate of unemployment that can be sustained without accelerating the rate of inflation
<b>Natural monopoly:</b>	a natural monopoly exists in a market whose quantity demanded prevents more than one firm from operating at maximum efficiency
<b>Oligopoly:</b>	a market dominated by a few large firms; barriers to entry are high and products may be differentiated or homogeneous. See differentiated oligopoly and pure oligopoly.
<b>Opportunity cost:</b>	opportunity cost is the value of the next best alternative when an economic decision is made.
<b>Patent:</b>	a right, granted by government to an inventor, to exclusively produce and sell his invented product, for a set period. It prevents copies being marketed for that period.
<b>Percentile:</b>	a percentile is one percent of a statistical group ranked from one 1 to 100 .
<b>Perfect competition:</b>	a theoretical market structure in which the market is supplied by many small firms with no influence on price and homogeneous products; no barriers to entry exist and knowledge of prices and technologies is perfect
<b>Planned economy:</b>	in a planned, or command economy the government make all the basic economic decisions i.e. it answers the 'what', 'how' and 'who' questions
<b>Portfolio investment:</b>	foreign investment in an Australian firm resulting in ownership of less than 10% of that firm
<b>Poverty:</b>	deprivation of essential assets and opportunities to which every human is entitled
<b>Pressure group:</b>	a group that puts pressure on decision-makers to make decisions in their favour
<b>Price control:</b>	governments impose price control when they impose a price, below equilibrium, above which it is illegal to charge. That is, a maximum or ceiling price is set. However the term is also used in a less strict sense to mean any form of government price intervention.
<b>Price discrimination:</b>	price discrimination occurs when a supplier charges a higher price to one buyer than another, or gives better allowances or discounts, beyond the usual discounts allowed in the trade
<b>Price elasticity of demand:</b>	the responsiveness of the quantity demanded to a change in price. If quantity changes by a greater proportion than the price, demand is said to be relatively price-elastic. If quantity changes by a lesser proportion than the price, demand is said to be relatively price inelastic.
<b>Price elasticity of supply:</b>	the responsiveness of the quantity supplied to a change in price. If quantity changes by a greater proportion than the price, supply is said to be relatively price-elastic. If quantity changes by a lesser proportion than the price, supply is said to be relatively price inelastic.
<b>Price stability:</b>	price stability is achieved in an economy when the rate of inflation is low. The Australian government's price stability objective is a target rate of inflation.
<b>Price support:</b>	governments support prices when they impose a price above equilibrium. They guarantee a minimum or floor price to suppliers.
<b>Privatisation:</b>	the process of selling government business enterprises to private owners
<b>Producer surplus:</b>	producer surplus is the income from production of a good at a price above that at which he is willing to supply
<b>Production possibilities curve:</b>	a production possibilities curve represents the combinations of two goods that can be produced with full use of all resources and the best available technologies

<b>Productivity:</b>	the quantity of goods and services produced per unit of resources used. Productivity increases when more production is possible without increasing resources used, or fewer resources are used to produce the same quantity of goods and services.
<b>Profit:</b>	income gained from ownership of a unit of production. It is the excess of revenues over expenses.
<b>Profit margin:</b>	the difference between a firm's revenue and its expenses
<b>Protection:</b>	measures that assist domestic firms to compete against foreign competition
<b>Public goods:</b>	goods and services produced and supplied by governments, using taxes raised from the public
<b>Pure oligopoly:</b>	one in which the product is homogeneous
<b>Quantile:</b>	a quantile is a position in a data set splitting that data set into subsets, each with an equal number of data.
<b>Quota:</b>	a quota, imposed by government, sets a maximum amount that can be supplied to the market
<b>Rationing:</b>	scarce goods and resources are rationed by the market mechanism. This means that they are distributed only to those who are prepared to pay the price increased as a result of reduced supply.
