

NINTH EDITION

# ESSENTIALS OF ECONOMICS

JOHN SLOMAN  
DEAN GARRATT

 Pearson

# **ESSENTIALS OF ECONOMICS**



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# ESSENTIALS OF ECONOMICS

**NINTH EDITION**

**JOHN SLOMAN**

The Economics Network, University of Bristol;  
Visiting Professor, University of the West of England

**DEAN GARRATT**

Aston Business School



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Royal Economic Society, the Scottish Economic Society and university economic departments and units from across the UK.

John is also visiting professor at the University of the West of England, Bristol, where, from 1992 to 1999, he was Head of School of Economics. He taught at UWE until 2007.

John has taught a range of courses, including economic principles on social science and business studies degrees, development economics, comparative economic systems, intermediate macroeconomics and managerial economics. He has also taught economics on various professional courses.

He is also the co-author with Dean Garratt and Jon Guest of *Economics* (Pearson Education, 10th edition 2018), with Dean



**Dean Garratt** is a senior teaching fellow at Aston Business School. He joined Aston University in September 2018 having previously been a Principal Lecturer at Nottingham Business School. Dean teaches economics at a variety of levels, including modules in macroeconomics and economics for non-specialists. He is passionate about encouraging students to communicate economics more intuitively,

to deepen their interest in economics and to apply economics to a range of issues.

Earlier in his career Dean worked as an economic assistant at both HM Treasury and at the Council of Mortgage Lenders. While at these institutions he was researching and briefing on a variety of issues relating to the household sector and to the housing and mortgage markets.

Dean is a Senior Fellow of the Higher Education Academy and an Associate of the Economics Network which aims to promote

Garratt, Jon Guest and Elizabeth Jones of *Economics for Business* (Pearson Education, 8th edition 2019) and with Elizabeth Jones of *Essential Economics for Business* (5th edition 2017). Translations or editions of the various books are available for a number of different countries with the help of co-authors around the world.

John is very interested in promoting new methods of teaching economics, including group exercises, experiments, role playing, computer-aided learning and use of audience response systems and podcasting in teaching. He has organised and spoken at conferences for both lecturers and students of economics throughout the UK and in many other countries.

As part of his work with the Economics Network he has contributed to its two sites for students and prospective students of economics: *Studying Economics* ([www.studyingeconomics.ac.uk](http://www.studyingeconomics.ac.uk)) and *Why Study Economics?* ([www.whystudyeconomics.ac.uk](http://www.whystudyeconomics.ac.uk))

From March to June 1997, John was a visiting lecturer at the University of Western Australia. In July and August 2000, he was again a visiting lecturer at the University of Western Australia and also at Murdoch University in Perth.

In 2007, John received a Lifetime Achievement Award as 'outstanding teacher and ambassador of economics' presented jointly by the Higher Education Academy, the Government Economic Service and the Scottish Economic Society.

high-quality teaching practice. He has been involved in several projects promoting a problem-based learning (PBL) approach in the teaching of economics. In 2006, Dean was awarded the Outstanding Teaching Prize by the Economics Network. The award recognises exemplary teaching practice that deepens and inspires interest in economics. In 2013, he won the student-nominated Nottingham Business School teacher of the year award.

Dean has been an academic assessor for the Government Economic Service (GES) helping to assess candidates at Economic Assessment Centres (EACs). In this role he assessed candidates looking to join the GES, the UK's largest employer of professional economists.

Dean has run sessions on HM Treasury's Graduate Development Programme (GDP). These sessions covered principles in policy making, applying economics principles and ideas to analyse policy issues and contemporary developments in macroeconomics.

Outside of work, Dean is an avid watcher of many sports. Having been born in Leicester, he is a season ticket holder at both Leicester City Football Club and Leicestershire County Cricket Club.

# Brief contents

<i>About the authors</i>	v
<i>Preface</i>	xiii
<i>Student and lecturer resources</i>	xvii
<i>Acknowledgements</i>	xix

## Part A INTRODUCTION

1 Economic issues	2
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## Part B MICROECONOMICS

2 Markets, demand and supply	30
3 Markets in action	48
4 The demand decision	71
5 The supply decision	93
6 Market structures	121
7 Wages and the distribution of income	162
8 Market failures and government policy	193

## Part C MACROECONOMICS

9 Aggregate demand and the business cycle	232
10 Aggregate supply and economic growth	273
11 The financial system, money and interest rates	301
12 Output, unemployment and inflation	341
13 Macroeconomic policy	374

## Part D INTERNATIONAL ECONOMICS

14 Globalisation and international trade	414
15 Balance of payments and exchange rates	453
<i>Websites appendix</i>	<i>W:1</i>
<i>Key ideas and glossary</i>	<i>K:1</i>
<i>Index</i>	<i>I:1</i>

# Detailed contents

<i>About the authors</i>	v
<i>Preface</i>	xiii
<i>Student and lecturer resources</i>	xvii
<i>Acknowledgements</i>	xix

## Part A INTRODUCTION

<b>1 Economic issues</b>	<b>2</b>
1.1 Global Economic Issues	3
COVID-19 and the global health emergency	3
Global inflation	4
The environment and the global climate emergency	4
1.2 The Core of Economics	5
The problem of scarcity	5
Demand and supply	6
1.3 Dividing Up the Subject	6
Microeconomics	7
Macroeconomics	9
1.4 Modelling Economic Relationships	12
The production possibility curve	13
The circular flow of goods and incomes	15
Models and data	16
1.5 Economic Systems	19
The command economy	20
The free-market economy	22
The price mechanism	22
The mixed market economy	26
Chapter 1 Boxes	
1.1 <i>The Opportunity Costs of Studying: What are you sacrificing?</i>	8
1.2 <i>Business Cycles: The inherent volatility of economies</i>	11
1.3 <i>Nominal and Real House Prices: Going through the roof</i>	18
1.4 <i>Command Economies: Rise and fall of planning in Russia</i>	22

## Part B MICROECONOMICS

<b>2 Markets, demand and supply</b>	<b>30</b>
2.1 Demand	31
The relationship between demand and price	31
The demand curve	31

Other determinants of demand	32
Movements along and shifts in the demand curve	33
2.2 Supply	34
Supply and price	34
The supply curve	34
Other determinants of supply	35
Movements along and shifts in the supply curve	36
2.3 The Determination of Price	36
Equilibrium price and output	36
Movement to a new equilibrium	43
2.4 The Free-Market Economy	45
Advantages of a free-market economy	45
Problems with a free-market economy	45
Chapter 2 Boxes	
2.1 <i>UK House Prices: Unearthing the foundations of house price patterns</i>	38
2.2 <i>Stock Market Prices: Taking stock of share prices</i>	40
2.3 <i>Commodity Prices: Riding the commodities</i>	
<i>Big Dipper</i>	42
<b>3 Markets in action</b>	<b>48</b>
3.1 Price Elasticity of Demand	49
The price elasticity of demand	49
Measuring the price elasticity of demand	50
Interpreting the figure for elasticity	50
Determinants of price elasticity of demand	51
3.2 Price Elasticity of Demand and Consumer Expenditure	52
3.3 Price Elasticity of Supply ( $P_{\epsilon_s}$ )	55
The determinants of price elasticity of supply	57
3.4 Other Elasticities	57
Income elasticity of demand	57
Cross-price elasticity of demand	58
3.5 Markets and Adjustment over Time	60
Short-run and long-run adjustment	60
Price expectations and speculation	60
3.6 Markets Where Prices are Controlled	63
Setting a minimum (high) price	63
Setting a maximum (low) price	64
Chapter 3 Boxes	
3.1 <i>The Measurement of Elasticity</i>	52
3.2 <i>Advertising and its Effect on Demand Curves: How to increase sales and price</i>	56



