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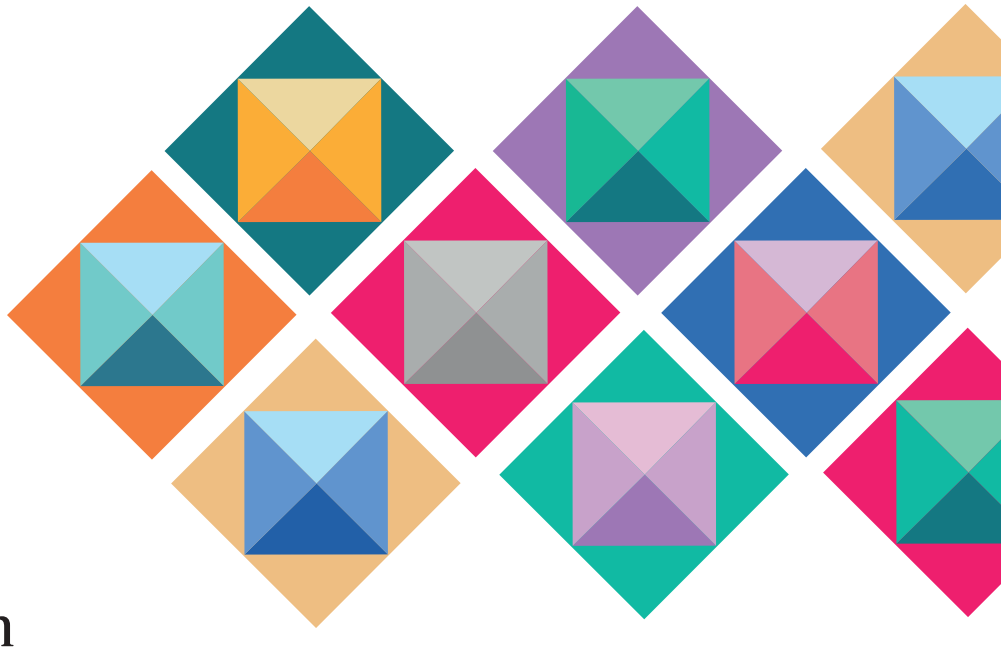

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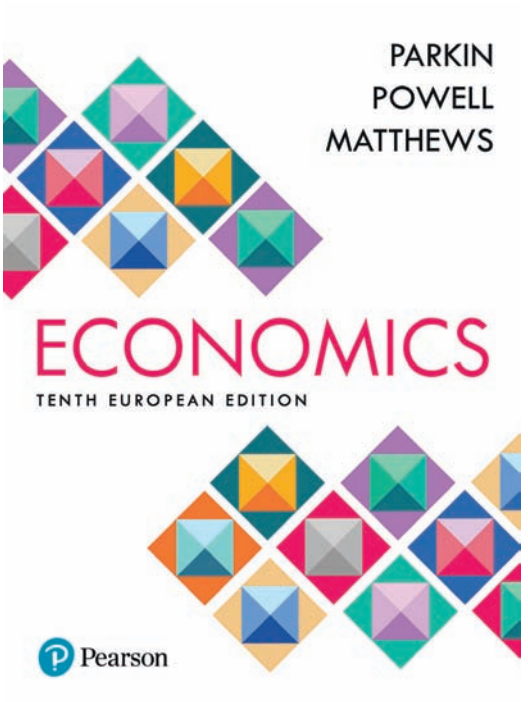

To Our Students

About the Authors

Michael Parkin is Professor Emeritus in the Department of Economics at the University of Western Ontario, Canada, where he taught the principles course to around 900 students each year. He studied economics at the University of Leicester but received his real training in the subject from an extraordinary group of economists at the University of Essex during the early 1970s. Professor Parkin has held faculty appointments at the Universities of Sheffield, Leicester, Essex and Manchester and visiting appointments at Brown University, Bond University, the Reserve Bank of Australia and the Bank of Japan. He is a past president of the Canadian Economics Association and has served on the editorial boards of the *American Economic Review* and the *Journal of Monetary Economics* and as managing editor of the *Manchester School* and the *Canadian Journal of Economics*. Professor Parkin's economic research has resulted in over 160 publications in journals and edited volumes, including the *American Economic Review*, the *Journal of Political Economy*, the *Review of Economic Studies*, the *Economic Journal*, *Economica*, the *Manchester School*, the *Journal of Monetary Economics* and the *Journal of Money*, *Credit and Banking*, and edited volumes. He became visible to the public through his work on inflation that discredited the use of prices and incomes policies.

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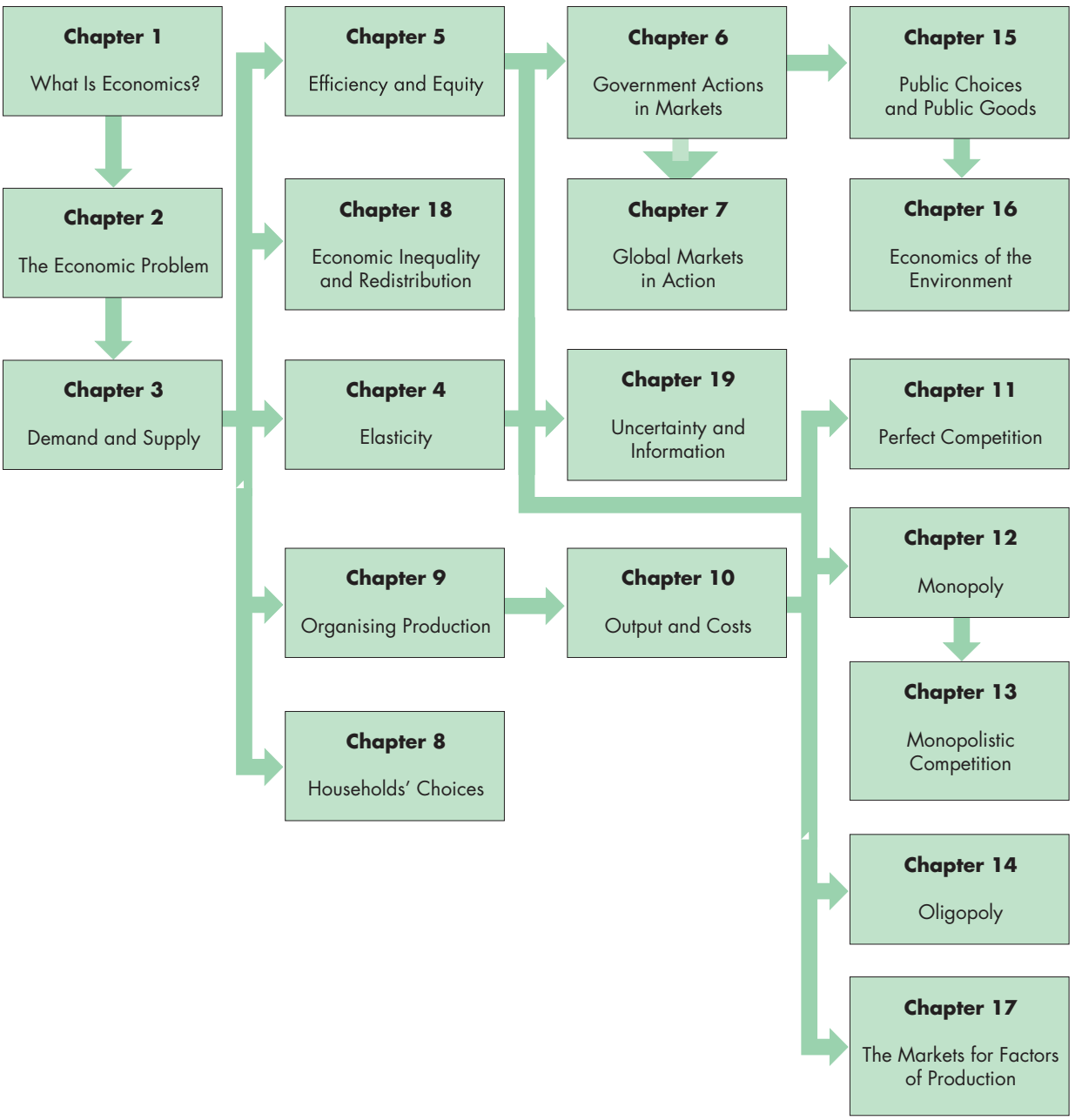
Micro Flexibility



