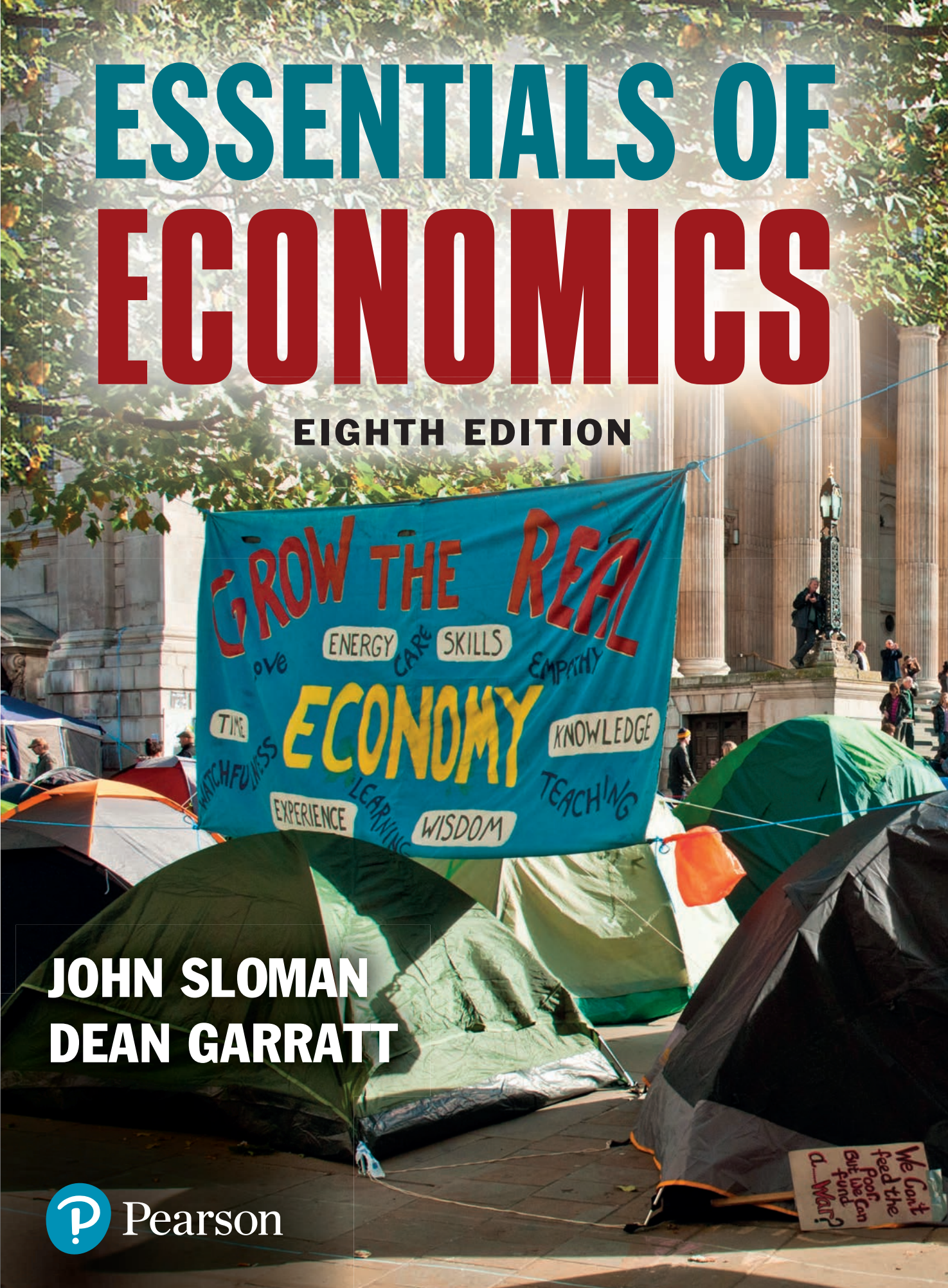
ESSENTIALS OF ECONOMICS

EIGHTH EDITION



JOHN SLOMAN
DEAN GARRATT

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ESSENTIALS OF ECONOMICS

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ESSENTIALS OF ECONOMICS

EIGHTH EDITION

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The Economics Network, University of Bristol;
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About the authors