3.3	<i>Elasticities and Relationships: Where there's a relationship, there's an elasticity</i>	59			
3.4	<i>Short Selling: Gambling on a fall in share prices</i>	63			
3.5	<i>A Minimum Unit Price for Alcohol: A way of reducing alcohol consumption</i>	65			
3.6	<i>UK Payday Loan Cap: Capping the cost of short-term credit</i>	66			
3.7	<i>The Effect of Imposing Taxes on Goods: Who ends up paying?</i>	68			
<b>4</b>	<b>The demand decision</b>	<b>71</b>			
4.1	Consumer Choice	72			
	Utility and the rational consumer	72			
	The rational consumer's optimal combination of goods	75			
4.2	The Timing of Costs and Benefits	77			
	Intertemporal choices	77			
	Maximising utility with intertemporal choices	77			
4.3	Uncertainty and Risk	78			
	Choice under risk and uncertainty	78			
	Attitudes towards risk	80			
	Insurance: a way of removing risks	81			
	Choices under asymmetric information	83			
4.4	Behavioural Economics	85			
	What is behavioural economics?	85			
	Processing limited information	85			
	Taking other people into account	87			
	Biased behaviour	88			
	Implications for economic policy	89			
	<b>Chapter 4 Boxes</b>				
4.1	<i>Satisfaction and Consumer Demand: Identifying the benefit drivers</i>	73			
4.2	<i>Optimal Consumption Bundles: Equi-marginal principle in consumption</i>	76			
4.3	<i>Intertemporal Decision Making and the Rational Consumer: Incorporating impatience into models of consumer choice</i>	79			
4.4	<i>Futures Markets: A way of reducing uncertainty</i>	82			
4.5	<i>Problems with Insurance Markets: Adverse selection and moral hazard</i>	84			
4.6	<i>Nudging People: How to change behaviour without taking away choice</i>	90			
<b>5</b>	<b>The supply decision</b>	<b>93</b>			
5.1	Production and Costs: Short Run	94			
	Short-run and long-run changes in production	94			
	Production in the short run: the law of diminishing returns	94			
	Measuring costs of production	95			
	Costs and output	96			
5.2	Production and Costs: Long Run	102			
	The scale of production	102			
	Long-run average cost	104			
	The relationship between long-run and short-run average cost curves	106			
	Long-run cost curves in practice	106			
	Postscript: decision-making in different time periods	106			
5.3	Revenue	108			
	Total, average and marginal revenue	108			
	Average and marginal revenue curves when price is not affected by the firm's output	110			
	Average and marginal revenue curves when price varies with output	110			
	Shifts in revenue curves	112			
5.4	Profit Maximisation	112			
	Some qualifications	113			
5.5	Problems with Traditional Theory	115			
	Explaining actual producer behaviour	115			
	Alternative aims	117			
	<b>Chapter 5 Boxes</b>				
5.1	<i>Diminishing Returns in the Bread Shop: Is the baker using his loaf?</i>	95			
5.2	<i>Malthus and the Dismal Science of Economics: Population growth + diminishing returns = starvation</i>	97			
5.3	<i>The Relationship Between Averages and Marginals</i>	99			
5.4	<i>Costs and the Economic Vulnerability of Firms: The behaviour of costs and firms' financial well-being</i>	100			
5.5	<i>The Optimum Combinations of Inputs: Equi-marginal principle in production</i>	105			
5.6	<i>Minimum Efficient Scale: The extent of economies of scale in practice</i>	108			
<b>6</b>	<b>Market structures</b>	<b>121</b>			
6.1	The Degree of Competition	122			
6.2	Perfect Competition	123			
	Assumptions	123			
	The short-run equilibrium of the firm	124			
	The short-run supply curve	125			
	The long-run equilibrium of the firm	125			
6.3	Monopoly	127			
	What is a monopoly?	127			
	Barriers to entry	127			
	Equilibrium price and output	131			
	Monopoly versus perfect competition: which best serves the public interest?	132			
	Potential competition or potential monopoly?				
	The theory of contestable markets	133			
6.4	Monopolistic Competition	136			
	Assumptions	136			
	Equilibrium of the firm	137			
	Non-price competition	138			
	Monopolistic competition and the public interest	138			
6.5	Oligopoly	139			
	The two key features of oligopoly	140			
	Competition and collusion	140			
	Collusive oligopoly	140			
	Non-collusive oligopoly: the breakdown of collusion	145			

Non-collusive oligopoly: assumptions about rivals' behaviour	145	7.4 <i>Minimum Wage Legislation: A way of helping the poor?</i>	182
Oligopoly and the consumer	147	7.5 <i>Inequality and Economic Growth: Macroeconomic implications of income inequality</i>	184
6.6 Game Theory	149	7.6 <i>UK Tax Credits: An escape from the poverty trap?</i>	188
Simultaneous single-move games	149		
Repeated simultaneous-move games	151		
Sequential-move games	152		
6.7 Price Discrimination	155	<b>8 Market failures and government policy</b>	<b>193</b>
Advantages to the firm	157	8.1 Social Efficiency	194
Price discrimination and the public interest	157	8.2 Market Failures: Externalities and Public Goods	196
		Externalities	196
		Public goods	199
<b>Chapter 6 Boxes</b>		8.3 Market Failures: Monopoly Power	201
6.1 <i>E-Commerce: Has technology shifted market power?</i>	128	Deadweight loss under monopoly	201
6.2 <i>Breaking the Monopoly on live Premier League Football: The sky is the limit for the English Premier League</i>	134	Conclusions	202
6.3 <i>OPEC: The history of the world's most famous cartel</i>	142	8.4 Other Market Failures	202
6.4 <i>Buying Power: What's being served up by the UK grocery sector?</i>	148	Imperfect information	202
6.5 <i>The Prisoners' Dilemma: Choosing whether to deny or confess</i>	153	Immobility of factors and time lags in response	203
6.6 <i>Profit-Maximising Prices and Output For a Third-Degree Price Discriminating Firm: Identifying different prices in different markets</i>	159	Protecting people's interests	203
		Other objectives	204
		How far can economists go in advising governments?	205
		8.5 Government Intervention: Taxes and Subsidies	206
		The use of taxes and subsidies	206
		Assessing the use of taxes and subsidies	208
		8.6 Government Intervention: Laws and Regulation	209
		Laws prohibiting or regulating undesirable structures or behaviour	209
		Regulatory bodies	209
		8.7 Other Forms of Government Intervention	212
		Changes in property rights	212
		Provision of information	213
		The direct provision of goods and services	213
		Nationalisation and privatisation	214
		8.8 More or Less Intervention?	216
		Drawbacks of government intervention	216
		Advantages of the free market	216
		Should there be more or less intervention in the market?	217
		8.9 The Environment: A Case Study in Market Failure	217
		The environmental problem	217
		Market failures	218
		Policy alternatives	218
		How much can we rely on governments?	226
		<b>Chapter 8 Boxes</b>	
		8.1 <i>The Tragedy of the Commons: The depletion of common resources</i>	200
		8.2 <i>Should Health-Care Provision be Left to the Market?: A case of multiple market failures</i>	204
		8.3 <i>Green Taxes: Are they the answer to the problem of pollution?</i>	220
		8.4 <i>Trading our Way out of Climate Change: The EU carbon trading system</i>	222
		8.5 <i>The Problem of Urban Traffic Congestion: Does Singapore have the answer?</i>	224
<b>7 Wages and the distribution of income</b>	<b>162</b>		
7.1 Wage Determination in a Perfect Market	163		
Perfect labour markets	163		
The supply of labour	163		
The demand for labour: the marginal productivity theory	164		
Wages and profits under perfect competition	167		
7.2 Wage Determination in Imperfect Markets	168		
Firms with power	168		
The role of trade unions	169		
Bilateral monopoly	169		
The efficiency wage hypothesis	171		
7.3 Inequality	172		
Types of inequality	172		
Measuring the size distribution of income	174		
The functional distribution of income	176		
The distribution of wealth	180		
Causes of inequality	181		
7.4 The Redistribution of Income	185		
Taxation	185		
Benefits	186		
The tax/benefit system and the problem of disincentives: the 'poverty trap'	188		
<b>Chapter 7 Boxes</b>			
7.1 <i>Labour Market Trends: Patterns in employment</i>	164		
7.2 <i>Wages under Bilateral Monopoly: All to play for?</i>	170		
7.3 <i>The Gender Pay Gap: Wage inequalities between men and women</i>	178		

**Part C**    **MACROECONOMICS**

<b>9 Aggregate demand and the business cycle</b>	<b>232</b>	10.2 Alternative Perspectives on Aggregate Supply	278
9.1 Introduction to Macroeconomics	233	The short-run aggregate supply curve	278
Key macroeconomic issues	233	The long-run aggregate supply curve	281
Government macroeconomic policy	239	Areas of general agreement	283
9.2 Economic Volatility and the Business Cycle	240	10.3 Introduction to Long-Term Economic Growth	284
The hypothetical business cycle	240	Long-run growth and the AD/AS model	284
The business cycle in practice	241	Comparing the growth performance of different countries	285
Spending, output and the business cycle	241	The causes of economic growth	286
9.3 The Circular Flow of Income Model	244	10.4 Economic Growth without Technological Progress	287
The inner flow, withdrawals and injections	245	Capital accumulation and capital deepening	287
The relationship between withdrawals and injections	247	A simple model of growth	291
Equilibrium in the circular flow	248	The neoclassical growth model	292
9.4 Simple Keynesian Model of National Income		10.5 Economic Growth with Technological Progress	295
Determination	248	Technological progress and the neoclassical model	295
Showing equilibrium with a Keynesian diagram	249	Endogenous growth theory	296
The withdrawals and injections approach	249		
The income and expenditure approach	250	Chapter 10 Boxes	
9.5 The Multiplier	252	10.1 <i>Short-run Aggregate Supply: The importance of micro foundations</i>	278
The withdrawals and injections approach	253	10.2 <i>Measuring Labour Productivity: Mind the UK productivity gap</i>	288
The income and expenditure approach	254	10.3 <i>Getting Intensive with Physical Capital: Capital intensity and labour productivity</i>	290
The multiplier: a numerical illustration	255	10.4 <i>UK Human Capital: Estimating the capabilities of the labour force</i>	298
The multiplier and the full-employment level of national income	255		
9.6 The Volatility of Private-Sector Spending	258	<b>11 The financial system, money and interest rates</b>	<b>301</b>
Consumption cycles	258	11.1 The Meaning and Functions of Money	302
Instability of investment	261	The functions of money	302
The role of the financial sector	263	What should count as money?	303
Why do booms and recessions come to an end?		11.2 The Financial System	303
What determines the turning points?	264	The banking system	303
9.7 Appendix Measuring National Income and Output	266	Deposit taking and lending	305
The product method	266	Profitability, liquidity and capital adequacy	310
The income method	267	Strengthening international regulation of capital adequacy and liquidity	313
The expenditure method	267	The central bank	317
From GDP to national income	269	The role of the money markets	319
Households' disposable income	269	11.3 The Supply of Money	321
Taking account of inflation	270	The creation of credit	322
Chapter 9 Boxes		The creation of credit: the real world	323
9.1 <i>Output Gaps and the Business Cycle: An alternative measure of excess or deficient demand</i>	242	What causes money supply to rise?	325
9.2 <i>The Consumption Function: The relationship between consumption and income</i>	252	The flow of funds equation	326
9.3 <i>Confidence and Spending: Does confidence help to forecast spending?</i>	264	Credit cycles	328
9.4 <i>Making Sense of Nominal and Real GDP: The interesting case of nominal and real Japanese GDP</i>	270	The relationship between money supply and the rate of interest	328
		11.4 The Demand for Money	331
		What determines the size of the demand for money?	331
<b>10 Aggregate supply and economic growth</b>	<b>273</b>	11.5 Equilibrium	333
10.1 The AD/AS Model	274	Equilibrium in the money market	333
The aggregate demand curve	274	The link between the money and goods markets	334
The aggregate supply curve	275	11.6 Money Supply, Aggregate Demand and Inflation	336
Equilibrium	276		