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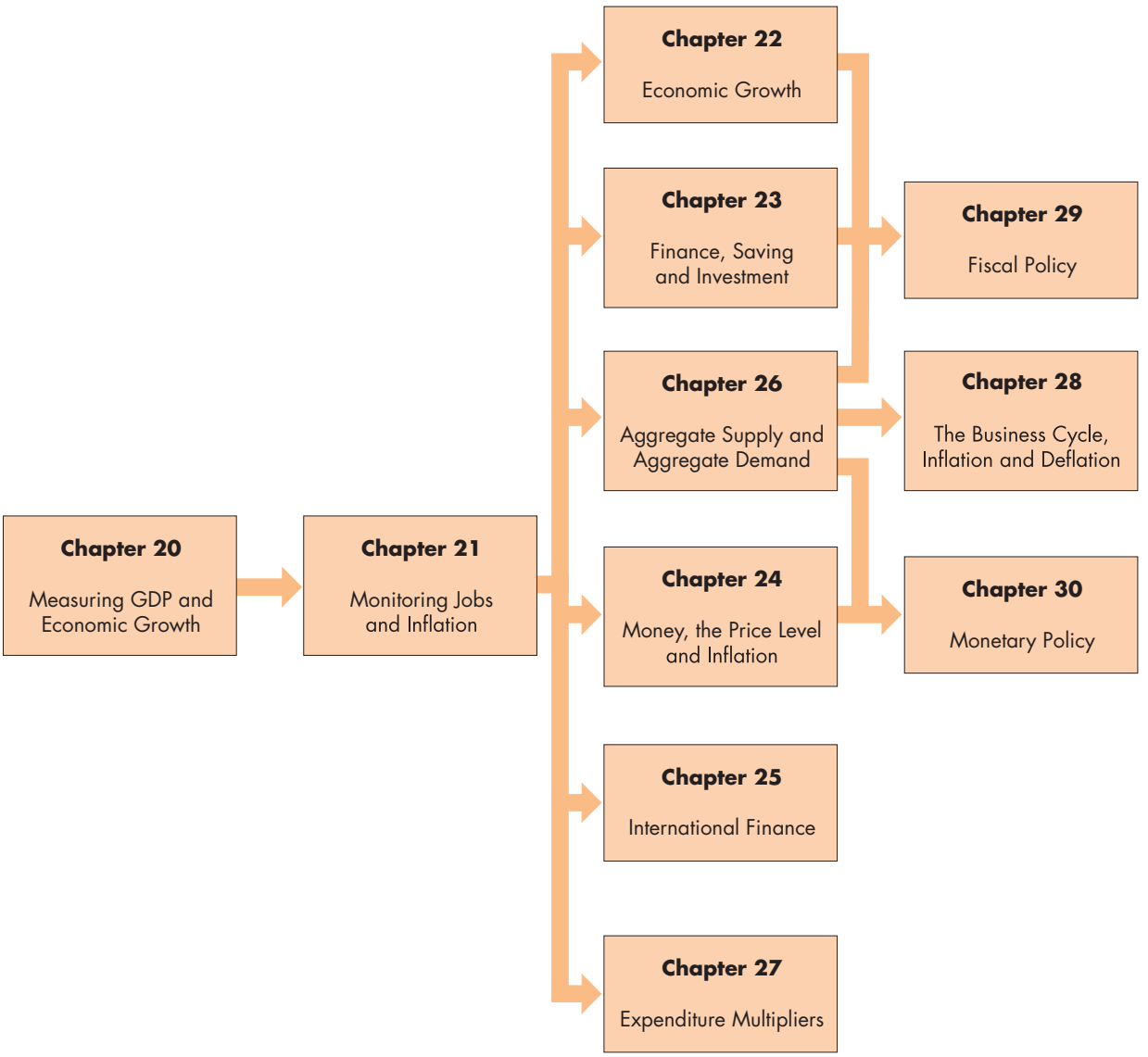

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Guided Tour for Students

Setting the Scene

Chapter Openers motivate the topic and set the scene. We carry the introductory story into the main body of the chapter and return to it in **Economics in the News** at the end of the chapter.

Objectives enable you to see exactly where the chapter is going and to set your goals before you begin the chapter. We link these goals directly to the chapter's major headings.

3 Demand and Supply

After studying this chapter you will be able to:

- Describe a competitive market and think about a price as an opportunity cost
- Explain the influences on demand
- Explain the influences on supply
- Explain how demand and supply determine prices and quantities bought and sold
- Use demand and supply to make predictions about changes in prices and quantities

A disease that kills banana trees is jumping continents. Left unchecked, it will bring a big drop in banana production. What will happen to the price of bananas if the disease isn't contained? The demand and supply model answers this question.

The model that you're about to study is the main tool of economics. It explains how prices are determined and how they guide the use of resources to influence *What*, *How* and *For Whom* goods and services are produced.

Economics in the News at the end of the chapter answers the question about the price of bananas.

53

Using the Study Tools

Highlighted **Key Terms** within the text simplify your task of learning the vocabulary of economics. Each term appears in a list of **Key Terms** at the end of the chapter and in the **Glossary** at the end of the book. The terms are also highlighted in the index and can be found online in the MyEconLab glossary and Flashcards.

Some examples of microeconomic questions are: Why are people streaming more films? How will a tax on sugar affect food manufacturers?

Macroeconomics is the study of the performance of the national economy and the global economy. Some examples of macroeconomic questions are: Why does

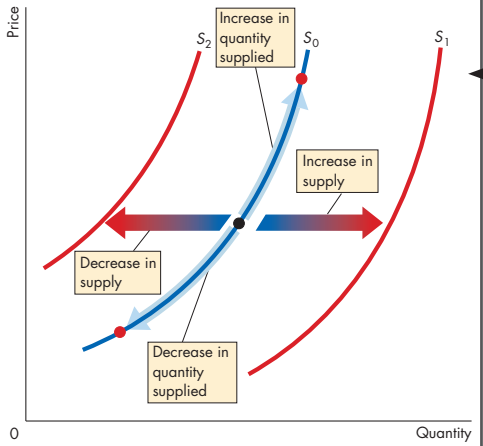
Cooperative equilibrium The outcome of a game in which the players make and share the monopoly profit. (p. 330)

Cost-push inflation An inflation that results from an initial increase in costs. (p. 679)

Key Terms

Benefit, 9
Capital, 4
Economic model, 11
Economics, 2
Efficiency, 5
Entrepreneurship, 4
Factors of production, 3
Goods and services, 3
Human capital, 3
Incentive, 2
Interest, 4

Figure 3.6 A Change in the Quantity Supplied versus a Change in Supply



When the price of the good changes, there is a movement along the supply curve and a change in the quantity supplied, shown by the blue arrows on supply curve S_0.

When any other influence on selling plans changes, there is a shift of the supply curve and a change in supply. An increase in supply shifts the supply curve rightward (from S_0 to S_1), and a decrease in supply shifts the supply curve leftward (from S_0 to S_2).

MyEconLab Animation

Diagrams show where the economic action is! Graphical analysis is the most powerful tool available for teaching and learning economics. We have developed the diagrams with the study and review needs of students in mind. Our diagrams feature:

- Original curves consistently shown in blue
- Shifted curves consistently shown in red
- Colour-blended arrows to suggest movement
- Other important features highlighted in red
- Graphs often paired with data tables
- Graphs labelled with boxed notes
- Extended captions that make each diagram and its caption a self-contained object for study and review
- Every diagram can be found with a step-by-step animation in MyEconLab.