John Sloman is Visiting Fellow at the University of Bristol and Associate of the Economics Network (www.economicsnetwork.ac.uk) a UK-wide organisation, where, until his retirement in 2012, he was Director. The Economics Network is based at the University of Bristol and provides a range of services designed to promote and share good practice in learning and teaching economics. The Network is supported by grants from the 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 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) and Why Study Economics? (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.

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

Dean runs sessions on HM Treasury's Graduate Development Programme (GDP). These sessions cover 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

Detailed contents

Part C MACROECONOMICS

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 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. 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; 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 banking crisis of the late 2000s and the subsequent effect on economies and the financial well-being of people, businesses and governments illustrate starkly how individual choices can have not only national but global effects.

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, including reference to all defined terms. This enables you to look up a definition 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. New to this edition, 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 eighth edition of *Essentials of Economics* is an abridged version of *Economics,* 10th 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,* 10th 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 as also highly suitable for courses, such as HND, where the economic environment component is part of a larger module.

Extensive revision

To bring economics alive and show how the subject relates to real-world issues, the eighth 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. In particular, this has meant further extensive updating of the macroeconomic chapters. However, the exciting debates around the discipline and the teaching of economics have meant a reworking of the microeconomic chapters too. 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 we have enhanced further our discussion around behavioural economics. In particular, we have expanded our treatment of consumer demand in a new chapter. This has allowed us to explore in more detail

the traditional treatment of the 'rational consumer' alongside insights from behavioural economics.
- We have restructured the opening two macroeconomic chapters to enhance our treatment of the business cycle and of long-run economic growth. We hope this new simplified structure will help students to make a clear distinction between the short and long run in macroeconomics and between demand-side and supply-side changes.
- We have extended the analysis throughout the text on the issues of globalisation and financialisation.
- The text provides extensive coverage of the recent developments in money and banking and their impact on the economy.
- 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 Brexit vote and of various economic policies pursued by the Trump administration.
- 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 on the student companion website.

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 included on the enclosed access card. If you've purchased this text on its own, then you can purchase access online at http://www.pearson.com/mylab/economics.

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 odd-numbered, 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 to use MyLab Economics, which is a complete virtual learning environment for your course or embedded into Blackboard, WebCT or Moodle. 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.
- 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.

