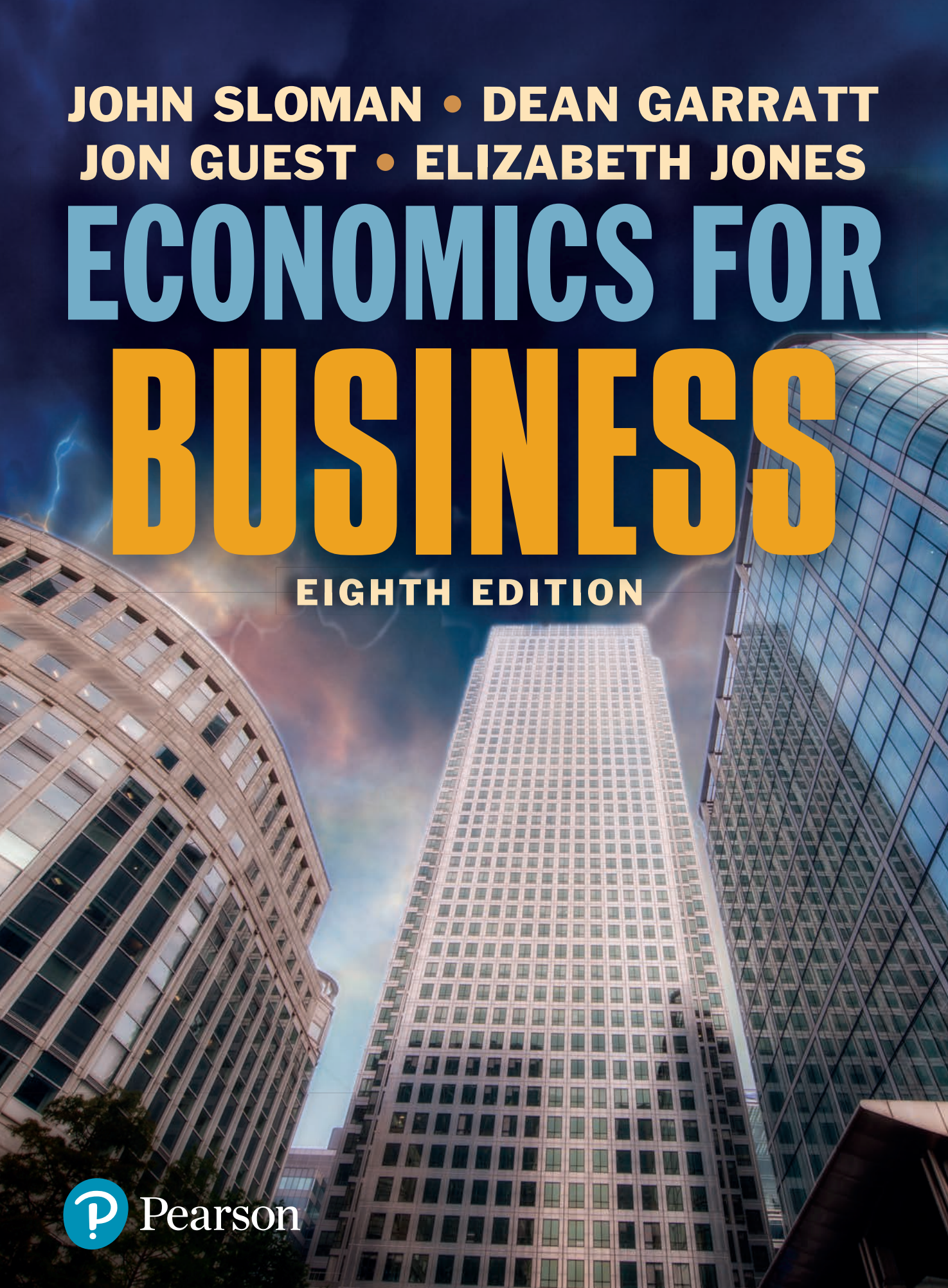
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ECONOMICS FOR BUSINESS

Eighth edition

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About the authors

John Sloman was Director of the Economics Network (www.economicsnetwork.ac.uk) from 1999 to 2012. The Economics Network is a UK-wide organisation based at the University of Bristol and provides a range of services designed to promote and share good practice in learning and teaching Economics. John is now a Visiting Fellow at Bristol and a Senior Associate with the Economics Network.

John is also Visiting Professor at the University of the West of England (UWE), 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 Alison Wride and Dean Garratt of *Economics* (Pearson Education, 10th edition 2018), with Dean Garratt of *Essentials of Economics* (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 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? (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.

Dr 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 economic principles for business and management students. 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.

Jon Guest

Jon is a Senior Teaching Fellow at Aston Business School and a Teaching Associate at Warwick Business School. He joined Aston University in September 2017 having previously been a Senior Lecturer at Nottingham Business School, a Principal Teaching Fellow at Warwick Business School and a Senior Lecturer Coventry University.

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 on-line version of the TV show 'Deal or No Deal' and games that involve students acting as buyers and sellers in the classroom. He has also 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.

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 10th edition of the textbook, Economics. 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.

Elizabeth Jones is a Professor in the Department of Economics at the University of Warwick. She joined the University of Warwick in 2012 and was the Deputy Director of Undergraduate Studies for 2 years. Since 2014, she has been the Director of Undergraduate Studies, with overall responsibility for all Undergraduate Degree programmes within the Economics Department. She is a Founding and now Alumni Fellow of the Warwick International Higher Education Academy and through this, she has been involved in developing and sharing best practice in teaching and learning within Higher Education. She was the external panellist for the curriculum review at the London School of Economics, advising on content, delivery and assessment.

She has previously co-ordinated and taught at the Warwick Economics Summer School and has also been involved in delivering the Warwick Economics Summer School in New Delhi, India. Within this, Elizabeth was delivering introductory courses in Economics to 16-18 year olds and has also delivered taster events to schools in Asia about studying Economics at University.

Prior to being at Warwick, Elizabeth was a Lecturer at the University of Exeter within the Business School and was in this position for 5 years, following the completion of her MSc in Economics. She also taught A level Economics and Business Studies at Exeter Tutorial College and continues to work as an Examiner in Economics for AQA. She is also a member of the OCR Consultative Forum and has previously been involved in reviewing A level syllabi for the main Examining bodies.

Elizabeth has taught a range of courses including Principles of Economics; Economics for Business; Intermediate Microeconomics; Economics of Social Policy; Economics of Education and Applied Economics. She has won multiple student-nominated awards for teaching at Warwick and Exeter University, winning the Best Lecturer prize at the 2017 Warwick Awards for Teaching Excellence. , where she used her prize money to invest in her development as a teacher at a conference in Boston. She has a passion for teaching Economics and particularly enjoys teaching Economics to non-economists and loves interacting with students both inside and outside of the classroom.

Elizabeth has taught on a number of professional courses, with EML Learning Ltd, where she teaches Economics for Non-economists and Intermediate Microeconomics to the public sector. She has delivered courses across all government Departments, including BIS, Department for Transport, HM-Treasury and the Department for Health. She is involved in teaching on the Graduate Development Programme for the new intake of HM Treasury employees twice each year, where she delivers sessions on economics, the role of policy and its implementation.

Outside of work, Elizabeth loves any and all sports. She is an avid fan of Formula 1 and tennis and provides ongoing support to her father's beloved Kilmarnock FC.

Brief contents

Detailed contents

Part F SUPPLY: ALTERNATIVE STRATEGIES

Part G THE FIRM IN THE FACTOR MARKET

Part H THE RELATIONSHIP BETWEEN GOVERNMENT AND BUSINESS

Preface

TO THE STUDENT

If you are studying economics on a business degree or diploma, then this book is written for you. Although we cover all the major principles of economics, the focus throughout is on the world of business. For this reason, we also cover several topics that do not appear in traditional economics textbooks.

As well as making considerable use of business examples throughout the text, we have included many case studies (in boxes). These illustrate how economics can be used to understand particular business problems or aspects of the business environment. Many of these case studies cover issues that you are likely to read about in the newspapers. Some cover general business issues; others look at specific companies. Nearly all of them cover topical issues, including the rise of online business, the video gaming market, entrepreneurship, the social responsibility of business, the effects of business activity on the environment, competition and growth strategy, mergers and takeovers, executive pay, the banking crisis of the late 2000s, the sluggish recovery from recession, quantitative easing, the role of global trade, increased competition from newly industrialised countries and the effects of Brexit.

The style of writing is direct and straightforward, with short paragraphs to aid rapid comprehension. There are also questions interspersed throughout the text in 'Pause for thought' panels. These encourage you to reflect on what you are learning and to see how the various ideas and theories relate to different issues. Definitions of all key terms are given in definition boxes, with defined terms appearing in bold. Also, we have highlighted 44 'Key ideas', which are fundamental to 'thinking like an economist'. We refer back to these every time they recur in the book. This helps you to see how the subject ties together, and also helps you to develop a toolkit of concepts that can be used in a host of different contexts.

Summaries are given at the end of each chapter, with points numbered according to the section in which they appear. These summaries should help you in reviewing the material you have covered and in revising for exams. Each chapter finishes with a series of questions. These can be used to check your understanding of the chapter and help you to see how its material can be applied to various business problems. References to various useful websites are listed at the end of each Part of the book.

The book also has a blog, *The Sloman Economics News Site,* with frequent postings by the authors. The blog discusses topical issues, links to relevant articles, videos and data and asks questions for you to think about.

There is also an open-access student website. This companion website contains 154 additional case studies, answers to 'Pause for thought' questions, animations of key models in the book with audio explanations suitable for playing on a smart phone, tablet or computer, a set of videoed interviews with business people about decision making and the relevance of economics to their businesses, hotlinks to 285 websites, plus other materials to improve your understanding of concepts and techniques used in economics.

We hope that, in using this book, you will share some of our fascination for economics. It is a subject that is highly relevant to the world in which we live. And it is a world where many of our needs are served by business – whether as employers or as producers of the goods and services we buy. After graduating, you will probably take up employment in business. A thorough grounding in economic principles should prove invaluable in the business decisions you may well have to make.

TO LECTURERS AND TUTORS

The aim of this book is to provide a course in economic principles as they apply to the business environment. It is designed to be used by first-year undergraduates on business studies degrees and diplomas where economics is taught from the business perspective. It is also suitable for students studying economics on postgraduate courses in management, including the MBA, and various professional courses.

Being essentially a book on economics, we cover all the major topics found in standard economics texts – indeed, some of the material in the principle sections is drawn directly from *Economics* (10th edition). But, in addition, there are several specialist business chapters and sections to build upon and enliven the subject for business studies students. These have been fully updated and revised for this new edition. The following are some examples of these additional topics:

- The business environment
- Business organisations
- Characteristics theory
- Consumer behaviour and behavioural economics
- Advertising and marketing of products
- Business strategy
- Alternative aims of firms
- Behavioural analysis of firms
- Growth strategy
- Strategic alliances and various other forms of co-operation between firms
- The small-firm sector
- Pricing in practice, including topics such as mark-up pricing, an extended analysis of first-, second- and third-degree price discrimination in various contexts, multiple product pricing, transfer pricing and pricing over the product life cycle
- Government and the firm, including policies towards research and development (R&D) and policies towards training
- Government and the market, including environmental policy and transport policy
- Financial markets and the funding of business investment
- The financial well-being of firms, households and governments and its impact on the business environment
- The multinational corporation
- Globalisation and business
- Trading blocs and their development
- Monetary union, the future of the Eurozone and implications for business
- The impact of Brexit on business

The text is split into 32 chapters. Each chapter is kept relatively short to enable the material to be covered in a single lecture or class. Each chapter finishes with a summary and review questions, which can be used for seminars or discussion sessions.

The chapters are grouped into 11 Parts:

- Part A Business and economics (Chapters 1–3) establishes the place of business within the economy and the relevance of economics to business decision making.
- Part B Business and markets (Chapters 4 and 5) looks at the operation of markets. It covers supply and demand analysis and examines the importance of the concept of elasticity for business decisions.
- Part C Background to demand (Chapters 6–8) considers the consumer – how consumer behaviour can be predicted and how, via advertising and marketing, consumer demand can be influenced.
- Part D Background to supply (Chapters 9 and 10) focuses on the relationship between the quantity that businesses produce and their costs, revenue and profits.
- Part E Supply: short-run decision making by firms (Chapters 11–13) presents the traditional analysis of market structures and the implications that such structures have for business conduct and performance. Part E finishes (Chapter 13) by considering various alternative theories of the firm to that of short-run profit maximisation.
- Part F Supply: alternative strategies (Chapters 14–17) starts by looking at business strategy. It also examines how businesses attempt to grow and how size can influence business actions. It finishes by considering why pricing strategies differ from one firm to another and how these strategies are influenced by the market conditions in which firms operate.
- Part G The firm in the factor market (Chapters 18 and 19) focuses on the market for labour and the market for capital. It examines what determines the factor proportions that firms use and how factor prices are determined.
- Part H The relationship between government and business (Chapters 20–22) establishes the theoretical rationale behind government intervention in the economy, and then assesses the relationship between the government and the individual firm and the government and the market.
- Part I Business in the international environment (Chapters 23–25) starts by examining the process of globalisation and the growth of the multinational business. It then turns to international trade and the benefits that accrue from it. It also examines the issue of protection and international moves to advance free trade. Finally, it examines the expansion of regional trading agreements.
- Part J The macroeconomic environment (Chapters 26–29) considers the macroeconomic framework in which

firms operate. We focus on the principal macroeconomic variables, investigate the role of money in the economy, and briefly outline the theoretical models underpinning the relationships between these variables.

- Part K Macroeconomic policy (Chapters 30–32) examines the mechanics of government intervention at a macro level as well as its impact on business and its potential benefits and drawbacks. Demand-side and supply-side policy and economic policy co-ordination between countries are all considered.

Extensive revision

As with previous editions, the eighth edition of *Economics for Business* contains a great deal of applied material. Consequently, there have been considerable revisions from the previous editions to reflect contemporary issues, debates and policy interventions. Specifically, you will find that:

- many of the boxes are new or extensively revised;
- there are many new examples given in the text;
- all tables and charts have been updated, as have factual references in the text;
- economic analysis and debate has been strengthened and revised at various points in the book in the 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 (Chapter 7). This has allowed us to explore in more detail the traditional economics treatment of the 'rational consumer' alongside insights from behavioural economics;
- we have extended the analysis throughout the book 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 of the implications of the Brexit vote and also of the Trump administration's policies in several parts of the book;
- most importantly, every part of the book has been carefully considered and, if necessary, redrafted, to ensure both maximum clarity and contemporary relevance.

SPECIAL FEATURES

The book contains the following special features:

- A direct and straightforward written style, with short paragraphs to aid rapid comprehension. The constant aim is to provide maximum clarity.
- Attractive full-colour design. The careful and consistent use of colour and shading makes the text more attractive to students and easier to use by giving clear signals as to the book's structure.
- Double-page opening spreads for each of the 11 Parts of the book. These contain an introduction to the material covered and an article from the *Financial Times* on one of the topics.
- Key ideas highlighted and explained where they first appear. There are 44 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. Showing how ideas can be used in a variety of contexts helps students to 'think like an economist' and to relate the different parts of the subject. All 44 Key ideas are defined in a special section at the end of the book.
- 'Pause for thought' questions integrated throughout the text. These encourage students to reflect on what they have just read and make the learning process a more active one. Answers to these questions appear on the student website.
- Highlighted technical terms, all of which are clearly defined in definition panels on the page on which they appear. This feature has proved very popular in previous editions and is especially useful for students when revising.
- A comprehensive glossary of all technical terms.
- Additional applied material can be found in the boxes within each chapter. The extensive use of applied material makes learning much more interesting for students and helps to bring the subject alive. This is particularly important for business students who need to relate economic theory to their other subjects and to the world of business generally. The boxes are current and include discussion of a range of companies and business topics. They are ideal for use as case studies in class. Answers to the questions in boxes can be found on the lecturer website, which lecturers can make available to students, if they choose.
- Boxes containing 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 students while at university but also in the world of work. They are frequently identified by employers as being especially valuable. Hence, undertaking the activities in the boxes helps students to increase their employability.

- Additional case studies with questions appearing on the student website are referred to at the end of each Part. Again, they can be used for class, with answers available on the lecturer website, which can be distributed to students, if lecturers choose to do so.
- Detailed summaries appear at the end of each chapter with the points numbered by the chapter section in which they are made. These allow students not only to check their comprehension of the chapter's contents, but also to get a clear overview of the material they have been studying.
- A series of review questions concluding each chapter to test students' understanding of the chapter's salient points. These questions can be used for seminars or as set work to be completed in the students' own time. Again, answers are available on the lecturer website.
- References at the end of each Part to a list of relevant websites, details of which can be found in the Web appendix at the end of the book. You can access any of these sites easily from the book's own website (at www.pearsonblog.campaignserver.co.uk/). When you enter the site, click on 'Hotlinks'. You will find all the sites from the Web appendix listed. Click on the one you want and the 'hotlink' will take you straight to it.
- A comprehensive index, including reference to all defined terms. This enables students to look up a definition as required and to see it used in context.

SUPPLEMENTS

Blog

Visit the book's blog, The *Sloman Economics News Site,* at www.pearsonblog.campaignserver.co.uk/. This refers to topical issues in economics and relates them to particular chapters in the book. There are frequent postings by the authors, with each one providing an introduction to the topic, and then links to relevant articles, videos, podcasts, data and official documents, and then questions which students and lecturers will find relevant for homework or class discussion.

Student website

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* blog, chapter by chapter, 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 book. You can search the extensive archive by chapter or keyword;
- 154 case studies with questions for self-study, ordered Part-by-Part and referred to in the text;
- updated list of 285 hotlinks to sites of use for economics;
- answers to all in-chapter (Pause for thought) questions;
- videoed interviews with a number of business people, where they discuss business decision making and the relevance of economic concepts to them.

Additional resources for lecturers and tutors

There are many additional resources for lecturers and tutors that can be downloaded 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 book and most of the tables.* Each figure is built up in a logical sequence, thereby allowing lecturers 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.
  - *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 is 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 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 to 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 24 of these, each one covering one or more chapters. They are in Word® and can be reproduced for use with large groups (up to 200 students) in a lecture theatre or large classroom. 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 of introductory economics.
- Answers to all end-of-chapter questions, Pause for thought questions, questions in boxes, questions in the case studies on the student website and to the 24 workshops. They have been completely revised with new hyperlinks where appropriate.

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

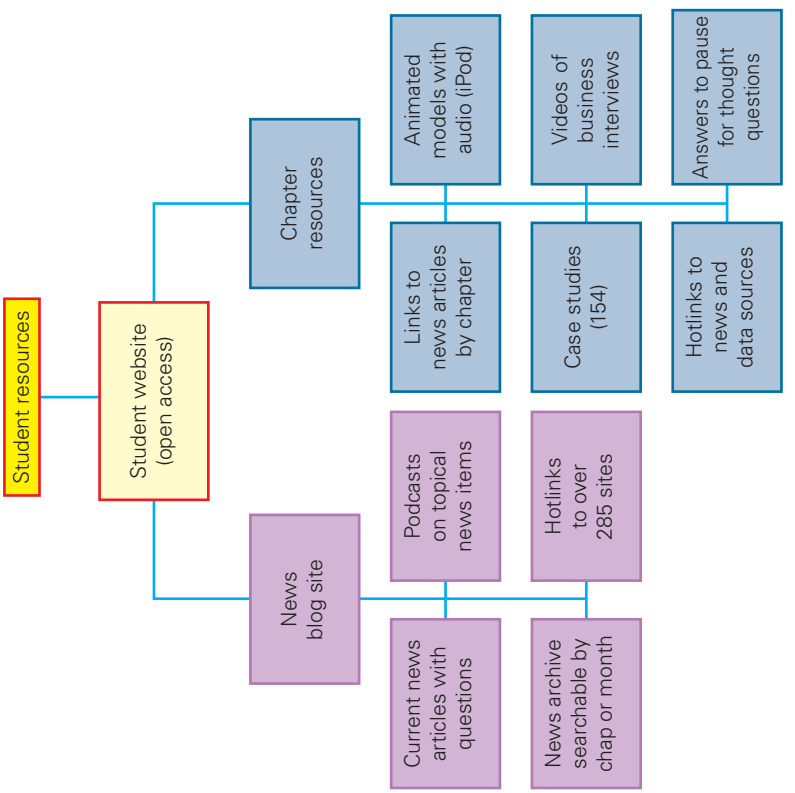
ACKNOWLEDGEMENTS

As with previous editions, we've had great support from the team at Pearson, including Catherine Yates, Carole Drummond and Natalia Jaszczuk. We'd like to thank all of them for their hard work and encouragement. Thanks, too, to the many users of the book who have given us feedback. We always value their comments. Please continue to send us your views.

Kevin Hinde and Mark Sutcliffe, co-authors with John on previous editions, have moved on to new ventures. However, many of their wise words and ideas are still embedded in this eighth edition and, for that, we once more offer a huge thank you.

Our families have also been remarkably tolerant and supportive throughout the writing of this new edition. Thanks especially to Alison, Pat, Helen, Elizabeth, Douglas and Harriet, who all seem to have perfected a subtle blend of encouragement, humour, patience and tolerance.