A **Review Quiz** at the end of every major section is tied to the chapter's learning objectives and enables you to go over the material again to reinforce your understanding of a topic before moving on. Work these questions, along with a new Key Terms Quiz and additional practice questions, all with instant feedback, in the **MyEconLab Study Plan.**

REVIEW QUIZ

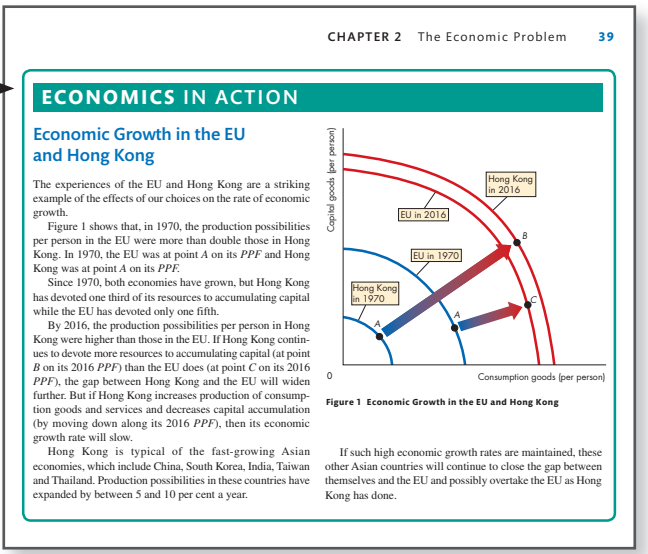
1. What is the equilibrium price of a good or service?
2. Over what range of prices does a shortage arise? What happens to the price when there is a shortage?
3. Over what range of prices does a surplus arise? What happens to the price when there is a surplus?
4. Why is the price at which the quantity demanded equals the quantity supplied the equilibrium price?
5. Why is the equilibrium price the best deal available for both buyers and sellers?

Do these questions in Study Plan 3.4 and get instant feedback. Do a Key Terms Quiz.

MyEconLab

Connecting with Reality

Economics in Action Boxes show you the connections between theory and real-world data or events. Tables and figures put the real-world flesh on the bones of the models and help you learn how to apply your newly gained knowledge of economic principles to the economic world around you.



CHAPTER 2 The Economic Problem 39

ECONOMICS IN ACTION

Economic Growth in the EU and Hong Kong

The experiences of the EU and Hong Kong are a striking example of the effects of our choices on the rate of economic growth.

Figure 1 shows that, in 1970, the production possibilities per person in the EU were more than double those in Hong Kong. In 1970, the EU was at point *A* on its *PPF* and Hong Kong was at point *A* on its *PPF*.

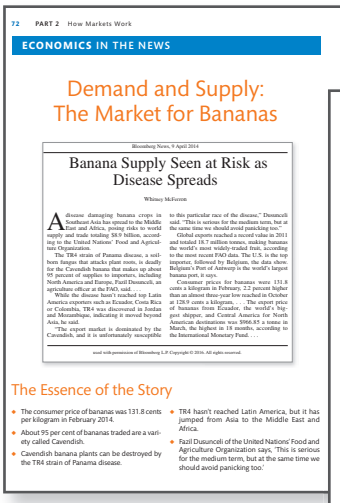
Since 1970, both economies have grown, but Hong Kong has devoted one third of its resources to accumulating capital while the EU has devoted only one fifth.

By 2016, the production possibilities per person in Hong Kong were higher than those in the EU. If Hong Kong continues to devote more resources to accumulating capital (at point *B* on its 2016 *PPF*) than the EU does (at point *C* on its 2016 *PPF*), the gap between Hong Kong and the EU will widen further. But if Hong Kong increases production of consumption goods and services and decreases capital accumulation (by moving down along its 2016 *PPF*), then its economic growth rate will slow.

Hong Kong is typical of the fast-growing Asian economies, which include China, South Korea, India, Taiwan and Thailand. Production possibilities in these countries have expanded by between 5 and 10 per cent a year.

Figure 1 Economic Growth in the EU and Hong Kong

If such high economic growth rates are maintained, these other Asian countries will continue to close the gap between themselves and the EU and possibly overtake the EU as Hong Kong has done.



72 PART 2 How Markets Work

ECONOMICS IN THE NEWS

Demand and Supply: The Market for Bananas

Bloomberg News, 9 April 2014

Banana Supply Seen at Risk as Disease Spreads

Whitney McFerron

A disease damaging banana crops in Southeast Asia has spread to the Middle East and Africa, posing risks to world supply and trade totaling $8.9 billion, according to the United Nations' Food and Agriculture Organization.

The TR4 strain of Panama disease, a soil-born fungus that attacks plant roots, is deadly for the Cavendish banana that makes up about 95 percent of supplies to importers, including North America and Europe, Fasil Dusuncelli, an agriculture officer at the FAO, said. . . .

While the disease hasn't reached top Latin America exporters such as Ecuador, Costa Rica or Colombia, TR4 was discovered in Jordan and Mozambique, indicating it moved beyond Asia, he said.

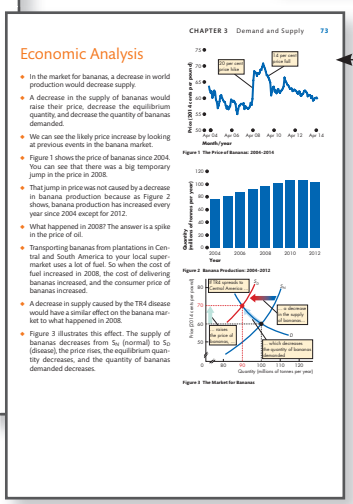
"The export market is dominated by the Cavendish; and it is unfortunately susceptible to this particular race of the disease," Dusuncelli said. "This is serious for the medium term, but at the same time we should avoid panicking too."

Global exports reached a record value in 2011 and totaled 18.7 million tonnes, making bananas the world's most widely-traded fruit, according to the most recent FAO data. The U.S. is the top importer, followed by Belgium; the data show. Belgium's Port of Antwerp is the world's largest banana port, it says.

Consumer prices for bananas were 131.8 cents a kilogram in February, 2.2 percent higher than an almost three-year low reached in October at 128.9 cents a kilogram. . . . The export price of bananas from Ecuador, the world's biggest shipper, and Central America for North American destinations was $986.85 a tonne in March, the highest in 18 months, according to the International Monetary Fund. . . .

The Essence of the Story

- The consumer price of bananas was 131.8 cents per kilogram in February 2014.
- About 95 per cent of bananas traded are a variety called Cavendish.
- Cavendish banana plants can be destroyed by the TR4 strain of Panama disease.
- TR4 hasn't reached Latin America, but it has jumped from Asia to the Middle East and Africa.
- Fasil Dusuncelli of the United Nations' Food and Agriculture Organization says, 'This is serious for the medium term, but at the same time we should avoid panicking too.'



CHAPTER 3 Demand and Supply 73

Economic Analysis

- In the market for bananas, a decrease in world production would decrease supply.
- A decrease in the supply of bananas would raise their price, decrease the equilibrium quantity, and decrease the quantity of bananas demanded.
- We can see the likely price increase by looking at previous events in the banana market.
- Figure 1 shows the price of bananas since 2004. You can see that there was a big temporary jump in the price in 2008.
- That jump in price was not caused by a decrease in banana production because as Figure 2 shows, banana production has increased every year since 2004 except for 2012.
- What happened in 2008? The answer is a spike in the price of oil.
- Transporting bananas from plantations in Central and South America to your local supermarket uses a lot of fuel. So when the cost of fuel increased in 2008, the cost of delivering bananas increased, and the consumer price of bananas increased.
- A decrease in supply caused by the TR4 disease would have a similar effect on the banana market to what happened in 2008.
- Figure 3 illustrates this effect. The supply of bananas decreases from S_0 (normal) to S_D (disease), the price rises, the equilibrium quantity decreases, and the quantity of bananas demanded decreases.