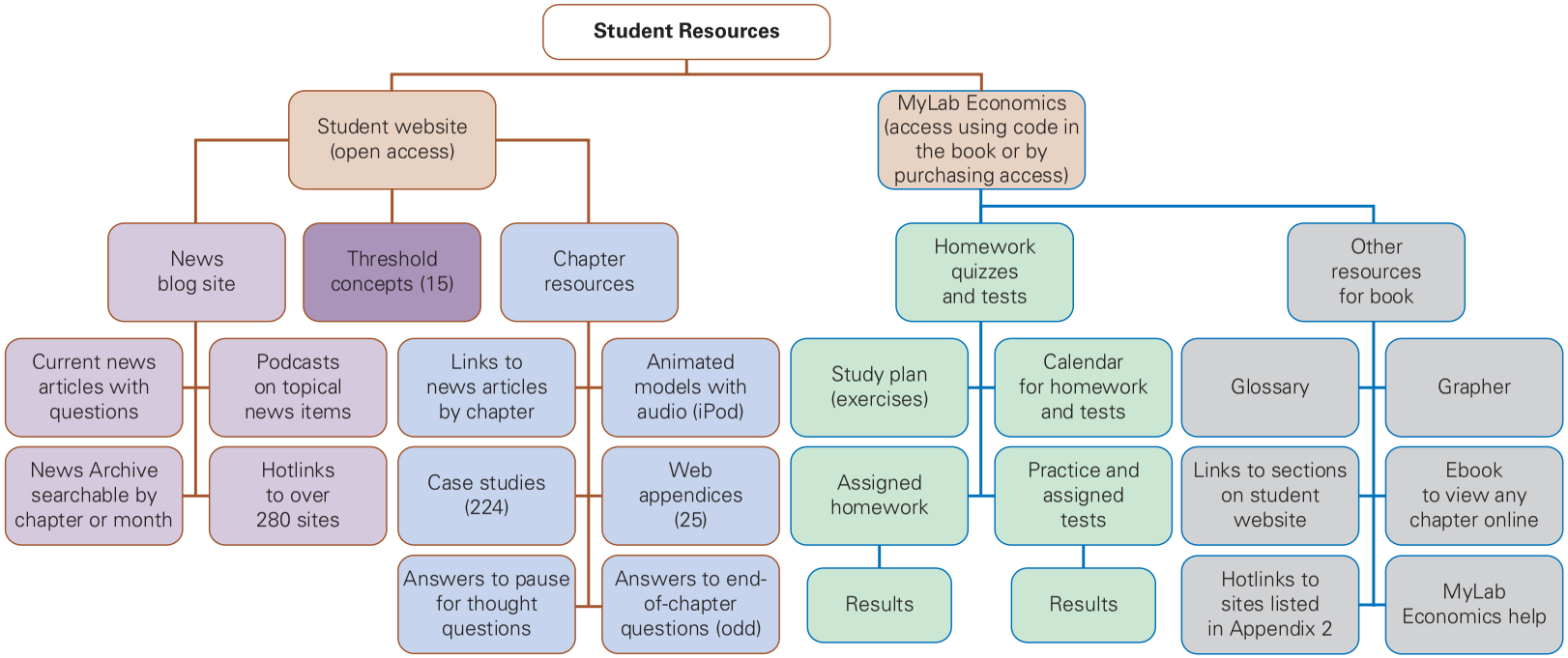
Contact your local Pearson representative for more details and support.