John, Dean, Elizabeth and Jon


Student resources
Student website (open access)
Chapter resources
Animated models with audio (iPod)
Videos of business interviews
Answers to pause for thought questions
Links to news articles by chapter
Case studies (154)
Hotlinks to news and data sources
News blog site
Podcasts on topical news items
Hotlinks to over 285 sites
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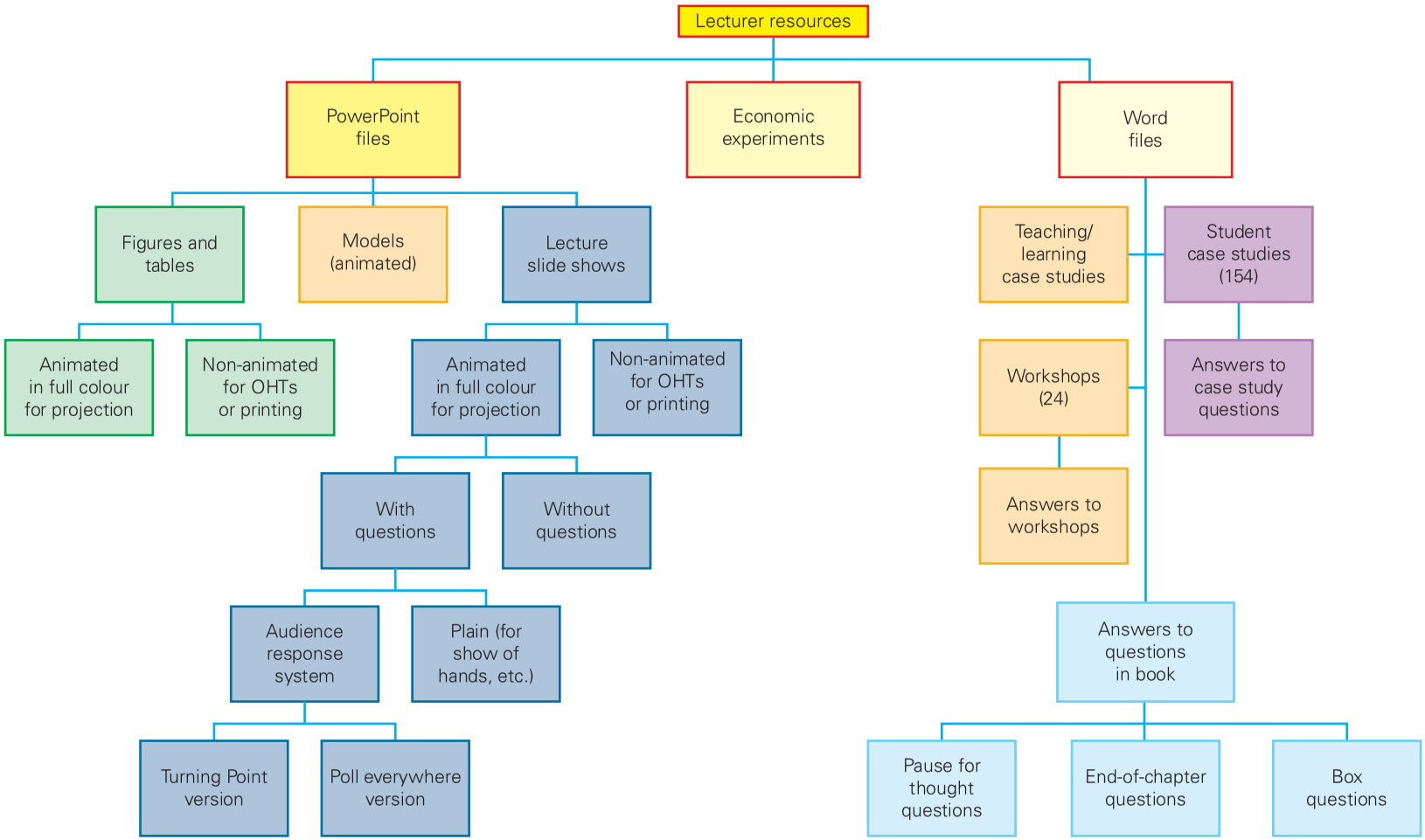
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Part A

Business and economics

The FT Reports . . .

Financial Times, 30 April 2018.

Deliveroo's speedy expansion belies tricky time for sector

By Chloe Cornish

Had its driver assessment system been operational when Deliveroo's co-founder and chief executive delivered its first ever order, he would not have scored highly.

William Shu, a former banker, motor-scooted a calzone from an Italian restaurant through London streets to a friend, only to eat the folded pizza himself – as he was hungry.

Deliveroo, which he says he started simply "to solve a personal problem", has topped this year's FT 1000 list of Europe's fastest growing companies. Between 2013, when Mr Shu and co-founder Greg Orlowski started the enterprise, and 2016, its revenues grew by a staggering compound annual growth rate of 924 per cent.

Deliveroo's platform provides 10 000 UK restaurants with delivery drivers on a combination of bicycles, scooters and cars.

"I kind of knew it would work in central London," says Mr Shu. But it was demand outside the capital that encouraged the company's breakneck growth: "That makes you more ambitious and want to go to more places." Since launch, Deliveroo has raised $957m in venture capital, according to company figures.

As Deliveroo has expanded into other UK cities, Europe and Asia, critics have questioned the profitability of its business model.

This is against the backdrop of a proliferation of competing app-based services, such as UberEats, part of the US ride-hailing company, and Just Eat, another FT 1000 business.

In 2016 . . . Deliveroo made losses of £129.1m on revenues of £128.6m. Mr Shu argues that this did not reflect performance in the cities Deliveroo has been operating in longest. "That year we expanded into 11 new countries, so there's an upfront investment required to do that," he says.

"I can assure you that the mature markets are much more profitable than newer markets," he adds, citing greater efficiencies and lower marketing costs.

Labour groups and Deliveroo riders have attacked the company over the flexible working arrangements it has with drivers. Mr Shu says this flexibility is the reason 92 per cent of Deliveroo's casual workforce choose to work for it. The company has 1000 people applying to do so each week in the UK, he says.

It now operates so-called "dark kitchens", which restaurants can use to produce food off-site. It offers restaurants help with branding and is even extending its consulting services to advise them on adding more marketable dishes to their menus.

It is all a matter of riders, restaurants and customers, he says. Without any one of these "the whole triangle breaks down".

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I dread admitting I am an economist. The cab driver quizzes you on what is going to happen to the economy, the dinner companion turns to talk to the person on the other side and the immigration officer says, with heavy sarcasm, that his country needs people like you.

John Kay, 'Everyday economics makes for good fun at parties', *Financial Times,* 2 May 2006

Businesses play a key role in all our lives. Whatever their size, and whatever the goods or services they provide, they depend on us as consumers to buy their products.

But just as businesses rely on us for their income, many of us also rely on them for our income. The wages we earn depend on our employer's success, and that success in turn depends on us as suppliers of labour.

And it is not just as customers and workers that we are affected by business. The success of business in general affects the health of the whole economy and thus the lives of us all.

The extract from the *Financial Times* takes the case of Deliveroo. To be successful, firms must be capable of responding to changes in the market environment in which they operate. This requires a thorough understanding of economics. Developing a business strategy that simultaneously responds to technological changes, changes in consumer tastes and the activities of rival companies is not an easy task. Fortunately, economics provides frameworks for thinking about these issues, and many more.

In Part A of this text, we consider the relationship between business and economics.

In Chapter 1 we look at the structure of industry and its importance in determining firms' behaviour. We also look at a range of other factors that may affect business decisions and how we can analyse the environment in which a firm operates in order to help it devise an appropriate business strategy.

Then, in Chapter 2 we ask what it is that economists do and, in particular, how economists set about analysing the world of business and the things businesses do. In particular, we focus on rational decision making – how to get the best outcome from limited resources.

Finally, in Chapter 3 we look at the different ways in which firms are organised: at their legal structure, at their internal organisation and at their goals.

Key terms

The business environment
PEST and STEEPLE analysis
Production
Firms
Industries
Industrial sectors
Standard Industrial Classification (SIC)
Industrial concentration
Structure–conduct–performance
Scarcity
Factors of production
Macroeconomics
Microeconomics
Opportunity cost
Marginal costs
Marginal benefits
Rational choices
Circular flow of income
Transaction costs
Principal and agent
Business organisation
Price taker
Perfectly competitive market
Price mechanism
Demand
Supply

Chapter 1

The business environment and business economics

Business issues covered in this chapter

- What do business economists do?
- What is meant by the 'business environment'?
- How are businesses influenced by their national and global market environment?
- How are different types of industry classified in the official statistics?
- What things influence a firm's behaviour and performance?

What is business economics?

What is the role of *business economics*? What will you study in this text?

The world economy has experienced many changes in recent decades, including the 2008/09 financial crisis and subsequent recession, the political changes in the USA, the vote to leave the EU in Britain, ongoing terrorist attacks, a growing environmental agenda, political tensions with Russia and changes in key emerging economies, such as China and India, to name a few. All of these events have had profound effects on businesses across the world and many have created an uncertain business environment, making it increasingly challenging for firms to operate.

Business economists examine *firms*: the changing environment in which they operate, the decisions they make, and the effects of these decisions – on themselves, on their customers, on their employees, on their business rivals, on the public at large and on the domestic and international economy.

All firms are different but, in one way or another, they are all involved in the production of goods and services. They use inputs, which cost money, to make output that earns money. The difference between the revenue earned and the costs incurred constitutes the firm's profit. Although firms may pursue a range of objectives, we assume that firms normally will want to make as much profit as possible or, at the very least, avoid a decline in profits.

In order to meet these and other objectives, managers will need to make effective choices: what to produce, how much to produce and at what price; what techniques of production to use, how many workers to employ and of what type, what suppliers to use for raw materials, equipment, etc. Business economists study these choices. They study economic decision making by firms.

The study of decision making can be broken down into three stages:

The external influences on the firm (the 'business environment'). Here we are referring to the various factors that affect the firm that are largely outside its direct control. Examples are the competition it faces, the prices its

suppliers charge, the state of the economy (e.g. whether growing or in recession) and the level of interest rates. Businesses need a clear understanding of their environment before they can set about making the right decisions.

Internal decisions of the firm. Given a firm's knowledge of these external factors, how will it then decide on prices, output, inputs, marketing, investment, etc.? Here the business economist can play a major role in helping firms achieve their business objectives.

The external effects of business decision making. When the firm has made its decisions and acted on them, how do the results affect the firm's rivals, its customers and the wider public? In other words, what is the impact of a firm's decision making on people outside the firm? Are firms' actions in the public interest or is there a case for government intervention?

What do business economists do?

Our study of business will involve three types of activity:

- *Description.* We will describe the objectives of businesses (e.g. making profit or increasing market share), the types of market in which firms operate (e.g. competitive or non-competitive) and the constraints on decision making (e.g. the costs of production, the level of consumer demand and the state of the economy).
- *Analysis.* We will analyse how a firm's costs might vary with the amount of output it produces and how its revenues will be affected by a change in consumer demand or a change in the price charged by rivals. We will also analyse the upswings and downswings in the economy: something that will have a crucial bearing on the profitability of many companies.
- *Recommendations.* Given the objectives of a firm, the business economist can help to show how those objectives can best be met. For example, if a firm wants to maximise its profits, the business economist can advise on what prices to charge, how much to invest, how much to advertise, etc. Of course, any such recommendations will only be as good as the data on which they are based. In an uncertain environment, recommendations will necessarily be more tentative.

In this chapter, as an introduction to the subject of business economics, we shall consider the place of the firm within its business environment, and assess how these external influences are likely to shape and determine its actions. In order to discuss the relationship between a business's actions and its environment, first we need to define what the business environment is.

1.1 THE BUSINESS ENVIRONMENT

Traditionally, we identify four dimensions to the business environment: political, economic, social/cultural and technological.

Political factors. Firms are directly affected by the actions of government and other political events. These might be major events affecting the whole of the business community, such as the problems in Syria and Iraq, the tensions between Russia and the USA, Britain leaving the EU or a change of government. Alternatively, they may be actions affecting just one part of the economy. For example, the charge on plastic carrier bags affects the retail sector and the ban on smoking in public places affects the tobacco industry.

Economic factors. Businesses are affected by a range of economic factors, including the changing costs of raw materials, the entry of a new rival into the market, the current availability of investment funds, the economic performance of the domestic and world economy, and changes in domestic and foreign economic policy.

It is normal to divide the economic environment in which the firm operates into two levels:

- *The microeconomic environment.* This includes all the economic factors that are *specific* to a particular firm operating in its own particular market. Thus one firm may be operating in a highly competitive market, whereas another may not; one firm may be faced with rapidly changing consumer tastes (e.g. a designer clothing manufacturer), while another may be faced with a virtually constant consumer demand (e.g. a potato merchant); one firm may face rapidly rising costs, whereas another may find that costs are constant or falling.
- *The macroeconomic environment.* This is the *national* and *international* economic situation in which business as a whole operates. Business in general will fare much better when the economy is growing, as opposed to when

BOX 1.1 A LIDL SUCCESS STORY

Making the best of your business environment

Lidl's history dates back to the 1930s, when Josef Schwarz, a partner in a German fruit wholesaler, developed the firm into a general food wholesaler. His son, Dieter, continued the development of the Schwarz-Gruppe and began to create the basis of the Lidl that we recognise today: a firm focusing on the discount end of the market. He changed the name of the supermarket from Schwarzmarkt ('black market') to Lidl, despite facing some legal issues relating to the surname 'Lidl'.

In 1973, the first Lidl store was opened in Germany. It had 3 employees and 500 product lines. Keeping costs down was a key aspect of the business, with unsold stock being removed quickly from shelves, products being left in original packaging and store size kept small. This was an approach already established by the other famous German discounter, Aldi. The strategy proved a success and, by the end of the decade, 30 Lidl stores were open in Germany and this number continued to grow, reaching 300 by the 1980s.[1]

It was the following decade when Lidl's presence outside of Germany began, with stores first opening in France and then in the UK in 1994. Over the next 10 years, it recorded consistent growth in the UK and quickly added to its stores, opening its 700th in the UK in 2018, where it now sells over 2000 products. The Lidl group now has over 10 000 stores worldwide, 150 distribution centres and operates in 28 countries globally.

It has retained its focus on low-cost products, which has proved to be a successful strategy to break the dominance of the big supermarket chains in the UK. According to Statista,[2] Lidl's market share in August 2012 was just 2.8 per cent; by 2017, it had increased to 5.2 per cent. So, although it still remains a fairly small player in the UK supermarket industry, Lidl's growth is significant. In the three months to May 2017, the whole UK market grew by 3.7 per cent, the fastest growth in over three and a half years. Yet Lidl recorded growth of 17.8 per cent, second only behind Aldi with 18.3 per cent growth.[3] According to Kantar, Lidl's UK sales continued to rise in 2017, with the retailer earning revenue of £5.8 billion.

How has Lidl broken into such a competitive market and recorded such high growth? What lessons are there for other businesses? How has its performance been affected by its business environment – by consumer tastes, by the actions of its rivals, by the state of the national and world economies and by government policy?

In particular, how would an economist analyse Lidl's performance so as to advise it on its best strategy for the future? This is the sort of thing that business economists do and the sort of thing we will be doing throughout this text. We will also look at the impact of the behaviour of businesses on their customers, on employees, on competitors and on society in general. So let's take a closer look at Lidl and relate its business in general to the topics covered in this text.

The market environment

To be successful, it is important for Lidl to get its product and strategy right. This means understanding the markets in which it operates and how consumer demand responds to changes in prices and to the other services being offered.

The supermarket industry in the UK is very competitive and is dominated by the big four: Tesco, Sainsbury's, Asda and Morrisons. In addition, there are other retailers, focused more on the high-end market, including Waitrose and Marks & Spencer. Aldi and Lidl, by contrast, focus on the opposite end of the market: no frills, low cost, budget products. However, few households viewed Lidl as the place where you would go to do your weekly shop. Instead, Lidl seemed to be more about stocking up on products.

While Lidl's low prices are crucial for its success, the quality of the products is equally important. Consumers will not be willing to pay a price, however low, if the food is of poor quality and if similar products can be purchased from other stores. With Lidl's rise to a legitimate competitor, the big four supermarkets in the UK were forced to respond and we have seen an increasingly competitive food industry, with many pressures being placed on suppliers, creating its own range of ethical issues. When setting prices and designing/sourcing products, consideration must be given to what rival companies are doing. Lidl's prices and product quality must be competitive to maintain its sales, profitability and increase its position in the global market and Lidl recognised the importance of this aspect.

While Lidl had always been an attractive place to shop for lower-income households, it wanted to expand its appeal. During and after the financial crisis, especially when food prices in the UK were rising faster than incomes, many middle- and even higher-income households began to be swayed into shopping at the budget retailer, keen on finding cheaper products. With its drive to become more upmarket, this meant that it was increasingly important for Lidl to focus on the quality of its products and change the perception that low cost meant low quality. In 2015, Lidl started to focus on changing its image as a budget retailer, opening stores in London, adapting its marketing, while still maintaining the low-cost nature of its products. David Gray from Planet Retail said:

> This is part of an ongoing strategy, with Lidl putting in more premium ranges, more fresh bakery products, more brands, to make it more like a mainstream supermarket.[4]

The strategy appears to have worked. In 2016, six of Lidl's products won their categories in the Quality Food Awards and, for the first time, Lidl was named Grocer of the Year at the 2015 Grover Gold Awards, beating Waitrose, Asda and Aldi. Lidl's UK CEO at the time, Ronny Gottschlich, reflected on the award and the changes introduced within Lidl commenting that:

> This is an incredible achievement . . . More and more people are coming to Lidl for their full supermarket shop,

[1] www.lidl.co.uk/en/About-Us.htm.

[2] www.statista.com/statistics/280208/grocery-market-share-in-the-united-kingdom-uk/.

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with old preconceptions continuing to change all the time . . . We are committed to investing in our own brand ranges so that we can offer our customers premium products and ingredients at the lowest possible prices, helping them to shop a little smarter and save as much money as possible, every single day.[5]

We look at how markets work in general in Chapters 4 and 5 and at different market structures and competition between firms in Chapters 11 to 13.

Products, employment and sustainability

Lidl's product range.

One of the key factors behind Lidl is its local sourcing of products, with around 70 per cent of products in UK stores sourced from UK farmers and producers. It has also recognised the increasing importance that customers place on sustainability and environmental issues, producing a Sustainability Report for the first time in 2016/17. Part of the aim here was to tackle the perception that low cost meant low quality and in this sustainability report, the UK CEO of Lidl noted that, 'We hope to challenge these misconceptions and increase our transparency by outlining our sustainability achievements to date and setting out our priorities and commitments for the future.'[6]

Lidl has launched four 'Big Steps': 'Buying British', 'Sourcing Responsibly', 'Tackling Food Waste' and 'Supporting Active & Healthy Lifestyles'. It is increasingly focused on these issues, for example through its sourcing of Fairtrade cocoa and sustainable fish. It is focusing an increasing number of resources on making positive changes in these areas and advertising them to consumers. Given the global nature of the business, it sources products from over 700 suppliers in 60 different countries and hence its supply chain is complex, requiring constant monitoring to ensure that quality is maintained at each stage.

Another of Lidl's key features is the development of its own-brand products, which offer cheaper alternatives to many everyday products. This development was, in part, a response to changing consumer demands as finances became tighter for many households. Lidl has had much success in this area, picking up numerous awards for its own-brand products. In 2016, Lidl was dominant at the Grocer Own Label Awards, picking up 63 medals and, in 2017, it was in second place, behind Aldi in terms of the number of Awards.

We look specifically at consumer demand and methods of stimulating it in Chapters 6 to 8 and a range of environmental issues and corporate social responsibility in Chapters 20 and 22.

Employees.

Lidl has 20 000 employees in stores across the UK and aims to become the UK's most attractive employer. In 2015, Lidl became the first UK supermarket to pay its workers the national living wage, aiming to 'share its success' with the staff, though controversy did arise when it emerged that this would be applied in England, Wales and Scotland, but not in Northern Ireland.

Lidl has experienced issues with its employees, including conflict with trade unions and issues of spying (more below), but its Sustainability Report does address human rights and working conditions, particularly focusing on the importance of low prices in its stores and how this links to pay and working conditions, especially within its complex supply chain.

Growth strategy.

Lidl has expanded considerably from its initial stores in Germany and now has stores in almost every country in Europe. In June 2017, it became Croatia's second largest supermarket and then broke into the US market, initially taking 2.6 per cent of the share of supermarket visits. Demand did then drop off, but personnel changes in the USA made a difference and sales rebounded towards the end of the year. Lidl plans to continue its expansion in the USA and in the UK, where a £1.45 billion investment programme is planned by 2019, with 60 new stores opening each year and significant growth in its logistics network. This includes new distribution centres in Wednesbury, in Southampton and plans for more in various other locations, creating 1500 new jobs. We are also seeing Lidl diversifying into clothing. This includes the introduction of an affordable but high-end 'Heidi Klum' range in its stores. Only time will tell whether this is a good fit for the budget retailer, despite its recent image change.

Employment issues are considered in Chapter 18, while strategic decisions such as growth by expansion in the domestic and global economy are examined in Chapters 14, 15 and 23.

Dealing with controversy

Despite Lidl's remarkable success, it hasn't all been straightforward and an important element for any business is how it deals with controversy and any issues that affect its public image.

One challenge came in 2008, when it emerged that Lidl was, essentially, spying on its employees, keeping records of toilet breaks, health concerns, finances and even relationships, with details learnt from private phone calls. Further, such information was being used by managers when making decisions about employees. Lidl confirmed that it knew about this and even condoned the policy, which was aimed to stop any staff issues before they became a problem and protect the company's financial position. Lidl did not have any staff devoted to press and public relations but, after confirming that the company would make employees more aware of the monitoring, Lidl bounced back.[7]

The same year, controversy emerged in Sweden, first when buying alcohol was required to enter a competition and second when Lidl staff poured cleaning products and detergents over food that was past its expiration date and placed in Lidl bins. Lidl was accused of poisoning the homeless who took the food, despite the warning that it had been poisoned. Lidl apologised for these actions and its rise continued.

In 2014, Lidl UK stopped its employees from speaking any language other than English, including Welsh in its Wales stores to ensure a 'comfortable environment' for all customers and employees.[8] This sparked controversy,

[5] www.lidl.co.uk/en/Grocer-of-the-Year-Award-3488.htm.

[6] www.lidl.co.uk/en/sustainability.htm.

[7] Debra Kelly, 'The untold truth of Lidl'; *Mashed*.

[8] '"English only" rule at Lidl shops sparks Welsh row' BBC News, (7 November 2014).

but Lidl hit back noting that, 'Employees could speak any language customers addressed them in – including Welsh.'

A deadly spider and its babies were found in a bunch of Lidl's bananas in the UK in August 2016 and similar issues have occurred in other countries, including Germany. In 2017, Lidl UK faced a social media backlash as customers criticised its decision to airbrush Christian symbols from its packaging and this controversy spilled over to Germany, Belgium and other European countries, where customers were also angry at the move.

Lidl has developed its press and media relations, in part to deal with responses to such issues. Its marketing strategy will continue to be crucial as it tries to shake off the image of a budget retailer. Despite ongoing issues in many countries, the retailer has proved resilient.

The economy

So do the fortunes of Lidl and other companies depend solely on their policies and those of their competitors? The answer is no.

One important element of a company's business environment is largely beyond its control: the state of the national economy and, for internationally trading companies, of the global economy. When the world economy is booming, sales and profits are likely to grow without too much effort by the company. However, when the global economy declines, as we saw in the economic downturn from 2008, trading conditions will become much tougher.

