

ELEVENTH EDITION

ECONOMICS

JOHN SLOMAN
DEAN GARRATT
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 Pearson

ECONOMICS



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ECONOMICS

Eleventh edition

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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 Economics, 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.

John is the co-author with Dean Garratt of *Essentials of Economics* (Pearson Education, 8th edition 2019); with Dean Garratt, Elizabeth Jones of the University of Warwick



Dr Dean Garratt is a Senior Teaching Fellow at Aston Business School having previously been a Principal Lecturer at Nottingham Business School. Dean teaches economics at a variety of levels, including modules in macroeconomics and economic

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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.

and Jon Guest of *Economics for Business* (Pearson Education, 8th edition 2019); and with Elizabeth Jones of *Essential Economics for Business* (Pearson Education, 6th edition 2020). 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 the 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?* (<http://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.

Earlier in his career Dean worked as an economic assistant at both HM Treasury and at the Council of Mortgage Lenders (now known as UK Finance). 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 has worked as an academic assessor for the Government Economic Service (GES) helping to assess candidates



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Jon has taught on a range of courses including Principles of Microeconomics, Intermediate Microeconomics, Economic Issues and Behavioural Economics. He has also taught economics on various professional courses for the Government Economic Service and HM Treasury.

Jon has worked on developing teaching methods that promote a more active learning environment in the classroom. In particular, he has published journal articles and carried out a number of funded research projects on the impact of games and experiments on student learning. These include an online version of the TV show *Deal or No Deal* and games that involve students acting as buyers and sellers in the classroom. He has recently included a series of short videos on economics topics and implemented elements of the flipped classroom into his teaching. Jon is also interested in innovative ways of providing students with feedback on their work.

at Economic Assessment Centres (EACs). He has also run sessions on HM Treasury's Graduate Development Programme (GDP) on principles in policy making 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.

Through his work as an Associate of the Economics Network, Jon has run sessions on innovative pedagogic practices at a number of universities and major national events. He is also an academic assessor for the Economics Assessment Centres run by the Government Economic Service. This involves interviewing candidates and evaluating their ability to apply economic reasoning to a range of policy issues. He has also acted as an External Examiner for a number of UK universities.

The quality of his teaching was formally recognised when he became the first Government Economic Service Approved Tutor in 2005 and won the student-nominated award from the Economics Network in the same year. Jon was awarded the prestigious National Teaching Fellowship by the Higher Education Academy in 2011.

Jon is a regular contributor and editor of the *Economic Review* and is a co-author of the 8th edition of the textbook *Economics for Business*. He has published chapters in books on the economics of sport and regularly writes cases for the 'Sloman in the News' website. He has also published research on the self-evaluation skills of undergraduate students.

Outside of work Jon is a keen runner and has completed the London Marathon. However, he now has to accept that he is slower than both of his teenage sons – Dan and Tom. He is also a long-suffering supporter of Portsmouth Football Club.

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Supporting Resources

Visit go.pearson.com/uk/sloman to find valuable online resources:

MyLab Economics

For students

- Study guide with exercises, quizzes and tests, arranged chapter by chapter
- Multiple-choice questions to test your learning
- Audio animations to illustrate key economic concepts and models
- Link to Sloman Economics News site
- Online textbook chapters
- Link to additional resources on the companion website (listed below)

For lecturers

- MyLab's gradebook, which automatically tracks student performance and progress
- Extensive test bank, allowing you to generate your own tests, assessments and homework assignment
- Access to a wealth of lecturer resources on the companion website (listed below)

Companion website

For students

- Answers to all in-chapter questions in the book
- Over 220 case studies with questions and activities, organised by chapter
- Over 130 audio animations explaining all the key models used in the book
- Regularly updated and searchable blog, featuring current news items with discussion of the issue, questions and links to articles and data
- Hotlinks to 284 sites relevant to the study of economics
- Maths case studies illustrating the key mathematical concepts used in the book

For lecturers

- Comprehensive range of PowerPoint slides, including figures and tables from the book, as well as animated slide shows for use in lectures, organised chapter by chapter. There are various versions of these slide shows, some including questions that can be used with 'clickers', phones or other smart devices
- Animated key models in PowerPoint
- Teaching and learning case studies, discussing ways of increasing student engagement and improving student learning
- 20 workshops in Word for use in large or small classes, plus a guide on ways of using the workshops. These can easily be customised to suit lecturers' needs. Answers are given to all the workshop questions
- Over 220 case studies with questions and student activities (as on student website). Answers to all questions in case studies
- Answers to all questions in the book (end-of-chapter questions, box questions and in-text questions) and to questions in maths case studies

Also: The companion website provides the following features:

- Search tool to help locate specific items of content
- Online help and support to assist with website usage and troubleshooting

For more information please contact your local Pearson Education sales representative or visit go.pearson.com/uk/sloman.

Preface

A NOTE TO THE STUDENT FROM THE AUTHORS

Economics affects all our lives. This has been dramatically brought home to us by the coronavirus pandemic. Governments imposed lockdowns and other restrictions. Many people lost their jobs or were put on furlough. Firms went out of business. Working lives changed and many switched to working online. Governments spent vast amounts of money, thereby increasing their debts. Later they tried to find ways of clawing down these debts, whether by raising taxes or cutting government expenditure.

We are all faced with economic questions and decisions. As consumers we try to make the best of our limited incomes. As workers – or future workers – we take our place in the job market. As citizens of a country our lives are affected by the decisions of our government and other policy makers: decisions over taxes, decisions over spending on health and education, decisions on interest rates, decisions that affect unemployment, inflation and growth. As dwellers on the planet Earth we are affected by the economic decisions of each other: the air we breathe, the water we drink and the environment we leave to our children are all affected by the economic decisions taken by the human race.

Economics thus deals with some of the most challenging issues we face. It is this that still excites us about economics after many years of teaching the subject. We hope that some of this excitement rubs off on you.

The first ten editions of *Economics* have been widely used in Britain and throughout the world. Like them, this eleventh edition is suitable for all students of economics at first-year degree level, A level or on various professional courses where a broad grounding in both principles and applications is required. It is structured to be easily understood by those of you who are new to the subject, with various sections and boxes that can be left out on first reading or on shorter courses; yet it also has sufficient depth to challenge those of you who have studied the subject before, with starred sections (appearing on a grey background) and starred case studies that will provide much that is new. There are also optional short mathematical sections for those of you studying a more quantitatively focused course.

The book gives a self-contained introduction to the world of economics and is thus ideal for those who will not study the subject beyond introductory level. But by carefully laying a comprehensive foundation and by the inclusion of certain materials in starred sections that bridge the gap between introductory and second-level economics, it provides the necessary coverage for those of you going on to specialise in economics.

The book looks at the world in the 2020s. Despite huge advances in technology and despite the comfortable lives led by many people in the industrialised world, we still suffer from unemployment, poverty and inequality, and in many countries (the UK included) the gap between rich and poor has grown much wider; our environment is polluted and the world is facing a climate emergency; our economy still goes through periodic recessions; conflict and disagreement often dominate over peace and harmony.