The equation of exchange	336	Problems of magnitude	382
Money and aggregate demand	337	The problem of timing	384
Chapter 11 Boxes		Fiscal rules	385
11.1 <i>Financial Intermediation: What is it that banks do?</i>	304	13.3 Monetary Policy	386
11.2 <i>The Growth of Banks' Balance Sheets: The rise of wholesale funding</i>	308	The policy setting	387
11.3 <i>The Rise of Securitisation: Spreading the risk or promoting a crisis?</i>	314	Control of the money supply over the medium and long term	388
11.4 <i>Minsky's Financial Instability Hypothesis: Are credit cycles inevitable?</i>	329	Short-term monetary measures	389
<b>12 Output, unemployment and inflation</b>	<b>341</b>	Techniques to control the money supply	390
12.1 Unemployment	342	Techniques to control interest rates	391
Measuring unemployment	342	Using monetary policy	396
Unemployment trends	342	13.4 Demand-Side Policy	398
Unemployment and the labour market	344	Attitudes towards demand management	398
Types of disequilibrium unemployment	346	The case for rules and policy frameworks	399
Types of equilibrium unemployment (or natural unemployment)	348	The case for discretion	400
Long-term changes in unemployment	349	Central banks and a Taylor rule	401
12.2 Inflation	352	Conclusions	401
Introduction to the causes of inflation	352	13.5 Supply-Side Policy	402
12.3 The Relationship Between Output, Unemployment and Inflation: The Short Run	357	Market-orientated supply-side policies	402
The AD/AS model	357	Interventionist supply-side policies	405
The Phillips curve	359	The link between demand-side and supply-side policies	407
12.4 The Relationship Between Inflation and Unemployment: Introducing Expectations	363	<b>Chapter 13 Boxes</b>	
The expectations-augmented Phillips curve	363	13.1 <i>Primary Surpluses and Sustainable Public Finances: The fiscal arithmetic of government debt</i>	380
Natural rate hypothesis	363	13.2 <i>The Fiscal Impulse: Assessing a country's fiscal stance</i>	382
The accelerationist hypothesis	365	13.3 <i>The Evolution of the Stability and Growth Pact in the EU: A supranational fiscal framework</i>	386
New classical perspective	365	13.4 <i>The Operation of Monetary Policy in the UK: Managing the reserves</i>	392
Keynesian views	368	13.5 <i>Monetary Policy in the Eurozone: The role of the ECB</i>	394
12.5 Inflation Rate Targeting	369	13.6 <i>Quantitative Easing: Rethinking monetary policy in hard times</i>	396
Chapter 12 Boxes		13.7 <i>Public Funding of Apprenticeships: Reforms to apprenticeships in England</i>	408
12.1 <i>The Costs of Unemployment: Is it just the unemployed who suffer?</i>	344	<b>Part D INTERNATIONAL ECONOMICS</b>	
12.2 <i>The Duration of Unemployment: Taking a dip in the unemployment pool</i>	347	<b>14 Globalisation and international trade</b>	<b>414</b>
12.3 <i>Inflation and Living Standards: The return of inflation</i>	353	14.1 Global Interdependence	415
12.4 <i>Cost-push Inflation: Cost-push inflation and supply shocks</i>	356	Interdependence through trade	415
12.5 <i>Mind the Gap: Do output gaps explain inflation?</i>	360	Financial interdependence	417
12.6 <i>The Accelerationist Hypothesis: The race to outpace inflationary expectations</i>	366	International business cycles	418
<b>13 Macroeconomic policy</b>	<b>374</b>	Global policy response	418
13.1 Fiscal Policy and the Public Finances	375	14.2 The Advantages of Trade	418
Roles for fiscal policy	375	Trading patterns	418
Public-sector finances	375	Specialisation as the basis for trade	421
Sustainability of public finances	378	The law of comparative advantage	421
The business cycle and the public finances	378	The gains from trade based on comparative advantage	422
The fiscal stance	378	Other reasons for gains from trade	423
13.2 The Use of Fiscal Policy	379	The terms of trade	423
The effectiveness of fiscal policy	382		

14.3 Arguments for Restricting Trade	424	The capital account	455
Arguments in favour of restricting trade	424	The financial account	456
Problems with protection	427	15.2 Exchange Rates	457
14.4 The World Trading System and the WTO	428	Determination of the rate of exchange in a	
14.5 Trading Blocs	431	free market	460
Types of preferential trading arrangement	431	15.3 Exchange Rates and the Balance of Payments	462
The direct effects of a customs union: trade		Exchange rates and the balance of payments:	
creation and trade diversion	432	no government or central bank intervention	462
Longer-term effects of a customs union	432	Exchange rates and the balance of payments:	
Preferential trading in practice	433	with government or central bank intervention	463
14.6 The European Union	435	15.4 Fixed Versus Floating Exchange Rates	464
From customs union to common market	435	Advantages of fixed exchange rates	464
The benefits and costs of the single market	436	Disadvantages of fixed exchange rates	464
Completing the internal market	437	Advantages of a free-floating exchange rate	465
The effect of the new member states	438	Disadvantages of a free-floating exchange rate	466
14.7 The UK and Brexit	439	Exchange rates in practice	467
Alternative trading arrangements	439	15.5 The Origins of the Euro	470
Long-term growth, trade and Brexit	439	The ERM	470
14.8 Trade and Developing Countries	442	The Maastricht Treaty and the road to the single	
The relationship between trade and		currency	471
development	442	15.6 Economic and Monetary Union (EMU)	
Trade strategies	443	in Europe	472
Approach 1: Exporting primaries – exploiting		Birth of the euro	472
comparative advantage	443	Advantages of the single currency	472
Approach 2: Import-substituting		Opposition to EMU	473
industrialisation (ISI)	446	Future of the euro	475
Approach 3: Exporting manufactures – a		15.7 Debt and Developing Countries	479
possible way forward?	447	The oil shocks of the 1970s	479
Chapter 14 Boxes		Dealing with the debt	481
14.1 <i>Trade Imbalance in the USA and China: An illustration</i>		Chapter 15 Boxes	
of economic and financial interdependencies	416	15.1 <i>Nominal and Real Exchange Rates: Searching for a</i>	
14.2 <i>Trading Places: Partners in trade</i>	420	real advantage	459
14.3 <i>Do we Exploit Foreign Workers by Buying Cheap</i>		15.2 <i>Dealing in Foreign Currencies: A daily juggling act</i>	462
Foreign Imports?	426	15.3 <i>The Importance of International Financial</i>	
14.4 <i>The Doha Development Agenda: A new direction</i>		Movements: How a current account deficit can	
for the WTO?	430	coincide with an appreciating exchange rate	466
14.5 <i>Features of The Single Market</i>	436	15.4 <i>The Euro/Dollar See-Saw: Ups and downs in the</i>	
14.6 <i>The Evolving Comparative Advantage of China:</i>		currency market	468
<i>Riding the dragon</i>	448	15.5 <i>Optimal Currency Areas: When it pays to pay in the</i>	
		same currency	474
<b>15 Balance of payments and exchange rates</b>	<b>453</b>	Websites appendix	W:1
15.1 The Balance of Payments Account	454	Key ideas and glossary	K:1
The current account	454	Index	I:1

# Preface

## TO THE STUDENT

Welcome to this introduction to economics. Whether you are planning to study economics beyond this level, or whether this will be your only exposure to this fascinating subject, we hope that you will find the text enjoyable and that it will give you some insight into the economy in which you live and the economic forces that shape all our lives.

Although you have probably never studied the subject before, you will almost certainly know quite a lot of economics already. After all, you make economic decisions virtually every day of your life. Every time you go shopping, you are acting as an ‘economist’: deciding what to buy with your limited amount of money. And in a period of rising prices, such as in 2022, these decisions become more important. But it is not just with decisions about buying that we act as economists. How much to work (something that students are increasingly forced to do nowadays), how much to study, even how much time to devote to various activities during the course of the day, are all, in a way, *economic* choices.

To satisfy us as consumers, goods and services have to be produced. We will therefore study the behaviour of firms and what governs the decisions that they make. How will the decisions of big businesses differ from those of small firms? How will the degree of competition affect the extent to which we gain or lose from the activities of firms?

In analysing economic choices we look at some of the big economic issues that face us all as members of society in the twenty-first century. Despite huge advances in technology, and despite the comfortable lives led by many people in the industrialised world, we continue to suffer from volatile economic growth, industrial change and unemployment and all the insecurity that these bring. Unexpected shocks, such as the COVID-19 pandemic, can have a major effect on livelihoods and jobs. We continue to witness poverty and inequality, and in many countries the gap between rich and poor has actually grown wider; our environment is polluted and the planet is warming; our growing affluence as consumers is increasingly bought at the expense of longer hours at work and growing levels of stress.