In the years after the financial crisis, the global economy remained in a vulnerable position and this led to many companies entering administration. These included Woolworths, Jessops, HMV, Comet, Blockbuster and Peacocks. However, it also presented opportunities for companies like Aldi and Lidl, which were able to take advantage of households who were looking for cheaper prices. In the 12 weeks to June 2008, Aldi saw its sales increase by 20.7 per cent, while Lidl's sales grew by 12.8 per cent, both well above the growth rates of the dominant supermarkets. Steve Gotham, a project director at Allegra Strategies, said:

> Clearly the economic circumstances in the UK are playing into the hands of the discounters. They are appealing to new customers and those new customers are coming from more middle-class backgrounds.[9]

Aldi's and Lidl's competitors continued to face difficulties with their financial performance as the economy struggled to recover. In 2015, sales at Tesco declined by 2 per cent from the previous year, with Morrisons falling by 1.7 per cent and Asda's sales falling 3.5 per cent in the last quarter of 2015 relative to the same time the previous year. Lidl took the opportunity to increase its market share and, together with Aldi, saw their combined share of the market move from 5 per cent in 2012 to 12 per cent by 2017. Previously, it had taken them nine years for their collective market share to double from 2.5 per cent to 5 per cent.[10]

According to Barclays Research, Lidl's international sales have increased from €28 billion in 2012 to €41.5 billion in 2016, and the UK performance mirrors its international success. This success is more reflective to the success of its low-cost strategy, rather than the trends of the global or UK economy. Although this might seem unusual, it is the very nature of Lidl's strategy that means it is the perfect retailer to take advantage of an economic downturn. At the other end of the UK retailers, Waitrose was also more insulated against the financial crisis than the 'Big Four' (Asda, Tesco, Sainsbury's and Morrisons) due to the nature of the products it sells.

The 2017 Christmas trading period saw the German retailer's UK sales rise by 16 per cent and 22 December saw Lidl UK's highest ever trading day. However, Lidl's expansion plans have proved to be costly. While its operational margin has fallen to 4.3 per cent, its lowest since 2012, this is still a healthy figure relative to the industry, once again indicating the success of this retailer. Whether such positive trading can be sustained will be determined by Lidl's strategy in the coming years.

We examine the national and international business environment in Chapters 23 to 29. We also examine the impact on business of government policies to affect the economy – policies such as changes in taxation, interest rates, exchange rates and customs duties in Chapters 30 to 32.

What challenges is Lidl likely to face in the coming years?

Choose a well-known company that trades globally and do a Web search to find out how well it has performed in recent years and how it has been influenced by various aspects of its business environment.

[9] James Thompson, 'Lidl and Aldi see sales soar amid economic downturn', *Independent* (24 June 2008).

[10] Kantar World Panel.

it is in recession, as we saw after the 2008 financial crisis. In examining the macroeconomic environment, we will also be looking at the policies that governments adopt in their attempt to steer the economy, since these policies, by affecting things such as taxation, interest rates and exchange rates, will have a major impact on firms.

Social/cultural factors. This aspect concerns social attitudes and values. These include attitudes towards working conditions and the length of the working day, equal opportunities for different groups of people (whether by ethnicity, gender, physical attributes, etc.), the nature and purity of products, the use and abuse of animals, and images portrayed in advertising.

The social/cultural environment also includes social trends, such as an increase in the average age of the population, or changes in attitudes towards seeking paid employment while bringing up small children. Various ethical issues, especially concerning the protection of the environment, are

BOX 1.2 THE BIOTECHNOLOGY INDUSTRY

Its business environment

There are few areas of business that cause such controversy as biotechnology. It has generated new medicines, created pest-resistant crops, developed eco-friendly industrial processes and, through genetic mapping, is providing incalculable advances in gene therapy. These developments, however, have raised profound ethical issues. Many areas of biotechnology are uncontentious, but genetic modification and cloning have met with considerable public hostility, colouring many people's views of biotechnology in general.

Biotechnology refers to the application of knowledge about living organisms and their components to make new products and develop new industrial processes. For many it is seen as the next wave in the development of the knowledge-based economy. The sector has grown significantly over the past 15 years, making significant contributions to global growth and job creation. In 2015, the global biotechnology industry was worth $500 billion and, although 2016 and 2017 presented many issues for the industry in terms of financing and of strategic and policy uncertainty, the industry is bouncing back and, according to a report by Grand View Research Inc., it will be valued at $727 billion by 2025.[1]

The global structure of the industry

The biotechnology sector is becoming increasingly global, with many new competitors emerging in Asia, but it is still the USA that dominates this sector. According to the Biotechnology Report from Ernst & Young (EY),[2] the USA has many more private and public companies than Europe, employing 135 750 workers in its public companies, while less than half this number are employed in comparable companies across Europe. Revenue growth for biotech companies in the USA fell for a second year in 2016, rising by only 4 per cent to reach $112.2 billion. However, in Europe, revenue growth increased from 4 per cent in 2015 to 19 per cent in 2016, reaching $27.2 billion, but only thanks to the acquisition of Baxalta by Shire, without which revenue growth would actually have been negative.

Mergers and acquisitions (M&As).

The biotechnology industry in Europe has outperformed other market sectors over the past few years, but this is largely down to merger and acquisition (M&A) activity, which in 2016 was Europe's strongest M&A year in a decade. However, it was 2015 that was a record year for global M&A activity in the biotechnology sector, with 79 deals taking place. Even though biotech M&A activity in 2016 was 12 per cent lower, there were still five significant deals (worth over $5 billion each), which accounted for 75 per cent of the sector's M&A activity[3] and 2016 did record the second highest aggregate M&A value and volume. There was also a significant amount of M&A activity in China, worth $6.8 billion, according to the Chinese investment bank, China Renaissance. This included deals where Chinese biotech and pharma companies purchased US or European companies, indicating China's intentions in the sector.

Countries' share of the global biotech sector.

Although US biotech companies have seen their worldwide share of patent applications decline from 44 per cent in the early 2000s to around 34 per cent in 2015, it is still the dominant country, according to the OECD. The EU28 accounted for 24 per cent of worldwide biotech patent applications in 2015 – little change from its 25 per cent figure in 2000. The big mover according to this metric is South Korea, with its share rising from 1.7 per cent in 2000 to 10 per cent in 2014.[4]

The Asian biotech sector is growing and the whole industry has seen a shift, with more capital flows coming from China, which is another of the Asian countries looking to make a global mark in this sector. However, until recently, government regulations meant that many of the most effective medicines were not available in China, despite its place as the second biggest market for pharmaceuticals. Now that these regulations are being relaxed, Chinese biotech companies will certainly join the race to develop drugs and investment into the sector will only rise.

Research and Development (R&D)

Although revenue growth in both the US and European biotechnology sector slowed to 7 per cent in 2016, following 2 years of double digit growth, a larger share of biotech company revenues went into R&D. According to the latest data from the OECD, R&D expenditure by biotech firms in the USA totalled $38.6 billion and this represented growth of over 40 per cent since 2012. When compared to Europe as a whole, the US biotechnology sector spends over twice as much on R&D and, although the industry is dominated by small and medium-sized businesses, it is the larger firms that dominate in terms of R&D. In most countries, biotech firms are geographically clustered, forming industry networks around key universities and research institutes. We will see the benefits of this in terms of costs in Chapter 9.

One of the big issues facing the biotech industry is the return on investment (ROI) in R&D. With medical and technological advances, as well as an ageing population, we are seeing more chronic diseases and the need to develop new drugs. However, this is a costly business, with estimates ranging from $1 billion to $2.5 billion per drug. Biotech companies are, therefore, under significant pressure to continue to invest in expensive new drug development, while facing increasing pressure to reduce prices.

Cutting the costs associated with drug development will be crucial, particularly the costs of clinical trials. Technology will be important in streamlining processes and making trials and testing more efficient and Artificial Intelligence is also likely to play a significant role. Some companies have already taken steps to address poor R&D productivity, including focusing on developing those drugs that have the greatest revenue potential, such as oncology and immunotherapy, and looking into developing personalised medicines. The big biotech companies, in particular, will need to continue to address poor R&D productivity if they and the wider sector are to remain feasible.

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[1] 'Biotechnology Market Analysis: By Application (Health, Food & Agriculture, Natural Resources & Environment, Industrial Processing Bioinformatics); By Technology, And Segment Forecasts, 2014 – 2025', Grand View Research (August 2017).

[2] *Beyond Borders: Biotechnology Report 2017*, Ernst & Young (16 June 2017).

Funding and the future

The costs of drug development have seen little change and it can still take a decade for new drugs to make it to market. This means that there can be a very long delay between biotech companies incurring the costs and generating the revenues; hence funding is essential. Most countries provide significant financial support to their biotech firms and encourage firms to form collaborative agreements and partnerships.

For example, the EUREKA programme was launched in 1985 as an intergovernmental network to promote innovation and provide easier access to finance. Now consisting of 41 members, including the EU itself, it provides support for collaborative ventures through a series of National Project Co-ordinators who help to secure national or EU funding. Successful projects are awarded the internationally recognised Eureka label.[5]

Although government funding is important, the majority of funding for the industry comes from 'venture capital' (investment by individuals and firms in new and possibly risky sectors). Such funding is extremely volatile. For example, biotech companies saw their share prices rise in 1999 and 2000 and then collapse, before seeing growth until 2007. The financial crisis then had an adverse impact on investment in both the EU (−79 per cent) and the US (−62 per cent) biotechnology industries and this had a serious impact on the viability of some businesses in the sector. However, the sector as a whole weathered the downturn relatively well and, from 2012 to 2015, investment recovered and biotech shares soared, with many tripling in value. Then in 2016, with economic and political uncertainty, there was a 27 per cent fall in investment into the industry, though early-stage capital financing remained buoyant.

With continuing economic and political risk, the biotech sector faces a number of challenges going forwards.

In 2016, 'the UK enjoyed the most financings of any European market (78), as well as the highest total innovation capital financing (US$1.3 billion, 25 per cent of the total) and highest total venture financing (US$590 million, 30 per cent of all European venture capital)'.[6] However, in 2019, the UK is due to leave the European Union and this will pose significant challenges, above and beyond the relocation of the European Medicines Agency from London.

Asian biotech companies will provide increasing competition to a sector that has undergone significant consolidation over the past decade. Furthermore, the uncertainty of health care reform in the USA, together with possible tax reforms, hiring freezes and funding cuts, will only add to the pressures on the biotechnology industry, as it faces the ongoing issues of poor R&D productivity and the costs of drug development.

From the brief outline above, identify the political, economic, social and technological dimensions shaping the biotechnology industry's business environment.

[3] *Beyond Borders: Biotechnology Report 2017*, Ernst & Young (16 June 2017).

[4] *Key biotechnology indicators*, OECD (November 2017).

[5] www.eurekanetwork.org/.

[6] *Key biotechnology indicators* (op. cit.).

also having a growing impact on the actions of business and the image that many firms seek to present.

Technological factors. Over the past 30 years there has been significant technological change, which has had a huge impact on how firms produce, advertise and sell their products. Online shopping has continued to grow, creating a global market place for firms, while causing problems for high street retailers. It has also changed how business is organised, providing more opportunities for smaller online retailers and changing the structure of many markets.

The use of robots and other forms of computer-controlled production has changed the nature of work for many workers. The information-technology revolution has enabled much more rapid communication and has made it possible for firms across the world to work together more effectively. The working environment has become more flexible and efficient, with many workers able to do their job from home, while travelling or from another country.

The division of the factors affecting a firm into political, economic, social and technological is commonly known as a ***PEST analysis***. However, we can add a further three factors to create ***STEEPLE analysis***. The additional elements are:

Environmental (ecological) factors. This has become an increasingly important issue in politics and business, with many firms aiming, and even being forced by government policy changes, to take a greener approach to business. Consumers are more environmentally aware and a green image can be useful in generating finance from investors and government. Business attitudes towards the environment are examined in sections 20.5 and 22.1.

Legal factors. Businesses are affected by the legal framework in which they operate. Examples include industrial relations

Definitions

PEST analysis Where the political, economic, social and technological factors shaping a business environment are assessed by a business so as to devise future business strategy.

STEEPLE analysis Where the social, technological, economic, environmental, political, legal and ethical factors shaping a business environment are assessed by a business so as to devise future business strategy.

legislation, product safety standards, regulations governing pricing in the privatised industries and laws preventing collusion between firms. We examine some of these laws in Chapter 21.

Ethical factors. Firms are increasingly under pressure to adopt a more socially responsible attitude towards business, with concerns over working conditions, product safety and quality and truthful advertising. With various companies finding themselves in difficulties over suspect business practices and with consumers' increasing awareness of these issues, many firms have been forced to adapt their business practices. Examples include Volkswagen and its 'defeat device', which gave more favourable emissions readings under test conditions; sexual harassment allegations affecting Weinstein Co. and a whole host of scandals affecting Uber. Business ethics and corporate responsibility are examined in section 20.5.

This framework is used widely by organisations to audit their business environment and to help them establish a strategic approach to their business activities. It is, nevertheless, important to recognise that there is a great overlap and interaction among these sets of factors. Laws and government policies reflect social attitudes; technological factors determine economic ones, such as costs and productivity; technological progress often reflects the desire of researchers to meet social or environmental needs; and so on.

As well as such interaction, we must also be aware of the fact that the business environment is constantly changing. Some of these changes are gradual, some are revolutionary. To be successful, a business will need to adapt to these changes and, wherever possible, take advantage of them. Ultimately, the better business managers understand the environment in which they operate, the more likely they are to be successful, either in exploiting ever-changing opportunities or in avoiding potential disasters.

Although we shall be touching on political, social and technological factors, it is economic factors that will be our main focus of concern when examining the business environment.

Pause for thought

Under which heading of a PEST or STEEPLE analysis would you locate training and education? What about a tax on plastic bottles?

KEY IDEA 1

The behaviour and performance of firms is affected by the business environment. **The business environment includes economic, political/legal, social/cultural and technological factors, as well as environmental, legal and ethical ones.**

1.2 THE STRUCTURE OF INDUSTRY

One of the most important and influential elements of the business environment is the *structure of industry*. How a firm performs depends on the state of its particular industry and the amount of competition it faces. Knowledge of the structure of an industry is therefore crucial if we are to understand business behaviour and its likely outcomes.

In this section we will consider how the production of different types of goods and services is classified and how firms are located in different industrial groups.

Classifying production

When analysing production it is common to distinguish three broad categories:

- ***Primary production.*** This refers to the production and extraction of natural resources such as minerals and sources of energy. It also includes output from agriculture.
- ***Secondary production.*** This refers to the output of the manufacturing and construction sectors of the economy.
- ***Tertiary production.*** This refers to the production of services, and includes a wide range of sectors such as finance, the leisure industry, retailing and transport.

Figures 1.1 and 1.2 show the share of output (or ***gross domestic product (GDP)***) and employment of these three sectors in 1974 and 2016. They illustrate how the tertiary

Definitions

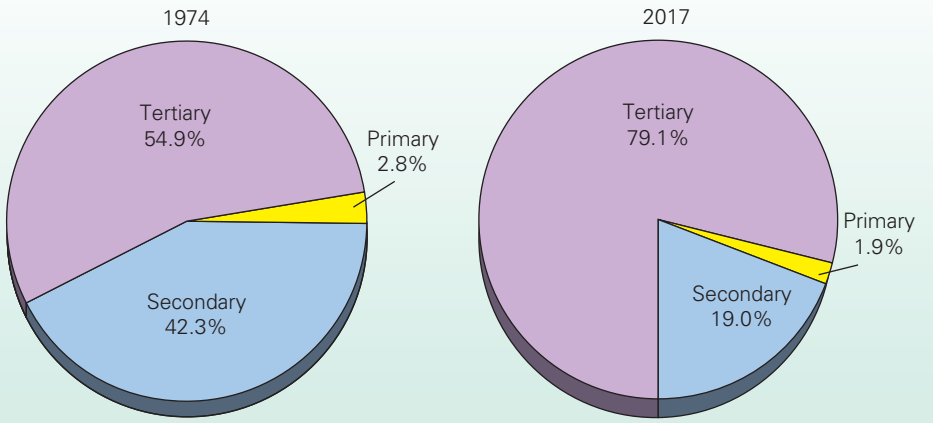
Primary production The production and extraction of natural resources, plus agriculture.

Secondary production The production from manufacturing and construction sectors of the economy.

Tertiary production The production from the service sector of the economy.

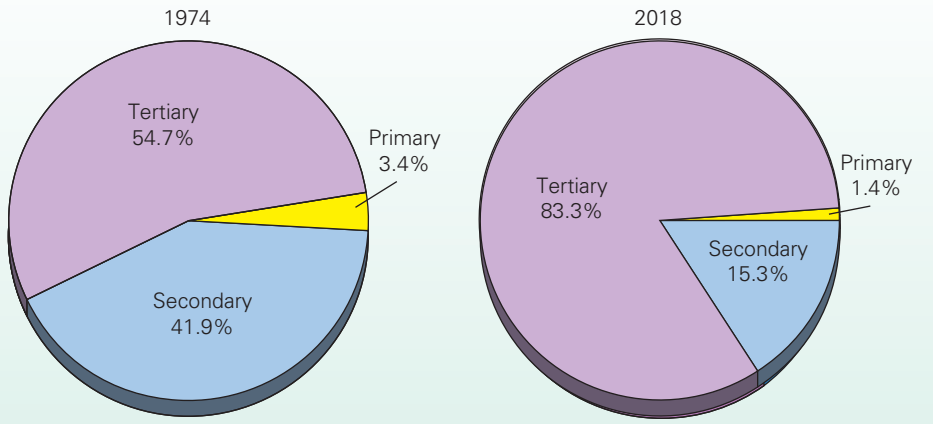
Gross domestic product (GDP) The value of output produced within the country typically over a 12-month period.

Figure 1.1 Output of industrial sectors (as a percentage of GDP)



Source: Based on data in *Time series data,* series ABMI, KKD5, KKD9, KKD7 and KKJ7 (ONS, 2018)

Figure 1.2 Employment by industrial sector (percentage of total employees)



Source: Based on *Labour Market Statistics* data, series DYDC, JWR5, JWR6, JWR7, JWR8, JWR9, JWT8 (ONS, 2018)

sector has expanded rapidly. In 2016, it contributed some 78.3 per cent to total output and employed 83.1 per cent of all workers. By contrast, the share of output and employment of the secondary sector has declined. In 2016, it accounted for only 21.1 per cent of output and 15.7 per cent of employment.

This trend is symptomatic of a process known as ***deindustrialisation*** – a decline in the share of manufacturing in GDP. Many commentators argue that this process of deindustrialisation is inevitable and that the existence of a large and growing tertiary sector in the UK economy reflects its maturity. Similar trends can also be observed in many other countries.

Definition

Deindustrialisation The decline in the contribution to production of the manufacturing sector of the economy.

Furthermore, it is possible to identify part of the tertiary sector as a fourth or 'quaternary' sector. This refers to the knowledge-based part of the economy and includes services such as education, information generation and sharing, research and development, consultation, culture and parts of government. This sector has been growing as a proportion of the tertiary sector.

The classification of production into primary, secondary and tertiary, and even quaternary, allows us to consider broad changes in the economy. However, if we require a more comprehensive analysis of the structure of industry and its changes over time, we need to classify firms into *particular* industries. The following section outlines the classification process used in the UK and the EU.

Classifying firms into industries

An ***industry*** refers to a group of firms that produce a particular category of product, such as the electrical goods industry, the holiday industry or the insurance industry. Industries can then be grouped together into broad ***industrial sectors***, such as manufacturing, construction or transport.

Classifying firms in this way helps us to analyse various trends in the economy, including areas of growth and decline and those parts of the economy with specific needs, such as training or transport infrastructure. Perhaps, most importantly, it helps economists and business people to understand and predict the behaviour of firms that are in direct competition with each other. In such cases, however, it may be necessary to draw the boundaries of an industry quite narrowly.

To illustrate this, take the case of the vehicle industry. The vehicle industry produces cars, lorries, vans and coaches. The common characteristic of these vehicles is that they are self-propelled road transport vehicles. In other words, we could draw the boundaries of an industry in terms of the broad physical or technical characteristics of the products it produces. The problem with this type of categorisation, however, is that these products may not be substitutes in an *economic* sense. If I am thinking of buying a new vehicle to replace my car, I am hardly likely to consider buying a coach or a lorry! If we are to group together products that are genuine competitors for each other, we will want to divide industries into more narrow categories, e.g. family cars, sports cars, etc.

On the other hand, if we draw the boundaries of an industry too narrowly, we may end up ignoring the effects of competition from another closely related industry. For example, if we are to understand the pricing strategies of electricity supply companies in the household market, it might be better to focus on the whole domestic fuel industry.

Thus how narrowly or broadly we draw the boundaries of an industry depends on the purposes of our analysis. You should note that the definition of an industry is based on the *supply* characteristics of firms, not on the qualities that consumers might attribute to products. For example, we classify cars into several groups according to size, price, engine capacity, design, model (e.g. luxury, saloon, seven-seater and sports), etc. These are demand-side characteristics of motor cars determined by consumers' tastes. The government, on the other hand, will categorise a company such as Nissan as belonging to the 'motor car' industry because making cars is its principal activity, and it does this even though Nissan produces a variety of models each with numerous features to suit individual consumer needs.

Both demand- and supply-side measures are equally valid ways of analysing the competitive behaviour of firms, and governments will look at both when there is a particular issue of economic importance, such as a merger between car companies. However, the supply-side measure is more simply calculated and is less susceptible to change, thereby making it preferable for general use.

Standard Industrial Classification

The formal system under which firms are grouped into industries is known as the ***Standard Industrial Classification (SIC)***. It is divided into 21 sections, such as manufacturing, transport and storage, real estate activities and education and each section has its own divisions, such as manufacturing being divided into manufacture of food products, of textiles or basic metals. These divisions are then divided into groups, then into classes and even subclasses (as you can see in Case Study A2 on the student website). The case study also shows how the different sectors have grown over time.

Over the past 70 years, revisions have been made to the SIC in order to reflect changes in the UK's industrial structure, such as the emergence of new products and industries and to bring the UK and EU systems of industry classification into alignment.

Changes in the structure of the UK economy

We can use the SIC to consider how UK industry has changed over time, in terms of output and employment. Often, it can be very important to look at changes in output and employment within the sub-divisions of the SIC in order to identify whether whole sectors are experiencing changes or if changes are affecting specific parts of a sector.

For example, in the UK there has been significant growth in the output of the services industries, including financial services, though some parts of the retail banking sector have seen a decline in employment due to technological change (fewer counter staff are required in high street banks, given the

Definitions

Industry A group of firms producing a particular product or service.

Industrial sector A grouping of industries producing similar products or services.

Standard Industrial Classification (SIC) The name given to the formal classification of firms into industries used by the government in order to collect data on business and industry trends.

growth in cash machines, credit cards, etc.). Figure 1.2 shows that manufacturing has seen a general decline in employment, as the UK has moved towards the tertiary sector, though some sub-divisions within manufacturing have seen growth, such as instruments and electrical engineering.

We can also use the SIC to consider which sectors of the economy are particularly susceptible to the strength of the economy. For example, construction and real estate tend to experience significant growth in employment during periods of economic growth and falls in employment during periods of economic decline.