In today's world there are many challenges that face us, including:

- A growing interdependence of the economies of the world, with a seemingly inexorable process of 'globalisation', which links us all through a web of telecommunications and international trade into a world of Amazon, Facebook, Coca-Cola, Nike trainers, Google, Netflix and the English Premier League.
- Coping with the effects of the coronavirus (COVID-19) pandemic and its aftermath.
- New challenges for the UK now it has left the EU.
- A rise in populism as the lower paid and unemployed see their incomes stagnating while the wealthy get richer. This has led to many people calling for policies to protect their jobs and communities from cheap imports.
- Large-scale migration of people across and within continents placing pressures on resources, but also creating new economic opportunities.
- Evidence that economic problems spread like a contagion around the world, tying domestic economic growth to global events.
- The effects of financialisation, by which we mean the increasing economic importance of the financial sector,

and its impact on the financial health of people, businesses and governments as well as its potential to destabilise economies.

- The continuing hangover from the turmoil on international financial markets that culminated in the banking crisis of 2007–8, with many countries today still trying to tackle high levels of public and private debt, made worse by government spending to mitigate the effects of the COVID-19 pandemic.
- Rapid economic growth of some developing countries, such as India and China, which are increasingly influential in the global economy.
- A move away from the ideological simplicity of a ‘free-market’ solution to all economic problems.
- An EU struggling to reform its institutions and processes and to stimulate economic growth.
- An ever-deepening crisis for many of the poorest developing countries, often ravaged by disease, conflict and famines, and seemingly stuck in a cycle of poverty.
- A world struggling to tackle climate change and cope with its economic, social and ecological consequences.

Economists are called on to offer solutions to these and many other problems. We shall be seeing what solutions economists can offer as the book progresses.

But despite our changing environment, there are certain economic fundamentals that do not change. Although there are disagreements among economists – and there are plenty – there is a wide measure of agreement on how to analyse these fundamentals.

Critical thinking and employability

When you are approaching graduation and start applying for jobs, you will need to demonstrate to potential employers that you have the range of skills necessary for analysing and solving problems and for communicating ideas and solutions to colleagues and clients. This requires the ability to think critically and to apply core concepts and ideas to new situations. Universities recognise this and ‘employability’ is a key objective of courses nowadays.

Employability is a core focus of this book. Critical thinking is developed through questions positioned throughout the text to encourage you to reflect on what you have just read and thereby improve and deepen your learning. Answers to these questions are freely available on the website to enable you to check your progress. Critical thinking is also developed through the use of Boxes of case studies and applications occurring several times in each chapter. These apply the economics you’re learning to a variety of real-world issues and data. There are many additional case studies with questions on the student website.

If your lecturer recommends the use of MyEconLab to accompany the text, you will find there large banks of additional questions and the ability to monitor your progress.

These questions enable you to reflect on your learning and on where additional work is required.

Critical thinking is also encouraged through the use of 15 ‘threshold concepts’. These are core ideas and concepts that recur throughout economics. Understanding and being able to apply these core economic concepts helps you to ‘think like an economist’ and to relate the different parts of the subject to each other. An icon appears in the margin wherever the concept recurs so that you can easily recognise its use in a new context.

In addition there are 40 ‘key ideas’ that encourage you to relate new material to a toolkit of ideas. Again, there are icons in the margin to help you identify the relevant idea.

The whole way through the book, you are encouraged to reflect on your learning, to apply it to the real world and to use real-world data to make sense of economic issues and problems.

In addition to the book, there is a news blog with news items added several times per month. Each blog post discusses economic issues in the news and relates these news items to key economic concepts and theories. Links are given to a range of articles, videos, podcasts, data and reports and each blog post finishes with a set of discussion questions. You can access the blog from the book’s website at go.pearson.com/uk/sloman. Archived articles go back many months. You can also search the news articles by key word, chapter of this book or by month. Again, the use of real-world news topics, questions and data helps you apply the theories and ideas you will learn in this book and develop these all-important critical thinking skills that are so central to employability.

In terms of employability, employees who can think flexibly and apply concepts and theories in new and perhaps strange situations to analyse and solve problems will be much more valuable to their employer. This book helps you to develop these skills. What is more, the use of data in the book and in the blogs and other web resources, and the hyperlinks in the e-text to data sources and relevant articles, will allow you to gain experience in using evidence to support and assess arguments.

Employers value these problem-solving skills. Indeed, they like to employ graduates with an economics degree, or some element of economics in their degree, because of the skills you will develop. And it’s not just for jobs as economists, but for a large number of professions where studying economics is seen to equip you with a valuable set of skills that are transferable to a range of non-economics situations.

We hope that this book will give you an enjoyable introduction to the economist’s world and that it will equip you with the tools to understand and criticise the economic policies that others pursue.

Good luck and have fun.

John, Dean and Jon

TO LECTURERS AND TUTORS

In the light of the financial crisis and the struggle of many countries to tackle its aftermath, there has been much soul-searching amongst economists about the appropriateness of the models we use and what should be taught to our students. These concerns were debated at an international conference at the Bank of England in 2012. One outcome of this was the publication of a book, *What's the Use of Economics?*¹ This considers how undergraduate courses could be reformed to meet the needs of employers and how economic models and syllabuses could be revised to reflect the real world and to provide a foundation for devising effective economic policy. A second, follow-up conference, *Revisiting the State of Economics Education*, took place at the Bank of England in 2015 and the debate continues.²

We have attempted to address these concerns in the past three editions of this book and have gone further still in this new edition. In particular, we have incorporated recent developments in macroeconomics, including stressing the importance of balance sheets, credit cycles, financial instability and systemic risk, the increased use of the *DAD/DAS* framework and the integration of the expectations-augmented Phillips curve and the *IS/MP* model. But these have been treated at a level wholly suitable for first-year students.

We have also given further weight to behavioural economics in analysing the behaviour of both consumers, firms and workers. In particular, there is more detailed discussion of loss aversion and the endowment effect, present bias and self-control issues, reference points and biases when making decisions under conditions of uncertainty. Indeed, Chapter 5 on behavioural economics has been completely reworked for this edition. More weight is given to the importance of institutional structures and culture and we have also strengthened microeconomic analysis in several places, such as game theory and price discrimination.

We have also thoroughly revised the applied chapters and sections to reflect changes in policies. For example, we have included the implications of the Brexit vote and the UK's subsequent exit from the EU and also of the Trump and Biden administrations' policies in several parts of the book.

In addition, we show how many of the theories developed to explain the problems that existed at the time and how they have evolved to reflect today's issues. We have thus continued to emphasise the link between the history of economic thought and economic history.