Figure 1 The Price of Bananas: 2004–2014

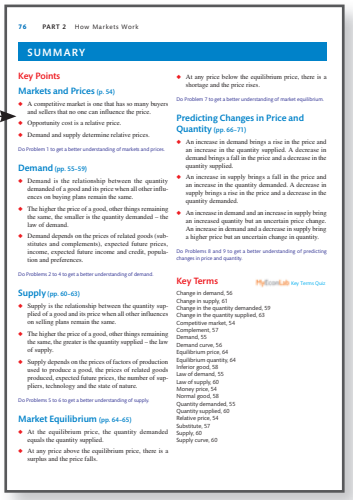
Figure 2 Banana Production: 2004–2012

Figure 3 The Market for Bananas

Economics in the News

This Parkin, Powell and Matthews hallmark helps students think like economists by connecting chapter tools and concepts to the world around them. At the end of each chapter in **Economics in the News**, students apply the tools they have just learned by analysing an article from a newspaper or news website. Each article sheds additional light on the questions first raised in the Chapter Opener. Questions about the article also appear with the end-of-chapter problems and applications.

Each chapter closes with a concise **Summary** organised by major topics, a list of **Key Terms** (with page references), **a Worked Problem, Study Plan Problems and Applications** and **Additional Problems and Applications.** All Study Plan problems are available in MyEconLab with instant feedback. All Additional problems are available in MyEconLab if assigned by your lecturer.



76 PART 2 How Markets Work

SUMMARY

Key Points

Markets and Prices (p. 54)

- A competitive market is one that has so many buyers and sellers that no one can influence the price.
- Opportunity cost is a relative price.
- Demand and supply determine relative prices.

Do Problem 1 to get a better understanding of markets and prices.

Demand (pp. 55–59)

- Demand is the relationship between the quantity demanded of a good and its price when all other influences on buying plans remain the same.
- The higher the price of a good, other things remaining the same, the smaller is the quantity demanded – the law of demand.
- Demand depends on the prices of related goods (substitutes and complements), expected future prices, income, expected future income and credit, population and preferences.

Do Problems 2 to 4 to get a better understanding of demand.

Supply (pp. 60–63)

- Supply is the relationship between the quantity supplied of a good and its price when all other influences on selling plans remain the same.
- The higher the price of a good, other things remaining the same, the greater is the quantity supplied – the law of supply.
- Supply depends on the prices of factors of production used to produce a good, the prices of related goods produced, expected future prices, the number of suppliers, technology and the state of nature.

Do Problems 5 to 6 to get a better understanding of supply.

Market Equilibrium (pp. 64–65)

- At the equilibrium price, the quantity demanded equals the quantity supplied.
- At any price above the equilibrium price, there is a surplus and the price falls.
- At any price below the equilibrium price, there is a shortage and the price rises.

Do Problem 7 to get a better understanding of market equilibrium.

Predicting Changes in Price and Quantity (pp. 66–71)

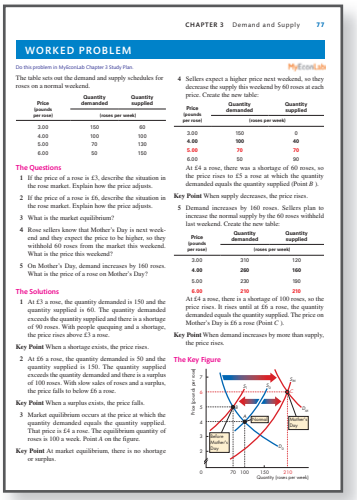
- An increase in demand brings a rise in the price and an increase in the quantity supplied. A decrease in demand brings a fall in the price and a decrease in the quantity supplied.
- An increase in supply brings a fall in the price and an increase in the quantity demanded. A decrease in supply brings a rise in the price and a decrease in the quantity demanded.
- An increase in demand and an increase in supply bring an increased quantity but an uncertain price change. An increase in demand and a decrease in supply bring a higher price but an uncertain change in quantity.

Do Problems 8 and 9 to get a better understanding of predicting changes in price and quantity.

Key Terms

MyEconLab Key Terms Quiz

Change in demand, 56
Change in supply, 61
Change in the quantity demanded, 59
Change in the quantity supplied, 63
Competitive market, 54
Complement, 57
Demand, 55
Demand curve, 56
Equilibrium price, 64
Equilibrium quantity, 64
Inferior good, 58
Law of demand, 55
Law of supply, 60
Money price, 54
Normal good, 58
Quantity demanded, 55
Quantity supplied, 60
Relative price, 54
Substitute, 57
Supply, 60
Supply curve, 60



CHAPTER 3 Demand and Supply 77

WORKED PROBLEM

Do this problem in MyEconLab Chapter 3 Study Plan

The table sets out the demand and supply schedules for roses on a normal weekend.

Price (pounds per rose)	Quantity demanded (roses per week)	Quantity supplied (roses per week)
2.00	150	60
4.00	100	100
5.00	70	130
6.00	50	150

The Questions

1 If the price of a rose is £3, describe the situation in the rose market. Explain how the price adjusts.

2 If the price of a rose is £6, describe the situation in the rose market. Explain how the price adjusts.

3 What is the market equilibrium?

4 Rose sellers know that Mother's Day is next weekend and they expect the price to be higher, so they withheld 60 roses from the market this weekend. What is the price this weekend?

5 On Mother's Day, demand increases by 160 roses. What is the price of a rose on Mother's Day?

The Solutions

1 At £3 a rose, the quantity demanded is 150 and the quantity supplied is 60. The quantity demanded exceeds the quantity supplied and there is a shortage of 90 roses. With people queueing and a shortage, the price rises above £3 a rose.

Key Point When a shortage exists, the price rises.

2 At £6 a rose, the quantity demanded is 50 and the quantity supplied is 150. The quantity supplied exceeds the quantity demanded and there is a surplus of 100 roses. With slow sales of roses and a surplus, the price falls to below £6 a rose.

Key Point When a surplus exists, the price falls.

3 Market equilibrium occurs at the price at which the quantity demanded equals the quantity supplied. That price is £4 a rose. The equilibrium quantity of roses is 100 a week. Point *A* on the figure.

Key Point At market equilibrium, there is no shortage or surplus.

4 Sellers expect a higher price next weekend, so they decrease the supply this weekend by 60 roses at each price. Create the new table:

Price (pounds per rose)	Quantity demanded (roses per week)	Quantity supplied (roses per week)
2.00	150	0
4.00	100	40
5.00	70	70
6.00	50	90

At £4 a rose, there was a shortage of 60 roses, so the price rises to £5 a rose at which the quantity demanded equals the quantity supplied (Point *B*).

Key Point When supply decreases, the price rises.

5 Demand increases by 160 roses. Sellers plan to increase the normal supply by the 60 roses withheld last weekend. Create the new table:

Price (pounds per rose)	Quantity demanded (roses per week)	Quantity supplied (roses per week)
3.00	310	120
4.00	260	160
5.00	230	190
6.00	210	210

At £4 a rose, there is a shortage of 100 roses, so the price rises. It rises until at £6 a rose, the quantity demanded equals the quantity supplied. The price on Mother's Day is £6 a rose (Point *C*).

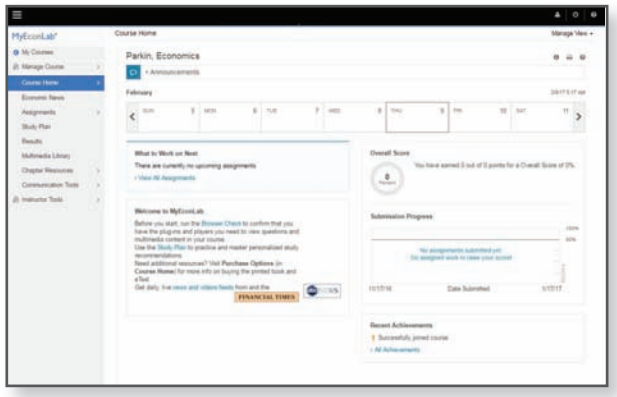
Key Point When demand increases by more than supply, the price rises.