The SIC also allows us to consider wider issues, such as ***industrial concentration***. This provides business economists with information about the structure of an industry, in terms of whether it is dominated by a few large firms (those employing 250 or more people), such as the electricity, gas and mining sectors, or if an industry is comprised of lots of small and medium-sized enterprises (SMEs). As we will see in the next section and at many other points throughout this book, the structure of an industry is an important determinant of firm behaviour and market outcomes.

Pause for thought

Give some examples of things we might learn about the likely behaviour and performance of businesses in an industry by knowing something about the industrial concentration of that industry.

Definition

Industrial concentration The degree to which an industry is dominated by large business enterprises.

1.3 THE DETERMINANTS OF BUSINESS PERFORMANCE

Structure–conduct–performance

KI 1 p 11

It should be apparent from our analysis thus far that business performance is strongly influenced by the market structure within which the firm operates. This is known as the *structure–conduct–performance paradigm*.

The structure of an industry depends on many factors. Some concern consumer demand, such as consumer tastes and whether there are close substitute products. Others concern production (supply), such as technology and the availability of resources.

These factors determine the competitiveness of an industry and influence firms' behaviour, as a business operating in a highly competitive market structure will conduct its activities differently from a business in a market with relatively few competitors. For example, the more competitive the market, the more aggressive the business may have to be in order to sell its product and remain competitive. The less competitive the market, the greater the power that a firm may have to increase prices and the greater is the chance that collusion between producers might be the preferred strategy, as a means of reducing the uncertainty and costs of any degree of competition.

Such conduct will, in turn, influence how well businesses perform. Performance can be measured by several different indicators, such as profitability, market share or growth in market share, and changes in share prices, especially relative to those of other firms in the industry, to name some of the most commonly used.

Throughout the text, we will see how market structure affects business conduct, and how business conduct affects business performance. Chapters 11, 12 and 21 are particularly relevant here.

It would be wrong, however, to argue that business performance is totally shaped by external factors such as market structure. In fact, the internal aims and organisation of business may be very influential in determining success.

Internal aims and organisation

Economists traditionally have assumed that businesses aim to maximise their profits. This traditional 'theory of the firm' shows the output that a firm should sell and at what price, if its objective is to make as much profit as possible.

Although this is still the case for many firms, as businesses have grown and become increasingly complex, more specialist managers have been employed to make the day-to-day decisions. This complexity of organisation makes the assumption of profit maximisation too simplistic in many cases.

With complex products and production lines, we have seen the emergence of increasingly distinct groups within firms, including the owners (shareholders) and the managers who are employed for their specialist knowledge. The problem is that the objectives of managers and owners may well differ and are often in conflict.

KI 7 p 30

The owners of a business may want to maximise profits to increase their dividends. This could involve a relatively high price and low sales. However, the managers may want to maximise sales and reduce prices to achieve this goal, or may have different goals entirely, especially if they do not receive any share of the profit. Their actions may reduce profits, creating a conflict between objectives.

Understanding these possible conflicts is crucial when trying to establish the objectives of a business. Whose objectives are being pursued? We will look at these conflicts and solutions in Chapters 3 and 13.

It is not only the aims of a business that affect its performance. Performance also depends on the following:

- *Internal structure.* The way in which the firm is organised (e.g. into departments or specialised units) will affect its costs, its aggressiveness in the market, its willingness to innovate, etc.
- *Information.* The better informed a business is about its markets, about its costs of production, about alternative techniques and about alternative products it could make, the better will it be able to fulfil its goals.
- *The competence of management.* The performance of a business will depend on the skills, experience, motivation, dedication and sensitivity of its managers.
- *The quality of the workforce.* The more skilled and the better motivated is a company's workforce, the better will be its results.
- *Systems.* The functioning of any organisation will depend on the systems in place: information systems, systems for motivation (rewards, penalties, team spirit, etc.), technical systems (for sequencing production, for quality control, for setting specifications), distributional systems (transport, ordering and supply), financial systems (for accounting and auditing), and so on.

We shall be examining many of these features of internal organisation in subsequent chapters.

Pause for thought

Other than profit and sales, what other objectives might managers have and how would you expect this to affect the price charged and output sold?

SUMMARY

1a Business economics is about the study of economic decisions made by business and the influences upon this. It is also concerned with the effects that this decision making has upon other businesses and the performance of the economy in general.

1b The business environment refers to the environment within which business decision making takes place. When analysing a business's environment it has been traditional to divide it into four dimensions: political, economic, social and technological (PEST). It is common practice nowadays, however, to add a further three dimensions: environmental, ethical and legal (STEEPLE).

1c The economic dimension of the business environment is divided into two: the microeconomic environment and the macroeconomic environment. The microenvironment concerns factors specific to a particular firm in a particular market. The macroenvironment concerns how national and international economic circumstances affect all business, although to different degrees.

2a Production is divided into primary, secondary, tertiary or quaternary. In most advanced countries, the tertiary and quaternary sectors have grown relative to the secondary sector.

2b Firms are classified into industries and industries into sectors. Such classification enables us to chart changes in industrial structure over time and to assess changing patterns of industrial concentration, its causes and effects.

3 The performance of a business is determined by a wide range of both internal and external factors, such as business organisation, the aims of owners and managers, and market structure.

REVIEW QUESTIONS

1 Assume you are a Japanese car manufacturer with a plant located in the UK and are seeking to devise a business strategy for the twenty-first century. Conduct a STEEPLE analysis on the UK car industry and evaluate the various strategies that the business might pursue.

2 What is the Standard Industrial Classification (SIC)? In what ways might such a classification system be useful? Can you think of any limitations or problems such a system might have over time?

3 Into which of the three sectors would you put (a) the fertiliser industry; (b) a marketing agency serving the electronics industry?

4 Consider a country other than the UK and investigate the changes in its industrial structure. Are the changes similar to or different from those in the UK?

5 Outline the main determinants of business performance. Distinguish whether these are micro- or macroeconomic.

Chapter 2

Economics and the world of business

Business issues covered in this chapter

- How do economists set about analysing business decision making?
- What are the core economic concepts that are necessary to understand the economic choices that businesses have to make, such as what to produce, what inputs and what technology to use, where to locate their production and how best to compete with other firms?
- What is meant by 'opportunity cost'? How is it relevant when people make economic choices?
- What is the difference between microeconomics and macroeconomics?

2.1 WHAT DO ECONOMISTS STUDY?

You may never have studied economics before and, yet, as individuals, we are constantly facing economic problems and making economic decisions. 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?

Traditional and social media are full of stories relating to the economy and to particular economic issues, such as price changes, new products, the effects of globalisation, changes in interest rates, government policy, the state of public finances, fluctuations in exchange rates and changes in the performance of the economy. All of these events and more are relevant to our lives and directly impact businesses of all sizes.

Furthermore, with recent events, such as the financial crisis, the UK's vote to leave the EU, changes in US politics, calls for greater protectionism, growing environmental concerns and questions of inequality, interest in economics has grown.

Therefore, anybody studying economics is doing so at incredibly interesting, if not turbulent, times. In addition,

there continues to be a lively debate among economists about the discipline: a debate fuelled initially by the financial crisis. This text aims to give you a better understanding of the economic influences on business in a dynamic world.

Tackling the problem of scarcity

In the previous chapter we looked at various aspects of the business environment and the influences on firms. We also looked at some of the economic problems that businesses face. But what contribution can economists make to the analysis of these problems and to recommending solutions?

To answer this question we need to go one stage back and ask what it is that economists study in general. What is it that makes a problem an *economic* problem? The answer is that there is one central problem faced by all individuals, firms, governments and in all societies, no matter how rich they are. From this one problem stem all the other economic problems we will be looking at throughout this book. This is the problem of ***scarcity***.

Would you like more money? Your answer is probably yes, as this will mean you can buy more goods and services. And it does not matter how wealthy you are: almost everyone will answer yes! Consumer wants are virtually unlimited.

The production of goods and services involves the use of inputs, or ***factors of production*** as they are often called. There are three broad types of inputs:

- Human resources: ***labour***. The labour force is limited both 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 themselves have had to be 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.

As all of these resources are limited, this means that, at any one time, the world can produce only a limited amount of goods and services.

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 2

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 afford a second Ferrari. But economists do not claim that we all face an *equal* problem of scarcity. The point is that people, both rich and poor, want more than they can have and this will cause them to behave in certain ways. Economics studies that behaviour.

Pause for thought

If we would all like more money, why doesn't the government or central bank print a lot more? Could this solve the problem of scarcity 'at a stroke'?

Two of the key elements in satisfying wants are, therefore, ***consumption*** and ***production***. As far as consumption is concerned, economics studies how much the population spends; what the pattern of consumption is in the economy; and how much people buy of particular items. The business economist, in particular, studies consumer behaviour; how sensitive consumer demand is to changes in prices, advertising, fashion and other factors; and how the firm can seek to persuade the consumer to buy its products.

As far as production is concerned, economics studies how much the economy produces in total; what influences the rate of growth of production; and why the production of some goods increases and the production of others falls. The business economist tends to focus on the role of the firm in this process: what determines the output of individual businesses and the range of products they produce; what techniques firms use and why; and what determines their investment decisions and how many workers they employ.

We will be studying the way in which firms use their resources to produce goods and services and how consumers make their choices given the constraints they face. Economics therefore studies choices and behaviour which, in one way or another, are related to consumption and production.

Definitions

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

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.

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

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

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 simply would demand and consume whatever they wanted. Such wants are virtually boundless: perhaps only limited by people's imagination.

Supply, on the other hand, is limited. The amount that firms can supply depends on the resources and technology available .

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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: *aggregate* demand will need to be balanced against *aggregate* supply. In other words, 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, as must the demand and supply of TVs, cars, houses and bus journeys.

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.

Dividing up the subject

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

- ***Microeconomics*** examines the individual parts of the economy. It is concerned with the factors that determine the demand and supply of particular goods and services and resources: cars, butter, clothes and haircuts; electricians, shop assistants, blast furnaces, computers and oil. It explores issues in competition between firms and the rationale for trade.
- ***Macroeconomics*** examines the economy as a whole. It is thus concerned with ***aggregate demand*** and ***aggregate supply***. By 'aggregate demand' we mean the total amount of spending in the economy, whether by consumers, by overseas customers 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.

Business economics, because it studies firms, is concerned largely with microeconomic issues. Nevertheless, given that businesses are affected by what is going on in the economy as a whole, it is still important for the business economist to study the macroeconomic environment and its effects on individual firms.

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.

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

Aggregate demand (*AD*) Total spending on goods and services made in the economy. It consists of four elements: consumer spending (C), investment (I), government spending (G) and the expenditure on exports (X), less any expenditure on foreign goods and services (M): $AD = C + I + G + X - M$.

Aggregate supply The total amount that firms plan to supply at any given level of prices.

2.2 BUSINESS ECONOMICS: MICROECONOMIC CHOICES

Microeconomics and choice

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Scarce resources mean that 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, given that there are not enough resources to produce all the things that people desire? How many cars, how much wheat, how much insurance, how many rock concerts, etc. will be produced?
- *How* are things going to be produced, given that there is normally more than one way of producing things? 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 is the nation's income going to be distributed? After all, the higher your income, the more you can consume

of the nation's output. What will be the wages of farm workers, printers, cleaners and accountants? How much will pensioners receive? How much profit will owners of private companies receive or will state-owned industries make? How will goods and services be allocated?

All societies have to make these choices, whether they be made by individuals, by groups or by the government. These choices can be seen as *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 fewer 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***.

KEY IDEA 3

The opportunity cost of something is what you give up to get it/do it. In other words, it is cost measured in terms of the best alternative forgone.

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.

Rational choices

Economists 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 shopping and you want to buy a loaf of bread. Do you spend a lot of money and buy a high-quality, organic hand-crafted loaf, or do you buy a cheap factory-produced loaf? To make a rational (i.e. sensible) decision, you will need to weigh up the costs and benefits of each alternative. The hand-crafted loaf 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 one, 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.

Pause for thought

Assume that you are looking for a job and are offered two. One is more pleasant to do, but pays less. How would you make a rational choice between the two jobs?

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 firm 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 earns a profit.

KEY IDEA 4

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).

In the more complex situation of deciding which model of car to produce, or how many of each model, the firm must weigh up the relative benefits and costs of each: i.e. it will want to produce the most profitable product mix.

Marginal costs and benefits

In economics we argue that rational choices involve weighing up ***marginal costs*** and ***marginal benefits***. These are the costs and benefits of doing a little bit more or a little bit less

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Definitions

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.

Marginal costs The additional cost 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.

BOX 2.1 WHAT, HOW AND FOR WHOM

Who answers these questions?

As we have seen, in microeconomics there are three key questions: what to produce; how to produce; for whom to produce. These questions have to be answered because of the problem of scarcity. However, the scarcity problem does not tell us anything about who answers these questions and how the problems are addressed.

In some economies, it is the government or some central planning authority that answers these questions. This is known as a ***planned*** or ***command economy***. At the other end of the spectrum is a ***free-market*** or ***laissez-faire economy***, where there is no government intervention and it is individuals and firms who answer the questions above.

In practice, all economies are ***mixed economies***, where decisions are taken by government, individuals and firms. It is the degree of government intervention that distinguishes different economic systems and determines how far towards each end of the spectrum an economy lies.

In countries such as North Korea, China or Cuba, the government has a large role, whereas in the USA, Ireland, Switzerland and various other Western economies, the government plays a much smaller role. Furthermore, governments differ in the type of intervention, such as regulation, taxation and public ownership, so any comparisons between countries and the amount of intervention should be made with caution.

Over the past 30 years, there has been a general shift towards the free-market end of the spectrum, as more and more countries have moved away from central planning. So, why are more countries increasingly relying on the free market to answer the questions of what, how and for whom to produce?

The command economy

In a command economy, it is the role of the state to allocate resources. It will decide how much should be invested and in what industries. It may tell each industry and individual firms which goods to produce, how much to produce and how they should be producing: e.g. the technology to use and labour requirements.

The state will also have a role in deciding how output should be distributed between consumers and the payments received for resources, such as labour, i.e. the 'for whom' question. Government may distribute goods based on its judgement of its people's needs; it could distribute goods and services directly through rationing or could determine the distribution of income and perhaps prices to influence consumer expenditure.

Although countries have moved more towards the free-market, there are advantages of this type of economic system. Governments can achieve high rates of growth through its allocation of resources to investment and also avoid unemployment by dictating the allocation of labour. Goods and services such as education, policing and national defence would be provided and governments could take account of 'bad' things, such as pollution, which is unlikely to happen in an economy where there is no government intervention. However, there is likely to be a significant amount of bureaucracy and the administrative costs of a command economy are prohibitive, as modern economies are very complex, meaning that planning would require a huge amount of complex information.

Furthermore, incentives may be very limited. For example, if income is distributed relatively equally between individuals,

Definitions

Planned or **command economy** An economy where all economic decisions are taken by the central (or local) authorities.

Free-market or **laissez-faire economy** An economy where all economic decisions are taken by individual households and firms, with no government intervention.

Mixed economy An economy where economic decisions are made partly through the market and partly by the government.

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. Perhaps you will set the alarm for 7.00. 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 or even 8.00. 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.

this could reduce the incentive to work harder or to train. Or if firms are rewarded by meeting targets for output, they may reduce the quality of goods in order to meet the targets.

Consumers and producers may lack individual liberty, being told what to produce and consume and this, in turn, could create shortages and surpluses. Government may dictate what is produced, but what happens if consumers don't want the goods that the government requires firms to produce? A shortage will emerge and, with the state setting prices, the price cannot adjust to eliminate the shortage. Conversely, too much of some goods may be produced, given consumer tastes, and, once again, the price cannot adjust to eliminate the surplus. In both cases, there is an inefficient use and allocation of resources.

Most of these problems were experienced in the former Soviet Union and the other Eastern bloc countries, and were part of the reason for the overthrow of their communist regimes.

The free-market economy

In a free-market economy, it is the firms who decide what to produce and they will respond to consumer tastes. As consumer demand or supply conditions change, prices can adjust. A shortage will push prices up and a surplus will push them down. And so, unlike in a command economy, shortages and surpluses can be eliminated.

This is one of the main advantages of a free-market economy. Resources will be used more efficiently, as firms and consumers have an incentive to act in their own self-interest. And these incentives can help to minimise the economic problem of scarcity. It also has the advantage of allowing individuals to have their liberty and make their own decisions and, because planning is not required, the bureaucracy and administrative costs are lower.

Despite the movement towards this type of economic system, it does still have its disadvantages. Without any government, some goods and services may not be produced, such as national defence and street lights. Others may be under- or overproduced, including education and those goods whose manufacture creates pollution respectively. Unemployment may be high and society could be very unequal, perhaps through some firms dominating the market and earning substantial profits, and those people with power and influence exploiting those without.

The mixed economy

Given that there are disadvantages to both a free-market and a command economy, it is hardly surprising that all economies are mixed. Some goods/services are left entirely to the free market, where producers respond to signals from consumers when deciding what to produce and how much to charge. Other goods and services have some light-touch intervention, perhaps through regulation of price, quality or information – we often see this in utilities, such as energy or water. However, as we saw in the section above, a free-market economy may not produce some goods and services at all and it is in these cases where there may be a much larger role for the government to ensure an efficient allocation of resources, for example through the provision of health care or defence. But it is worth bearing in mind that while markets can fail, so can governments. We consider various forms of government intervention in Chapters 20, 21 and 22.

1. *Draw a spectrum of economic systems ranging from command economy to free-market economy. Pick some countries and decide where you think they lie. Think about the role of government in each country and in which areas the government intervenes.*
2. *How would the positioning of countries along the spectrum of economic systems change if you were considering the 1980s?*

Research the structure of the Chinese economy. What is the balance between planning and private decision making by companies?

Microeconomic choices and the firm

All economic decisions made by firms involve choices. The business economist studies these choices and their results.

We will look at the choices of how much to produce, what price to charge the customer, how many inputs to use, what types of input to use and in what combination. Firms will also need to make choices that have a much longer-term effect, such as whether to expand the scale of its operations, whether to invest in new plants, engage in research and development, whether to merge with or take over another company, diversify into other markets, or increase the amount it exports.

The right choices (in terms of best meeting the firm's objectives) will vary according to the type of market in which the firm operates, its predictions about future demand, its degree of power in the market, the actions and reactions of competitors, the degree and type of government intervention, the current tax regime, the availability of finance, and so on. In short, we will be studying the whole range of economic choices made by firms and how they may change in different scenarios.

In all these cases, the owners of firms will want the best possible choices to be made: i.e. those choices that best meet the objectives of the firm. Making the best choices, as we have seen, will involve weighing up the marginal benefits against the marginal opportunity costs of each decision.

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BOX 2.2 THE OPPORTUNITY COSTS OF STUDYING ECONOMICS

What are you sacrificing?

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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 a choice to do something, we are, in effect, rejecting doing some alternative – after all, we can't do everything. This alternative forgone is the opportunity cost of our action.

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 of economics.

Buying a textbook costing £44.49

This does involve a direct money payment. What you have to consider is the alternatives you could have bought with the £44.49. 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

You may or may not be paying course fees. Even if you are, there is no extra (marginal) monetary cost in coming to classes once the fees have been paid. You will not get a refund by skipping classes!

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 sitting drinking coffee with friends, 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?*

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 expenses;
- transport;
- food, entertainment 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:

- tuition fees;
- books, stationery, etc.;
- additional accommodation and transport expenses over what would have been incurred by taking the job;
- wages that would have been earned in the job less any student grant or loan interest subsidy received.

Note that tuition fees would not be included if they had been paid by someone else: for example, as part of a scholarship or a government grant.

3. *Why is the cost of food not included?*
4. *Make a list of the benefits of higher education.*
5. *Is the opportunity cost to the individual of attending higher education different from the opportunity costs to society as a whole?*

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

2.3 BUSINESS ECONOMICS: THE MACROECONOMIC ENVIRONMENT

KI 2 p 17

Because things are scarce, societies are concerned that their resources are being used as *fully as possible,* and that over time the national output should *grow*.

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 (e.g. in the 1930s, the early 1980s, the early 1990s and the late 2000s). Furthermore, attempts by governments to stimulate growth and employment often have resulted in inflation and a large rise in imports. Even when societies do achieve growth, it can be short lived. Economies typically experience cycles, where periods of growth alternate with periods of stagnation, such periods varying from a few months to a few years.

Macroeconomics, then, studies the determination of national output and its growth over time. It also studies the problems of stagnation, unemployment, inflation, the balance of international payments and cyclical instability, and the policies adopted by governments to deal with these problems.

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 balance of payments 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. After all, if demand is high, they can probably still sell as much as before (if not more) even at the higher prices, and thus make more profit. If firms in general put up their prices, inflation results.
- ***Balance of trade deficits*** are the excess of imports over exports. If aggregate demand rises, part of the extra demand will be spent on imports, such as US tablets, Japanese MP3 players, German cars and Chilean wine. Also, if inflation is high, home-produced goods will become uncompetitive with foreign goods. We are likely, therefore, to buy more 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.

- A ***recession*** is defined as where output in the economy declines for two consecutive quarters or more: in other words, where growth becomes negative over that time. A recession is associated with a low level of consumer spending. If people spend less, shops are likely to find themselves with unsold stocks. As a result, they will buy less from the manufacturers, which in turn will cut down on production.
- ***Unemployment*** is likely to result from cutbacks in production. If firms are producing less, they will need a smaller labour force.

Government 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 creating more incentives for businesses to innovate.

Macroeconomic policy and its effects on business

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Both demand-side and supply-side policy will affect the business environment. Take demand-side policy. If there is a recession, the government might try to boost the level of spending (aggregate demand) by cutting taxes, increasing government spending or reducing interest rates. If consumers respond by purchasing more, then this clearly will have an effect on businesses. So firms will want to be stocked up ready for an upsurge in consumer demand. Therefore, they will want to estimate the effect on their own particular market of a boost to aggregate demand. Studying the macroeconomic environment and the effects of government policy, therefore, is vital for firms when forecasting future demand for their product.

It is the same with supply-side policy. The government may introduce tax incentives for firms to invest, or for people to work harder; it may introduce new training schemes; it may build new motorways. These policies will affect firms' costs and hence the profitability of production. So, again, firms will want to predict how government policies are likely to affect them, so that they can plan accordingly.

The circular flow of income

One of the most useful diagrams for illustrating the macroeconomic environment and the relationships between producers and consumers is the *circular flow of income* diagram. This is illustrated in Figure 2.1.

The consumers of goods and services are labelled 'households'. Some members of households, of course, are also workers and, in some cases, are the owners of other factors of production too, such as land. The producers of goods and services are labelled 'firms'.

Firms and households are in a twin 'demand and supply' relationship.

First, on the right-hand side of the diagram, households demand goods and services, and firms supply goods and services. In the process, exchange takes place. In a money economy (as opposed to a ***barter economy***), firms exchange goods and services for money. In other words, money flows from households to firms in the form of consumer expenditure, while goods and services flow the other way – from firms to households.