This new edition also retains many of the popular features of the previous edition:

- A style that is direct and to the point, with the aim all the time to provide maximum clarity. There are numerous examples to aid comprehension.
- All economic terms highlighted in the text where they first appear and defined at the foot of that page. Each term is also highlighted in the index, so that the student can simply look up a given definition as required. By defining them on the page where they appear, the student can also see the terms used in context in the text.
- Key ideas highlighted and explained when they first appear. There are 40 of these ideas, which are fundamental to the study of economics. Students can see them recurring throughout the book, and an icon appears in the margin to refer back to the page where the idea first appears.
- Fifteen 'threshold concepts'. Understanding and being able to relate and apply these core economic concepts helps students to 'think like an economist' and to relate the different parts of the subject to each other. Again, an icon appears in the margin wherever the concept recurs.
- A wealth of applied material in boxes (172 in all), making learning more interesting for students and, by relating economics to the real world, bringing the subject alive. The boxes allow the book to be comprehensive without the text becoming daunting and allow more advanced material to be introduced where appropriate. Many of the boxes can be used as class exercises and virtually all have questions at the end.
- Extensive use of data, with links in the online version to general data sources and individual datasets, with many opportunities for students to explore data to help them reflect on policy choices.
- Full-page chapter introductions. These set the scene for the chapter by introducing the students to the topics covered and relating them to the everyday world. The introductions also include a 'chapter map'. This provides a detailed contents listing, helping students to see how the chapter is structured and how the various topics relate to each other.
- A consistent use of colour in graphs and diagrams, with explanations in panels where appropriate. These features make them easier to comprehend and more appealing.
- Starred sections and boxes for more advanced material (appearing with a grey background). These can be omitted without interrupting the flow of the argument. This allows the book to be used by students with different abilities and experience, and on courses of different levels of difficulty.
- 'Looking at the maths' sections. These short sections express a topic mathematically. Some use calculus; some

¹ Diane Coyle (ed.), *What's the Use of Economics?* London Publishing Partnership (2012).

² Peter Day, 'Are economics degrees fit for purpose?', *BBC News* (5 February 2016).

do not. They are designed to be used on more quantitatively focused courses and go further than other textbooks at introductory level in meeting the needs of students on such courses. Most refer students to worked examples in Maths Cases on the student website. Some of these use simultaneous equations; some use simple unconstrained optimisation techniques; others use constrained optimisation, using both substitution and Lagrange multipliers. The 'Looking at the maths' sections are short and can be omitted by students on non-mathematical courses without any loss of continuity.

- An open learning approach, with questions incorporated into the text so as to test and reinforce students' understanding as they progress. This makes learning a much more active process.
- End-of-chapter questions. These can be set as work for students to do in class or at home. Alternatively, students can simply use them to check their comprehension at the end of a topic.
- Summaries given at the end of each section, thus providing a point for reflection and checking on comprehension at reasonably frequent intervals.
- An even micro/macro split.
- The book is divided into seven parts. This makes the structure transparent and makes it easier for the student to navigate.

Despite retaining these popular features, there have been many changes to this eleventh edition.

Extensive revision

Economics (11th edition) uses a lot of applied material, both to illustrate theory and policy, and to bring the subject alive for students by relating it to contemporary issues. This has meant that, as with the previous edition, much of the book has had to be rewritten to reflect contemporary issues. Specifically this means that:

- Many new boxes have been included on topical and controversial issues, including the market for vaccines, the economics of two-sided markets, social media influencers, cash versus vouchers, evidence of Giffen behaviour in China, minimum unit pricing for alcohol, the secondary ticket market and takeovers, immigration and the labour market, minimum wage legislation, the roll out of Universal Credit in the UK, worker motivation and behavioural economics, the effects of consumer behaviour on firms' pricing, the dominance of Google and recent competition law cases, supermarket buying power, personalised pricing in digital markets, an analysis of the Dasgupta report on the economics of biodiversity, cap-and-trade and carbon emission taxes, measuring wellbeing, developments of HDI adjusted for inequality

and planetary pressures, COVID-19 and public-sector spending, measuring fiscal impulses, labour productivity and measuring inflation bias. Existing boxes have been extensively revised.

- There are many new examples given in the text.
- Theoretical coverage has been strengthened at various points in the book to reflect developments in the subject. This includes:
 - further emphasis on the role of borrowing, debt, financial markets, balance sheets and risk at the government, corporate and household levels with reference in many places to the impact of the COVID-19 pandemic;
 - inclusion of the role of various amplifiers in macroeconomic models;
 - the further development of macroeconomic models, including the interaction between the *IS/MP* model, the *DAD/DAS* model and the expectations-augmented Phillips curve models;
 - reworking the Solow model in terms of output per worker;
 - increased emphasis on behavioural economics at the level of both the consumer and the firm, including extending the analysis of bounded rationality, framing, present bias, loss aversion, prospect theory, preferences for fairness and biases when making decisions in an uncertain environment;
 - a deepening of the exposition of game theory at various points in the book and more detailed analysis of price discrimination, externalities and public goods.
- The text provides extensive coverage of the recent developments in money and banking and their impact on the economy.
- All policy sections reflect the changes that have taken place since the last edition, including changes to the regulation of businesses and the protection of the environment, and the responses to the financial crisis and COVID-19 pandemic, which had implications for the scale and scope of interventions and the financial well-being of governments. The text enables students to see how they can apply fundamental economic concepts to gain a better understanding of these important issues. Hence, students will be in a better position to analyse the actual responses of policy makers as well as the alternatives that could perhaps have been pursued.
- For this eleventh edition, all tables and charts have been updated, as have factual references in the text.
- Most importantly, every single section and every single sentence of the book has been carefully considered, and if necessary redrafted, to ensure both maximum clarity and contemporary relevance. The result, we hope, is a text that your students will find exciting and relevant to today's world.

SUGGESTIONS FOR SHORTER OR LESS ADVANCED COURSES

The book is designed to be used on a number of different types of course. Because of its comprehensive nature, the inclusion of a lot of optional material and the self-contained nature of many of the chapters and sections, it can be used very flexibly.

It is suitable for one-year principles courses at first-year degree level, two-year economics courses on non-economics degrees, A level, HND and professional courses. It is also highly suitable for single-semester courses, either with a micro or a macro focus, or giving a broad outline of the subject.

The following suggests chapters which are appropriate to different types of course and gives some guidance on chapters that can be omitted while retaining continuity:

Alternative 1: Less advanced but comprehensive courses

Omit all starred sections, starred sub-sections and starred boxes.

Example of a comprehensive course, omitting some of these chapters: Chapters 1–8, 10, 12–14, 15, 17–22, 24–25.

Alternative 2: Economics for Business courses

Chapters 1–3, 5–9, 12–15, 18, 21, 23–6.

Example of an Economics for Business course, omitting some of these chapters: Chapters 1–3, 6–10, 14, 15, 18, 22, 24–25.

Alternative 3: Introduction to microeconomics

Chapters 1–14, 24. The level of difficulty can be varied by including or omitting starred sections and boxes from these chapters.

Example of an Introduction to Microeconomics course, omitting some of these chapters: Chapters 1–4, 6–8, 10, 12, 24.