The Key Figure

Using MyEconLab

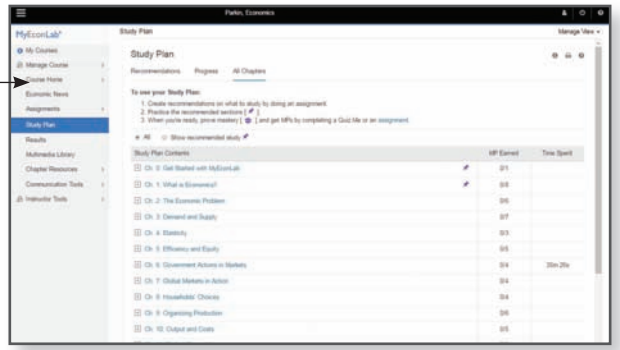
Use the power of MyEconLab to accelerate your learning. You need both an access card and a course ID to access MyEconLab:

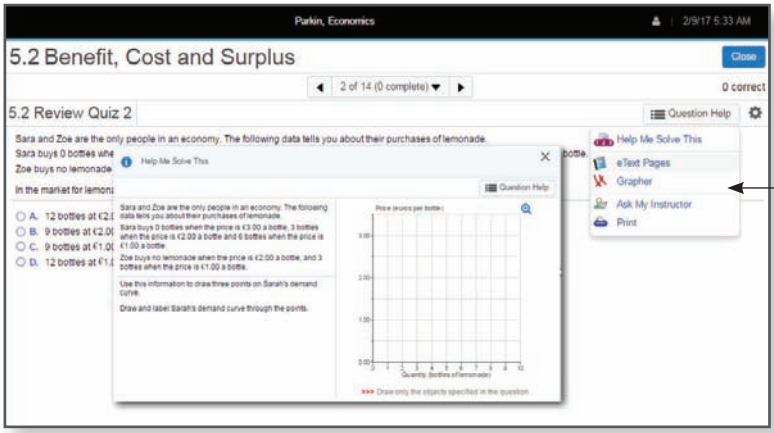
1. Is your lecturer using MyEconLab? **Ask your lecturer** for your course ID
2. Has an access card been included with the book? **Check the inside back cover of the book.**
3. If you have a course ID but no access card, **go to:** http://www.myeconlab.com/ **to buy access** to this interactive study programme.



Sample Tests (two for each chapter named What do I know? and What have I learnt?) are preloaded in MyEconLab and enable you to test your understanding and identify the areas in which you need to do further work. Your lecturer might also create custom tests or quizzes.

MyEconLab creates a personal **Study Plan** for you based on your performance on the sample tests. The Study Plan diagnoses weaknesses and consists of a series of additional exercises with detailed feedback and 'Help Me Solve This' explanations for topics in which you need further help. The Study Plan is also linked to other study tools.





From the Study Plan exercises, you can link to **Help Me Solve This** (step-by-step explanations) and an **electronic version of your textbook.**

Preface

The future is always uncertain. But at some times, and now is one of them, uncertainty is extreme. The major source of extreme uncertainty is economic policy. There is uncertainty about trade policy in the wake of the Brexit vote and the election of Donald Trump as U.S. president. There is uncertainty about exchange rate policy as competitive devaluation rears its head. There is extraordinary uncertainty about monetary policy with the central banks having exploded the quantity of bank reserves and continuing to create more money in an attempt to stimulate their fragile economies. And there is uncertainty about fiscal policy as unprecedented deficits interact with ageing healthcare costs.

In the nine years since the global financial crisis of August 2007 moved economics from the business report to the front page, justified fear has gripped producers, consumers, financial institutions and governments.

Even the *idea* that the market is an efficient mechanism for allocating scarce resources came into question as some political leaders trumpeted the end of capitalism and the dawn of a new economic order in which tighter regulation reined in unfettered greed.

Rarely do teachers of economics have such a rich feast on which to draw. And rarely are the principles of economics more surely needed to provide the solid foundation on which to think about economic events and navigate the turbulence of economic life.

Although thinking like an economist can bring a clearer perspective to and deeper understanding of today's events, students don't find the economic way of thinking easy or natural.

Economics seeks to put clarity and understanding in the grasp of the student through its careful and vivid exploration of the tension between self-interest and the social interest, the role and power of incentives – of opportunity cost and marginal benefit – and by demonstrating the possibility that markets supplemented by other mechanisms might allocate resources efficiently.

Students who use this text thoughtfully do well in their course but achieve high marks. They also begin to think about issues in the way economists do, and learn how to explore difficult policy problems and make more informed decisions in their own economic lives.

The Tenth Edition Revision

Thoroughly updated, this comprehensive revision builds on the solid foundation of the previous edition and retains its thorough and detailed presentation of the principles of economics, its emphasis on real-world examples and applications, its development of critical thinking skills, its diagrams renowned for pedagogy and precision, and its path-breaking technology.

Most chapters have been thoroughly reworked to achieve even greater clarity and to place greater emphasis on applications to current issues. Some sections of chapters have been removed and other sections added to cover new issues, particularly those that involve current policy problems.

Current issues organise each chapter. News stories about today's major economic events tie each chapter together, from new abbreviated chapter-opening vignettes to *Economics in the News* and end-of-chapter problems and applications and online practice.

Economics in the News boxes show students how to use the economic toolkit to understand the events and issues they are confronted with in the media.

At Issue boxes show two sides of a controversial issue and helps students to apply the economic way of thinking to clarify and debate the issues.

Among the many issues covered in one or more of the features described above are:

- Capitalism and its critics in Chapter 1
- The falling cost of oil in Chapter 4
- Taxing sugary drinks in Chapter 8
- Infrastructure spending on roads in Chapter 15
- Climate change and wind power in Chapter 16
- Avoiding a Brexit recession in Chapter 26
- Japan's decades long struggle to escape deflation in Chapter 28
- Fiscal stimulus in Chapter 29
- The Bank of England's extraordinary actions in Chapter 30
- Extraordinary monetary stimulus in Chapter 30

Highpoints of the Revision

Parkin, Powell and Matthews has been "teaching economics as if the last 30 years had happened" for most of the last 30 years. This text also teaches economics as if the last three years had happened. For it recognises that students want to use the principles they are learning to understand economic events that happened in their own adult lives.

Pursuing this focus on recent events, the current revision has four high points:

- Immigration
- Deflation and stagnation
- Brexit
- Controlling interest rates

Immigration

Immigration is examined in Chapter 17 on factor markets. Data are presented to place UK immigration in an international context, and two possible effects of immigration are analysed: where immigrants are willing to work for lower wages and take jobs away from the local population, and where immigrants do jobs that locals don't want and create profitable business opportunities.

Deflation and Stagnation

Deflation and stagnation are studied in Chapters 26, 27 and 28. The long, slow recovery from the recession that followed the global financial crisis and the persistence of low inflation in both the UK and the EU are studied in Chapter 26 (Aggregate Supply and Aggregate Demand), and Japan's long stagnation and deflation are studied in a reorganised Chapter 28, The Business Cycle, Inflation and Deflation.

Brexit

The Brexit referendum (23 June 2016) occurred as we began work on this revision. Beyond Theresa May's declaration that "Brexit means Brexit", there is no way of knowing or predicting the economic world that will emerge from the Article 50 negotiations. But some of the issues are clear, and the referendum itself has triggered policy developments.

Brexit makes seven key appearances. In Chapter 7, we look at a range of its possible effects on UK international trade. In Chapter 22, we examine alternative views of its effects on economic growth. In Chapter 24, we look at the Bank of England's Brexit interest rate cut and in Chapter 30, *At Issue* looks at the pros and cons of that cut. The rapidly falling pound is discussed in Chapter 25; the challenge of avoiding a Brexit recession features in Chapter 26; and the fiscal policy fallout is examined in Chapter 29.

Controlling Interest Rates

The Bank of England's interest rate actions have had profound effects and have generated much debate. Exactly how does the Bank hit its interest target? We answer this question in Chapter 30, Monetary Policy, and explain the details of how the Bank operates at a near-zero interest rate.

Economics in the News

This Parkin, Powell and Matthews hallmark helps students think like economists by connecting chapter tools and concepts to the world around them.

Complementing *Economics in the News* questions, which appear weekly in *MyEconLab* and in end-of-chapter problems, a series of *Economics in the News* boxes help students to answer news-based questions.