We live in a highly interdependent world where actions have implications elsewhere. The Russian invasion of Ukraine directly caused rises in gas, oil and grain prices and drove up the cost of living, hitting poor people especially hard as they spend a large proportion of their income on energy and food.

So, what can be done about these problems? This text seeks not only to analyse these problems but also to examine the sorts of policies that governments might pursue in their attempt to address them.

The text is designed with one overriding aim: to make this exciting and highly relevant subject as clear to understand as possible. To this end, the text has a number of important features:

- A direct and straightforward written style; short paragraphs to aid rapid comprehension. The aim all the time is to provide maximum clarity.
- A careful use of colour to guide you through the text and make the structure easy to follow.
- Key ideas highlighted and explained where they first appear. These ideas are key elements in the economist’s ‘toolkit’. Whenever they recur later in the text, an icon appears in the margin and you are referred back to the page where they are defined and explained. All the key ideas are gathered together at the beginning of the Glossary.
- Some of the key ideas are particularly important in affecting the way we see the world: they help us think like economists. We call these ‘threshold concepts’ and there are 15 of these.
- Clear chapter-opening pages, which set the scene for the chapter. They also highlight the issues that will be covered in the chapter and can thus be seen as ‘learning objectives’.
- Summaries at the end of each section (rather than each chapter). This provides a very useful means of revising and checking your understanding as you progress.
- Definitions of all technical terms given at the foot of the page where the term is first used. The term itself is highlighted in the text.
- ‘Pause for thought’ questions integrated in the text. These are designed to help you reflect on what you have just read and to check on your understanding. Answers to all ‘pause for thought’ questions are given on the student free-access companion website, which, for the rest of the text, we refer to simply as the ‘student website’.
- A comprehensive index. This enables you to look up a concept or topic as required and to see it used in context.
- An alphabetical glossary at the end of the text. This gathers together all the defined terms.
- Plentiful use of up-to-date examples to illustrate the arguments. This helps to bring the subject alive and puts it in context.



- Review questions at the end of each chapter for either individual or class use.
  - Answers to all odd-numbered questions are given on the student website. These questions will be helpful for self-testing, while the even-numbered ones can be used for class testing.
  - Many boxes (typically four to six per chapter) providing case studies, news items, applications, or elaborations of the text. The boxes are of two types: Case Studies and Applications; and Exploring Economics. Each box contains questions allowing students to assess their own understanding and each box contains an activity designed to develop important skills around research, data analysis and the communication of economic ideas and principles. These skills are not only of use to you at university but also in the world of work. They are frequently identified by employers as being especially valuable. Hence, by undertaking the activities in the boxes you help increase your employability.
  - A comprehensive set of web references at the end of each of the four parts of the text. Each reference is numbered to match those in the Web Appendix at the end of the text. You can easily access any of these sites from this book's own website (at <http://www.pearsoned.co.uk/sloman>). When you enter the site, click on **Hot Links**. You will find all the sites from the Web Appendix listed. Click on the one you want and the 'hot link' will take you straight to it.
  - Appendices for most chapters appear on the student website. These Web Appendices take the argument further than in the text and look at some more advanced theories. While none of these is necessary for studying this text, and many courses will not refer to them, they provide the necessary additional material for more advanced courses that still require a short textbook.
- Good luck with your studies – and have fun. Perhaps this will be just the beginning for you of a lifelong interest in economic issues and the economy.

## TO LECTURERS AND TUTORS

This ninth edition of *Essentials of Economics* is an abridged version of *Economics*, 11th edition (John Sloman, Dean Garratt and Jon Guest). Some passages have been directly transcribed, while others have been extensively rewritten in order to provide a consistent coverage of the 'essentials' of economics.

The text is designed specifically for one-semester courses in introductory economics. There are 15 chapters (1 introductory, 7 micro, 5 macro and 2 international), each providing about a week's worth of reading. The text is also ideal for year-long courses that are designed for those not going on to specialise in economics, or where economics is only a subsidiary component.

Naturally, in a one-semester course, or in courses for non-specialists, tutors cannot hope to cover all the principles of economics. Thus some things have had to go. The text does not cover indifference curves or isoquants. The analysis of costs is developed with only an informal reference to production functions. Distribution theory is confined to the determination of wage rates. In macroeconomics, *IS/LM* and *IS/MP* analysis have been left out, as have some of the more advanced debates in monetary and exchange rate theory. In addition, many passages have been simplified to reflect the nature of courses on which the text is likely to be used. The result is a text that is approximately half the length of *Economics*, 11th edition.

### Suggestions for longer or more advanced courses

If you want to use this text on more rigorous courses, most chapters have one or more Web Appendices. These introduce

students to more advanced models, such as indifference analysis, isoquant analysis, general equilibrium in both a closed and an open economy, *IS/LM*, *IS/MP*, the full money multiplier, and trade creation and diversion. You can use any or all of them to fit your course.

The text is also ideal for the economics AS/A2 syllabuses of the various boards.

The text is also highly suitable for courses, such as HND, where the economic environment component is part of a larger module.

### Extensive revision within the existing structure

To bring economics alive and show how the subject relates to real-world issues, the ninth edition of *Essentials of Economics* contains a great deal of applied material. Consequently, there have been considerable revisions from the previous editions to reflect contemporary issues, debates and policy interventions. Specifically, you will find that:

- Many of the boxes are new or extensively revised.
- There are many new examples given in the text.
- All tables and charts have been updated, as have factual references in the text.
- Economic analysis and debate has been strengthened and revised at various points in the text in light of economic events and developments in economic thinking.
- Building on the revisions in previous editions there is considerable coverage of behavioural economics.

- The climate emergency is considered in many places throughout the text, with consideration of the economic causes and government policies to tackle global warming.
- There is also coverage throughout of the impact of the COVID-19 pandemic and the various measures taken by governments to limit the economic damage.
- There is analysis of the impact on inflation of both supply problems in the aftermath of COVID and the Russian invasion of Ukraine. The reaction of governments and central banks is also considered.
- All policy sections have been thoroughly revised to reflect the changes that have taken place since the last edition. This includes an analysis in several parts of the text of the implications of the UK's exit from the EU and of policies being pursued in various parts of the world that restrict trade.
- Most importantly, every part of the text has been carefully considered, and if necessary redrafted, to ensure both maximum clarity and contemporary relevance.

The text also contains 36 'key ideas' and these are highlighted and explained when they first appear. These fundamental concepts provide a 'toolkit' for students. Students can see them recurring throughout the text, and an icon appears in the margin to refer back to the page where the idea first appears. Showing how these ideas can be used in a variety of contexts helps students to relate the different parts of the subject to each other. Fifteen of these concepts are given the special status of 'Threshold Concepts'. Understanding and being able to use these concepts, such as opportunity cost, help students to 'think like an economist'. Each of these concepts is explained in detail in MyLab Economics and on the student companion website.

But, despite considerable updating, the book retains the same structure as the previous edition. This should make the transition to the ninth edition straightforward as it removes the need to update references to chapters, sections and pages in the book.

We hope that your students will find this an exciting and interesting text that is relevant to today's issues.

## SUPPLEMENTS

### MyLab Economics for students

MyLab Economics provides a comprehensive set of online tests, homework and revision exercises. If you have purchased this text as part of a pack, then you can gain access to MyLab by following the instructions to register the access code. If you've purchased this text on its own, then you can purchase access online at [www.myeconlab.com](http://www.myeconlab.com)

MyLab Economics provides a variety of tools to enable students to access their own learning, including exercises, quizzes and tests, arranged chapter by chapter. There are many new questions in this edition and each question has been carefully considered to reflect the learning objectives of the chapter. A personalised Study Plan identifies areas to concentrate on to improve grades, and specific tools are provided to each student to direct their studies in a more efficient way.

### Student website

In addition to the materials on MyLab Economics, there is an open-access companion website for students with a large range of other resources, including:

- Animations of key models with audio explanations. These 'audio animations' can be watched online or downloaded to a computer, MP4 player, smart phone, etc.
- Links to the Sloman Economics News site with news items added several times each month, with introductions, links to newspaper and other articles and to relevant data, questions for use in class or for private study, and references to chapters in the text. You can search the extensive archive by chapter or keyword.

- More than 200 case studies with questions for self-study, ordered chapter by chapter and referred to in the text.
- A set of Web appendices which explore economic theory further than in the text and are suitable for courses with more advanced sections or where students want to study the subject in greater depth.
- An updated list of over 280 hot links to sites relevant to economics. These are referred to in the book's Websites Appendix and at the end of each of the four Parts of the text.
- Answers to all Pause for thought questions.
- Answers to end-of-chapter questions.
- Threshold Concepts. A detailed description of each of the 15 Threshold Concepts, showing how understanding them and being able to apply them in a variety of contexts helps you to think like an economist.

Note that Sloman Economics News and hotlinks can also be accessed directly from <http://pearsonblog.campaignserver.co.uk/>.

### MyLab Economics for lecturers and tutors

You can register online at [www.myeconlab.com](http://www.myeconlab.com) to use MyLab Economics, which is a complete virtual learning environment for your course or embedded into Blackboard, Moodle or your university's own online learning platform. You can customise its look and feel and its availability to students. You can use it to provide support to your students in the following ways:

- MyLab's gradebook automatically records each student's time spent and performance on the tests and Study Plan. It also generates reports you can use to monitor your students' progress.



- You can use MyLab to build your own test, quizzes and homework assignments from the question base provided to set your own students' assessment.
- A select number of questions are generated algorithmically so they use different values each time they are used.
- You can create your own exercises by using the econ exercise builder.

Contact your local Pearson representative for more details and support.