Alternative 4: Introduction to macroeconomics

Chapters 1, 2, 15–26. The level of difficulty can be varied by including or omitting starred sections and boxes from these chapters.

Example of an Introduction to Macroeconomics course, omitting some of these chapters: Chapters 1, 2, (if microeconomics has not previously been covered) 15, 17–23, 25.

Alternative 5: Outline courses

Chapters 1, 2, 6, 7, 15, 17, 18, 22, 24, 25 (section 25.1). Omit boxes at will.

Alternative 6: Courses with a theory bias

Chapters 1, 2, 4–10, 12, 15–21, 23, 24, 25. The level of difficulty can be varied by including or omitting starred sections and boxes from these chapters.

Alternative 7: Courses with a policy bias (and only basic theory)

Chapters 1–3, 6, 7, 11–15, (17), 22–6.

COMPANION RESOURCES

MyEconLab (for students)

MyEconLab is a comprehensive set of online resources developed for the eleventh edition of *Economics*. The book is available with an access card, but if your book did not come with one, you can purchase access to the resources online at www.MyEconLab.com.

MyEconLab provides a variety of tools to enable students to assess 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 the most efficient way.

Student website

In addition to the materials on MyEconLab, 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 can be watched online or downloaded to a computer, MP4 player, smart phone, etc.;
- Links to the Sloman Economics news blog with news items added several times each month by a small team of authors;
- 224 case studies with questions for self-study and a range of activities for individual students or groups. These case studies are ordered chapter by chapter and referred to in the text;

- Maths cases with exercises, related to the 'Looking at the Maths' sections in the book;
- Updated list of 284 hotlinks to sites of use for economics;
- Answers to all in-chapter questions.

Note that the companion website, news blog and hotlinks can also be accessed directly from go.pearson.com/uk/sloman.

See the Student Resources chart on page xxi.

MyEconLab (for lecturers)

You can register online at www.myeconlab.com to use MyEconLab, 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:

- MyEconLab'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 MyEconLab to build your own tests, quizzes and homework assignments from the question base provided to set for your students' assessment.
- Questions are generated algorithmically so that they use different values each time they are used.
- You can create your own exercises by using the econ exercise builder.

Additional resources for lecturers

There are also many additional resources for lecturers and tutors that can be downloaded from the lecturer section of MyEconLab or from the separate lecturer website. These have been thoroughly revised for this updated eleventh edition. These include:

- PowerPoint® slideshows 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 these slideshows:
 - All figures from the book and most of the tables. Each figure is built up in a logical sequence, thereby allowing them to be shown in lectures in an animated form. They are also available in a simple version suitable for printing for handouts or display on an OHP or visualiser.
 - A range of models. There are 42 files, each containing one of the key models from the book, developed in an animated sequence of between 20 and 80 screens.
 - Customisable lecture slideshows. There is one for each chapter of the book. Each one can be easily

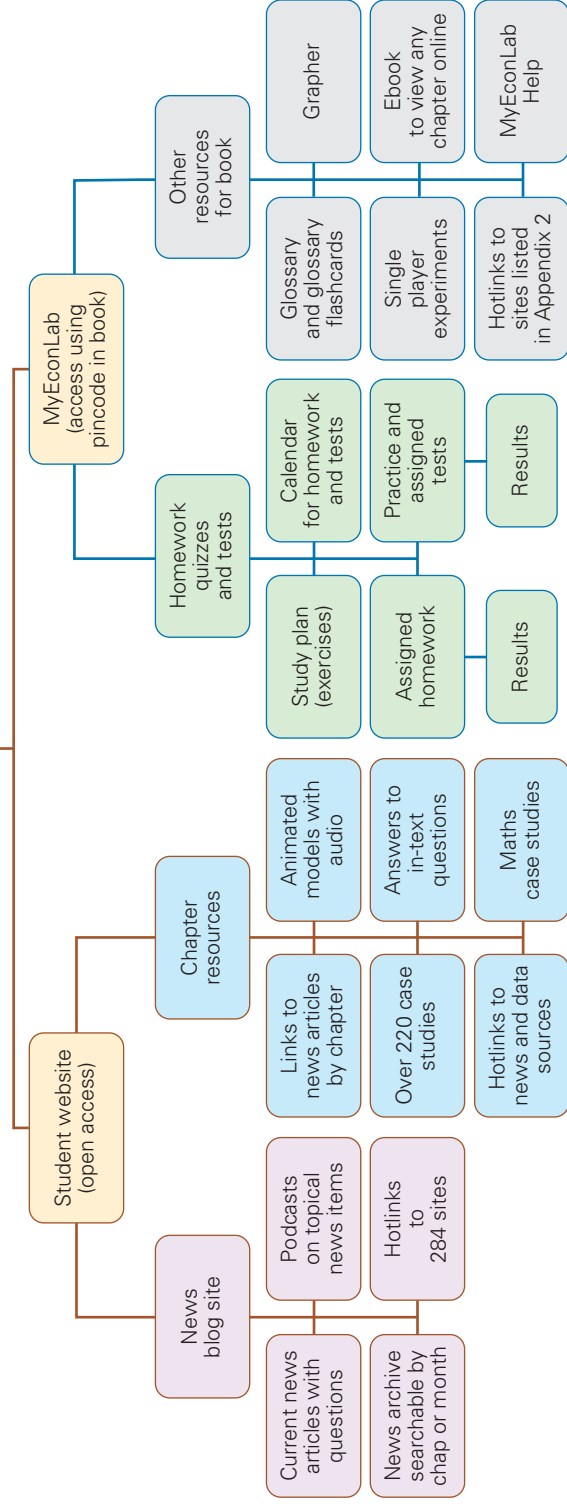
edited, with points added, deleted or moved, so as to suit particular lectures. A consistent use of colour is made to show how the points tie together. It is not intended that all the material is covered in a single lecture; you can break at any point. It's just convenient to organise them by chapter. They come in various versions:

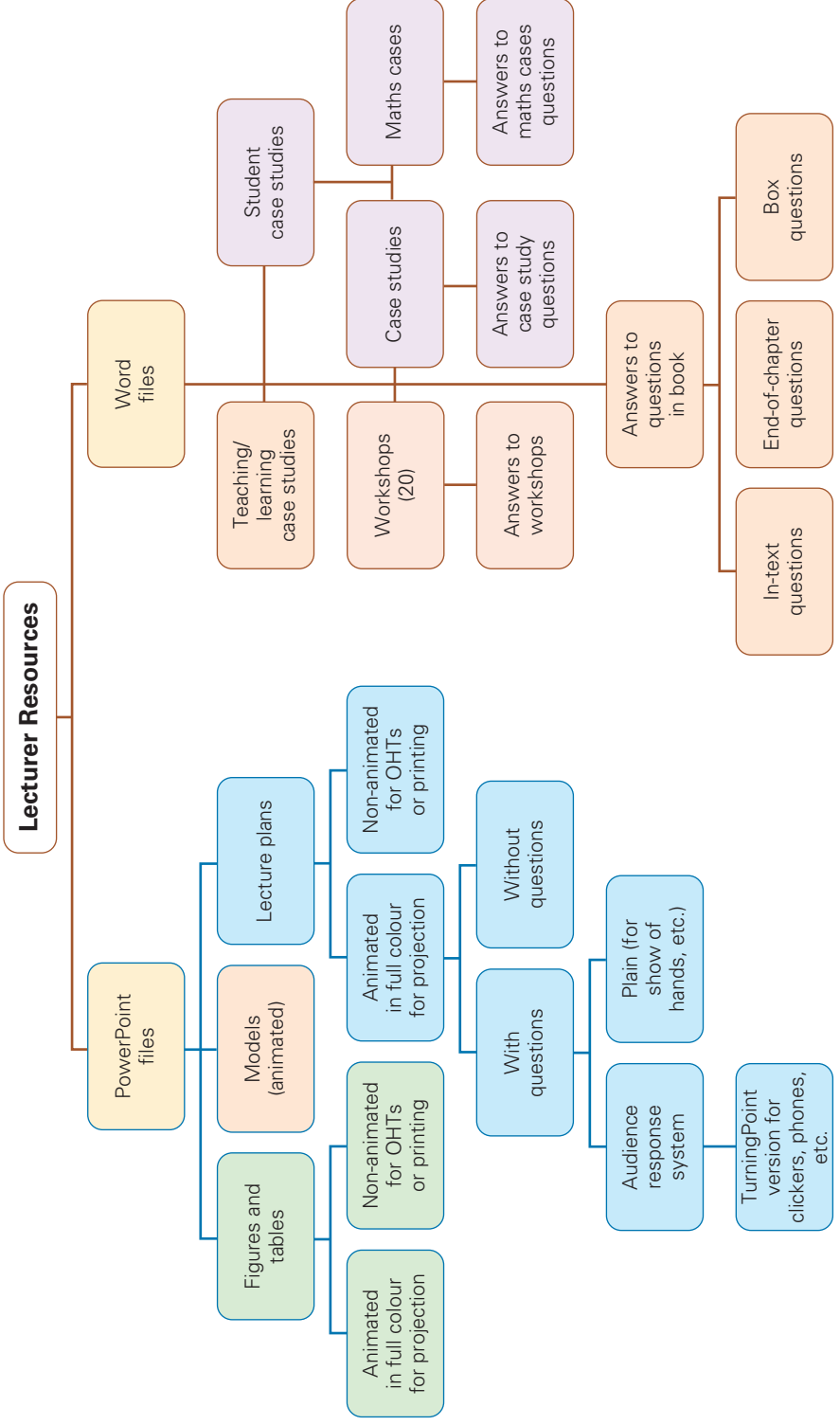
- Lecture slideshows with integrated diagrams. These include animated diagrams, charts and tables at the appropriate points.
- Lecture slideshows with integrated diagrams and questions. These include multiple-choice questions to allow lectures to become more interactive and can be used with or without an audience response system (ARS). An ARS version is available for TurningPoint® and is ready to use with the appropriate 'clickers' or on smartphones, tablets or laptops through the TurningPoint app (previously called ResponseWare®). The 'Show of Hands' version can easily be adapted for use with other ARS software.
- Lecture plans without the diagrams. These allow you to construct your own diagrams on the blackboard, whiteboard or visualiser.

- Answers to all questions in *Economics* (11th edition): i.e. questions embedded in the text, box questions and end-of-chapter questions. These can be edited as desired and distributed to students.
- Answers to the case studies and maths cases found on the student website.
- Case studies. These 224 cases, also available to students on the student website, can be reproduced and used for classroom exercises or for student assignments. Most cases have questions, to which answers are also provided (not available to students). Each case also has an activity for individual students or for groups, and most would be suitable for seminars.
- Maths cases. These 33 maths cases with exercises, also available to students on the student website, relate to the 'Looking at the Maths' sections in the book. Answers to the exercises are also provided (not available to students).
- Workshops. There are 20 of these (10 micro and 10 macro/international). They are in Word® and can be reproduced for use with large groups of students (up to 200). They can also be amended to suit your course. Suggestions for use are given in an accompanying file. Answers to all workshop questions are given in separate Word® files.
- Teaching/learning case studies. These 20 case studies examine various ways to improve student learning of introductory economics. 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





Lecturer Resources

PowerPoint files

Figures and tables

Animated in full colour for projection

Non-animated for OHTs or printing

Models (animated)

Animated in full colour for projection

Non-animated for OHTs or printing

Lecture plans

With questions

Without questions

Audience response system

TurningPoint version for clickers, phones, etc.

Plain (for show of hands, etc.)

Word files

Teaching/learning case studies

Student case studies

Workshops (20)

Answers to workshops

Case studies

Answers to case study questions

Maths cases

Answers to maths cases questions

Answers to questions in book

In-text questions

End-of-chapter questions

Box questions

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Introduction

1 Economics and Economies

2

This opening part of the book introduces you to economics – what it is and why it is a great subject to study. Economics is not a set of facts or theories to be memorised; it is both more interesting and more useful than that. Studying economics enables you to think about the world in a different way; it helps you to make sense of the decisions people make: decisions about what to buy or what job to do; decisions governments make about how much to tax or what to spend those taxes on; decisions businesses make about what to produce, what prices to charge and what wages to pay. This makes economics relevant for everyone, not only those who are going on to further study.

And it is about some of the biggest issues that face society, such as poverty and inequality, health and wellbeing, the environment, biodiversity and sustainability, the relationships between nations and how we trade and how money gets moved around the world, economic recessions and unemployment, and how individuals and governments can help to tackle these issues.

By studying economics, you will gain a ‘toolkit’ of concepts, ideas and theories that will enable you to think about and analyse these issues. You will be able to apply this ‘way of thinking’ to your life both now and in the future. You will be able to think more analytically and to problem-solve more effectively; this helps explain why economics graduates are so highly valued by employers. Studying economics therefore opens up a variety of career opportunities.



1

Chapter

Economics and Economies

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We start by looking at two of the biggest issues of our time – the COVID-19 pandemic 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. But they are not just issues studied by health and climate scientists. 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.

1.1 ECONOMICS AND GLOBAL ISSUES

Economists study very many of the issues we face, whether as individuals, families, firms and employees, local groups, societies, central and local government, and internationally through institutions and meetings of governments. Some of these issues are small everyday ones, such as what to buy in the supermarket or how much to save. Others are global in scale, requiring solutions at a whole range of levels from the international to actions by individuals.

Two of the greatest issues to confront society in recent times have been the coronavirus pandemic and the climate crisis.

As COVID-19 swept across the world in early 2020, it left a trail of deaths and lost livelihoods in its wake. Everyone had to adjust their way of living, faced with lockdowns, working from home, or jobs lost or furloughed. As scientists rushed to develop vaccines and health authorities rushed to distribute them, so governments were faced with the seeming dilemma of how much to prioritise saving lives versus how much to prioritise saving livelihoods through keeping the economy going. Or would prioritising saving lives and locking down allow the economy to bounce back more quickly later on with the virus sooner under control?