ECONOMICS IN THE NEWS

The Opportunity Cost of Cocoa

World's Sweet Tooth Heats Up Cocoa

Chocolate consumption is soaring as people in developing countries are getting wealthier. Cocoa farmers are ramping up production to keep the chocolate flowing, but the price of cocoa keeps rising.

Source: *The Wall Street Journal*, 13 February 2014

The Questions

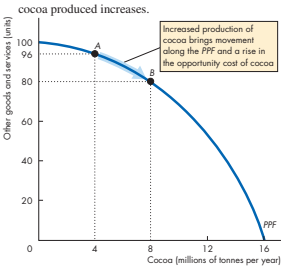
How does the *PPF* illustrate (1) the limits to cocoa production, (2) the trade-off we must make to increase cocoa production and (3) the effect of the increased chocolate consumption on the cost of producing cocoa?

The Answers

- Figure 1 shows shows the global *PPF* for cocoa and other goods and services. Point *A* on the *PPF* tells us that if 4 million tonnes of cocoa are produced, a maximum of 96 units of other goods and services can be produced.
- The movement along the *PPF* from point *A* to point *B* illustrates the trade-off we must make to increase chocolate and cocoa production.
- The slope of the *PPF* measures the opportunity cost of cocoa. If cocoa production increases from zero to 4 million tonnes, the production of other goods and services decreases from 100 units to 96 units. The opportunity cost of 1 tonne of cocoa is 1 unit of other goods and and services.

But if cocoa production increases from 4 million tonnes to 8 million tonnes, the production of other goods and services decreases from 96 units to 80 units. The opportunity cost of 1 tonne of cocoa is now 4 units of other goods and services.

As resources are moved into producing cocoa, labour, land and capital less suited to the task of cocoa production are used and the cost of additional tonne of cocoa produced increases.



PPF for Cocoa and Other Goods and Services

In this Tenth Edition, we have rebranded the *Economics in the News* feature of earlier editions as *Economics in the News* to emphasise the variety of ways in which news events and analysis appear in our text and supplements.

Here is a sample of 48 topics covered by these boxes:

- Mark Zuckerberg's big idea: The 'next 5 billion'
- The Markets for Chocolate and Cocoa
- The Elasticity of Demand for Oil
- Making Traffic Flow Efficiently
- Brexit and UK Trade
- Principals and Agents Get it Wrong at JPMorgan
- Perfect Competition in Steel
- Is Google Misusing Monopoly Power?
- Airbus versus Boeing
- Euro Area Unemployment
- Brexit and UK Growth
- A Massive Open Market Operation
- Brexit Interest Rate Cut
- A Plunging Pound
- Taxes and the Global Location of Business
- Monetary Stimulus Before and After Brexit

At Issue

Ten *At Issue* boxes engage the student in debate and controversy. An *At Issue* box (see below) introduces an issue and then presents two opposing views. It leaves the matter unsettled so that the student and lecturer can continue the argument in tutorials and reach their own conclusions.

The goal of *At Issue* is to motivate the student to think about the opposing arguments and to take a stand on the issues. The ten issues covered by this feature are:

- The protest against market capitalism
- Do we need a law against price gouging?
- Does the minimum wage cause unemployment?
- Is offshore outsourcing bad or good for Europe?
- Can decentralisation and competition contain costs and maintain a high-quality National Health Service?
- Should we be doing more to reduce carbon emissions?
- Should GNNP replace GDP?
- No more too big to fail?
- How, whether and when to balance the goverment's budget
- Was the Bank of England's Brexit rate cut right?

ECONOMICS IN THE NEWS

Expanding Production Possibilities

World Bank News, 23 October 2015

Technology Drives Sustainable Agricultural Development in China

Ji Yanyu used to spread several types of fertiliser on his rice paddy in China's Guangdong Province. . . . In 2007, Guangdong farmers used 770 kilograms of fertiliser per hectare, which was twice the figure of Japan, five times the figure of Thailand and six times the figure of the United States.

Ji also sprayed lots of pesticides on the paddy covering less than half a hectare, even though the excess chemicals he applied drained into the groundwater or ended up as residue on the rice plants. Today, Ji uses just one fertiliser and a fraction of the amount of pesticides as before. He harvested 450 kilograms of rice in 2014, compared to 350 kilograms the previous year . . . .

A $200-million project supported by the World Bank helps Ji and other Guangdong farmers benefit from new technologies that promote sustainable agriculture in several ways. By reducing the amount of pesticides and fertilisers used, farmers no longer pollute local water systems or overwhelm their products with excess chemicals. . . . To get the fertilisers formulated to meet growth needs and high efficiency, low toxicity and low residue pesticides, farmers use an integrated circuit card – also known as an IC or "smart" card. . . .

According to the project management office, fertiliser application dropped by 24 per cent for the spring rice and 12 per cent for the autumn rice in 2014, while applied pesticide amounts for rice dropped by 27 per cent. The spring rice yields grew six per cent and autumn rice yields rose by 19 per cent.

The Essence of the Story

- China's rice farmers use more pesticides and up to six times more fertiliser than farmers in other countries.
- In 2014, a $200 million World Bank project provided new technology for China's rice farmers in Guangdong.
- A new smart card technology enables farmers find the least amount of fertiliser and pesticides needed to increase yields and reduce waste and pollution.
- The new technology increased the rice yield of one farmer by 29 per cent; and overall, it increased yields by up to 19 per cent with substantially reduced fertiliser and pesticide application.

AT ISSUE

Should We Be Doing More to Reduce Carbon Emissions?

Economists agree that tackling the global warming problem requires changes in the incentives that people face. The cost of carbon-emitting activities must rise and the cost of clean-energy technologies must fall.

Disagreement centres on *how* to change incentives. Should more countries set targets for cutting carbon emissions at a faster rate and introduce a carbon tax, emissions charges or cap-and-trade to cut emissions? Should clean energy research and development be subsidised?

Yes: The Stern Review

- Confronting emitters with a tax or price on carbon imposes low present costs for high future benefits.
- The cost of reducing greenhouse gas emissions to safe levels can be kept to 1 per cent of global income each year.
- The future benefits are incomes at least 5 per cent and possibly 20 per cent higher than they will be with inaction every year forever.
- Climate change is a global problem that requires an international coordinated response.
- Unlike most taxes, which bring deadweight loss, a carbon tax eliminates (or reduces) deadweight loss.
- Strong, deliberate policy action is required to change the incentives that emitters face.
- Policy actions should include:
  1. Emissions limits and emissions trading
  2. Increased subsidies for energy research and development, including the development of low-cost clean technology for generating electricity
  3. Reduced deforestation and research into new drought and flood resilient crop varieties

UK economist Nicholas Stern, principal author of *The Stern Review on the Economics of Climate Change.*

Greenhouse gas emission is 'the greatest market failure the world has ever seen.' To avoid the risk of catastrophic climate change, the upward CO_2 trend must be stopped.

No: The Copenhagen Consensus

- Confronting emitters with a tax or price on carbon imposes high present costs and low future benefits.
- Unless the entire world signs up to an emissions reduction programme, free riders will increase their emissions and carbon leakage will occur.
- A global emissions reduction programme and carbon tax would lower living standards in the rich countries and slow the growth rate of living standards in developing countries.
- Technology is already advancing and the cost of cleaner energy is falling.
- Fracking technology has vastly expanded the natural gas deposits that can be profitably exploited, and replacing coal with gas halves the carbon emissions from electricity generation.
- Free-market price signals will allocate resources to the development of new technologies that stop and eventually reverse the upward trend in greenhouse gases.

Bjørn Lomborg, President of the Copenhagen Consensus and author of *The Skeptical Environmentalist.*

'For little environmental benefit, we could end up sacrificing growth, jobs and opportunities for the big majority, especially in the developing world.'

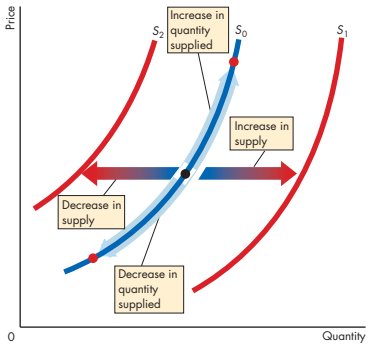
Features to Enhance Teaching and Learning

Here, we briefly review the powerful teaching and learning features retained from the previous edition.