## Additional resources for lecturers and tutors

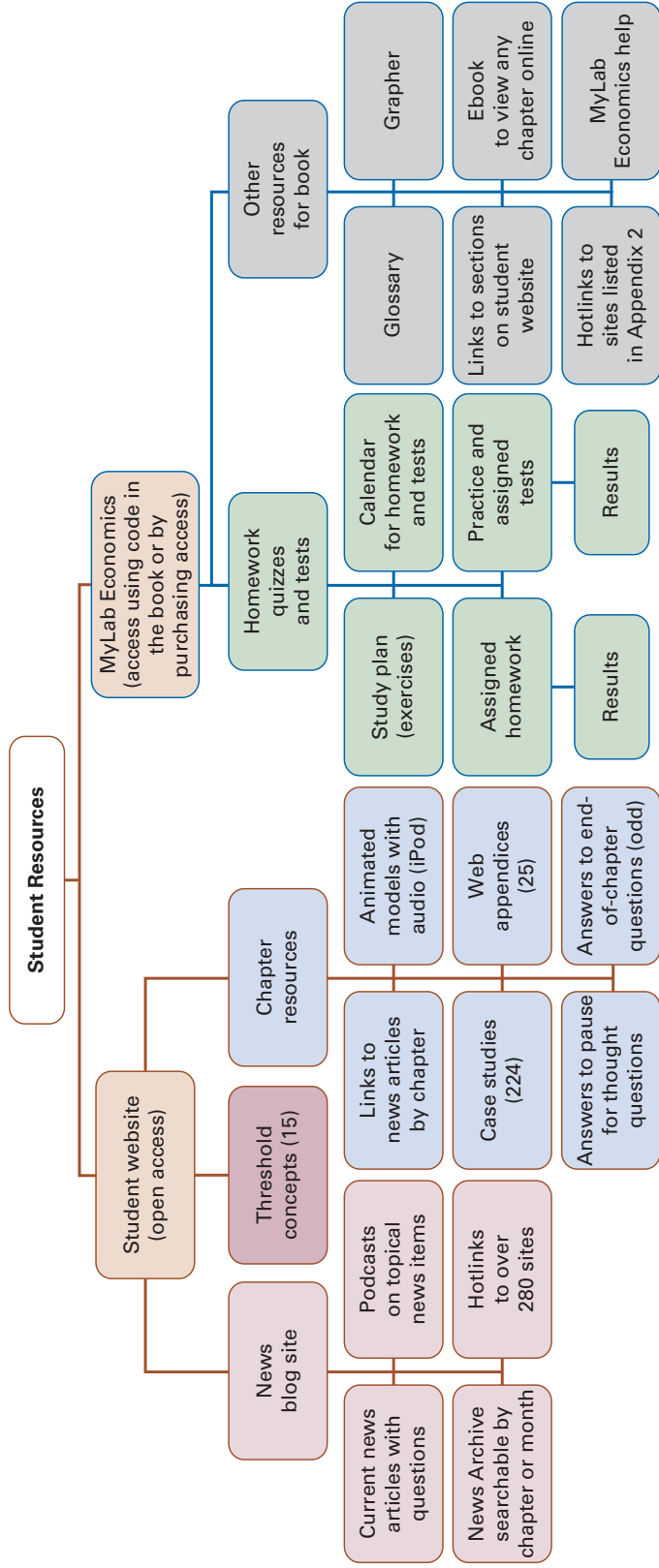
There are many additional resources for lecturers and tutors that can be downloaded from the lecturer section of MyLab or from the Lecturer Resources section of the book's website at [www.pearsoned.co.uk/sloman](http://www.pearsoned.co.uk/sloman). These have been thoroughly revised for the ninth edition. These include:

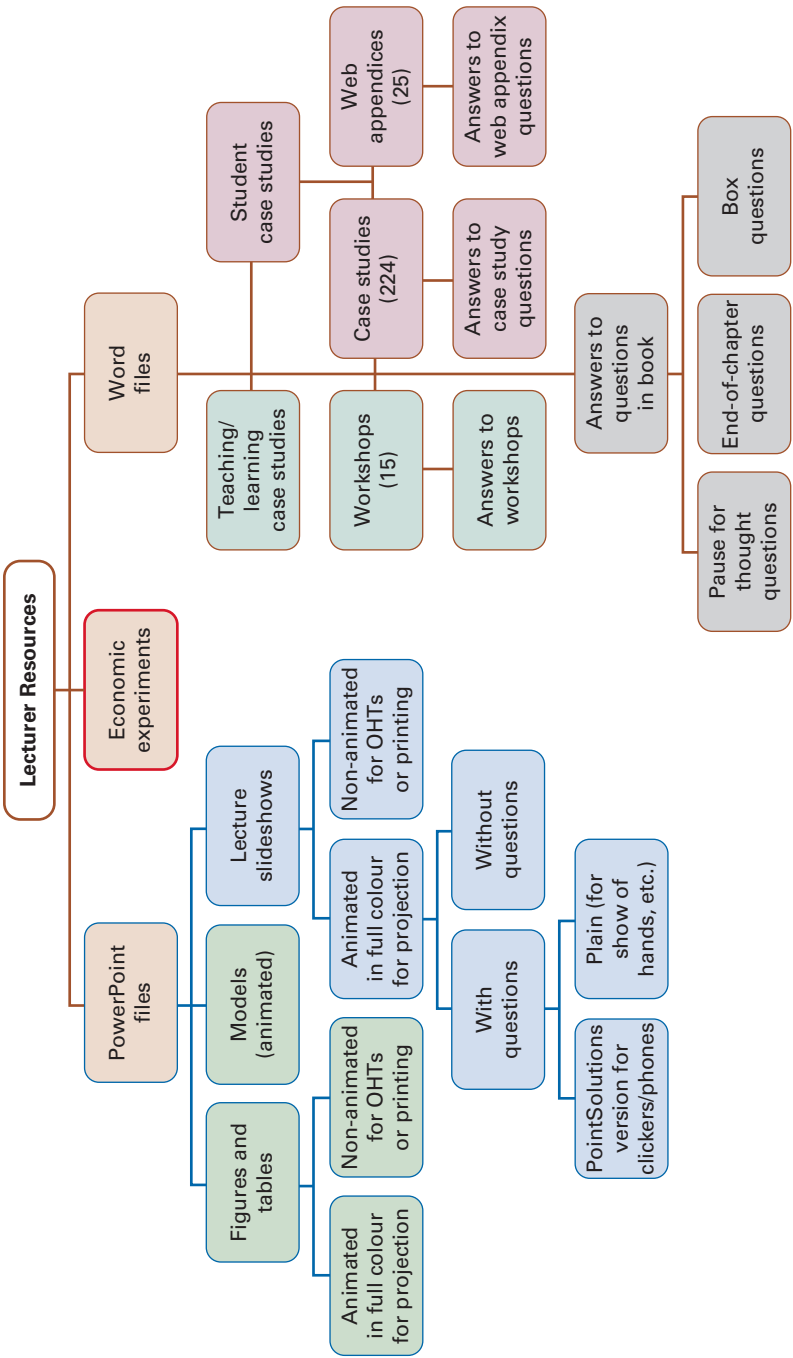
- PowerPoint® slide shows in full colour for use with a data projector in lectures and classes. These can also be made available to students by loading them on to a local network. There are several types of slideshows:
  - *All figures from the text and most of the tables.* Each figure is built up in a logical sequence, thereby allowing tutors to show them in lectures in an animated form. There is also a non-animated version suitable for printing or for display on an OHP or visualiser.
  - *A range of models.* There are 26 files, each containing one of the key models from the text, developed in an animated sequence of between 20 to 80 screens.
  - *Customisable lecture slideshows.* These are a series of bullet-point lecture plans. There is one for each chapter of the text. Each one can be easily edited, with points added, deleted or moved, so as to suit particular lectures. A consistent use of colour is made to show how the points tie

together. It is not intended that all the material is covered in a single lecture; you can break at any point. It's just convenient to organise them by chapter. They come in various versions:

- Lecture slideshows with integrated diagrams. These lecture plans include animated diagrams, charts and tables at the appropriate points.
- Lecture plans with integrated diagrams and questions. These are like the above but also include multiple-choice questions, allowing lectures to become more interactive. They can be used with or without an audience response system (ARS). A special ARS version is available for TurningPoint® and is ready to use with appropriate 'clickers' or with smartphones, tablets or laptops.
- Lecture plans without the diagrams. These allow you to construct your own diagrams on the blackboard, whiteboard or visualiser or use pre-prepared ones on a visualiser or OHP.
- Case studies. These, also available in MyLab economics and on the student website, can be reproduced and used for classroom exercises or for student assignments. Answers are also provided (not available on the student site).
- Workshops. There are 15 of these – one for each chapter. They are in Word® and can be reproduced for use with large groups (up to 200 students) in a lecture theatre or large classroom. In A-level classes, they can be used as worksheets, either for use in class or for homework. Suggestions for use are given in an accompanying file. Answers to all workshops are given in separate Word files.
- Teaching/learning case studies. There are 20 of these. They examine various approaches to teaching introductory economics and ways to improve student learning.
- Answers to all end-of-chapter questions, pause for thought questions, questions in boxes, questions in Web Cases and Web Appendices and to the 15 workshops. They have been completely revised with new hyperlinks where appropriate.

The following two pages show in diagrammatic form all the student and lecturer resources.