The other issue is the climate emergency, with scientific evidence becoming clearer of the devastating effect of global warming. Melting ice caps causing rising sea levels that devastate low-lying lands; a change in long-term rainfall totals, with some areas becoming drier and others wetter, affecting long-term crop yields and livelihoods and forcing people to migrate to survive; more frequent droughts, fires, floods and hurricanes causing death and destruction; a loss of biodiversity as species are wiped out and as humans take more desperate steps to survive, such as cutting down forests and farming more intensively – activities that compound environmental damage.

We examine each of these two issues and see how economists can contribute to understanding them and their consequences and what can be done about them. As we shall see, economists have played a major part and will continue to do so.

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. The impact on developing countries was particularly harsh. According to the World Bank, in 2020 alone the pandemic may have pushed around 100 million people into extreme poverty.¹

Everyone was faced with choices and these affected behaviour. Most of these had an economic dimension. Indeed, economics studies the choices we make as individuals, firms, societies or governments.

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). Some decided to follow lockdowns; others were ready to break or bend the 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 5. For example, early on in the pandemic, many people stock-piled 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 affected firms' profits. Some sectors were particularly hard hit, such as hospitality, leisure and tourism. Many suppliers found that their sales revenues had dried up as they were forced to close down, while others adjusted by trying to sell more online. Firms had to choose whether to give up or carry on.

On the plus side, some of their costs had fallen, such as heating and lighting and staff costs; we call these 'variable costs'. Other costs, however, such as rent, rates and interest charges generally did not fall; we call these 'fixed costs'.

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. Some managed to defer fixed costs, but these would have to be paid later – another difficult choice whether or not to give up.

And the pandemic hastened the move to online sales and away from the High Street, leading to the demise of many large chains of shops such as Arcadia, Laura Ashley and Debenhams. Others, such as John Lewis, closed a number of branches. 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 6 to 9. 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 childcare 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. Most had little power in such a situation and had to accept the wages determined by the changing market environment.

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

¹ Poverty and Shared Prosperity 2020: Reversals of Fortune, p. 11, World Bank (2020, revised 2021), <https://openknowledge.worldbank.org/bitstream/handle/10986/34496/9781464816024.pdf>

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. These can be as simple as whether to wear a face mask. So should the government constrain our actions? This is another key choice that has to be made and economists can help analyse these choices and identify their costs and benefits.

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.

The UK was particularly badly hit at first, partly from the choice made by the government to delay locking down. National output (known as ‘gross domestic product’ or ‘GDP’) fell by nearly 10 per cent in 2020. Unemployment rose. The government responded by massively increasing spending by supporting individuals through the furlough scheme, whereby 80 per cent of the wages of those temporarily laid off were covered by the government and distributed through their employers. Other support was 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. In the USA, President Biden introduced a \$3 trillion programme of infrastructure spending to boost a green recovery. This followed a \$1.9 trillion programme of support for vulnerable people and businesses to survive the pandemic.

We look at issues such as growth and unemployment in the second half of the book from Chapter 15 onwards.

But the massive support came at a cost. Government spending on support schemes plus a decline in tax revenues meant that government borrowing soared. In the UK, annual public-sector net borrowing rose from 2.6 per cent of GDP in 2019 to nearly 17 per cent in 2020, so adding to the total stock of public-sector debt, pushing it up from 84.4 per cent in 2019 to just over 100 per cent in 2020 – and forecast to rise to nearly 110 per cent by 2023 (see Figure 22.3 on page 697).

The government has to finance the borrowing through paying interest from taxes (or even more borrowing). So the government was faced with a choice about when to start raising taxes or cutting government spending to reduce the level of borrowing. This was a hard choice and the plan, announced in the 2021/22 Budget, was to raise taxes on business profits (‘corporation tax’) and to freeze income tax thresholds from April 2023. Similar dilemmas were faced by governments around the world. 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 22.

It was not just governments that were trying to keep their economies going. Central banks, such as the Federal Reserve in the USA, the European Central Bank for the euro-zone 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 it go above 2 per cent per annum. The role of money in the economy is examined in Chapter 18 and subsequent chapters.



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

Getting all these economic choices right was a hard thing for individuals, businesses and governments. Economists had a crucial role in analysing the effects of these choices and advising on the best courses of action.

The environment and the global climate emergency

So can economists play a central role in addressing the climate emergency? The answer is ‘yes’ at many levels. Climate scientists can model the causes and effects of global warming. However, to address the problem and cut emissions to reach carbon neutrality and stop global warming – or at least limit it to 1.5°C above pre-industrial levels, which is the objective of the Intergovernmental Panel on Climate Change (IPCC) – then choices have to be made.

As we saw when looking at the coronavirus pandemic in the context of vaccination, people’s actions affect others. Perhaps nowhere is this more crucial than with the environment. When people burn fossil fuels in their boilers or their cars, or buy goods which have travelled half way across the world on fossil-fuel hungry ships and planes, this affects others; not just themselves.

At an individual level, therefore, people need to think and behave ‘green’. But what are the mechanisms for achieving this? Apart from education and developing greater social responsibility, pricing is key. 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 and 3 and later in Chapters 7 and 8.

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 Chapters 12 and 13. There are other methods too by which pricing can be used. One of these is emissions trading. This is where permits to emit CO₂ are allocated or auctioned to businesses, which can then trade them 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).

The issue of fairness

One of the key issues in economics is how to achieve a fair distribution of income and wealth, both today and over time. One area where this is vitally important is the environment. How can the world fairly share the costs and benefits of creating a low-carbon economy? If it fails, politicians will face a backlash from people who see their jobs and incomes under threat. Young people will blame the old for taking more than their fair share and degrading the environment in the process.

The problem is that change normally involves gainers and losers – a central dilemma in economics. Green investment may create jobs in alternative energy generation but result in jobs being lost in coal mining and heavy industry. And when there are groups of losers, populist politicians can use the resulting anger to drive wedges in society and turn people against tackling climate change – something that is easier if they can deny its existence.

International action

We live in an interdependent world. Actions in one part of the globe affect lives in others. If the rich countries are big carbon emitters, this affects people in poor countries too. Their lives may be more vulnerable to climate change and its impact on the weather and harvests. Economists play a large role in studying the trading between nations and how economic power affects patterns of trade and investment.

Multinational companies often drive intensive farming and mining in developing countries, and the effects on the environment in these countries can be devastating. Rainforests are cut down for mining, ranching or growing monocrops, such as palm oil plantations. And not only is the devastation confined to these countries: as well as hugely diminishing biodiversity, they contribute to global warming as the ‘lungs of the world’ are destroyed. From 2010 to 2019, in Brazil’s Amazon basin 16.6 billion tonnes of CO₂ were released into the atmosphere from burning or destroying forest, or replacing it with plantations. Yet only 13.9 billion tonnes were drawn down through photosynthesis and new growth.²

Actions by the global community can help but very often there are international games being played, with countries often 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.