Diagrams that Show the Action

Because many students find graphs hard to use, we have developed the entire art programme with the study and review needs of the student in mind. The diagrams feature:

- Original curves consistently shown in blue
- Shifted curves, equilibrium points and other important features highlighted in red
- Colour-blended arrows to suggest movement
- Graphs paired with data tables
- Diagrams labelled with boxed notes
- Extended captions that make each diagram and its caption a self-contained object for study and review.



Economics in Action Boxes

This feature uses boxes within the chapter to address current events and economic occurrences that highlight and amplify the topics covered in the chapter. Instead of simply reporting the current events, the material in the boxes applies the event to an economics lesson, enabling students to see how economics plays a part in the world around them as they read through the chapter.

Some of the many issues covered in these boxes include the best affordable choice of cinema films and DVD rentals, market entry and exit, how Apple doesn't make the iPhone, a game in supermarket retailing, who in the UK are the rich and the poor, diversity of UK wage rates, loanable funds to kickstart the UK property market, and the size of the fiscal stimulus multipliers.

Chapter Openers

Each chapter opens with a student-friendly vignette that raises questions to motivate the student and focus the chapter. An end-of-chapter *Economics in the News* returns to the chapter-opening question and answers it.

Key Terms

Highlighted terms simplify the student's task of learning the vocabulary of economics. Each highlighted term appears in an end-of-chapter list with its page number, in an end-of-book glossary with its page number, boldfaced in the index, and in MyEconLab.

In-Text Review Quizzes

A review quiz at the end of each major section enables students to determine whether a topic needs further study before moving on. This feature includes a reference to the appropriate MyEconLab study plan to help students further test their understanding.

ECONOMICS IN ACTION

Best Affordable Choice of Cinema Films and DVD Rentals

Between 2008 and 2014, UK box-office receipts increased by 25 per cent to over £1 billion and during that same period, the average price of a cinema ticket increased by a similar amount. So cinema receipts are rising, but cinema admissions are much the same.

What is happening to cinema going? One answer is that the cinema experience has changed. We're happy to pay more for 3-D movies, dramatic sound effects, comfortable seating, in-theatre food and drink.

But there is another answer. Events in the market for DVD rentals and streaming have affected cinema going. To see why, let's look at the recent history of the market for DVD rentals and streaming.

Back in 2008, Blockbuster was a traditional high street DVD rental company charging £4.00 for DVD film rental. Blockbuster was competing against new companies like LoveFilm offering online DVD order and postal return. By 2014, LoveFilm was part of Amazon Prime, charging £1.00 per rental or a monthly streaming fee. Now, you can stream pay-to-view films at £1.00 through i-tunes or Blinkbox. By January 2013, Blockbusters had closed 324 of their 528 stores and were bankrupt.

Figure 1 shows how the share of film revenue for different formats has changed since 2008. Revenue from viewing films on TV, in cinemas and by streaming has risen, while revenue from viewing by rental or buying DVDs has fallen.

Easy access to cheap postal DVDs and pay-to-view streamed films transformed the rental market for film watching and Figure 2 shows why.

A student has a budget of £40 a month to allocate to seeing films. To keep things simple, we'll suppose that the price of a cinema ticket is £8 in both 2008 and 2012. The price of a film rental (by DVD only) in 2008 was £4, so the student's budget line is the one that runs from 5 cinema films on the *y*-axis to 10 rentals on the *x*-axis. The student's best affordable point is 2 cinema films and 6 rentals a month.

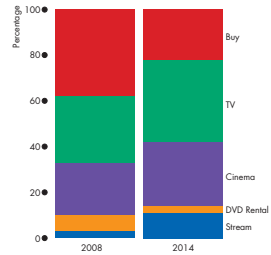


Figure 1 Film Viewing by Source in 2008 and 2014

Source of data: *BFI Statistical Yearbook*, 2014.

By 2016, the price of a rental by DVD or pay-to-view falls to £1 a film but the price of a cinema ticket remains at £8. So the budget line rotates outward. The student's best affordable point is now 2 cinema films and 25 rentals a month. Our student is consuming the same number of more expensive films at the cinema and many more cheaper rental films by pay-to-view streaming.

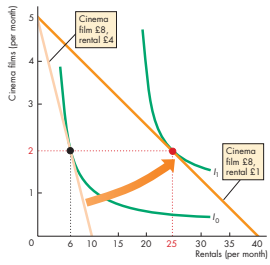


Figure 2 Best Affordable Cinema and Rental Choice

REVIEW QUIZ

1 What is the equilibrium price of a good or service?
2 Over what range of prices does a shortage arise? What happens to the price when there is a shortage?
3 Over what range of prices does a surplus arise? What happens to the price when there is a surplus?
4 Why is the price at which the quantity demanded equals the quantity supplied the equilibrium price?
5 Why is the equilibrium price the best deal available for both buyers and sellers?

Do these questions in Study Plan 3.4 and get instant feedback. Do a Key Terms Quiz. MyEconLab

Worked Problem

A new feature in the Tenth Edition is a full-page end-of-chapter worked problem. As part of the chapter review, the student has an opportunity to work a multi-part problem that covers the core content of the chapter and consists of questions solutions and key figures. This new feature increases the incentive for the student to learn-by-doing and actively, rather than passively, review the chapter.

For the Lecturer

This book enables you to focus on the economic way of thinking and choose your own course structure.

Focus on the Economic Way of Thinking

You know how hard it is to encourage a student to think like an economist, but that is your goal. Consistent with this goal, the text focuses on and repeatedly uses the central ideas: choice; trade-off; opportunity cost; the margin; incentives; the gains from voluntary exchange; the forces of demand, supply and equilibrium; the pursuit of economic rent; the tension between self-interest and the social interest; and the scope and limitations of government actions.

Choose Your Own Course Structure

You want to teach your own course. We have organised this book to enable you to do so. We demonstrate the book's flexibility in the flexibliity charts that show the alternative pathways through the micro and macro chapters on pp. viii–ix. By following the arrows through the charts you can select the path that best fits your preference for course structure. Whether you want to teach a traditional course that blends theory and policy, or one that takes a fast-track through either theory or policy issues, *Economics* gives you the choice.

Lecturer's Support Tools

The Tenth Edition has the following support tools:

- Lecturer's Manual
- Test Banks
- PowerPoint Resources
- MyEconLab

Lecturer's Manual

Nicola Lynch and Eugene Michaels of the University of Derby have created a Lecturer's Manual. Each chapter contains an outline, what's new in the Tenth Edition, teaching suggestions, a look at where we have been and where we are going, a description of the electronic supplements and additional discussion questions.

Test Banks

Nicola Lynch and Eugene Michaels of the University of Derby have reviewed and edited all our Test Bank questions and created many new questions to ensure their clarity and consistency with the Tenth Edition.

An electronic Test Bank provides 3,500 multiple-choice questions. This Test Bank is available in Test Generator Software (TestGen with QuizMaster). Fully networkable, it is available for Windows and Macintosh. TestGen's graphical interface enables lecturers to view, edit and add questions; transfer questions to tests; and print different forms of tests. Tests can be formatted with varying fonts and styles, margins and headers and footers, as in any word-processing document. Search and sort features let the lecturer quickly locate questions and arrange them in a preferred order. QuizMaster, working with your university's computer network, automatically marks the exams, stores the results on disk and allows the lecturer to view or print a variety of reports.

A pdf Test Bank provides a further 1,500 true/false and numerical questions. Both Test Banks are available online to download from **www.myeconlab.com.**

MyEconLab

MyEconLab works hand-in-hand with *Economics*. Michael Parkin and Robin Bade, assisted by Jeannie Gillmore have authored and overseen all of the MyEconLab content for *Economics*. Our team has worked hard to ensure that the Parkin, Powell and Matthews MyEconLab is tightly integrated with the book's content and vision.

With comprehensive homework, quiz, test and tutorial options, lecturers can manage all assessment needs in one programme.