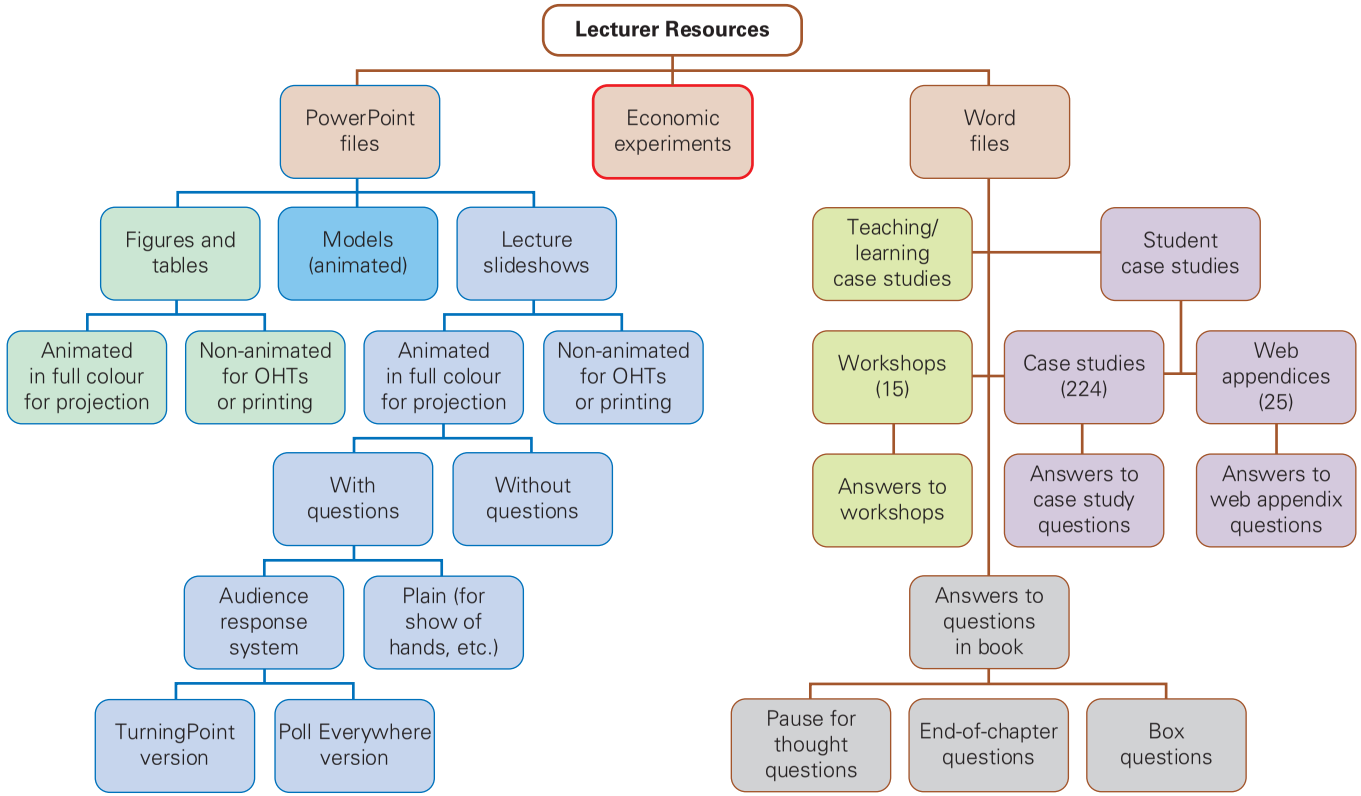
Additional resources for lecturers and tutors

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. These have been thoroughly revised for the eighth 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 on the student companion 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.


Student Resources
Student website (open access)
MyLab Economics (access using code in the book or by purchasing access)
News blog site
Threshold concepts (15)
Chapter resources
Homework quizzes and tests
Other resources for book
Current news articles with questions
Podcasts on topical news items
Links to news articles by chapter
Animated models with audio (iPod)
Study plan (exercises)
Calendar for homework and tests
Glossary
Grapher
News Archive searchable by chapter or month
Hotlinks to over 280 sites
Case studies (224)
Web appendices (25)
Assigned homework
Practice and assigned tests
Links to sections on student website
Ebook to view any chapter online
Answers to pause for thought questions
Answers to end-of-chapter questions (odd)
Results
Results
Hotlinks to sites listed in Appendix 2
MyLab Economics help


Lecturer Resources
PowerPoint files
Economic experiments
Word files
Figures and tables
Models (animated)
Lecture slideshows
Teaching/ learning case studies
Student case studies
Animated in full colour for projection
Non-animated for OHTs or printing
Animated in full colour for projection
Non-animated for OHTs or printing
Workshops (15)
Case studies (224)
Web appendices (25)
With questions
Without questions
Answers to workshops
Answers to case study questions
Answers to web appendix questions
Audience response system
Plain (for show of hands, etc.)
Answers to questions in book
TurningPoint version
Poll Everywhere version
Pause for thought questions
End-of-chapter questions
Box questions

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 Natalia Jaszczuk and Carole Drummond 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.

Part A

Introduction

Chapter 1

Economic issues

You may never have studied economics before, and yet traditional and social media are full of stories relating to the economy and to particular economic issues. Consequently, we are continually being made aware of local, national and international economic issues: whether it be price increases (or sometimes decreases), new products on the market, the effects of globalisation, interest rate changes, fluctuations in exchange rates, unemployment, economic recessions, the stability of the banking system or the state of the government's finances.

An important reason for the interest in economics is that as individuals we are continually faced with economic problems and decisions of our own. What should I buy in the supermarket? Should I save up for a summer holiday, or spend more on day-to-day living? Should I go to university, or should I try to find a job now?