## ACKNOWLEDGEMENTS

As with previous editions, we owe a debt to various people. A special thanks to Peter Smith from the University of Southampton for authoring the MyLab Economics questions and tests. Thanks to the team at Pearson Education, and especially to Catherine Yates, who has been a tremendous help and support at every stage of revising the text. Thanks to Mel Carter, Jodie Mardell-Lines and Vivek Khandelwal for all the work they have put in to producing the text and its supplements. Thanks too to the many users of the text who have given us feedback. We always value their comments.

John: As always, I owe a huge debt to my family, and especially my wife and soulmate Alison, whose love and support have made this and previous editions possible. And many thanks once again to Dean, whose ideas and enthusiasm have been fantastic. It's been great to work together.

Dean: A special thank you must go to Patricia. She continues to be my rock and remains steadfastly supportive. I would like to thank my parents for all their love and continued support. Finally, thanks to John for again inviting me to work on *Essentials of Economics* and, not least, for his abundant patience.

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**11 European Commission:** Based on data in AMECO Database, European Commission, DG Business, Economy, Euro (May 2022); **18 Office for National Statistics:** Consumer Price Inflation time series dataset and UK House Price Index: reports (Office for National Statistics); **19 Office for National Statistics:** Consumer Price Inflation time series dataset and UK House Price Index: reports (Office for National Statistics); **23 International Monetary Fund:** Data drawn from World Economic Outlook Database (IMF, April 2022) and various forecasts; **38 Office for National Statistics:** Based on data from Consumer Price Inflation time series dataset and UK House Price Index: reports (Office for National Statistics); **40 Office for National Statistics:** Based on data from Consumer Price Inflation time series dataset, series CHAW (ONS) and various (2022); **42 The World Bank Group:** Based on data from World Bank Commodity Price Data (The Pink Sheet), (Commodity Markets, World Bank, 2022); **97 Macmillan Publishers:** T.R. Malthus, *First Essay on Population* (Macmillan, 1926), pp. 13–14.; **109 European Commission:** C. F. Pratten, 'A survey of the economies of scale', in *Research into the 'Costs of Non-Europe'*, Volume 2 (Commission of the European Communities, Luxembourg, 1988).; **109 European Commission:** European Commission/Economists Advisory Group Ltd, 'Economies of scale', *The Single Market Review, Sub-series V, Volume 4* (Commission of the European Communities, Luxembourg, 1997).; **128 Office for National Statistics:** Based on series J4MC from Time Series Data (National Statistics).; **142 The World Bank Group:** Nominal oil price data from World Commodity Price Data (The Pink Sheet), Commodity Markets (World Bank); **142 Organisation for Economic Co-operation and Development:** Price Index from Data Extracts (OECD); **164 Office for National Statistics:** Based on data in series MGRZ, YCBH, MGRQ, YCBW and EMP17 (ONS); **173 Office for National Statistics:** Based on data from The effects of taxes and benefits on UK household income UK, 2020/21, Reference Table 2, (ONS, 28 March 2022); **175 Office for National Statistics:** The

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# A

Part

## Introduction

1 Economic issues

2





## Economic issues

We start by looking at three of the biggest issues of our time – the COVID-19 pandemic, the subsequent rise in global inflation and global warming. These have had profound effects on societies around the world and, in the case of global warming, will do for decades to come. They are forcing us and our governments to make choices. Studying these choices is central to economics. Economists can analyse them and present us with policy alternatives. They can help us come to the best decisions in the light of the information presented by scientists.

Economics contains some core ideas. These ideas are simple but can be applied to a wide range of economic problems. We start examining these ideas in this chapter. We begin on the journey to help you to ‘think like an economist’ – a journey that we hope you will find fascinating and will give you a sound foundation for many possible future careers.

In this chapter, we will attempt to answer the question, ‘What is economics about?’, and give you greater insight into the subject you are studying. We will see how the subject is divided up and distinguish between the two major branches of economics: microeconomics and macroeconomics.

We will also look at the ways in which different types of economy operate, from the centrally planned economies of the former communist countries to the more free-market economies of most of the world today. We will ask just how ‘markets’ work.

**After studying this chapter, you should be able to answer the following questions:**

- What is economics about?
- What is the central economic problem faced by all individuals and societies?
- How can people set about making the best of their limited resources?
- What is meant by ‘opportunity cost’? How is it relevant when people make economic choices?
- What is the difference between microeconomics and macroeconomics?
- What are the potential social implications of economic choices?
- How can you represent simply economic relationships in a graph?
- Why is the distinction between nominal and real figures important?
- How do different economic systems tackle the problem of scarcity?

At this point it's worth drawing your attention to the Economics News site that accompanies this text. You can access it directly at <http://pearsonblog.campaignserver.co.uk/> or from MyLab Economics' home page, or simply Google 'Sloan Economics news site'. The site shows how items in the news are related to the economic issues you will be studying in this text. There are links to newspaper articles, to videos, to data sources and to reports. There are questions for you to consider and a powerful search feature that lets you browse earlier articles by chapter of the book, month and keywords.

## 1.1 GLOBAL ECONOMIC ISSUES

### *Problems to analyse and tackle*

Economists study the various choices and decisions that affect our lives and livelihoods. These may be big decisions made by governments or the day-to-day decisions that we each make. To give you a flavour of economic decisions, we look at three of the most important issues that have faced societies and individuals in recent years.

#### **COVID-19 and the global health emergency**

The COVID-19 pandemic dominated our lives during 2020 and 2021 and beyond. People and governments struggled to cope with illness and death, and the damage to lives and livelihoods. Everyone was faced with choices, and these affected behaviour. Most of these had an economic dimension.

#### *Individual choices*

People had to decide whether to follow the rules and advice about behaviour: e.g. whether to wear a face-mask, or socially distance or follow lockdown rules. Economics studies people's behaviour – and how it impacts on economic decisions and the economy. We look at such behaviour in Chapters 2 to 4. For example, early on in the pandemic, many people stockpiled various items, such as hand sanitiser, toilet rolls and dried foods. This caused many shops to run out, which only further encouraged panic buying. Some shops responded by raising prices to increase their profit margins.

The lockdowns affects firms' profits. Some sectors were particularly hard hit, such as hospitality, leisure and tourism. Profits would have become losses if the government had not provided substantial support, which was still not enough to prevent many firms going out of business.

And the pandemic hastened the move to online sales and away from the High Street. Across the UK, some 17 500 chain-store outlets were permanently closed in 2020. In contrast, sales of online retailers such as Boohoo and Asos boomed.

We examine costs, revenues and profits in Chapters 5 and 6. We see how some firms are better protected against market forces than others, especially if they have a large market share and resulting market power.

As far as employees were concerned, some were easily able to work from home with a separate room to work in and a good Internet connection. They also saved money on commuting costs. Others with child-care responsibilities and shared working spaces and/or devices struggled to work efficiently from home. Some found their incomes constant or even rising; others saw a fall or had to rely on furlough money from the government.

Then vaccines began to be rolled out. Most people embraced getting jabbed to protect them and their loved ones. Others were suspicious for various reasons. But here was a classic problem in economics: what we do for ourselves often has spillover effects on others. If we are not protected, we are more likely to catch the disease and pass it on to others, even if we only get infected mildly or are largely asymptomatic. Many actions we take affect others – either beneficially or adversely.

#### *Government choices*

The pandemic did not just affect individuals and firms; it had major effects on whole economies. With many firms being forced to shut down, even if only temporarily, and some sectors, such as public transport, facing a collapse in demand, economies around the world went into recession – economic growth was negative and unemployment rose.

Governments in many countries responded by supporting individuals through various furlough schemes. Support was also given to businesses and to the self-employed. This prevented unemployment from rising much further.

Other longer-term measures for recovery included large-scale spending on physical infrastructure, such as public transport, roads, green energy and broadband, and on public services, such as health and education.

We look at issues such as growth and unemployment in Part C of the book.

But the massive support came at a cost. Government spending on support schemes plus a decline in tax revenues meant that government borrowing soared. Governments had to finance the borrowing through paying interest from taxes (or even more borrowing). So they were faced with the hard choice about when

to start raising taxes or cutting government spending to reduce the level of borrowing. The general approach was to spend now and pay later – an easy choice at the time, but a difficult one later, especially for governments facing re-election. Policy choices such as these are examined in Chapter 13.

### Pause for thought

*Give some other examples of choices that governments had to make during the pandemic. To what extent were they economic choices?*

## Global inflation

It was not just governments that were trying to keep their economies going during the pandemic. Central banks, such as the Federal Reserve in the USA, the European Central Bank for the eurozone and the Bank of England for the UK, were also playing their part. The general approach was to create more electronic money, through a process of ‘quantitative easing’. If there was more money circulating through the banking system, people would borrow and spend more, helping to boost businesses.

But when you turn on the ‘money tap’ like this, you have to choose how much money to create and when to turn the tap off. Too little money and the recession may persist; too much money and prices may be pushed up by soaring spending. This ‘inflation’, as it is called, creates other problems for the economy, and central banks are keen not to let prices rise by more than 2 per cent per annum. The role of money in the economy is examined in Chapters 11–13.

Inflation really took off in 2022. The extra money created during the pandemic helped to fund the bounce back from recession. Spending rose rapidly. But supply could not keep up with the demand. Supply chains had been disrupted during the recession: there was a shortage of transportation (both land transport and shipping), a shortage of various components (such as computer chips) and a shortage of various types of skilled labour. Firms responded by raising prices. This pushed up the general level of prices: inflation took off.

Inflation was compounded by the Russian invasion of Ukraine. Supplies of oil and gas were disrupted; energy prices soared. Ukraine is a major exporter of wheat, sunflower oil and other crops. The blockade of Ukrainian exports led to a rapid rise in their price; food prices also soared. This further pushed up the overall inflation rate, which approached an annual rate of 10 per cent in many rich countries and higher rates than this in many poorer countries.