² Xiangming Xiao et al., ‘Carbon loss from forest degradation exceeds that from deforestation in the Brazilian Amazon’, *Nature Climate Change* (29 April 2021), www.nature.com/articles/s41558-021-01026-5

BOX 1.1

WHAT’S THE LATEST ECONOMICS NEWS?

CASE STUDIES AND APPLICATIONS

- The UK cannot retain the benefits of the EU’s single market or customs union now it has left the EU.
- Researchers suggest that the long-term economic effects from the COVID-19 pandemic may be less serious than those from the financial crisis of 2007–8.
- Severe droughts cause crops to fail across sub-Saharan Africa: higher grain prices expected soon.
- There is concern that American trade policies will hurt both US consumers and producers, while reducing global growth.
- Unemployment falls and economic growth accelerates, leading to expectations of higher interest rates.
- The age at which UK workers can draw their state pension is raised further. Many predict that those currently under 30 will be working until at least the age of 70.
- Lack of training helps to explain low levels of productivity.
- Oil prices set to remain low for many years as more and more countries engage in fracking and as more investment takes place in green energy.
- The economy grows more rapidly and economists predict that interest rates will rise; house prices likely to stop rising.
- Government raises taxes to tackle soaring public-sector debt.



1. What is it that makes each one of the above news items an economics item (we explore this question in the next section)?
2. In each case identify two different individuals or groups who might be affected by the news item.



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 can make everyone better off. Countries can specialise in what they are good at and export these products, and then import products in which they are less efficient. 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 three 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

Many people think that economics is about *money*. Well, to some extent this is true. Economics has a lot to do with money: with how much money people earn; how much they spend; what various items cost; how much money firms make; the total amount of money there is in the economy. But, as we shall see later in the book, money is only important because of what it allows us to do; money is a tool and economics is more than just the study of money.

It is 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.



Could production and consumption take place without money? If you think they could, give some examples.

But we still have not got to the bottom of what economics is about. Is there one crucial ingredient that makes a problem an economic one? The answer is that there is a central problem faced by all individuals and all countries, no matter how rich. It is the problem of *scarcity* – an issue underlying all other economic problems. For an economist, scarcity has a very specific definition.



Before reading on, how would you define 'scarcity'? Must goods be at least temporarily unattainable to be scarce?

The problem of scarcity

Ask people if they would like more money, and the vast majority would answer 'Yes'. But they don't want more money for its own sake. Rather they want to be able to buy more goods and services, either today or in the future. These 'wants' will vary according to income levels and tastes.

In a poor country 'wants' might include clean water, education and suitable housing. In richer nations 'wants' might involve a second car, longer holidays and more time with friends and family. As countries get richer, human wants may change but they don't disappear. Wants are virtually unlimited.

Yet the means of fulfilling wants are limited. At any point, the world can only produce a finite amount of goods and services because the world has a limited amount of *resources*. These resources, or **factors of production** as they are often called in economics, are of three broad types:

- Human resources: **labour**. The labour force is limited in number, but also in skills. This limits the productivity of labour: i.e. the amount labour can produce.
- 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 had to be produced. The world has a limited stock of factories, machines, transportation and other equipment. The productivity of this capital is limited by the current state of technology.

Definitions

Production The transformation of inputs into outputs by firms in order to earn profit (or to 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.



Could each of these types of resources be increased in quantity or quality? Is there a time dimension to your answer?

So this is the fundamental economic problem: human wants are virtually unlimited, whereas the resources available to meet those wants are limited. We can thus define scarcity as follows:



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



If we would all like more money, why does the government not print a lot more? Could it not thereby solve the problem of scarcity 'at a stroke'?

Of course, we do not all face the problem of scarcity to the same degree. A poor family who may not be able to afford enough to eat, or a decent place to live, will hardly see it as a 'problem' that a rich family cannot afford a second skiing holiday. 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 are distributed, whether between different individuals, different regions of a country or different countries of the world.

This economic problem – limited resources but limitless wants – makes people, both rich and poor, behave in certain ways. Economics studies that behaviour. It studies people at work, producing goods that people want. It studies people as consumers, buying the goods that they want. It studies governments influencing the level and pattern of production and consumption. It even studies why people get married and what determines the number of children they have! In short, it studies anything to do with the process of satisfying human wants.

Demand and supply

We have said that economics is concerned with consumption and production. Another way of looking at this is in terms of *demand* and *supply*. Demand and supply and the relationship between them lie at the very centre of economics. How does this relate to the problem of scarcity?

Demand is related to wants. If every good and service were free, people would simply demand whatever they wanted. In total, such wants are likely to be virtually boundless, perhaps only limited by people's imaginations. *Supply*, on the other hand, is limited. It is related to resources. The amount that firms can supply depends on the resources and technology available.

Given the problem of scarcity – that human wants exceed what can actually be produced – *potential* demands

will exceed *potential* supplies. Society has to find some way of dealing with this problem, to try to match demand with supply. This applies at the level of the economy overall: total or '*aggregate*' demand needs to be balanced against total or *aggregate* supply. In other words, total spending in the economy should balance total production. It also applies at the level of individual goods and services. The demand and supply of cabbages should balance, and so should the demand and supply of cars, houses, tablets and holidays.

But if potential demand exceeds potential supply, how are *actual* demand and supply made equal? Either demand has to be reduced, 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.

Dividing up the subject

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

Macroeconomics is concerned with the economy as a whole. It is concerned with **aggregate demand** 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 is concerned with the individual parts of the economy. It is concerned with the demand and supply of particular goods, services and resources such as cars, butter, clothes, haircuts, plumbers, accountants, blast furnaces, computers and oil.

Definitions

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

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.

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.



Which of the following are macroeconomic issues, which are microeconomic ones and which could be either depending on the context?

- Inflation.
- Low wages in certain sectors.
- The rate of exchange between the pound and the euro.
- Why the prices of fresh fruit and vegetables fluctuate more than those of cars.
- The rate of economic growth this year compared with last year.
- The decline of traditional manufacturing industries.
- Immigration of workers.

Macroeconomics

Because scarcity exists, societies are concerned that their resources should be used *as fully as possible* and that over time their national output should grow.

Why should resources be used as fully as possible? If resources are 'saved' in one time period, surely they can be used in the next time period? The answer is that not all resources can be saved. For example, if a worker doesn't go to work one week then that resource is lost: labour can't be saved up for the future.

Why do societies want growth? To understand this, think back to the discussion of endless wants: if our output grows, then more of our wants can be satisfied. Individuals and society can be made better off.

The achievement of growth and the full use of resources are not easy. This is demonstrated by periods of high unemployment and stagnation that have occurred from time to time throughout the world (for example, in the recessions of the 1930s, the early 1980s and following the financial crisis of 2007–8 and COVID-19 pandemic of 2020). Furthermore, attempts by governments to stimulate growth and employment can result in inflation and rising imports. Economies have often experienced business cycles where periods of growth alternate with periods of recession, such periods varying from a few months to a few years.