Yet while these and other economic issues are relevant to so much that affects our daily lives, recent events have helped to increase further the interest in economics and the views of economists. These include the financial and economic crisis of the late 2000s; growing concerns about inequality and social injustice; the calls by some for greater protectionism, with populist movements blaming free trade for the decline of many traditional sectors and for increased social deprivation; and the UK's decision following the 2016 referendum to leave the European Union.

Therefore, anybody studying economics is doing so in incredibly interesting, if not turbulent, times. In addition, there continues a lively debate among economists about the discipline: a debate fuelled initially by the financial crisis.

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?

This includes questions around the way economists study economic issues, around the economics curriculum in schools, colleges and universities and around the way in which economists communicate their ideas and arguments, especially to those who are not specialists in economics.

So just what is economics about? In this introduction we will attempt to answer this question and to give you some insights into the subject you will be studying by using this text.

We will also see how the subject is divided up and, in particular, we will distinguish between the two major branches of economics: microeconomics and macroeconomics.

We conclude by considering alternative ways in which economies are run. How would they work if all decisions were taken by the government or, at the other extreme, if they relied totally on the decisions of households and firms? How, in practice, are individual decisions influenced by the government?

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 'Sloman 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 ENGAGING WITH ECONOMICS

Is economics relevant to me?

Economics provides us with important insights into addressing not only some of the most important questions societies face but also much 'smaller' questions: ones that affect all of us. To help illustrate the sorts of questions that economists analyse we begin with a flight of fancy.

An island economy

Assume that we wake up tomorrow charged with running an island economy. Once we got over the initial excitement, we might begin to appreciate it's not going to be all palm trees and days by the pool. An economy has people who need to eat, be housed and will need access to health care. It may have other islands, nearby, who are friendly and want to trade – or who are not friendly and may want to invade.

Being in charge suddenly seems to involve quite a few decisions. We have choices to make. What is this island going to produce so that people can live? Is it going to be self-sufficient, or to 'swap' goods with other countries? How are people going to know what to produce? How will the products be shared out? Will they be allocated to everyone, even those who do not work? What will we do if some people are too old to work and don't have savings or families to support them? What should we do if the island bank runs out of money? How can we be sure that we will have enough resources to support the people next year, as well as this?

Of course, we are never actually going to be parachuted in to be in charge of an island, although some of you reading this text may aspire to go into politics. But the questions we have posed above reflect the real challenges countries face. Important choices have to be made. We will look at the role of government throughout this text: decisions that need to be taken, different approaches to solving economic problems, and what happens when governments need to work together.

Economic puzzles and issues

Economists study choices which, in one way or another, are related to consumption and production – a theme we will develop further in this chapter. Consequently, they consider a wide variety of economic puzzles and issues. The ones we discuss below are just a few that you might find interesting.

A pay rise

Do you work? By which we mean, do you work for money? If so, note down your hourly pay and how many hours you work per week.

Let's assume you are earning £7.50 per hour. Would you like a pay-rise to £15 per hour? You would? And what will you do with the extra money you earn? You might go on holiday, or save more, or perhaps you'll simply go out for an extra evening per week, or buy nicer food when you go shopping.

But before we start talking about that, we need to go back to that note of yours. If your rate of pay doubled, how many hours would you work now? You might work the same number of hours; you might think it's worth working more hours; or, you might

decide that you can work fewer hours and have more time for other things. It's an interesting puzzle for you to think about. You could ask your friends how they might react in this situation. Perhaps you, or some of your friends, aren't working at the moment, but might do so if higher rates of pay were on offer.

We've thought about this from *your* point of view. Who else might be interested in the puzzle? Employers are obviously involved. If they want people to do more work, they might consider whether offering higher hourly rates will achieve that. Imagine how annoying it would be if, instead, people want to work fewer hours, not more. We will see in Chapter 7, that governments might be interested too.