Central banks responded by raising interest rates – their normal response to rising inflation. The aim is to dampen spending by making borrowing more

expensive and to encourage saving. But this risked driving countries into recession.

### Inequality

A major issue in economics is inequality and poverty. Over the years this has increased in most countries as the rich have got richer, while many on low incomes have seen their real incomes (i.e. incomes after taking inflation into account) stagnate or even fall.

The inflation of 2022 compounded the problem. The poor consume a larger proportion of basic foodstuffs and energy than do the rich. Many poor people were driven into a state of food and fuel poverty and were not able to afford both to eat enough and to heat their homes adequately. We consider inequality in Chapter 7.

## The environment and the global climate emergency

The world is faced with a climate emergency as the planet warms and as floods, droughts, fires, hurricanes and crop failures increase. Economists can look at policy options and their implications.

A key policy concerns pricing. If renewable energy were cheaper and fossil fuels were more expensive, then people would be more willing to switch to low-carbon consumption. Indeed, pricing is a central issue in economics. We look at pricing in Chapters 2, 3 and 5.

But how can prices be altered? They can be reduced by government subsidies and raised by taxes. We look at green taxes and subsidies in Chapter 8 and especially Section 8.9.

Another method for limiting emissions is for governments to cap the amount that firms are allowed to emit. Permits to emit CO<sub>2</sub> are allocated or auctioned to businesses. These can then be traded in markets. Low emitters will not have to pay so much, thereby giving them a cost advantage over high-emitting companies, which will require more permits and hence have to pay more. Economists have played a key role in developing emissions trading in markets such as the EU Emissions Trading Scheme (EU ETS).

### International action

We live in an interdependent world. Actions in one part of the globe affect lives in others. A good example is cutting down rainforests for mining, ranching or growing monocrops, such as palm oil.

Actions by the global community can help but very often there are international games being played, with countries unwilling to commit to carbon-reducing measures unless they can be convinced that other countries are playing their part too. Economists study these types of ‘games’. Indeed there is a major branch of economics called ‘game theory’, which looks at effective ways of incentivising people, firms and governments to behave in co-operative ways. We look at game theory in Section 6.6.



**Pause for thought**

*For what reasons may governments want other governments to stick to tough climate or emissions targets and yet be not willing to do so themselves?*

Trade between nations can make everyone better off. But this only works if certain conditions hold,

including recognition of the environmental impact of trade. Economists study these conditions and can advise governments on trade policy. This and other international issues are the subject of the final two chapters of the book.

All these economic issues stem from a core set of problems. It is to this core that we now turn.

## 1.2 THE CORE OF ECONOMICS

### What is economics all about?

Section 1.1 illustrates that economics involves an analysis of decision making by individuals, businesses, governments and countries. These are decisions concerned with the following:

- The **production** of goods and services: how much an economy produces, both in total and of individual items; how much each firm or person produces; what techniques of production are used; how many people are employed.
- The **consumption** of goods and services: how much people spend (and how much they save); how much people buy of particular items; what individuals choose to buy; how consumption is affected by prices, advertising, fashion, people's incomes and other factors.

But we still have not quite got to the bottom of what economics is about. What is the crucial ingredient that makes a problem an *economic* one? The answer is that there is one central problem faced by all individuals and all countries, no matter how rich. From this one problem stem all the other economic problems we shall be looking at throughout this text.

This central economic problem is *scarcity*. For an economist, scarcity has a very specific definition. Let us examine that definition.

### The problem of scarcity

Ask people if they would like more money, and the vast majority would answer 'yes'. They want more money so that they can buy more goods and services; and this applies not only to poor people but also to most wealthy people too. The point is that human wants are virtually unlimited.

Yet the means of fulfilling human wants are limited. At any one time the world can produce only a limited amount of goods and services. This is because the world has only a limited amount of resources. These resources, or **factors of production** as they are often called, are of three broad types.

- Human resources: **labour**. The labour force is limited in number and in skills.

- Natural resources: **land and raw materials**. The world's land area is limited, as are its raw materials
- Manufactured resources: **capital**. Capital consists of all those inputs that have themselves been produced in the first place. The world has a limited stock of capital: a limited supply of factories, machines, transportation and other equipment. The productivity of capital is limited by the state of technology.

So here is the reason for scarcity: human wants are virtually unlimited, whereas the resources available to satisfy these wants are limited. We can thus define **scarcity** as follows:

**KEY  
IDEA  
1**

**Scarcity** is the excess of human wants over what can actually be produced. Because of scarcity, various choices have to be made between alternatives.

Of course, we do not all face the problem of scarcity to the same degree. A poor person unable to afford enough to eat or a decent place to live will hardly see it as a 'problem' that a rich person cannot

### Definitions

**Production** The transformation of inputs into outputs by firms in order to earn profit (or meet some other objective).

**Consumption** The act of using goods and services to satisfy wants. This will normally involve purchasing the goods and services.

**Factors of production (or resources)** The inputs into the production of goods and services: labour, land and raw materials, and capital.

**Labour** All forms of human input, both physical and mental, into current production.

**Land (and raw materials)** Inputs into production that are provided by nature: e.g. unimproved land and mineral deposits in the ground.

**Capital** All inputs into production that have themselves been produced: e.g. factories, machines and tools.

**Scarcity** The excess of human wants over what can actually be produced to fulfil these wants.

afford a second Ferrari. But economists do not claim that we all face an *equal* problem of scarcity. In fact, this is one of the major issues economists study: how resources and products are *distributed*, whether between different individuals, different regions of a country or different countries of the world.

### Pause for thought

*If we would all like more money, why doesn't the government simply print a lot more?*

But given that people, both rich and poor, want more than they can have, this makes them *behave* in certain ways. Economics studies that behaviour. It studies people at work, producing the goods that people want. It studies people as consumers buying the goods they themselves want. It studies governments influencing the level and pattern of production and consumption. In short, it studies anything to do with the process of satisfying human wants.

## Demand and supply

We said that economics is concerned with consumption and production. Another way of looking at this is in terms of *demand* and *supply*. In fact, demand

and supply and the relationship between them lie at the very centre of economics. But what do we mean by the terms, and what is their relationship with the problem of scarcity?

*Demand* is related to wants. If goods and services were free, people would simply demand whatever they wanted. Such wants are virtually boundless, perhaps limited only by people's imagination. *Supply*, on the other hand, is limited. It is related to resources. The amount firms can supply depends on the resources and technology available.

Given the problem of scarcity, given that human wants exceed what can actually be produced, *potential* demands will exceed *potential* supplies. Society therefore has to find some way of dealing with this problem. Somehow it has to try to match demand and supply. This applies at the level of the economy overall: total spending in the economy must balance total production. It also applies at the level of individual goods and services. The demand and supply of cabbages must balance, and so must the demand and supply of cars, houses, tablets and holidays.

But if potential demand exceeds potential supply, how are *actual* demand and supply to be made equal? Either demand has to be curtailed, or supply has to be increased, or a combination of the two. Economics studies this process. It studies how demand adjusts to available supplies, and how supply adjusts to consumer demands.

K1  
p 5

### Recap

1. The central economic problem is that of scarcity.
2. Given that there is a limited supply of factors of production (labour, land and capital), it is impossible to provide everybody with everything they want.
3. Potential demands exceed potential supplies.

## 1.3 DIVIDING UP THE SUBJECT

### *What's meant by 'microeconomics' and 'macroeconomics'?*

Economics is traditionally divided into two main branches – *microeconomics* and *macroeconomics*, where 'micro' means small and 'macro' means big.

**Microeconomics** is concerned with the individual parts of the economy. It is concerned with the demand

and supply of *particular* goods and services and resources such as cars, butter, clothes, haircuts, plumbers, accountants, blast furnaces, computers and oil.

**Macroeconomics** is concerned with the economy as a whole. It is thus concerned with **aggregate demand**

### Definition

**Microeconomics** The branch of economics that studies individual units: e.g. households, firms and industries. It studies the interrelationships between these units in determining the pattern of production and distribution of goods and services.

and **aggregate supply**. By ‘aggregate demand’ we mean the total amount of spending in the economy, whether by consumers, by customers outside the country for our exports, by the government, or by firms when they buy capital equipment or stock up on raw materials. By ‘aggregate supply’ we mean the total national output of goods and services.

## Microeconomics

### Microeconomics and choice

**KI 1** Because resources are scarce, *choices* have to be made.  
**p 5** There are three main categories of choice that must be made in any society.

- *What* goods and services are going to be produced and in what quantities? How many cars, how much wheat, how much insurance, how many rock concerts, etc. will be produced?
- *How* are things going to be produced? What resources are going to be used and in what quantities? What techniques of production are going to be adopted? Will cars be produced by robots or by assembly-line workers? Will electricity be produced from coal, oil, gas, nuclear fission, renewable resources or a mixture of these?
- *For whom* are things going to be produced? In other words, how will the nation’s income be distributed? After all, the higher your income, the more you can consume of the nation’s output. What will be the wages of shop workers, professional footballers, cleaners and accountants? How much will chief executives of large companies receive? How much will pensioners receive? How much of the nation’s income will go to shareholders or landowners?

All societies have to make these choices, whether they be made by individuals, by groups or by the government. These choices are *microeconomic* choices, since they are concerned not with the *total* amount of national output, but with the *individual* goods and services that make it up: what they are, how they are made, and who gets the incomes to buy them.