Macroeconomic problems are closely related to the balance between aggregate demand and aggregate supply.

If aggregate demand is too *high* relative to aggregate supply, inflation and trade deficits are likely to result.

- **Inflation** refers to a general rise in the level of prices throughout the economy. If aggregate demand rises substantially, firms are likely to respond by raising their prices. If demand is high, they can probably still sell as much as before (if not more) even at the higher prices, and make higher profits. If firms in general put up their prices, inflation results. By comparing price levels between different periods we can measure the *rate of inflation*. Typically, the rate of inflation reported is the *annual* rate of inflation: the percentage increase in prices over a 12-month period.
- **Balance of trade** deficits are the excess of imports over exports. If aggregate demand rises, people are likely to

buy more imports. So part of the extra spending will go on goods from overseas, such as Japanese TVs, Chinese computers, German cars, etc. Also, if the rate of inflation is high, home-produced goods will become uncompetitive with foreign goods. We are likely to buy more foreign imports and people abroad are likely to buy fewer of our exports.

If aggregate demand is too low relative to aggregate supply, unemployment and recession may well result.

- **Recession** is where output in the economy declines for two successive quarters or longer. In other words, during this period growth becomes negative. Hence, not all periods during which the economy contracts are termed 'recessions'. It is the duration and persistence of the contraction that distinguishes a recession. Recessions are associated with low levels of consumer spending. If people spend less, shops are likely to find themselves with unsold stock. Then they will buy less from the manufacturers; they will cut down on production; and buy fewer capital goods such as machinery.
- **Unemployment** is likely to result from cutbacks in production. If firms are producing less, they will need to employ fewer people.

Macroeconomic policy, therefore, tends to focus on the balance of aggregate demand and aggregate supply. It can be *demand-side policy*, which seeks to influence the level of spending in the economy. This in turn will affect the level of production, prices and employment. Or it can be *supply-side policy*. This is designed to influence the level of production directly: for example, by trying to create more incentives for firms to innovate.

Definitions

Inflation A general rise in the level of prices throughout the economy.

(Annual) Rate of inflation The percentage increase in the level of prices over a 12-month period.

Balance of trade Exports of goods and services minus imports of goods and services. If exports exceed imports, there is a 'balance of trade surplus' (a positive figure). If imports exceed exports, there is a 'balance of trade deficit' (a negative figure).

Recession A period where national output falls for two or more successive quarters.

Unemployment The number of people of working age who are actively looking for work but are currently without a job. (Note that there is much debate as to who should officially be counted as unemployed.)

Demand-side policy Government policy designed to alter the level of aggregate demand, and thereby the level of output, employment and prices.

Supply-side policy Government policy that attempts to alter the level of aggregate supply directly.

BOX 1.2

LOOKING AT MACROECONOMIC DATA

CASE STUDIES AND APPLICATIONS

Assessing different countries' macroeconomic performance

Rapid economic growth, low unemployment, low inflation and the avoidance of current account deficits¹ are major macroeconomic policy objectives of most governments around the world. To help them achieve these objectives they employ economic advisers. But when we look at the performance of

various economies, the success of governments' macroeconomic policies seems decidedly 'mixed'.

The table shows data for the USA, Japan, Germany² and the UK from 1961 to 2022.

Macroeconomic performance of four industrialised economies (average annual figures)

	Unemployment (% of workforce)				Inflation (annual %)				Economic growth (annual %)				Balance on current account (% of national income)			
	USA	Japan	Germany	UK	USA	Japan	Germany	UK	USA	Japan	Germany	UK	USA	Japan	Germany	UK
1961–70	4.8	1.3	0.6	1.7	2.4	5.6	2.7	3.9	4.2	10.1	4.4	3.0	0.5	0.6	0.7	0.2
1971–80	6.4	1.8	2.2	3.8	7.0	8.8	5.1	13.2	3.2	4.4	2.8	2.0	0.9	0.5	1.1	-0.7
1981–90	2.5	2.5	6.0	9.6	4.5	2.2	2.5	6.2	3.2	3.9	2.3	2.6	-1.7	2.3	2.6	-1.4
1991–2000	3.3	3.3	7.9	7.9	2.2	0.4	2.3	3.3	3.3	1.5	1.9	2.4	-1.6	2.5	-0.7	-1.5
2001–07	5.3	4.6	9.2	5.2	2.8	-0.1	1.9	1.9	2.1	1.0	2.3	2.5	-4.8	3.3	3.8	-2.1
2008–11	8.4	4.7	7.0	7.3	2.1	-0.2	1.6	3.4	0.4	-0.6	0.8	-0.3	-3.2	2.9	5.9	-3.3
2012–19	5.5	3.3	4.3	5.5	1.6	0.7	1.3	1.8	2.4	1.1	1.4	1.9	-2.2	2.6	7.5	-4.3
2020	8.1	2.8	4.2	4.5	1.2	0.0	0.4	0.9	-3.5	-4.8	-4.9	-9.9	-3.1	3.3	7.1	-3.9
2021–22	5.0	2.6	4.1	6.1	2.3	0.4	1.7	1.7	5.0	2.9	3.5	5.2	-3.5	3.4	7.3	-3.9

Note: Years 2021 and 2022 are based on forecasts.

Sources: *Statistical Annex of the European Economy* (Commission of the European Communities, various tables and years) and *World Economic Outlook* (IMF, April 2021), www.imf.org/en/Publications/WEO/weo-database/2021/April



1. Has the UK generally fared better or worse than the other three countries?
2. Was there a common pattern in the macroeconomic performance of each of the four countries over these 60 years?

If the government does not have much success in managing the economy, it could be for the following reasons:

- Economists have incorrectly analysed the problems and hence have given the wrong advice.
- Economists disagree and hence have given conflicting advice.

- Economists have based their advice on inaccurate statistics or incorrect forecasts.
- Governments have not listened to the advice of economists. This could be for political reasons, such as the electoral cycle.
- There is little else that governments could have done: the problems were insoluble or could not have been predicted.

1 The current account balance is the trade balance plus any incomes earned from abroad minus any incomes paid abroad. These incomes could be wages, investment incomes or government revenues (see section 15.7 for details).

2 West Germany from 1961 to 1991.

Microeconomics

Microeconomics and choice

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, since there are not enough resources to produce everything people want? How many electric cars, how much coffee, how much healthcare, how many smartphones, 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 such as wind farms or a mixture of these?

- *For whom* are things going to be produced? In other words, how will the country's income be distributed? After all, the higher your income, the more you can consume of the total output. What will be the wages of shop workers, MPs, footballers and accountants? How much will pensioners receive? How much of the country's income will go to shareholders or landowners?

All societies have to make these choices, whether they are made by individuals, groups or the government. They can be seen as 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 to consume them.