Information and decision making

One thing that economists spend a lot of time talking and thinking about is information. We will see in the rest of this text how important it is when making decisions. And, as you've already seen, most of economics is about looking at decisions. For example, how can you decide which university to apply for? You need to have all sorts of information: what the entry requirements are, what the structure of the course is, how good the lecturers are at teaching and making the subject interesting, how many people get good jobs at the end of the course, how good the social life is, what the accommodation is like. You can probably think of other questions you would want answering.

Of course, having information is going to affect your decision making; that's the whole point. So, let's imagine you are choosing whether or not to see a film that has just been released. You can get information about the plot, the actors, the special effects, the rating, etc. You can also read opinions of critics and reviewers on the quality of the film. Hopefully all this information will help you decide whether to spend money and time going to see it. Similarly, you can get information about many of the other goods and services you might want to buy, by talking to friends or family, researching on the Internet or browsing in shops.

What about a bigger piece of information? Suppose someone could tell you exactly how long you will live? Would that be a useful piece of information? How would it change your decisions every day? Would you behave differently right away? Does your answer depend on who gives the information? You might be more inclined to believe a doctor or scientist than an astrologer!

In practice, no one is going to be able to tell you your exact life expectancy (to the day). Accidents can happen and medicine moves on. So the best you could currently expect is an informed prediction based, usually, on statistical probability. But such informed predictions about life expectancy are crucial for insurance companies deciding on premiums.

Information is all around us – in fact, we are said to live in the information age. So the problem is often not one of a lack of information, but one of too much and what information is reliable. We hope, by reading this text, you will be better able to assess information and its usefulness for making economic decisions.

We need to save more. We need to spend more.

Puzzles like the two above are concerned with individual decisions and these are probably the easiest type to identify. But there are some which apply to a whole economy or country. The second half of this text, Chapters 9 onwards, looks at 'whole economy' economics, so let's identify an issue in that area.

How much do you save? The answer will depend on your income, your spending habits and probably on things that are hard to pin down, such as your current level of confidence or how 'good' you are at saving.

There are all sorts of reasons why saving is a 'good thing'. We are living longer and, unless we save more, we may not have enough to be comfortable in our old age. When we save, we have a buffer against emergencies. When we save, we receive interest, which gives us additional income.

Now let's think about saving on a national basis. You have probably heard politicians say that the country needs to save for the future, especially if we all are going to live longer. The nation, they argue, needs to reduce its debts so that we can reduce the interest we have to pay, leaving more left over for the things people want, such as a better health service and better education. And if emergencies arise (the financial crisis of the late 2000s is a really good example) the country will be in a better position if banks have plenty of money. It's also true that saving by individuals provides a source of funds for businesses that want and need to borrow for investment.

You might be wondering why this is a puzzle, since it seems pretty straightforward.

So now let's imagine the opposite situation where, instead of saving only a little bit, you saved a great deal of your income, much more than you do now. Imagine that you only bought the barest of necessities, grew your own food, wore the same clothes for years and didn't buy any new technology, or even have an occasional night out. You might have a pretty miserable life.

Now scale this up to the whole economy again. If no one is spending much, what will happen? Businesses will very quickly be in trouble. The banks will be full of our savings, but no one will be borrowing. Spending will therefore be low and firms

won't be able to make profits. We will have lots of security in the form of future spending, but an economy that is in recession and very soon could be in crisis.

Of course this is an exaggerated example. But you can see the puzzle: saving is good, but so is spending. What should we do? What should the government encourage us to do?

1.2 THE ECONOMIC PROBLEM

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.

KI 1 p 5

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.

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**

Definitions

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 p 5

Because resources are scarce, *choices* have to be made. 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 *micro*economic 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 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

Definition

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 & 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.

TC 1 p 7

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?*

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.

TC 1 p 7

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 adds to 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 TC 2

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).**

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 as *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 and the late 2000s). 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