### Choice and opportunity cost

Choice involves sacrifice. The more food you choose to buy, the less money you will have to spend on other goods. The more food a nation produces, the less resources there will be for producing other goods. In other words, the production or consumption of one thing involves the sacrifice of alternatives. This sacrifice of alternatives in the production (or consumption) of a good is known as its **opportunity cost**.

If the workers on a farm can produce either 1000 tonnes of wheat or 2000 tonnes of barley, then the opportunity cost of producing 1 tonne of wheat is the 2 tonnes of barley forgone. The opportunity cost of buying a textbook is the new pair of jeans you also wanted that you have had to go without. The opportunity cost of working overtime is the leisure you have sacrificed.

Opportunity cost as the basis for choice is a key idea. But it is more than that. It is also the first of our ‘threshold concepts’ (click on the Threshold Concepts link in MyLab Economics or on the student website for a detailed explanation of each one). There are 15 of these threshold concepts, which we shall be exploring throughout the text. Each of them keeps recurring in a variety of different contexts.

Once you have grasped these concepts and seen their significance, they will affect the way that you understand and analyse economic problems. They help you to ‘think like an economist’.

**KEY  
IDEA**  
2

**TC**  
1

The **opportunity cost** of something is what you give up to get it/do it.

### Rational choices

When trying to understand behaviour economists typically start by assuming ‘rational decision making’. Consequently, they often refer to *rational choices*. This simply means the weighing-up of the *costs* and *benefits* of any activity, whether it be firms choosing what and how much to produce, workers choosing whether to take a particular job or to work extra hours, or consumers choosing what to buy.

Imagine you are doing your shopping in a supermarket and you want to buy a bottle of wine. Do you

### Definitions

**Macroeconomics** The branch of economics that studies economic aggregates (grand totals): e.g. the overall level of prices, output and employment in the economy.

**Aggregate demand** The total level of spending in the economy.

**Aggregate supply** The total amount of output in the economy.

**Opportunity cost** The cost of any activity measured in terms of the best alternative forgone.

**Rational choices** Choices that involve weighing up the benefit of any activity against its opportunity cost.

## BOX 1.1

## THE OPPORTUNITY COSTS OF STUDYING

CASE STUDIES &amp; APPLICATIONS

**What are you sacrificing?**

You may not have realised it, but you probably consider opportunity costs many times a day. The reason is that we are constantly making choices: what to buy, what to eat, what to wear, whether to go out, how much to study and so on. Each time we make such a choice, we are in effect rejecting some alternative. This alternative forgone is the opportunity cost of the action we chose.

Sometimes the opportunity costs of our actions are the direct monetary costs we incur. Sometimes it is more complicated.

Take the opportunity costs of your choices as a student.

**Buying a textbook costing £49.95**

This choice involves a direct money payment. What you have to consider is the alternatives you could have bought with the £49.95. You then have to weigh up the benefit from the best alternative against the benefit of the textbook.



1. What might prevent you from making the best decision?

**Coming to classes**

Even though students pay fees for their degrees in many countries, there is no extra (marginal) monetary cost in coming to classes once the fees have been paid. You will not get a refund by missing classes. The fees, once you've paid them, are what we call a 'sunk cost'.

So are the opportunity costs zero? No: by coming to classes you are *not* working in the library; you are *not* having an extra hour in bed; you are *not* undertaking paid work during that time, and so on. If you are making a rational decision to come to classes, then you will consider such possible alternatives.



2. If there are several other things you could have done, is the opportunity cost the sum of all of them?

3. What factors would make the opportunity cost of attending a class relatively high?

**Revising for an economics exam**

Again, the opportunity cost is the best alternative to which you could have put your time. This might be revising for some

other exam. You will probably want to divide your time sensibly between your subjects. A *sensible* decision is not to revise economics on any given occasion if you will gain a greater benefit from revising another subject. In such a case the (marginal) opportunity cost of revising economics exceeds the (marginal) benefit.

**Choosing to study at university or college**

What are the opportunity costs of being a student in higher education? At first it might seem that the costs would include the following:

- Tuition fees.
- Books, stationery, etc.
- Accommodation, food, entertainment, travel and other living expenses.

But adding these up does *not* give the *opportunity cost*. The opportunity cost is the *sacrifice* entailed by going to university or college *rather* than doing something else. Let us assume that the alternative is to take a job that has been offered. The correct list of opportunity costs of higher education would include:

- Books, stationery, etc.
- Additional accommodation and travel expenses over what would have been incurred by taking the job (this figure could be negative).
- Wages that would have been earned in the job, less any income received as a student.
- Tuition fees paid by the student.



4. Why is the cost of food not included?

5. What impact would it have on the calculation of opportunity costs if you really disliked the nature of the work in the best alternative job?

6. Is the opportunity cost to the individual of attending higher education different from the opportunity costs to society as a whole? Do the benefits of higher education for society differ from those for the individual?



Estimate your own cost of studying for a degree (or other qualification). For what reasons might you find it difficult to make such a calculation?

spend a lot of money and buy a top-quality wine, or do you buy a cheaper one instead? To make a rational (i.e. sensible) decision, you will need to weigh up the costs and benefits of each alternative.

The top-quality wine may give you a lot of enjoyment, but it has a high opportunity cost: because it is expensive, you will need to sacrifice quite a lot of consumption of other goods if you decide to buy it. If you buy the cheap bottle, however, although you will not enjoy it so much, you will have more money left over to buy other things: it has a lower opportunity cost.

Thus rational decision making, as far as consumers are concerned, involves choosing those items that give you the best value for money: i.e. the *greatest benefit relative to cost*.

The same principles apply to firms when deciding what to produce. For example, should a car manufacturer open up another production line? A rational decision will again involve weighing up the benefits and costs. The benefits are the revenues that the firm will earn from selling the extra cars. The costs will include the extra labour costs, raw material costs, costs of component parts, etc. It will be profitable to

open up the new production line only if the revenues earned exceed the costs entailed: in other words, if it increases profit.

### Marginal costs and benefits

In economics we argue that rational choices involve weighing up **marginal costs** and **marginal benefits**.

TC 2  
p 9

These are the costs and benefits of doing a little bit more or a little bit less of a specific activity. They can be contrasted with the *total* costs and benefits of the activity.

Take a familiar example. What time will you set the alarm clock to go off tomorrow morning? Let us say that you have to leave home at 8.30 a.m. Perhaps you will set the alarm for 7 a.m. That will give you plenty of time to get up and get ready, but it will mean a relatively short night's sleep. Perhaps then you will decide to set it for 7.30 a.m. or even 8 a.m. That will give you a longer night's sleep, but much more of a rush in the morning to get ready.

So how do you make a rational decision about when the alarm should go off? What you have to do is to weigh up the costs and benefits of *additional* sleep. Each extra minute in bed gives you more sleep (the marginal benefit) but gives you more of a rush when you get up (the marginal cost). The decision is therefore based on the costs and benefits of *extra* sleep, not on the *total* costs and benefits of a whole night's sleep.

This same principle applies to rational decisions made by consumers, workers and firms. For example, the car firm we were considering just now will weigh up the marginal costs and benefits of producing cars: in other words, it will compare the costs and revenue of producing *additional* cars. If additional cars add more to the firm's revenue than to its costs, it will be profitable to produce them.

KEY  
IDEA  
3

**Rational decision making** involves weighing up the marginal benefit and marginal cost of any activity. If the marginal benefit exceeds the marginal cost, it is rational to do the activity (or to do more of it). If the marginal cost exceeds the marginal benefit, it is rational not to do it (or to do less of it).

TC  
2

Decision making based on marginal costs and benefits is the second of our threshold concepts, explored on the book's website.

### Definitions

**Marginal costs** The additional costs of doing a little bit more (or 1 *unit* more if a unit can be measured) of an activity.

**Marginal benefits** The additional benefits of doing a little bit more (or 1 *unit* more if a unit can be measured) of an activity.

### Pause for thought

Imagine that, as a student, you are short of money and that you are offered employment working in the student union shop. You can choose the number of hours each week that you work. How would you make a 'rational' decision about the number of hours to work in any given week?

### The social implications of choice

Microeconomics does not just study how choices are made. It also looks at their *consequences*. Under certain conditions the consequences may be an *efficient* use of the nation's resources: the economy is making the most of its scarce resources.

However, a whole series of possible problems can arise from the choices that people make, whether they are made by individuals, by firms or by the government. These problems include such things as inefficiency, waste, inequality and pollution.

Take the cases of inequality and pollution.

- **Inequality.** Even though the current levels of production and consumption might be efficient, they might be regarded as unfair. For the distribution of goods and services among different members of societies to be regarded as equitable it must be considered fair or just. The problem, of course, is that people have different notions of fairness. Equity is therefore described as a value judgement: notions of equity will depend on the values of individuals or society.
- **Pollution.** It might be profitable for a firm to tip toxic waste into a river. But what is profitable for the firm will not necessarily be 'profitable' for society. There may be serious environmental consequences of the firm's actions. The case of pollution illustrates how the effects of people's choices often spill over to other people.

### Macroeconomics

Because things are scarce, societies are concerned that their resources should be used *fully as possible*, and that over time their national output should *grow*. KI 1  
p 5

The achievement of growth and the full use of resources is not easy, however, as demonstrated by the periods of high unemployment and stagnation that have occurred from time to time throughout the world (for example, in the 1930s, the early 1980s, the early 1990s, the late 2000s and 2020–1 during the pandemic lockdowns). Furthermore, attempts by government to stimulate growth and employment can result in inflation and rising imports.

Even when societies do achieve growth, it can be short-lived. Economies are inherently unstable and