Definitions

Rate of inflation (annual) 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 a few months or more. The official definition is where real GDP declines for two or more consecutive quarters.

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

Barter economy An economy where people exchange goods and services directly with one another without any payment of money. Workers would be paid with bundles of goods.

BOX 2.3 LOOKING AT MACROECONOMIC DATA

Assessing different countries' macroeconomic performance

	Unemployment (% of workforce)				Inflation (%)				Economic growth (%)				Balance on current account[1] (% 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	1.6	2.4	5.6	2.7	4.0	4.3	10.1	4.4	3.1	0.3	1.1	−0.1	0.7
1971–80	6.4	1.8	2.2	3.8	7.0	8.8	5.2	13.1	3.2	4.4	2.9	2.1	−0.4	−0.6	−0.3	−0.4
1981–90	7.1	2.5	6.0	9.6	4.4	1.8	2.6	6.1	3.3	4.6	2.3	2.9	−3.0	2.6	2.9	−1.1
1991–2000	5.6	3.3	8.1	7.9	2.1	0.5	1.8	2.8	3.4	1.3	2.0	2.5	−2.7	2.7	−1.4	−1.3
2001–10	6.1	4.7	8.8	5.6	2.0	−0.8	1.3	1.7	1.6	0.6	0.9	1.5	−4.7	3.7	4.7	−3.4
2011–19[2]	5.9	3.5	4.6	5.9	1.6	0.2	1.3	2.0	2.1	1.1	1.8	1.8	−1.7[3]	2.8	8.4	−4.3

Notes: [1] The current account balance is the balance of trade plus other income flows from and to abroad.
[2] 2018 and 2019 figures based on forecasts.
[3] USA data average 2011–17 only.
Source: Based on *Statistical Annex of the European Economy*, EC, 2018.

Rapid economic growth, low unemployment, low inflation and the avoidance of balance of trade deficits are the 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 government macroeconomic policies seems decidedly 'mixed'.

The table shows data for the USA, Japan, Germany and the UK from 1961 to 2019.

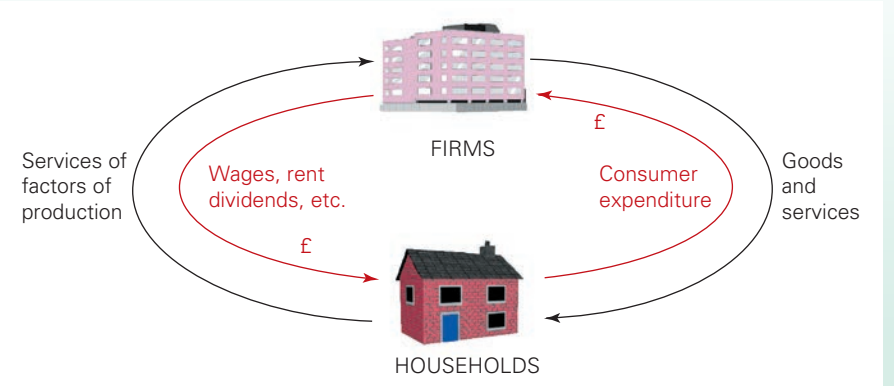
If the government does not have much success in managing the economy, it could be for the following reasons:

- 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 forecasts.
- Governments have not heeded the advice of economists.
- There is little else that governments could have done: the problems were insoluble.

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 this period of just over 50 years?*

Choose one other EU country and, using the data source for the table above, compare its economic performance since 1981 with that of the other four countries in the table. You should look at each of the four indicators.

Figure 2.1 Circular flow of goods and incomes



This coming together of buyers and sellers is known as a ***market*** – whether it be a street market, a shop, an auction, a mail-order system or whatever. Thus we talk about the market for apples, the market for oil, for cars, for houses, for televisions, and so on.

Second, firms and households come together in the market for factors of production. This is illustrated on the left-hand side of the diagram. This time the demand and supply roles are reversed. Firms demand the use of factors of production owned by households – labour, land and capital. Households supply them. Thus the services of labour and other factors flow from households to firms and, in exchange, firms pay households money – namely, wages, rent, dividends and interest. Just as we referred to particular goods markets, so we can also refer to particular factor markets – the market for bricklayers, for secretaries, for hairdressers, for land, etc.

There is, thus, a circular flow of incomes. Households earn incomes from firms and firms earn incomes from households. The money circulates. There is also a circular flow of goods and services, but in the opposite direction. Households supply factor services to firms, which then use them to supply goods and services to households.

Macroeconomics is concerned with the total size of the flow. If consumers choose to spend more, firms will earn more from the increased level of sales. They will probably respond by producing more or raising their prices, or some combination of the two. As a result, they will end up paying more out to workers in the form of wages, and to shareholders in the form of profits. Households will thus gain additional income. This will then lead to an additional increase in consumer spending and, therefore, a further boost to production.

The effect does not go on indefinitely, however. When households earn additional incomes, not all of it is spent: not all of it recirculates. Some of the additional income will be saved; some will be paid in taxes; and some will be spent on imports (and thus will not stimulate domestic production). The bigger these 'withdrawals', as they are called, the less production will carry on being stimulated.

It is important for firms to estimate the eventual effect of an initial rise in consumer demand (or a rise in government expenditure, for that matter). Will there be a boom in the economy or will the rise in demand merely fizzle out? A study of macroeconomics helps business people to understand the effects of changes in aggregate demand and the effects that such changes will have on their own particular business. It helps with business planning.

We examine the macroeconomic environment and the effects on business of macroeconomic policy in Chapters 26–32.

Definition

Market The interaction between buyers and sellers.

2.4 TECHNIQUES OF ECONOMIC ANALYSIS

When students first come to economics, many are worried about the amount of mathematics they will encounter. Will it all be equations and graphs, with lots of calculations to do and difficult theories to grasp?

Economics can involve a lot of mathematics, but it doesn't have to and, as you will see if you glance through the pages of this text, there are many diagrams and tables, but only a few equations. The mathematical techniques that you will have to master are relatively limited, but they are ones that we use many times in many different contexts. You will find that, if you are new to the subject, you will very quickly become familiar with these techniques. If you are not new to the subject, perhaps you could reassure your colleagues who are!

In the two Mathematical Appendices (A and B) on the student website, you will find a guide to some of the simple techniques that economists use. We suggest that you look through them at this stage. However, the first one, in particular, should provide a useful reference throughout your study of the book.

SUMMARY

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

1b The subject of economics usually is divided into two main branches: macroeconomics and microeconomics.

2a Microeconomics deals with the activities of individual units within the economy: firms, industries, consumers, workers, etc. Because resources are scarce, people have to make choices. Society has to choose by some means or other *what* goods and services to produce, *how* to produce them and *for whom* to produce them. Microeconomics studies these choices.

2b Rational choices involve weighing up the marginal benefits of each activity against its marginal opportunity costs. If the marginal benefit exceeds the marginal cost, it is rational to choose to do more of that activity.

2c Businesses are constantly faced with choices: how much to produce, what inputs to use, what price to charge, how much to invest, etc. We will study these choices.

3a Macroeconomics deals with aggregates such as the overall levels of unemployment, output, growth and prices in the economy.

3b The macroeconomic environment will be an important determinant of a business's profitability.

REVIEW QUESTIONS

1 Virtually every good is scarce in the sense we have defined it. There are, however, a few exceptions. Under *certain circumstances,* water and air are not scarce. When and where might this be true for (a) water and (b) air? Why is it important to define water and air very carefully before deciding whether they are scarce or abundant? Under circumstances where they are *not* scarce, would it be possible to charge for them?

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

a) Inflation.
b) Low wages in certain service industries.
c) The rate of exchange between the pound and the euro.
d) Why the price of cabbages fluctuates more than that of cars.
e) The rate of economic growth this year compared with last year.
f) The decline of traditional manufacturing industries.

3 Make a list of three things you did yesterday. What was the opportunity cost of each?

4 A washing machine manufacturer is considering whether to produce an extra batch of 1000 washing machines. How would it set about working out the marginal opportunity cost of so doing?

5 How would a firm use the principle of weighing up marginal costs and marginal benefits when deciding whether (a) to take on an additional worker; (b) to offer overtime to existing workers?

6 We identified three categories of withdrawal from the circular flow of income. What were they? There are also three categories of 'injection' of expenditure into the circular flow of income. What do you think they are?

3 Chapter

Business organisations

Business issues covered in this chapter

- How are businesses organised and structured?
- What are the aims of business?
- Will owners, managers and other employees necessarily have the same aims? How can those working in the firm be persuaded to achieve the objectives of their employers?
- What are the various legal categories of business and how do different legal forms suit different types of business?
- How do businesses differ in their internal organisation? What are the relative merits of alternative forms of organisation?

If you decide to grow strawberries in your garden or allotment, or if you decide to put up a set of shelves in your home, then you have made a production decision. Most production decisions, however, are not made by the individuals who will consume the product. Most production decisions are made by firms: whether by small one-person businesses or by giant multinational corporations, such as General Motors or Sony.

In this chapter we are going to investigate the firm: what is its role in the economy; what are the goals of firms; how do firms differ in respect to their legal status; and in what ways are they organised internally?

3.1 THE NATURE OF FIRMS

As firms have grown and become more complex, so the analysis of them has become more sophisticated. They are seen less and less like a 'black box', where inputs are fed in one end, used in the most efficient way and then output emerges from the other end. Instead, the nature and organisation of firms are seen to be key determinants of how they behave and of the role they play in respect to resource allocation and production.

Complex production

Very few goods or services are produced by one person alone. Most products require a complex production process that will involve many individuals. But how are these individuals to be organised in order to produce such goods and services? Two very different ways are:

- within markets via price signals;
- within firms via a hierarchy of managerial authority.

In the first of these two ways, each stage of production would involve establishing a distinct contract with each separate producer. Assume that you wanted to produce a woollen jumper. You would need to enter a series of separate contracts: to have the jumper designed, to buy the wool, to get the wool spun, to get it dyed, to have the jumper knitted. There are many other stages in the production and distribution process that might also be considered. With each contract a price will have to be determined, and that price will reflect current market conditions. In most cases, such a form of economic organisation would prove to be highly inefficient and totally impractical. Consider the number of contracts that might be necessary if you wished to produce a motor car!

With the second way of organising production, a single ***firm*** (or just a few firms) replaces the market. The co-ordination of the conversion of inputs into output takes place *within* the firm: not through the market mechanism, but by management issuing orders as to what to produce and the manner in which this is to take place. Hence the distinguishing feature of the firm is that the price mechanism plays little role in allocating resources within it.

The benefits of organising production within firms

The function of the firm is to bring together a series of production and distribution operations, doing away with the need for individuals to enter into narrowly specified contracts. If you want a woollen jumper, you go to a woollen jumper retailer.

According to Ronald Coase,[1] the key advantage of organising production and distribution through firms, as opposed to the market, is that it involves lower ***transaction costs***. Transaction costs are the costs of making economic arrangements about production, distribution and sales.

KEY IDEA 5

Transaction costs. **The costs incurred when firms buy inputs or services from other firms as opposed to producing them themselves. They include the costs of searching for the best firm to do business with, the costs of negotiating, drawing up, monitoring and enforcing contracts, and the costs of transporting and handling products between the firms. These costs should be weighed against the benefits of outsourcing through the market.**

The transaction costs associated with individual contracts made through the market are likely to be substantial for the following reasons:

- The *uncertainty* in framing contracts. It is unlikely that decision makers will have perfect knowledge of their production processes, especially given their complexity. Given, then, that such contracts are established on imperfect information, they are consequently subject to error.
- The *complexity* of contracts. Many products require multiple stages of production. The more complex the product, the greater the number of contracts that would have to be made. The specifications within contracts may also become more complex, requiring high levels of understanding and knowledge of the production process, which raises the possibility of error in writing them. As contracts become more complex, they raise a firm's costs of production and make it more difficult to determine the correct price for a transaction.
- *Monitoring* contracts. Entering into a contract with another person may require you to monitor whether the terms of the contract are fulfilled. This may incur a significant time cost for the individual, especially if a large number of contracts require monitoring.
- *Enforcing* contracts. If one party breaks its contract, the legal expense of enforcing the contract or recouping any losses may be significant. Many individuals might find such costs prohibitive and, as a consequence, be unable to pursue broken contracts through the legal system.

What is apparent is that, for most goods, the firm represents a superior way to organise production. The actions of management replace the price signals of the market and overcome many of the associated transaction costs.

Goals of the firm

As we saw in Chapter 1 (page 14), economists traditionally assume that firms aim to maximise profits. But, while critics of the traditional theory tend to accept that this is true of the *owners* of firms, are the owners the people who actually make the decisions about how much to produce and at what price? In many firms, the answer is 'no'.

The divorce of ownership from control

As businesses steadily grew over the nineteenth and twentieth centuries, many owner-managers were forced, however reluctantly, to devolve some responsibility for the running of the business to other individuals. These new managers brought with them technical skills and business expertise, a crucial prerequisite for a modern successful business enterprise.

The managerial revolution that was to follow, in which business owners (shareholders) and managers became

Definitions

Firm An economic organisation that co-ordinates the process of production and distribution.

Transaction costs The costs incurred when firms buy inputs or services from other firms as opposed to producing them themselves. They include the costs of searching for the best firm to do business with, the costs of drawing up, monitoring and enforcing contracts and the costs of transporting and handling products between the firms.

[1] Ronald H. Coase, 'The Nature of the Firm', ***Economica,*** Vol. 4, No. 16, Nov. 1937, pp. 386–405. See also: www.econlib.org/library/Enc/bios/Coase.html.

distinct groups, called into question what the precise goals of the business enterprise might now be. This debate was to be further fuelled by the growth of the ***joint-stock company*** (a structure first recognised in England in the sixteenth century) in which the ownership of the enterprise was progressively dispersed over a large number of shareholders. The growth in the joint-stock company was a direct consequence of business owners looking to raise large amounts of investment capital in order to maintain or expand business activity.

This twin process of managerial expansion and widening share ownership led Berle and Means[2] to argue that the *ownership* of stocks and shares in an enterprise no longer meant *control* over its assets. Subsequently, they drew a distinction between 'nominal ownership', namely getting a return from investing in a business, and 'effective ownership', which is the ability to control and direct the assets of the business. The more dispersed nominal ownership becomes, the less and less likely it is that there will be effective ownership by shareholders. (This issue will be considered in more detail in Chapter 13.)

The modern company is *legally* separate from its owners (as you will discover in section 3.2). Hence the assets are legally owned by the business itself. Consequently, the group *in charge* of the business is that which controls the use of these assets: i.e. the group that determines the business's objectives and implements the necessary procedures to secure them. In most companies this group is the managers.

Berle and Means argued that, as a consequence of this transition from owner to manager control, conflicts are likely to develop between the goals of managers and those of the owners. But what are the objectives of managers? Will they want to maximise profits or will they have some other aim?

Managers may want to maximise their *own* interests, such as pursuing higher salaries, greater power or prestige, greater sales, better working conditions or greater popularity with their subordinates. Different managers in the same firm may well pursue different aims. But these aims may conflict with the owners' aims of profit maximisation.

Managers will still have to ensure that *sufficient* profits are made to keep shareholders happy, but that may be very different from *maximising* profits. Alternative theories of the firm to those of profit maximisation, therefore, tend to assume that large firms are ***profit 'satisficers'***. That is, managers strive hard for a minimum target level of profit, but are less interested in profits above this level. (An article from Bloomberg considers some of the background to the theory and more recent evidence relating to Japanese scandals.)[3]

[2] Adolf A. Berle Jr. and Gardiner C. Means, *The Modern Corporation and Private Property* (Macmillan, 1932).

[3] Noah Smith, 'Japan Inc. scandals build a case for corporate reform'; *Bloomberg* (12 October 2017).

Such theories fall into two categories: first, those theories that assume that firms attempt to maximise some other aim, provided that sufficient profits are achieved; and second, those theories that assume that firms pursue a number of potentially conflicting aims, of which sufficient profit is merely one. (These alternative theories are examined more fully in Chapter 14.)

Pause for thought

Make a list of six possible aims that a manager of a high street department store might have. Identify some conflicts that might arise between these aims.

KEY IDEA 6

The nature of institutions and organisations is likely to influence behaviour. **There are various forces influencing people's decisions in complex organisations. Assumptions that an organisation will follow one simple objective (e.g. short-run profit maximisation) are thus too simplistic in many cases.**

The principal–agent relationship

Can the owners of a firm ever be sure that their managers will pursue the business strategy most appropriate to achieving the owners' goals (traditionally, profit maximisation)? This is an example of what is known as the ***principal–agent problem***.

One of the features of a complex modern economy is that people (principals) have to employ others (agents) to carry out their wishes. If you want to go on holiday, it is easier to go to a travel agent to sort out the arrangements than to do it all yourself. Likewise, if you want to buy a house, it is more convenient to go to an estate agent.

The crucial advantage that agents have over their principals is specialist knowledge and information. This is frequently the basis upon which agents are employed. For example, owners employ managers for their specialist knowledge of a market or their understanding of business practice. But this situation of ***asymmetric information*** – that one party (the agent) knows more than the other (the

Definitions

Joint-stock company A company where ownership is distributed between a large number of shareholders.

Profit satisficing Where decision makers in a firm aim for a target level of profit rather than the absolute maximum level. By not aiming for the maximum profit, this allows managers to pursue other objectives, such as sales maximisation or their own salary or prestige.

Principal–agent problem One where people (principals), as a result of lack of knowledge, cannot ensure that their best interests are served by their agents.

Asymmetric information A situation in which one party in an economic relationship knows more than another.

principal) – means that it will be very difficult for the principal to judge in whose interest the agent is operating. Are managers pursuing their own goals rather than the goals of the owner?

KEY IDEA 7

The principal–agent problem. **Where people (principals), as a result of a lack of knowledge, cannot ensure that their best interests are served by their agents. Agents may take advantage of this situation to the disadvantage of the principals.**

Principals may attempt to reconcile the fact that they have imperfect information and are, thus, in an inherently weak position, in the following ways:

- *Monitoring* the performance of the agent. Shareholders could monitor the performance of their senior managers through attending annual general meetings. The managers could be questioned by shareholders and, ultimately, replaced if their performance is seen as unsatisfactory.
- Establishing a series of *incentives* to ensure that agents act in the principals' best interest. For example, managerial pay could be closely linked to business performance (e.g. profitability). Schemes such as profit sharing encourage managers (agents) to act in the owners' (principals') interests, thereby aligning their objectives. However, this is likely to be more effective with a larger incentive: e.g. the larger the share in company profits, the more inclined managers will be to act in the owners' interests. However, the larger the incentive the more costly it is likely to be to the owners.

Pause for thought

Identify a situation where you, as a consumer, are in a principal–agent relationship with a supplier. How can you minimise the problem of asymmetric information in this relationship?

Within any firm there will exist a complex chain of principal–agent relationships – between workers and managers, between junior managers and senior managers, between senior managers and directors, and between directors and shareholders. All groups will hold some specialist knowledge that might be used to further their own distinct goals. Predictably, the development of effective monitoring and evaluation programmes and the creation of performance-related pay schemes have been two central themes in the development of business practices in recent years – a sign that the principal is looking to fight back.

Staying in business

Aiming for profits, sales, salaries, power, etc. will be useless if the firm does not survive! Trying to *maximise* any of the various objectives may be risky. For example, if a firm tries to maximise its market share by aggressive advertising or price cutting, it might invoke a strong response from its rivals. The resulting war may drive it out of business. Some of the managers may move easily to other jobs and actually may gain from the experience, but the majority are likely to lose. Concern with survival, therefore, may make firms cautious.

Not all firms, however, make survival the top priority. Some are adventurous and are prepared to take risks. Adventurous firms are most likely to be those dominated by a powerful and ambitious individual – an individual prepared to take gambles.

The more dispersed the decision-making power is in the firm, and the more worried managers are about their own survival, the more cautious are their policies likely to be: preferring 'tried and trusted' methods of production, preferring to stick with products that have proved to be popular, and preferring to expand slowly and steadily.

If a firm is too cautious, however, it may not survive. It may find that it loses market share to more innovative or aggressive competitors. Ultimately, a firm must balance caution against keeping up with competitors, ensuring that the customer is sufficiently satisfied and that costs are kept sufficiently low by efficient management and the introduction of new technology.

The efficient operation of the firm may be influenced strongly by its internal organisational structure. We will consider this in more detail (see section 3.3), but first we must consider how the *legal* structure of the firm might influence its conduct within the marketplace.

KI 6 p 29

Pause for thought

Why is a firm facing little competition from rivals likely to have higher profits, but also higher costs, than a firm facing intense competition?

3.2 THE FIRM AS A LEGAL ENTITY

KI 6 p 29

The legal structure of the firm is likely to have a significant impact on its conduct, and subsequent performance, within the marketplace. In the UK, there are several types of firm, each with a distinct legal status.

The sole proprietor

Here, the business is owned by just one person. Usually, such businesses are small, with only a few employees. Retailing, construction and farming are typical areas where sole

BOX 3.1 EXPLOITING ASYMMETRIC INFORMATION

Examples of the principal–agent relationship

The issue of asymmetric information and its implications for the principal–agent relationship is not just a problem within firms. It exists in many walks of life where two parties are involved in some sort of transaction, but where one party has more information than the other and it may be in their interests to use that extra information to gain an advantage.

Second-hand cars

Assume you want to buy a second-hand car and go to a second-hand car dealer. When looking at a particular car, you might look at the mileage, the upholstery and whether there are any scratches on the bodywork or any obvious damage. You'll ask about any problems or reliability issues.

But, even if you have expert knowledge about cars, the dealer will have much better information than you as to how good (or bad) it really is. They may 'neglect' to tell you about the rust on the underside of the car, the problems of starting it on a cold morning or its history of unreliability. By omitting certain bad things about the car, they will hope to gain a higher price and thus use the problem of asymmetric information to their advantage.

George Akerlof published a paper in the 1970s, entitled 'The Market for "Lemons"',[1] in which he considered the problem of asymmetric information in the market for used cars. In the paper, he showed how poor information on the part of customers can, in extreme circumstances, lead to the total unravelling of the market – second-hand car dealers consistently try to sell poor quality cars (or 'lemons') as 'reliable' ones and consumers, unable to distinguish poor quality cars, become increasingly mistrustful.

Elections

Whether it is at school, college, university or even in government, you need votes to win an election. Depeding on the context, there will be certain things that are more likely to lead to victory. Perhaps at school, it's campaigning for shorter days or no uniforms. At university, it might be about providing more contact with academic staff and, at a general election, it might be about redistributing income, protecting education or health care, or investing money in regeneration projects.