<b>Real GDP:</b>	the value of GDP in a period, statistically reduced by the rate of inflation over that period
<b>Real income:</b>	the value of income in a period discounted by the rate of inflation over that period
<b>Real interest rate:</b>	the rate of interest for a period discounted by the rate of inflation over that period
<b>Recession:</b>	a period of low economic activity. It is technically defined as two or more quarters of negative growth
<b>Recovery:</b>	a period in which the level of economic activity increases from a low level
<b>Rent:</b>	payment for the use of land resources such as land or buildings
<b>Resale price maintenance:</b>	the illegal practice of directing resellers of a product not to sell or advertise below a specified minimum price
<b>Reserve Bank:</b>	the Reserve Bank of Australia (RBA) is Australia's central bank
<b>Resources:</b>	anything used in production of goods and services is a resource
<b>Salary:</b>	a fixed amount paid for labour, irrespective of hours worked per week
<b>Sales tax:</b>	wholesale sales tax, abolished on July 1 2000, was a tax applied to certain goods at the wholesale level
<b>Saving:</b>	household income that is not spent on consumption goods and services
<b>Savings gap:</b>	the term "savings gap" is used by economists to refer to the gap between the amount of money needed for investment in Australia in a period, and the amount available in Australia. There is always a need to borrow overseas money to finance Australian investment.
<b>Seasonal unemployment:</b>	workers who are temporarily unemployed between seasons
<b>Seasonal adjustment:</b>	seasonal adjustment of statistics is mathematical adjustment to remove the influence of known seasonal factors
<b>Services:</b>	intangible products, performed by people, that satisfy wants or are used in production of other goods and services
<b>Shortage:</b>	a shortage occurs in a market when the quantity demanded exceeds the quantity supplied

<b>Speculation:</b>	buying of assets in order to sell them at a later date at a higher price
<b>Structural unemployment:</b>	unemployment caused by changes in the structure of firms, industries or the economy
<b>Structural policy:</b>	those aimed at changing the structure of the firms, industries or the economy. They are also referred to as microeconomic reforms.
<b>Subsidy:</b>	a payment by government to suppliers to a particular market, to reduce their production costs
<b>Substitutes:</b>	different goods and services that satisfy the same want. Oranges and apples are examples of substitute goods as either can satisfy the want of fruit.
<b>Supply:</b>	supply of a good or service is the quantity that sellers are willing and able to sell at a particular price
<b>Supply curve:</b>	a line representing the quantity of a good or service supplied at a range of prices. It is drawn on a graph of the relationship between price and quantity.
<b>Surplus:</b>	a surplus occurs in a market when the quantity supplied exceeds the quantity demanded
<b>Takeover:</b>	a takeover of a firm by another firm occurs when a single firm is formed in which only one of the original firms has all the decision-making power
<b>Tariff:</b>	a tax on imports, usually expressed as a percentage of the import price
<b>Tax:</b>	a payment to government by a household or firm
<b>Technology:</b>	knowledge of the methods and processes of production
<b>Trade balance:</b>	the difference between the values of exports and imports for a period
<b>Trade Weighted Index:</b>	an index of foreign currency prices used to measure the exchange rate for Australian dollars. It measures the price of a basket of currencies, weighted to reflect the importance of each currency in Australia's pattern of trade.
<b>Traditional economy:</b>	a traditional economy answers the 'what', 'how' and 'who' questions on the basis of tradition
<b>Transnational company:</b>	one with production or subsidiaries in more than one country; see multinational company
<b>Underemployed:</b>	people underemployed are those employed part time who want more hours of work per week
<b>Unemployment:</b>	the unemployed are defined by the Australian Bureau of Statistics as those who are not working for pay for more than one hour per week, but are actively seeking employment
<b>Unemployment rate:</b>	the percentage of the labour force unemployed, in a particular survey week: it is reported monthly
<b>Utility:</b>	the concept of utility in economics refers to satisfaction of wants. Utility is maximised in an economy when resources are used to satisfy the maximum possible wants.
<b>Value added:</b>	the value of goods and services added by a particular firm as a result of its production process. For example a baker, who buys flour for \$2 000, adds \$5 000 of value to that flour by using it to produce bread and selling it for \$7 000.
<b>Wages:</b>	hourly, daily or weekly payments for labour
<b>Wants:</b>	needs and desires that can be satisfied by consumption of goods and services
<b>'What' question:</b>	the 'what' question is what goods and services will be produced, and what quantity
<b>'Who' question:</b>	see 'for whom' question