But here, too, there is a problem of asymmetric information. Whatever the campaign promises, the people seeking election (the agents) generally know better than the electorate (the principals) whether or not their manifesto is viable; whether they will stick to their promises or if they are merely promises to gain votes. There are countless past examples from across the world of broken promises.[2]

Internet dating

The world of online dating has grown significantly over the past few years, with more and more people taking to the web to find their perfect match. But here is another classic example of the problem of asymmetric information. Dating sites (so we're told!) require you to upload a picture and complete some general information about yourself: your likes, dislikes, height, age, education, salary, occupation, location, etc.

However, when you complete that information, only you know how much of it is completely true. There are, inevitably, certain characteristics that make people's profiles more attractive – perhaps you exaggerate your height or salary or take a few years off your age. Whatever 'white lies' you tell, you have much better information as to your own profile than those looking at it. Of course, the same applies to you when you accept a date with someone who has seen your profile – they have more information than you as to whether their picture is recent or taken a decade ago!

Interviews

When you apply for a job, you will probably write lots of wonderful things about yourself. If you are lucky enough to be invited for interview, you will, undoubtedly, repeat those things and elaborate on just how committed you would be if you were offered the job.

- Would you be willing to stay late, if it was required? Of course you would!
- What about coming in early or at weekends? No problem!
- Are you happy working as part of a team? You love working with others!
- Can you manage and prioritise a heavy workload? Efficiency is your middle name! And so on . . .

You say all of these things to impress the interview panel and thus increase your chances of getting the job. However, you know much better than the interviewers if you really mean these things. When it comes down to it, will you really come in at the weekend if you're not obliged to do so?

Asymmetric information creates an issue, as you, the interviewee, have much better information about your personality, your aims and commitment to the job, than the interviewers. Of course, they can and will ask for references, but hopefully you've been sensible enough to ask only those people who think well of you to supply them!

Give some other examples of where asymmetric information might cause problems for one party.

Consider your own interactions with other people over the past week. In which cases were you (a) the principal, (b) the agent, (c) neither as it was not a principal–agent interaction? In the cases of (a) and (b), to what extent did asymmetric information influence the nature and outcome of the interaction?

[1] G. Akerlof, 'The Market for "Lemons": Quality, Uncertainty and the Market Mechanism', *The Quarterly Journal of Economics,* Vol. 84, No. 3. (August 1970)

[2] See, for example, Stef W. Kight, '10 big broken promises of past presidents', *Axios* (2 May 2017) and Ryan Koronowski. 'Trump broke 80 promises in 100 days', *Think Progress* (29 April 2017).

proprietorships are found. Such businesses are easy to set up and may require only a relatively small initial capital investment. They may well flourish if the owner is highly committed to the business and can respond to changing market conditions. They suffer two main disadvantages, however:

- *Limited scope for expansion.* Finance is limited to what the owner can raise personally, e.g. through savings or a bank loan. Also there is a limit to the size of an organisation that one person can effectively control.
- *Unlimited liability.* The owner is personally liable for any losses that the business might make. This could result in the owner's house, car and other assets being seized to pay off any outstanding debts, should the business fail.

The partnership

This is where two or more people own the business. In most partnerships there is a legal limit of 20 partners. Partnerships are common in the same fields as sole proprietorships. They are also common in the professions: solicitors, accountants, surveyors, etc. With more owners, there is more scope for expansion, as extra finance can be raised. Also, as each partner can specialise in one aspect of the business, larger organisations are often more viable. However, taking on partners does mean a loss of control through shared decision making.

Although, since 2001, it has been possible to form limited liability partnerships, many partnerships still have unlimited liability. This problem could be very serious. The mistakes of one partner could jeopardise the personal assets of all the other partners.

Where large amounts of capital are required and/or when the risks of business failure are relatively high, partnerships without limited liability are not an appropriate form of organisation. In such cases, it is best to form a company (or 'joint-stock company' to give it its full title).

Companies

A company is legally separate from its owners. This means that it can enter into contracts and own property. Any debts are *its* debts, not the owners'. The owners are the shareholders, each of whom receives his or her share of the company's distributed profit: these payments are called 'dividends' and the size will depend on the profit made and the number of shares held.

The owners have only *limited liability*. This means that, if the company goes bankrupt, the owners will lose the amount of money they have invested in the company, but no more. Their personal assets cannot be seized. This has the advantage of encouraging people to become shareholders and, indeed, large companies may have thousands of shareholders – some with very small holdings and others, including institutional shareholders such as pension funds, with very large holdings. Without the protection of limited liability, many of these investors would never put their money into any company that involved even the slightest risk. It also means that companies can raise significant finance, thus creating greater scope for expansion.

Shareholders often take no part in the running of the firm. They may elect a board of directors which decides broad issues of company policy. The board of directors, in turn, appoints managers who make the day-to-day decisions, which has its own problems, as we have seen. There are two types of company: public and private.

Public limited companies. A public limited company is not a nationalised industry: it is still in the private sector. It is 'public' because it can offer new shares publicly: by issuing a prospectus, it can invite the public to subscribe to a new share issue. In addition, many public limited companies are quoted on a stock exchange, where existing shareholders can sell some or all of their shares. The prices of these shares will be determined by demand and supply. A public limited company must hold an annual shareholders' meeting. Examples of well-known UK public limited companies are Marks & Spencer, BP, Barclays, BSkyB and Tesco.

Private limited companies. Private limited companies cannot offer their shares publicly. Shares have to be sold privately. This makes it more difficult for private limited companies to raise finance and, consequently, they tend to be smaller than public companies. They are, however, easier to set up than public companies. One of the most famous examples of a private limited company was Manchester United Football Club (which used to be a public limited company until it was bought out by the Glazer family in 2005). It then became a public limited company again in August 2012 when 10 per cent of the shares were floated on the New York Stock Exchange.

Consortia of firms

It is common, especially in large civil engineering projects that involve very high risks, for many firms to work together as a consortium. The Channel Tunnel and Thames Barrier are products of this form of business organisation. Within the consortium one firm may act as the managing contractor, while the other members may provide specialist services. Alternatively, management may be shared more equally.

Co-operatives

These are of two types.

Consumer co-operatives. These, like the old high street Co-ops, are officially owned by the consumers. Consumers, in fact, play no part in the running of these co-operatives. They are run by professional managers.

Producer co-operatives. These are firms that are owned by their workers, who share in the firm's profit according to some agreed formula. They are sometimes formed by people in the same trade coming together: for example, producers of handicraft goods. At other times, they are formed by workers

buying out their factory from the owners; this is most likely if it is due to close, with a resultant loss of jobs. Producer co-operatives, although still relatively few in number, have grown in recent years. One of the most famous is the department store chain, John Lewis.

Public corporations

These are state-owned enterprises such as the BBC, the Bank of England and nationalised industries.

Public corporations have a legal identity separate from the government. They are run by a board, but the members of the board are appointed by the relevant government minister. The boards have to act within various terms of reference laid down by an Act of Parliament. Profits of public corporations that are not reinvested accrue to the Treasury. Since 1980, most public corporations have been 'privatised': that is, they have been sold directly to other firms in the private sector (such as Austin Rover to British Aerospace) or to the general public through a public issue of shares (such as British Gas). However, in response to turmoil in the financial markets, the UK Government nationalised two banks in 2008, Northern Rock (see Box 15.3) and Bradford & Bingley. It also partly nationalised two others, the Royal Bank of Scotland and the Lloyds Banking Group (HBOS and Lloyds TSB).

The issue of privatisation is considered in Chapter 22 and you can read about current debate regarding the future of Britain's railways on the Sloman News Site.[4]

3.3 THE INTERNAL ORGANISATION OF THE FIRM

KI 6 p 29

The internal operating structures of firms are governed frequently by their size. Small firms tend to be centrally managed, with decision making operating through a clear managerial hierarchy. In large firms, however, the organisational structure tends to be more complex, although technological change is forcing many organisations to reassess the most suitable organisational structure for their business.

Pause for thought

Before you read on, consider in what ways technology might influence the organisational structure of a business.

U-form

In small to medium-sized firms, the managers of the various departments – marketing, finance, production, etc. – are normally directly responsible to a chief executive, whose function is to co-ordinate their activities: relaying the firm's overall strategy to them and being responsible for interdepartmental communication. We call this type of structure ***U (unitary) form*** (see Figure 3.1).

When firms expand beyond a certain size, however, a U-form structure is likely to become inefficient. This inefficiency arises from difficulties in communication, co-ordination and control. It becomes too difficult to manage the whole organisation from the centre. The problem is that the chief executive suffers from ***bounded rationality*** – a limit on the rate at which information can be absorbed and processed. When facing complex decisions, typically they make satisfactory rather than optimal decisions, relying on rules-of-thumb and tried and tested methods. As the firm grows, more decisions are required. This leads to less time per decision and, ultimately, poorer decisions. The chief executive effectively loses control of the firm.

KEY IDEA 8

Good decision making requires good information. Where information is poor, or poorly used, decisions and their outcomes may be poor. This may be the result of bounded rationality.

In attempting to regain control, it is likely that a further managerial layer will be inserted. The chain of command thus becomes lengthened as the chief executive must now co-ordinate and communicate via this intermediate managerial level. This leads to the following problems:

- Communication costs increase.
- Messages and decisions may be misinterpreted and distorted.
- The firm experiences a decline in organisational efficiency as various departmental managers, freed from central control, seek to maximise their personal departmental goals.

Definitions

U-form business organisation One in which the central organisation of the firm (the chief executive or a managerial team) is responsible both for the firm's day-to-day administration and for formulating its business strategy.

Bounded rationality When individuals have limited abilities to find and process the relevant information required to make the best decision, i.e. purchase the goods that generate the most consumer surplus.

[4] 'Should Britain's railways be nationalised', *The Sloman Economics News site* (6 January 2018).

BOX 3.2 MANAGERS, PAY AND PERFORMANCE

CEO and average worker pay ratios

One key feature of large public limited companies tends to be the very high pay received by the top managers and executives. In the USA, the median pay of top US executives up to the 1980s was around 30 times higher than average wages. According to the AFL-CIO Labour Union in 2016, their median pay was 347 times more than that of employees.

Other data give different figures. For example, a report by the Economic Policy Institute[1] found that the ratio was 20:1 in 1965, 59:1 in 1989 and 271:1 in 2016. It found that CEO compensation had risen by 937 per cent (based on stock options realised) since 1978, which is 70 per cent faster than the rise in the stock market and compares rather favourably with the 11.2 per cent growth in the average worker's compensation.

In the UK, similar trends are observed. The Equality Trust finds that CEOs of the FTSE 100 earned around 190 times the average employee's pay package. In 2014, the High Pay Centre think tank found that by 5 January, the top CEOs in Britain would have earned more than the average UK worker earns in the whole year. Just four years later, on 4 January 2018, known as 'Big Cat Thursday', the High Pay Centre announced that the top CEOs would already have earned more than the average UK worker – it took just 3 working days.[2]

According to Bloomberg,[3] CEOs in companies in India listed on its Sensex Index earn 229 times more than average workers. This is the second biggest gap after the USA (265:1). Other countries, including Norway and Austria, have much smaller gaps. In this dataset, the UK has a 201:1 pay gap, while South Africa, Germany, China and Japan have pay gaps of 180:1, 136:1, 127:1 and 58:1 respectively.

The pay-performance link?

The awards given to executive 'fat cats' have met with considerable protest in recent years. While a large pay differential has always existed, it has grown significantly over the past few decades and, given the negligible pay rises of the average worker since the financial crisis in particular, this widening gap has caused much resentment. But, is the pay gap justified?

There are arguments put forward to justify such generosity, including:

- 'The best cost money.' Failure to offer high rewards may encourage the top executives within an industry to move elsewhere.
- 'High rewards motivate.' High rewards are likely to motivate not only top executives, but also those below them. Managers, especially those in the middle of the business hierarchy, will compete for promotion and seek to do well with such high rewards on offer.

We do live in a world where comparisons are constantly being made. Comparing compensation packages can be used as a means of identifying those CEOs who are above or below average. As Next's CEO said: 'No board wants their CEO to be in the bottom quartile.' However, the culture was somewhat different in Japan, where a number of years ago, a regulatory change required listed securities companies to publish remuneration details of any managers earning above $1 million (approximately). One aim was to increase the pay of underpaid bosses. But such was the embarrassment of being on the list of so-called 'high-earners', some bosses took pay cuts!

But, is there a link between high pay and company performance?

Research suggesting a negative link

Despite the more than doubling of growth in the pay of FTSE 100 CEOs since the 1980s, there has been little change in the share prices of the companies themselves. In a piece of research by Lancaster Management School, commissioned by the UK arm of the CFA Institute, the CEOs of Britain's top 350 companies each earnt an average of £1.9m in 2014 – this represented a rise of 82 per cent compared to the figure 13 years before. Yet the report found that the return on invested capital had risen by less than 1 per cent. The authors concluded:

> Our findings suggest a material disconnect between pay and fundamental value generation.[4]

[1] Lawrence Mishel and Jessica Schieder, *CEO pay remains high relative to the pay of typical workers and high-wage earners*, Economic Policy Institute (20 July 2017).

[2] 'It's Fat Cat Day – Thursday Jan 4 2018'; *High Pay Centre blog* (4 January 2018).

[3] Anders Melin, 'Executive Pay', *Bloomberg* (23 January 2018).

[4] Zlata Rodionova, 'Link between high executive pay and performance 'negligible', study finds'; *Independent* (28 December 2016).

M-form

To overcome these organisational problems, the firm can adopt an ***M- (multi-divisional) form*** of managerial structure (see Figure 3.2).

This suits medium to large firms. The firm is divided into a number of 'divisions'. Each division could be responsible for a particular product or group of products, or a particular

Definitions

M-form business organisation One in which the business is organised into separate departments, such that responsibility for the day-to-day management enterprise is separated from the formulation of the business's strategic plan.

However, it is important to note that the report also stated that many of the measures used focus on the short term and thus are 'unsophisticated'.

Some go even further and suggest that the high pay of CEOs can be counter-productive and actually can reduce productivity. Andrew Smithers, an economist, says that long-term incentives relating to performance actually encourage short-termism and that such extensive use of these reward mechanisms in the UK relative to Europe (where executive pay is lower) is one reason for Britain's lower productivity.[5]

In July 2016, research from Corporate Governance firm, MSCI, which focused on 10 years of performance and pay data, showed that some of the worst performing companies were run by some of the highest paid executives. The report found:

> . . . little evidence to show a link between the large proportion of pay that such awards represent and long-term company stock performance. In fact, even after adjusting for company size and sector, companies with lower total summary CEO pay levels more consistently displayed higher long-term investment returns'.[6]

The report found that if $100 was invested in the top 20 per cent of companies based on CEO pay, then that money would be worth $265 after 10 years (the length of the study). Conversely, the same investment in the 20 per cent of companies run by the lowest paid CEOs would have generated a $367 return.

A different view

However, others take a different view. Thomas Noe, Professor of Management Studies at Oxford's Saïd Business School, argues that, in the USA, and probably the UK too, most of the increase in executive pay can be accounted for by an increase in company size. For a large company, it can make sense to pay a premium for a chief executive who may deliver a slightly better performance than its rivals. 'You are much more willing to pay for tiny differences in performance, because now they are getting multiplied by a much bigger base . . . If shareholders were unhappy, they would vote against company pay policies.'[7]

Shareholder pressure

And, in many cases, this has happened. Executive pay has fallen over the past year or more. For example, in the USA, the ratio was 299:1 in 2014, falling to 271:1 in 2016. In the UK, the average pay of CEOs in the FTSE 100 fell by around 17 per cent in 2017, though it still remains at £4.5 million! According to CIPD Chief Executive Peter Cheese:

> The drop in pay in the last year is welcome, although relatively marginal, and will have largely been driven by the growing public and shareholder concerns and the Prime Minister's stronger focus on boardroom excess and plans to reform corporate governance.[8]

Sir Martin Sorrell, the boss of advertising giant WPP, saw his pay fall from £70 million in 2015 to £48 million in 2016, even though his company's advertising revenues and profits increased. By 2021, it should be cut to just over £13 million, following a change in pay policy at WPP and past revolt by key shareholders.

The pay gap remains substantial and, while there are certainly cases of high paid bosses providing excellent returns, there are many examples where high pay is seemingly unrelated to performance.[9]

1. *Explain how excessive executive remuneration might illustrate the principal–agent problem.*
2. *In the UK, many of the highest-paid executives head former public utilities. Why might the giving of very high rewards to such individuals be a source of public concern?*

Choose a FTSE 100 company and, from its reports, examine the pay of the CEO or other senior executives. Assess the arguments used for justifying these rewards.

[5] See, for example, Anthony Hilton, 'Bonus culture will hurt UK in the long term', *Evening Standard* (10 May 2016).

[6] Ric Marshall and Linda-Eling Lee, *Are CEOs paid for performance?*, MSCI (July 2016).

[7] Brian Groom, 'Executive pay: The trickle-up effect', *Financial Times* (27 July 2011).

[8] 'Many UK CEOs earn more in three days than a typical worker does in a year', *Reuters,* (3 January 2018).

[9] See, for example: Andrew Hill, 'Bonuses are bad for bankers and even worse for banks' *Financial Times* (25 January 2016).

market (e.g. a specific country). The day-to-day running and even certain long-term decisions of each division would be the responsibility of the divisional manager(s). This leads to the following benefits:

- Reduced length of information flows.
- The chief executive being able to concentrate on overall strategic planning.
- An enhanced level of control, with each division being run as a mini 'firm', competing with other divisions for the limited amount of company resources available.

The flat organisation

The shift towards the M-form organisational structure was motivated primarily by a desire to improve the process of

Figure 3.1 U-form business organisation

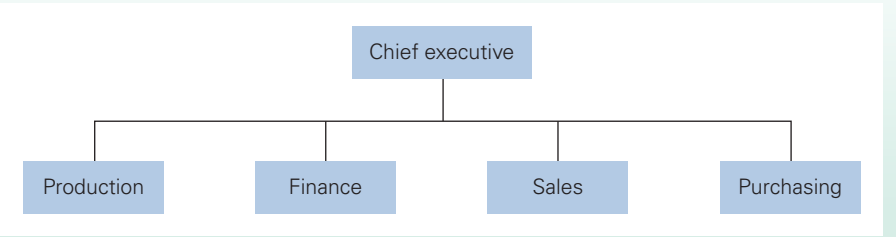
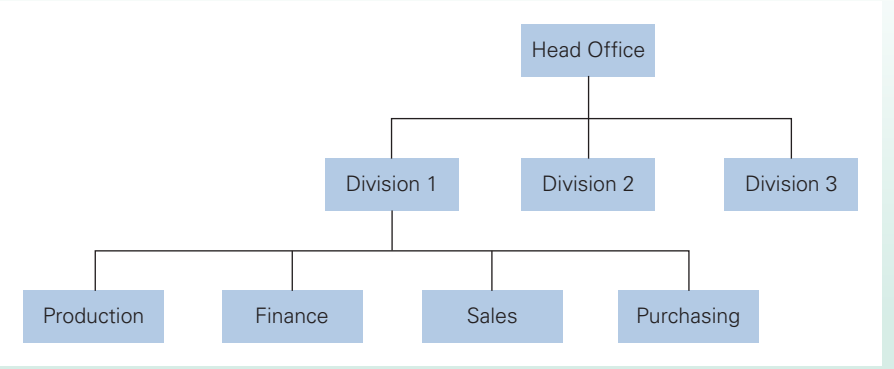


Figure 3.2 M-form business organisation



decision making within the business. This involved adding layers of management. Recent technological innovations, especially in respect to computer systems such as email and management information systems, have encouraged many organisations to think again about how to establish an efficient and effective organisational structure. The ***flat organisation*** is one that fully embraces the latest developments in information technology and, by so doing, is able to reduce the need for a large group of middle managers. Senior managers, through these new information systems, can communicate easily and directly with those lower in the organisational structure. Middle managers are, effectively, bypassed.

The speed of information flows reduces the impact of bounded rationality on the decision-making process. Senior managers are able to re-establish and, in certain cases, widen their span of control over the business organisation.

In many respects, the flat organisation represents a return to the U-form structure. It is yet to be seen whether we also have a return to the problems associated with this type of organisation.

The holding company

Also known as the H-form, this business organisation is closely linked to the expansion and development of multinational enterprises, which have become more prevalent with globalisation. In many respects, it is a variation on the M-form structure. A ***holding company*** (or parent company) is one that owns a controlling interest in other subsidiary companies, which, in turn, may also have controlling interests in other companies.

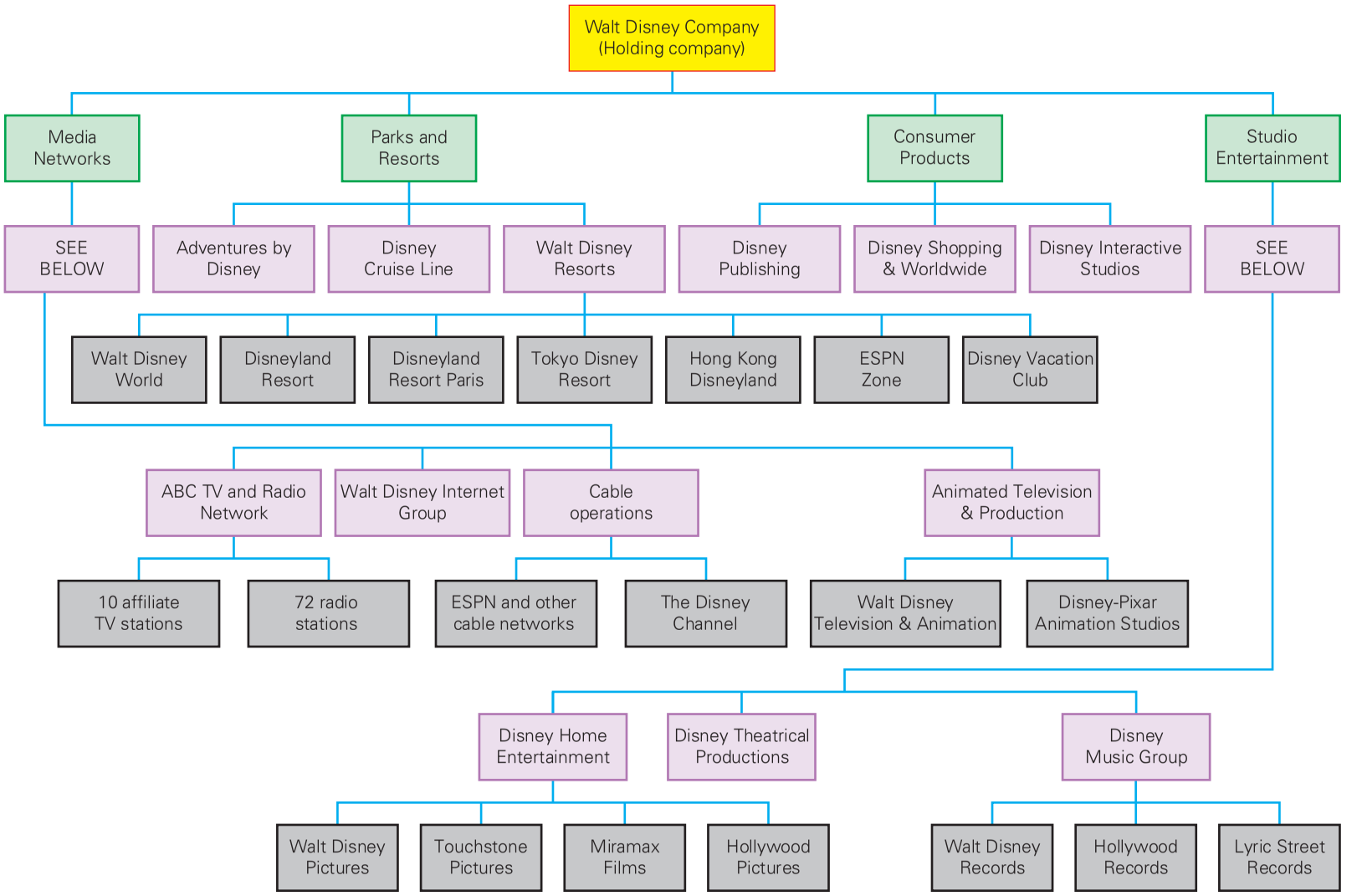
H-form organisational structures can be highly complex. While the parent company has ultimate control over its various subsidiaries, it is likely that both tactical and strategic decision making is left to the individual companies within the organisation. Many multinationals are organised along the lines of an international holding company, where overseas subsidiaries pursue their own independent strategy. The Walt Disney Company (Holding Company) represents a good example of an H-form business organisation. Figure 3.3 shows the firm's organisational structure and the range of assets it owns.

Definitions

Flat organisation One in which technology enables senior managers to communicate directly with those lower in the organisational structure. Middle managers are bypassed.

Holding company A business organisation in which the present company holds interests in a number of other companies or subsidiaries.

Figure 3.3 Organisational structure of The Walt Disney Company (Holding Company)



BOX 3.3 THE CHANGING NATURE OF BUSINESS

Knowledge rules

In the knowledge-driven economy, innovation has become central to achievement in the business world. With this growth in importance, organisations large and small have begun to re-evaluate their products, their services, even their corporate culture in the attempt to maintain their competitiveness in the global markets of today. The more forward-thinking companies have recognised that only through such root and branch reform can they hope to survive in the face of increasing competition.[1]

Knowledge is fundamental to economic success in many industries and, for most firms, key knowledge resides in skilled members of the workforce. The result is a market in knowledge, with those having the knowledge being able to command high salaries and often being 'headhunted'. The 'knowledge economy' is affecting people from all walks of life, and fundamentally changing the nature, organisation and practice of business.

The traditional business corporation was based around five fundamental principles:

- Individual workers needed the business and the income it provided more than the business needed them. After all, employers could always find alternative workers. As such, the corporation was the dominant partner in the employment relationship.
- Employees who worked for the corporation tended to be full time, and depended upon the work as their sole source of income.
- The corporation was integrated, with a single management structure overseeing all the various stages of production. This was seen as the most efficient way to organise productive activity.
- Suppliers, and especially manufacturers, had considerable power over the customer by controlling information about their product or service.
- Technology relevant to an industry was developed within the industry.

In more recent times, with the advent of the knowledge economy, the principles above have all but been turned on their head.

- The key factor of production in a knowledge economy is knowledge itself, and the workers that hold such knowledge. Without such workers, the corporation is unlikely to succeed. As such, the balance of power between the business and the worker in today's economy is far more equal.
- Even though the vast majority of employees still work full time, the diversity in employment contracts, such as part-time and short-term contracts and consultancy, means that full-time work is not the only option. (We examine this in section 18.4.) The result is an increasing number of workers offering their services to business in non-conventional ways.
- As companies increasingly supply their products to a global marketplace, many find that they do not have the expertise to do everything themselves – from production though all its stages, research and development, adapting products to specific markets, marketing, sales, etc. With communication costs that are largely insignificant, businesses are likely to be more efficient and flexible if they outsource and de-integrate. Not only are businesses outsourcing various stages of production, but many are also employing specialist companies to provide key areas of management, such as HRM (human resource management): hiring, firing, training, benefits, etc.
- Whereas, in the past, businesses controlled information, today access to information via sources such as the Internet means that power is shifting towards the consumer.
- Today, unlike in previous decades, technological developments are less specific to industries. Knowledge developments diffuse and cut across industry boundaries. What this means for business, in a knowledge-driven economy, is that they must look beyond their own industry if they are to develop and grow. We frequently see partnerships and joint ventures between businesses that cut across industry types and technology.

What is clear from the above is that the dynamics of the knowledge economy require a quite fundamental change in the nature of business. Organisationally it needs to be more flexible, helping it to respond to the ever-changing market conditions it faces. Successful companies draw upon their ***core*** competencies to achieve market advantage and thus, ultimately, specialise in what they do best. Businesses must learn to work with others, either through outsourcing specialist tasks or through more formal strategic partnerships.

Within this new business model, the key assets are the specialist people in the organisation – its knowledge workers. How will businesses attract, retain and motivate the best? Will financial rewards be sufficient or will workers seek more from their work and the organisation they work for?

With such issues facing the corporation we can expect to see a radical reinterpretation of what business looks like and how it is practised over the coming years.

How is the development of the knowledge economy likely to affect the distribution of wage income? Will it become more equal or less equal?

[1] European Commission, Directorate-General for Enterprise, *Innovation Management and the Knowledge-Driven Economy* (ECSC-EC-EAEC Brussels-Luxembourg, 2004).

Other structures used by multinational companies

Other types of organisational structure for multinational organisations include the ***integrated international enterprise***. In this structure, a company's international

Definitions

Integrated international enterprise One in which an international company pursues a single business strategy. It co-ordinates the business activities of its subsidiaries across different countries.

subsidiaries, rather than pursuing independent business strategies, co-ordinate (at a regional or global level) and integrate their activities in pursuit of shared corporate aims and objectives. In such an organisation, the distinction between parent company and subsidiary is of less relevance than the identification of a clear corporate philosophy which dominates business goals and policy.

Another structure is the ***transnational association***, which typically is owned and managed by local people, with the business headquarters holding little equity investment in its subsidiaries and providing minimal managerial and technical assistance. The subsidiary produces output (typically components) and sells this by a contractual arrangement to the headquarters, which then assembles, markets or distributes it. The headquarters retains the decisive role within the international business, but the use of ***global sourcing*** means that distinct production sites are used to produce large numbers of single components and this helps to reduce costs.

We shall investigate the organisational structures and issues surrounding multinational corporations more fully (see Chapter 23).

Definitions

Transnational association A form of business organisation in which the subsidiaries of a company in different countries are contractually bound to the parent company to provide output to or receive inputs from other subsidiaries.

Global sourcing Where a company uses production sites in different parts of the world to provide particular components for a final product.

SUMMARY

1a The firm's role in the economy is to eliminate the need for making individual contracts through the market and to provide a more efficient way to organise production.

1b Using the market to establish a contract is not costless. Transaction costs will mean that the market is normally less efficient than the firm as an allocator of resources.

1c The divorce of ownership from control implies that the objectives of owners and managers may diverge and, similarly, the objectives of one manager may differ from another. Hence the goals of firms may be diverse. What is more, as ownership becomes more dispersed, so the degree of control by owners diminishes yet further.

1d Managers might pursue maximisation goals other than profit or look to achieve a wide range of targets in which profit acts as a constraint on other business aims.

1e The problem of managers not pursuing the same goals as the owners is an example of the principal–agent problem. Agents (in this case the managers) may not always carry out the wishes of their principals (in this case the owners). Because of asymmetric information, managers are able to pursue their own aims, just so long as they produce results that will satisfy the owners. The solution for owners is for there to be better means of monitoring the performance of managers and incentives for the managers to behave in the owners' interests.

2a The legal status of the firm will influence both its actions and performance within the marketplace.

2b There are several types of legal organisation of firms: the sole proprietorship, the partnership, the private limited company, the public limited company, consortia of firms, co-operatives and public corporations. In the first two cases, the owners have unlimited liability: the owners are personally liable for any losses the business might make. With companies, however, shareholders' liability is limited to the amount they have invested. This reduced risk encourages people to invest in companies.

3a The relative success of a business organisation will be influenced strongly by its organisational structure. As a firm grows, its organisational structure will need to evolve in order to account for the business's growing complexity. This is particularly so if the business looks to expand overseas.

3b As firms grow, so they tend to move from a U-form to an M-form structure. In recent years, however, with the advance of information technology, many firms have adopted a flat organisation – a return to U-form.

3c Multinational companies often adopt relatively complex forms of organisation, such as the holding company (H-form) structure and more and more firms are de-integrating and outsourcing as a means of improving efficiency.

REVIEW QUESTIONS

1 What is meant by the term 'transaction costs'? Explain why the firm represents a more efficient way of organising economic life than relying on individual contracts.

2 Explain why the business objectives of owners and managers are likely to diverge. How might owners attempt to ensure that managers act in their interests and not in the managers' own interests?

3 Compare and contrast the relative strengths and weaknesses of the partnership and the public limited company.

4 Conduct an investigation into a recent large building project, such as the PyeongChang Winter Olympics or the Football World Cup in Russia or Brazil. Identify what firms were involved and the roles and responsibilities they had.

Outline the advantages and disadvantages that such business consortia might have.

5 If a business is thinking of reorganisation, why and in what ways might new technology be an important factor in such considerations?

6 What problems are multinational corporations, as opposed to domestic firms, likely to have in respect to organising their business activity? What alternative organisational models might multinationals adopt? To what extent do they overcome the problems you have identified?

ADDITIONAL PART A CASE STUDIES ON THE *ECONOMICS FOR BUSINESS* STUDENT WEBSITE (www.pearsoned.co.uk/sloman)

A.1 **The UK defence industry.** A PEST analysis of the changes in the defence industry in recent years.

A.2 **Scarcity and abundance.** If scarcity is the central economic problem, is anything truly abundant?

A.3 **Global economics.** This examines how macroeconomics and microeconomics apply at the global level and identifies some key issues.

A.4 **Buddhist economics.** A different perspective on economic problems and economic activity.

A.5 **Green economics.** This examines some of the environmental costs that society faces today. It also looks at the role of economics in analysing these costs and how the problems can be tackled.

A.6 **Downsizing and business reorganisation.** Many companies in recent years have 'downsized' their operations and focused on their core competencies. This looks particularly at the case of IBM.

A.7 **Positive and normative statements.** A crucial distinction when considering matters of economic policy.

WEBSITES RELEVANT TO PART A

Numbers and sections refer to websites listed in the Web appendix and hotlinked from this text's website at **www.pearsoned.co.uk/sloman**

- For a tutorial on finding the best economics websites, see site C8 (Internet for Economics).
- For news articles relevant to Part A, see the Economics News Articles link from the text's website.
- For general economics news sources, see websites in section A of the Web appendix at the end of the text and particularly A1–9, 35, 36. See also A38, 39, 42, 43, 44 for links to newspapers worldwide.
- For business news items, again see websites in section A of the Web appendix at the end of the text and particularly A1–4, 8, 20–26, 35, 36.
- For sources of economic and business data, see sites in section B and particularly B1–5, 27–9, 32, 36, 39, 43.
- For general sites for students of economics for business, see sites in section C and particularly C1–7.
- For sites giving links to relevant economics and business websites, organised by topic, see sites I7, 11, 12, 16, 18.
- For details on companies, see site A3.

Business and markets

The FT Reports . . .

The Financial Times, 26 April 2018

Computerised trading drives up New York cocoa price

By Emiko Terazono

Computers are dominating the trading of cocoa in New York, sparking a dramatic divergence in the longstanding price relationship with the London market.

Speculative funds have driven the price of the commodity in New York up more than 50 per cent since the start of the year to just under $3,000 a tonne. The New York market, traded in dollars, has traditionally been the preferred market for financial players such as hedge funds.

The London market, historically favoured by traders and commercial players buying and selling physical cocoa, has only risen 34 per cent in the same timeframe.

The big shift triggered by the New York buying is that its benchmark, which normally trades at a discount to London, now sits at a record premium.

The pronounced shift in price relationships comes as hedge fund managers with physical trading capabilities and merchant traders have exited the cocoa market.

In the past, such a large price difference would have encouraged a trader to buy physical cocoa in London and send it to New York, hence narrowing the relationship. However, current price movements reflected the absence of such players, said brokers.

Anthony Ward, the commodities trader known in the cocoa market for his large bets, has been among the more well-known fund managers to close his hedge fund, exiting the market at the end of last year. Mr Ward, dubbed 'Chocfinger' due to his influence over the cocoa price, blamed the rising power of algorithmic and systems-based trading for making position-taking based on 'fundamental' supply and demand factors more difficult. . .

The divergence between the two cocoa benchmarks comes as waves of buying and selling by speculative funds, many believed to be driven by algorithms, are rippling across the soft commodities markets. . .

Cocoa is a relatively small market compared with other agricultural commodities such as corn or soyabeans, and it is hard to take large positions without the rest of the market knowing. However, brokers said anonymous computerised strategies now dominate flows in the New York market.

Rather than follow fundamental supply and demand news, many of the funds trade on momentum. Others use algorithms that exploit the shifts in price relationships between different markets or separate contracts of the same commodity.

'[The market] is in the grip of technical, system-led buying,' said Justin Grandison, director of cocoa brokerage at ABN Amro.

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Uncertainty is also the defining characteristic of business competition today. Competing in volatile markets can feel a lot like entering the ring against George Foreman in his prime – or, even worse, like stumbling into a barroom brawl. The punches come from all directions, include a steady barrage of body blows and periodic haymakers, and are thrown by a rotating cast of characters who swing bottles and bar stools as well as fists.

Donald Sull, 'How to survive in turbulent markets', *Harvard Business Review,* February 2009, p. 80

Markets dominate economic life, from buying and selling raw materials, to supplying the final product to the customer. It would be difficult to imagine a world without markets. In fact, we talk about economies today as 'market economies', with economic decisions made primarily by business, consumers and employees interacting with each other in a market environment.

The determination of a market price is a complex business and often subject to great fluctuation (as the *Financial Times* article illustrates). This is particularly so when you consider commodities, such as coffee, wheat and orange juice, which are highly dependent upon the weather and subject to considerable speculative buying and selling.

In Part B of this text we shall explore how the market system operates. In Chapter 4 we will consider those factors that influence both demand and supply and how, via their interaction, we are able to derive a market price. We see how markets transmit information from consumers to producers and from producers to consumers. We see how prices act as an incentive – for example, if consumers want more mobile phones, how this increased demand leads to an increase in their price and hence to an incentive for firms to increase their production.

Changes in price affect the quantity demanded and supplied. But how much? How much will the demand for DVDs go up if the price of DVDs comes down? How much will the supply of new houses go up if the price of houses rises? In Chapter 5 we develop the concept of *elasticity* of demand and supply to examine this responsiveness. We also consider some of the issues the market raises for business, such as the effects on a business's revenue of a change in the price of the product, the impact of time on demand and supply and how businesses deal with the risk and uncertainty markets generate. We also look at speculation – people attempting to gain by anticipating price changes.

Key terms

Price mechanism
Demand and demand curves
Income and substitution effects
Supply and supply curves
Equilibrium price and quantity
Shifts in demand and supply curves
Price elasticity of demand
Income elasticity of demand
Cross-price elasticity of demand
Price elasticity of supply
Speculation
Risk and uncertainty
Spot and futures markets

Chapter 4

The working of competitive markets

Business issues covered in this chapter

- How do markets operate?
- How are market prices determined and when are they likely to rise or fall?
- Under what circumstances do firms have to accept a price given by the market rather than being able to set the price themselves?
- What are the influences on consumer demand?
- What factors determine the amount of supply coming on to the market?
- How do markets respond to changes in demand or supply?

4.1 BUSINESS IN A COMPETITIVE MARKET

If a firm wants to increase its profits, should it raise its prices or should it lower them? Should it increase its output or should it reduce it? Should it modify its product or should it keep the product unchanged? The answer to these, and many other questions, is that it depends on the market in which the firm operates. If the market is buoyant, it may well be a good idea for the firm to increase its output in anticipation of greater sales. It may also be a good idea to raise the price of its product in the belief that consumers will be willing to pay more. If, however, the market is declining, the firm may decide to reduce output, cut prices or diversify into an alternative product.

The firm is, thus, greatly affected by its market environment, an environment that is often outside the firm's control and subject to frequent changes. For many firms, prices are determined not by them, but by the market. Even where they do have some influence over prices, the influence is only slight. They may be able to put prices up a small amount but, if they raise them too much, they will find that they lose sales to their rivals.

The market dominates a firm's activities. The more competitive the market, the greater this domination becomes. In the extreme case, the firm may have no power at all to change its price: it is what we call a ***price taker***. It has to accept the market price as given. If the firm attempts to raise the price above the market price, it will simply be unable to sell its product: it will lose all its sales to its competitors. Take the case of farmers selling wheat. They have to accept the price as dictated by the market. If, individually, they try to sell above the market price, no one will buy.

Definition

Price taker A person or firm with no power to be able to influence the market price.

In competitive markets, consumers too are price takers. When we go into shops we have no control over prices. We have to accept the price as given. For example, when you get to the supermarket checkout, you cannot start haggling with the checkout operator over the price of a can of beans or a tub of margarine.

So how does a competitive market work? For simplicity, we will examine the case of a ***perfectly competitive market***. This is where both producers and consumers are too numerous to have any control over prices whatsoever: a situation where everyone is a price taker.

Clearly, in other markets, firms will have some discretion over the prices they charge. For example, a manufacturing company such as Ford will have some discretion over the prices it charges for its Fiestas or Mondeos. In such cases, the firm has some 'market power'. (We will examine different degrees of market power in Chapters 11 and 12.)

The price mechanism

In a ***free market*** individuals are free to make their own economic decisions. Consumers are free to decide what to buy with their incomes: free to make demand decisions. Firms are free to choose what to sell and what production methods to use: free to make supply decisions. The resulting demand and supply decisions of consumers and firms are transmitted to each other through their effect on *prices*: through the ***price mechanism***.

The price mechanism works as follows. Prices respond to *shortages* and *surpluses*. Shortages cause prices to rise. Surpluses cause prices to fall.

If consumers decide they want more of a good (or if producers decide to cut back supply), demand will exceed supply. The resulting *shortage* will cause *the price of the good to rise.* This will act as an incentive to producers to supply more, since production will now be more profitable. At the same time, it will discourage consumers from buying so much. *The price will continue rising until the shortage has thereby been eliminated.* A *Business Insider* article looks at changes in the price of butter in Europe caused by shortages.[1]

If, on the other hand, consumers decide they want less of a good (or if producers decide to produce more), supply will exceed demand. The resulting *surplus* will cause *the price of the good to fall.* This will act as a disincentive to producers, who will supply less, since production will now be less profitable. It will encourage consumers to buy more. *The price will continue falling until the surplus has thereby been eliminated.*

This price, where demand equals supply, is called the ***equilibrium price***. By ***equilibrium*** we mean a point of balance or a point of rest: in other words, a point towards which there is a tendency to move.

The same analysis can be applied to labour markets (and those for other factors of production), except that here the demand and supply roles are reversed. Firms are the demanders of labour. Households are the suppliers. If there is a surplus of a particular type of labour, the wage rate (i.e. the price of labour) will fall until demand equals supply. Many economies fell into recession in 2008 and, in the next few years, the demand for goods and services fell, reducing the demand for labour. The surplus of labour (unemployment) that emerged in many labour markets led to a fall in wage rates in these markets. You can read about the link between wages and surplus labour in a BBC News article.[2]

Likewise, if the demand for a particular type of labour exceeds its supply, the resulting shortage will drive up the wage rate, as employers compete with each other for labour. The higher wages will curb firms' demand for that type of labour and encourage more workers to take up that type of job. As economies have recovered from recession, wages have risen in many labour markets and they should continue to do so until demand equals supply, thus eliminating the shortage in those markets.

As with price, the wage rate where the demand for labour equals the supply is known as the *equilibrium* wage rate.

The response of demand and supply to changes in price illustrates a very important feature of how economies work.

KEY IDEA 9

People respond to incentives. **It is important, therefore, that incentives are appropriate and have the desired effect.**

The effect of changes in demand and supply

How will the price mechanism respond to changes in consumer demand or producer supply? After all, the pattern of consumer demand changes over time. For example, people

Definitions

Perfectly competitive market (preliminary definition) A market in which all producers and consumers of the product are price takers. There are other features of a perfectly competitive market (these are examined in Chapter 11).

Free market One in which there is an absence of government intervention. Individual producers and consumers are free to make their own economic decisions.

Price mechanism The system in a market economy whereby changes in price in response to changes in demand and supply have the effect of making demand equal to supply.

Equilibrium price The price where the quantity demanded equals the quantity supplied; the price where there is no shortage or surplus.

Equilibrium A position of balance. A position from which there is no inherent tendency to move away.

[1]Oscar Williams-Grut, 'The butter market is going crazy', *Business Insider* (30 October 2017).

[2]Matthew West, 'No wage rises until jobless rate falls to 5% says MPC member', *BBC News* (18 June 2014).

may decide they want more downloadable music and fewer CDs. The pattern of supply also changes. For example, changes in technology may allow the mass production of microchips at lower cost, while the production of hand-built furniture becomes relatively expensive.

In all cases of changes in demand and supply, the resulting changes in *price* act as both *signals* and *incentives*.

A change in demand

KI 9 p45

A rise in demand for a good creates a shortage, which causes a rise in its price. This then acts as an incentive for firms to supply more of it. They will divert resources from goods with lower prices relative to costs (and hence lower profits) to this good, which is now more profitable.

A fall in demand for a good creates a surplus, which causes a fall in its price. This then acts as an incentive for firms to supply less, as these goods are now less profitable to produce.

A change in supply

A rise in supply creates a surplus and causes a fall in price. This then acts as an incentive for consumers to demand more. A fall in supply creates a shortage, causing a rise in price. This then acts as an incentive for consumers to buy less.

KEY IDEA 10

Changes in demand or supply cause markets to adjust. **Whenever such changes occur, the resulting 'disequilibrium' will bring an automatic change in prices, thereby restoring equilibrium (i.e. a balance of demand and supply).**

The interdependence of markets

The interdependence of goods and factor markets

KI 9 p45

A rise in demand for a good will raise its price and profitability. The higher price will help to curb the rise in demand. It will also encourage firms to supply more. But to do this they will require more inputs. Thus the demand for the inputs will rise, which, in turn, will raise the price of the inputs. The suppliers of these inputs will respond to this incentive by supplying more, which, in turn, will allow the users of these inputs to produce more goods to meet the higher demand. This can be summarised as follows:

Goods market

- Demand for the good rises.
- This creates a shortage.
- This causes the price of the good to rise.
- This eliminates the shortage by choking off some of the demand and encouraging firms to produce more.

Factor market

- The increased supply of the good causes an increase in the demand for factors of production (i.e. inputs) used in making it.
- This causes a shortage of those inputs.
- This causes their prices to rise.
- This eliminates their shortage by choking off some of the demand and encouraging the suppliers of inputs to supply more.

Goods markets thus affect factor markets. Figure 4.1 summarises this sequence of events. (It is common in economics to summarise an argument like this by using symbols.)

KI 10 p46

Interdependence exists in the other direction too: factor markets affect goods markets. For example, the discovery of raw materials will lower their price. This will lower the costs of production of firms using these raw materials and increase the supply of the finished goods. The resulting surplus will lower the price of the good, which, in turn, will encourage consumers to buy more.

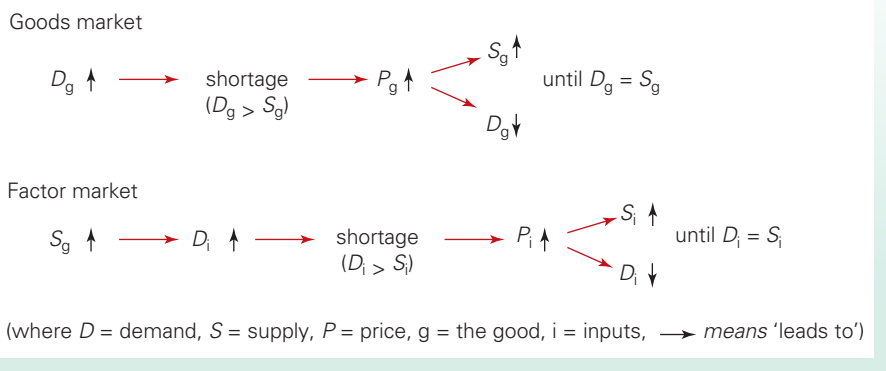
The interdependence of different goods markets

KI 10 p46

Many goods markets are also interdependent, such that a rise in the price of one good may encourage consumers to buy alternatives. This will drive up the price of alternatives, which will encourage producers to supply more of the alternatives.

Let us now turn to examine each side of the market – demand and supply – in more detail.

Figure 4.1 The price mechanism: the effect of a rise in demand



4.2 DEMAND

The relationship between demand and price

The headlines announce: 'Major crop failures in Brazil and East Africa: coffee prices soar.' Shortly afterwards, you find that coffee prices have doubled in the shops. What do you do? Presumably, you will cut back on the amount of coffee you drink. Perhaps you will reduce it from, say, six cups per day to two. Perhaps you will give up drinking coffee altogether.

This is simply an illustration of the general relationship between price and consumption: *when the price of a good rises, the quantity demanded will fall.* This relationship is known as the ***law of demand***. There are two reasons for this law:

- People will feel poorer. They will not be able to afford to buy so much of the good with their money. The purchasing power of their income (their *real income*) has fallen. This is called the ***income effect*** of a price rise.
- The price has risen *relative to other goods.* People will thus switch to alternative or 'substitute' goods. This is called the ***substitution effect*** of a price rise.

Similarly, when the price of a good falls, the quantity demanded will rise. People can afford to buy more (the income effect), and they will switch away from consuming alternative goods (the substitution effect).

Therefore, returning to our example of the increase in the price of coffee, we will not be able to afford to buy as much as before, and we will probably drink more tea, cocoa, fruit juices or even water instead.

A word of warning: be careful about the meaning of the words ***quantity demanded***. They refer to the amount consumers are willing and able to purchase at a given price over a given time period (for example, a week or a month). They do *not* refer to what people would simply *like* to consume. You might like to own a luxury yacht, but as the price of luxury yachts is in the millions, your demand will almost certainly be zero.

The demand curve

Consider the hypothetical data in Table 4.1. The table shows how many kilos of potatoes per month would be purchased at various prices.

Columns (2) and (3) show the ***demand schedules*** for two individuals, Tracey and Darren. Column (4), by contrast, shows the total ***market demand schedule***. This is the total demand by all consumers. To obtain the market demand schedule for potatoes, we simply add up the quantities

Definitions

Law of demand The quantity of a good demanded per period of time will fall as the price rises and rise as the price falls, other things being equal (*ceteris paribus*).

Income effect The effect of a change in price on quantity demanded arising from the consumer becoming better or worse off as a result of the price change.

Substitution effect The effect of a change in price on quantity demanded arising from the consumer switching to or from alternative (substitute) products.

Quantity demanded The amount of a good that a consumer is willing and able to buy at a given price over a given period of time.

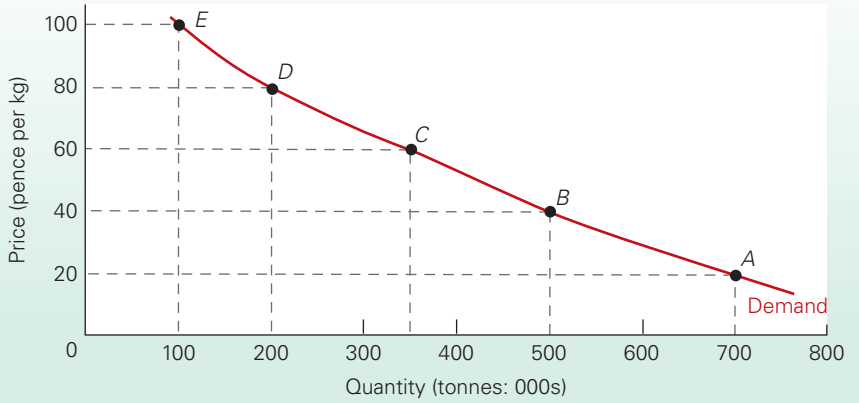
Demand schedule for an individual A table showing the different quantities of a good that a person is willing and able to buy at various prices over a given time period.

Market demand schedule A table showing the different total quantities of a good that consumers are willing and able to buy at various prices over a given time period.

Table 4.1 The demand for potatoes (monthly)

	Price (pence per kg) (1)	Tracey's demand (kg) (2)	Darren's demand (kg) (3)	Total market demand (tonnes: 000s) (4)
A	20	28	16	700
B	40	15	11	500
C	60	5	9	350
D	80	1	7	200
E	100	0	6	100

Figure 4.2 Market demand curve for potatoes (monthly)



demanded at each price by *all* consumers: i.e. Tracey, Darren and everyone else who demands potatoes. Notice that we are talking about demand *over a period of time* (not at a *point* in time). Thus we would talk about daily demand or weekly demand or whatever.

The demand schedule can be represented graphically as a ***demand curve***. Figure 4.2 shows the market demand curve for potatoes corresponding to the schedule in Table 4.1. The price of potatoes is plotted on the vertical axis. The quantity demanded is plotted on the horizontal axis.

Point *E* shows that at a price of 100p per kilo, 100 000 tonnes of potatoes are demanded each month. When the price falls to 80p we move down the curve to point *D*. This shows that the quantity demanded has now risen to 200 000 tonnes per month. Similarly, if the price falls to 60p, we move down the curve again to point *C*: 350 000 tonnes are now demanded. The five points on the graph (*A*–*E*) correspond to the figures in columns (1) and (4) of Table 4.1. The graph also enables us to read off the likely quantities demanded at prices other than those in the table.

A demand curve could also be drawn for an individual consumer. Like market demand curves, individuals' demand curves generally slope downward from left to right (they have negative slopes): the lower the price of a product, the more a person is likely to buy.

Two points should be noted at this stage:

- In textbooks, demand curves (and other curves too) are, only occasionally, used to plot specific data. More frequently, they are used to illustrate general theoretical arguments. In such cases, the axes will simply be price and quantity, with the units unspecified.
- The term 'curve' is used even when the graph is a straight line! In fact, when using demand curves to illustrate arguments, we draw them frequently as straight lines – it's easier.

Pause for thought

Referring to Table 4.1, assume that there are 200 consumers in the market. Of these, 100 have schedules like Tracey's and 100 have schedules like Darren's. What would be the total market demand schedule for potatoes now?

Other determinants of demand

Price is not the only factor that determines how much of a good people will buy. Think about your own consumption of any good – which other factors would cause you to buy more or less of it? Here are just some of the factors that might affect demand:

Tastes. The more desirable people find the good, the more they will demand. Your tastes are probably affected by advertising, fashion, observing what your friends and other consumers buy, considerations of health and your experiences from consuming the good on previous occasions. Taste for dairy is rising quickly in China, which is affecting the dairy market, as discussed in an article from *New Food*.[3]

[3]George Smith, 'Research reveals global consequences of China's growing taste for dairy', *New Food* (19 February 2018).

Definitions

Demand curve A graph showing the relationship between the price of a good and the quantity of the good demanded over a given time period. Price is measured on the vertical axis; quantity demanded is measured on the horizontal axis. A demand curve can be for an individual consumer or a group of consumers or, more usually, for the whole market.

The number and price of substitute goods (i.e. competitive goods). The higher the price of ***substitute goods***, the higher will be the demand for this good as people switch from the substitutes. For example, the demand for coffee will depend on the price of tea. If tea goes up in price, the demand for coffee will rise.

The number and price of complementary goods. ***Complementary goods*** are those that are consumed together: cars and petrol, shoes and polish, bread and butter. The higher the price of complementary goods, the fewer of them will be bought and hence the less the demand for this good. For example, the demand for games will depend on the price of game consoles, such as an Xbox or PlayStation. If the price of an XBox goes up, so that fewer are bought, the demand for Xbox games will fall.

Income. As people's incomes rise, their demand for most goods will rise. Such goods are called ***normal goods***. There are exceptions to this general rule, however. As people get richer, they spend less on ***inferior goods***, such as supermarkets' value lines or bus travel, and switch to better-quality goods.

Distribution of income. If, for example, national income were redistributed from the poor to the rich, the demand for luxury goods would rise. At the same time, as the poor got poorer, they might have to turn to buying inferior goods, whose demand would thus rise, too.

KI 13 p75

Expectations of future price changes. If people think that prices are going to rise in the future, they are likely to buy more now before the price does go up, so demand will increase.

Although the list above covers the main categories of determinants of demand, there are many other factors that will also affect demand and they will vary depending on the good in question. You can read about some of the key determinants, first for beef in an article[4] based on the findings of a report[5] prepared for the Cattlemen's Beef Board in January 2018 and, second, following a key change in the UK in 2016 that involved a charge on plastic bags.[6]

Pause for thought

1. *By referring to each of these six determinants of demand, consider what factors would cause a rise in the demand for butter.*
2. *Do all these six determinants of demand affect both an individual's demand and the market demand for a product?*
3. *Identify any other factors that would affect (a) your demand for goods and services and (b) the market demand for goods and services.*

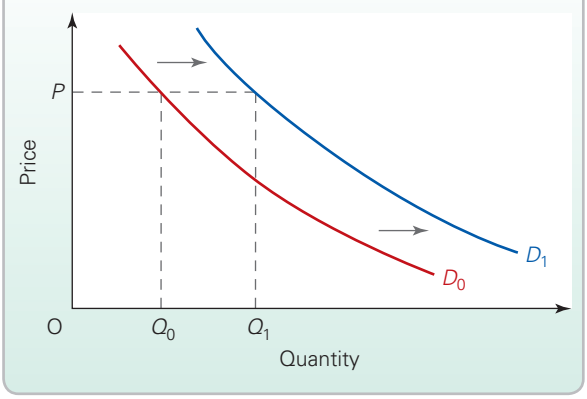
[4]National Cattlemen's Beef Association, 'NCBA Study: Many Factors Impacting Domestic Beef Demand', *Drovers* (1 February 2018).

Movements along and shifts in the demand curve

A demand curve is constructed on the assumption that 'other things remain equal' (*ceteris paribus*). In other words, it is assumed that none of the determinants of demand, other than price, changes. The effect of a change in price is then simply illustrated by a movement along the demand curve: for example, from point *B* to point *D* in Figure 4.2 when price rises from 40p to 80p per kilo.

What happens, then, when one of these other determinants does change? The answer is that we have to construct a whole new demand curve: the curve shifts. Consider a change in one of the determinants of your demand for going to the cinema, excluding the price of tickets: say your income rises. Assuming going to the cinema is a normal good, this increase in income will cause you to go more often at any price: the whole curve will shift to the right. This shows that at each price more cinema tickets will be demanded than before. Thus in Figure 4.3 at a price of *P*, a

Figure 4.3 An increase in demand



Definitions

Substitute goods A pair of goods that are considered by consumers to be alternatives to each other. As the price of one goes up, the demand for the other rises.

Complementary goods A pair of goods consumed together. As the price of one goes up, the demand for both goods will fall.

Normal goods Goods whose demand rises as people's incomes rise.

Inferior goods Goods whose demand falls as people's incomes rise.

[5]Glynn T. Tonsor, Jayson L. Lusk and Ted C. Schroeder, *Assessing Beef Demand Determinants,* Cattlemens' Beef Board (18 January 2018).

[6]Rebecca Morelle, 'Plastic bag use plummets in England since 5p charge', *BBC News* (30 July 2016).

quantity of Q_0 was originally demanded. But now, after the increase in demand, Q_1 is demanded. (Note that D_1 is not necessarily parallel to D_0.)

If a change in a determinant other than price causes demand to fall, the whole curve will shift to the left.

To distinguish between shifts in and movements along demand curves, it is usual to distinguish between a change in *demand* and a change in the *quantity demanded*. A shift in demand is referred to as a ***change in demand***, whereas a movement along the demand curve as a result of a change in price is referred to as a ***change in the quantity demanded***.

Pause for thought

The price of a can of Coca-Cola rises, but you notice that the demand for Coca-Cola increases. Can you conclude that the demand curve for Coca-Cola is upward sloping?

4.3 SUPPLY

Supply and price

Imagine you are a farmer deciding what to do with your land. Part of your land is in a fertile valley. Part is on a hillside where the soil is poor. Perhaps, then, you will consider growing vegetables in the valley and keeping sheep on the hillside.

Your decision will depend, to a large extent, on the price that various vegetables will fetch in the market and, likewise, the price you can expect to get from sheep and wool. As far as the valley is concerned, you will plant the vegetables that give the best return. If, for example, the price of potatoes is high, you will probably use a lot of the valley for growing potatoes. If the price gets higher, you may well use the whole of the valley, perhaps being prepared to run the risk of potato disease. If the price is very high indeed, you may even consider growing potatoes on the hillside, even though the yield per acre is much lower there. In other words, the higher the price of a particular crop, the more you are likely to grow in preference to other crops.

This illustrates the general relationship between supply and price: *when the price of a good rises, the quantity supplied will also rise.* There are three reasons for this:

- As firms supply more, they are likely to find that, beyond a certain level of output, costs rise more and more rapidly. Only if price rises will it be worth producing more and incurring these higher costs.
- In the case of the farm we have just considered, once potatoes have to be grown on the hillside, the costs of producing them will increase. Also, if the land has to be farmed more intensively, say by the use of more and more fertilisers, again the cost of producing extra potatoes is likely to rise quite rapidly. It is the same for manufacturers. Beyond a certain level of output, costs are likely to rise rapidly as workers have to be paid overtime and as machines approach their full capacity. If higher output involves higher costs of production, producers will need to get a higher price if they are to be persuaded to produce extra output. We consider how costs rise with rises in output in more detail in Chapter 9.
- The higher the price of the good, the more profitable it becomes to produce. Firms will thus be encouraged to produce more of it by switching from producing less profitable goods.
- Given time, if the price of a good remains high, new producers will be encouraged to set up in production. Total market supply thus rises.

The first three determinants affect supply in the short run. The fourth affects supply in the long run. (We distinguish between short-run and long-run supply later, in section 5.4.)

The supply curve

The amount that producers would like to supply at various prices can be shown in a ***supply schedule***. Table 4.2 shows a

Definitions

Change in demand The term used for a shift in the demand curve. It occurs when a determinant of demand *other* than price changes.

Change in the quantity demanded The term used for a movement along the demand curve to a new point. It occurs when there is a change in price.

Supply schedule A table showing the different quantities of a good that producers are willing and able to supply at various prices over a given time period. A supply schedule can be for an individual producer or group of producers, or for all producers (the market supply schedule).

Table 4.2 The supply of potatoes (monthly)

	Price of potatoes (pence per kg)	Farmer X's supply (tonnes)	Total market supply (tonnes: 000s)
a	20	50	100
b	40	70	200
c	60	100	350
d	80	120	530
e	100	130	700

monthly supply schedule for potatoes, both for an individual farmer (farmer X) and for all farmers together (the whole market).

The supply schedule can be represented graphically as a ***supply curve***. A supply curve may be an individual firm's supply curve or a market supply curve (i.e. that of the whole industry).

Figure 4.4 shows the *market* supply curve of potatoes. As with demand curves, price is plotted on the vertical axis and quantity on the horizontal axis. Each of the points *a–e* corresponds to a figure in Table 4.2. Thus, for example, a price rise from 60p per kilogram to 80p per kilogram will cause a movement along the supply curve from point *c* to point *d*: total market supply will rise from 350 000 tonnes per month to 530 000 tonnes per month.

Not all supply curves will be upward sloping (positively sloped). Sometimes they will be vertical, horizontal, or even downward sloping. This will depend largely on the time period over which firms' response to price changes is considered. This question is examined in Chapter 5.

Pause for thought

1. *How much would be supplied at a price of 70p per kilo?*
2. *Draw a supply curve for farmer X. Are the axes drawn to the same scale as in Figure 4.4?*

Other determinants of supply

Like demand, supply is not determined simply by price. The other determinants of supply are as follows.

The costs of production. The higher the costs of production, the less profit will be made at any price. As costs rise, firms will cut back on production, probably switching to alternative products whose costs have not risen so much.

KI 3 p19

The main reasons for a change in costs are as follows:

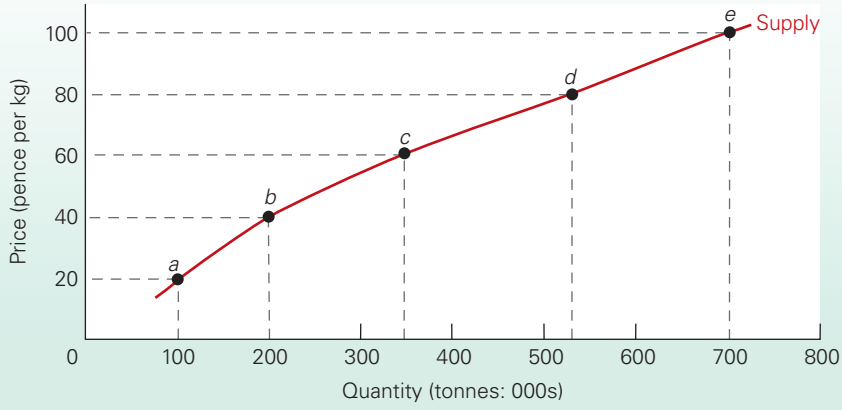
- *Change in input prices:* costs of production will rise if wages, raw material prices, rents, interest rates or any other input prices rise.
- *Change in technology:* technological advances can fundamentally alter the costs of production. Consider, for example, how the microchip revolution has changed production methods and information handling in virtually every industry in the world.
- *Organisational changes:* various cost savings can be made in many firms by reorganising production.
- *Government policy:* costs will be lowered by government subsidies and raised by various taxes.

The profitability of alternative products (substitutes in supply). Many firms produce a range of products and will move resources from the production of one good to another as circumstances change. If some alternative product

Definitions

Supply curve A graph showing the relationship between the price of a good and the quantity of the good supplied over a given time period.

Figure 4.4 Market supply curve of potatoes (monthly)



(a ***substitute in supply***) becomes more profitable to supply than before, producers are likely to switch from the first good to this alternative; so supply of the first good falls. Other goods are likely to become more profitable if their prices rise or their costs of production fall. For example, if the price of carrots goes up, or the cost of producing carrots comes down, farmers may decide to produce more carrots. The supply of potatoes is, therefore, likely to fall.

The profitability of goods in joint supply. Sometimes when one good is produced, another good is also produced at the same time. These are said to be ***goods in joint supply***. An example is the refining of crude oil to produce petrol. Other grade fuels will be produced as well, such as diesel and paraffin. If more petrol is produced, due to a rise in demand, then the supply of these other fuels will rise, too.

Nature, 'random shocks' and other unpredictable events. In this category we would include the weather and diseases affecting farm output, wars affecting the supply of imported raw materials, the breakdown of machinery, industrial disputes, earthquakes, floods and fire, etc.

The aims of producers. A profit-maximising firm will supply a different quantity from a firm that has a different aim, such as maximising sales.

Pause for thought

With reference to each of the above determinants of supply, identify what would cause (a) the supply of potatoes to fall and (b) the supply of leather to rise.

KI 13 p75

Expectations of future price changes. If price is expected to rise, producers may temporarily reduce the amount they sell. Instead, they are likely to build up their stocks and release them on to the market only when the price does rise. At the same time, they may plan to produce more, by installing new machines or taking on more labour so that they can be ready to supply more when the price has risen.

The number of suppliers. If new firms enter the market, supply is likely to rise.

Movements along and shifts in the supply curve

The principle here is the same as with demand curves. The effect of a change in price is illustrated by a movement along the supply curve: for example, from point *d* to point *e* in Figure 4.4 when price rises from 80p to 100p. Quantity supplied rises from 530 000 to 700 000 tonnes.

If any other determinant of supply changes, the whole supply curve will shift. A rightward shift illustrates an increase in supply. A leftward shift illustrates a decrease in supply. Thus in Figure 4.5, if the original curve is S_0, the curve S_1 represents an increase in supply (more is supplied at each price), whereas the curve S_2 represents a decrease in supply (less is supplied at each price).

A movement along a supply curve often is referred to as a ***change in the quantity supplied***, whereas a shift in the supply curve simply is referred to as a ***change in supply***.

Pause for thought

By referring to the determinants of supply, consider what factors would cause a rightward shift in the supply of family cars.

Definitions

Substitutes in supply These are two goods where an increased production of one means diverting resources away from producing the other.

Goods in joint supply These are two goods where the production of more of one leads to the production of more of the other.

Change in the quantity supplied The term used for a movement along the supply curve to a new point. It occurs when there is a change in price.

Change in supply The term used for a shift in the supply curve. It occurs when a determinant other than price changes.

Figure 4.5 Shifts in the supply curve