- All of the Review Quiz and Key Terms Quiz questions and end-of-chapter Problems and Applications are assignable and automatically graded in MyEconLab.
- All the Review Quiz and Key Terms Quiz questions and end-of-chapter Study Plan Problems and Applications are available for students to work in Study Plan.
- None of the end-of-chapter Additional Problems and Applications are available to students in MyEconLab unless assigned by the lecturer.
- Many of the problems and applications are algorithmic, draw-graph and numerical exercises.
- Test Item File questions are available for assignment as MyEconLab quizzes, tests or homework.
- The Custom Exercise Builder enables lecturers to create their own problems for assignment as test or homework questions.
- The powerful Gradebook records each student's performance and time spent on tests, the study plan and homework, and generates reports by student or by chapter.

PowerPoint Resources

Robin Bade has developed a Microsoft PowerPoint Lecture Presentation for each chapter that includes all the text figures animated and speaking notes along with a separate set of files that contain large-scale versions of all the text's figures (most of them animated). Use these to make your own presentations. PowerPoint slides are available for Macintosh and Windows.

For the Student

Two outstanding support tools for the student are:

- MyEconLab
- PowerPoint Notes

MyEconLab

Optimise your study time with MyEconLab, our online assessment and tutorial system. When you take a sample test online, MyEconLab gives you targeted feedback and a personalised Study Plan to identify the topics that you need to review.

The Study Plan consists of practice problems taken directly from the end-of-chapter Study Plan Problems and Applications, the Review Quiz in the textbook and the Key Terms Quiz.

The Study Plan gives you unlimited opportunity to practise. And as you work each exercise, instant feedback helps you understand and apply the concepts. Many Study Plan exercises contain algorithmically generated values to ensure that you get as much practice as you need.

Study Plan exercises link to the following learning resources:

1. Step-by-step *Help Me Solve This* helps you to break down a problem in much the same way as a lecturer would during a class. These are available for selected problems.
2. Links to the *Pearson e-Text* promote reading of the text when you need to revisit a concept or explanation.
3. *Animated graphs* appeal to a variety of learning styles.
4. *Key Terms Quiz* allows you to test your knowledge of the deficntions of the key terms that are foundmental to understanding economics.
5. A *graphing tool* enables you to build and manipulate graphs to better understand how concepts, numbers and graphs connect.

PowerPoint Notes

Robin Bade has prepared a set of Microsoft PowerPoint Notes for students. These notes contain an outline of each chapter with the textbook figures animated. Students can download these PowerPoint Notes from MyEconLab, print them, bring them to the lecture and use them to create their own set of study notes.

Acknowledgements

We extend our gratitude and thanks to the many people who have contributed to this new edition of our text and to all those who made such important contributions to the previous editions on which this one is based. So many people have provided help and encouragement, either directly or indirectly, that it is impossible to name them all.

We particularly thank our colleagues, present and past, who have helped to shape our understanding of economics and who have provided help in the creation of this new edition. We thank our reviewers who have read and commented on our work and provided countless good ideas that we have eagerly accepted. We also thank our families for their input and patience.

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We thank Nicola Lynch and Eugene Michaels of the University of Derby for their work (with Melanie) on the Lecturer's Manual and the Test Banks.

We thank Robin Bade and Jeannie Gillmore for their work on MyEconLab test questions.

We could not have produced this book without the help of the people for whom it is written, our students. We thank the several thousand students we have been privileged to teach over many years. Their comments on previous editions (and on our teaching), whether in complaint or praise, have been invaluable.

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As always, the proof of the pudding is in the eating! The value of this book will be decided by its users, and whether you are a student or a teacher, we encourage you to send us your comments and suggestions.

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1 What Is Economics?

After studying this chapter you will be able to:

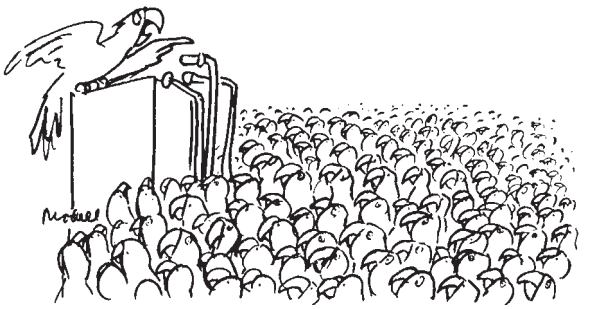
- Define economics and distinguish between microeconomics and macroeconomics
- Explain the big questions of economics
- Explain the key ideas that define the economic way of thinking
- Describe how economists go about their work as social scientists and policy advisers

Is economics about money: How people make money and spend it? Is economics about the stock market and share prices? Is it about business, government and jobs? Is it about why some people and some nations are rich and others are poor? Economics is about all these things, but its core is the study of *choices* and their *consequences*.

Your life will be shaped by the choices that you make and the challenges that you face. To face those challenges and seize the opportunities they present, you must understand the powerful forces at play. The economics that you're about to learn will become your most reliable guide. The chapter gets you started by describing the questions that economists try to answer and looking at how economists think as they search for answers.

A Definition of Economics

A fundamental fact dominates our lives: we want more than we can get. Our inability to get everything we want is called **scarcity**. Scarcity is universal. It confronts all living things. Even parrots face scarcity!



Not only do I want a cracker – we all want a cracker!

Think about the things that you want and the scarcity that you face. You want to go to a good college or university. You want to live in a well-equipped, spacious and comfortable home. You want the latest smartphone and the fastest Internet connection for your laptop or iPad. You want some sports and recreational gear – perhaps some new running shoes, or a new bike. You want much more time than is available to go to seminars, do your class preparation, play sports and games, read novels, go to the movies, listen to music, travel and go out with your friends. You want to live a long and healthy life.

What you can afford to buy is limited by your income and by the prices you must pay, and your time is limited by the fact that your day has 24 hours. You want some other things that only governments provide.

You want to live in a safe neighbourhood in a peaceful and secure world and enjoy the benefits of clean air, lakes, rivers and oceans.

What governments can afford is limited by the taxes they collect. Taxes lower people's incomes and compete with the other things they want to buy. What everyone can get – what society can get – is limited by the productive resources available. These resources are the gifts of nature, human labour and ingenuity and all the previously produced tools and equipment.

Because we can't get everything we want, we must make *choices*. You can't afford *both* a laptop *and* an iPhone, so you must *choose* which one to buy. You can't spend tonight *both* studying for your next test *and* going to the cinema, so, again, you must *choose* which one to do. Governments can't spend a pound of tax revenue on both national defence and environmental protection, so they must choose how to spend that pound.

Your choices must somehow be made consistent with the choices of *others*. If you choose to buy a laptop, someone else must choose to sell it. Incentives reconcile choices. An **incentive** is a reward that encourages or a penalty that discourages an action. If the price of a laptop is too high, more will be offered for sale than people want to buy. And if the price is too low, fewer will be offered for sale than people want to buy. But there is a price at which choices to buy and sell are consistent.

Economics is the social science that studies the *choices* that individuals, businesses, governments and entire societies make as they cope with *scarcity* and the *incentives* that influence and reconcile those choices.

The subject divides into two main parts:

- Microeconomics
- Macroeconomics

Microeconomics is the study of the choices that individuals and businesses make, the way these choices interact in markets and the influence of governments. Some examples of microeconomic questions are: Why are people streaming more films? How will a tax on sugar affect food manufacturers?

Macroeconomics is the study of the performance of the national economy and the global economy. Some examples of macroeconomic questions are: Why does the UK unemployment rate fluctuate? Will the unemployment rate rise if the Bank of England raises interest rates?

REVIEW QUIZ

1. List some examples of scarcity that you face.
2. Find examples of scarcity in today's headlines.
3. Find an illustration of the distinction between microeconomics and macroeconomics in today's headlines.

Do these questions in Study Plan 1.1 and get instant feedback. Do a Key Terms Quiz.

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Two Big Economic Questions

Two big questions summarise the scope of economics:

- How do choices end up determining *what, how* and *for whom* goods and services get produced?
- When do choices made in the pursuit of *self-interest* also promote the *social interest*?

What, How and For Whom?

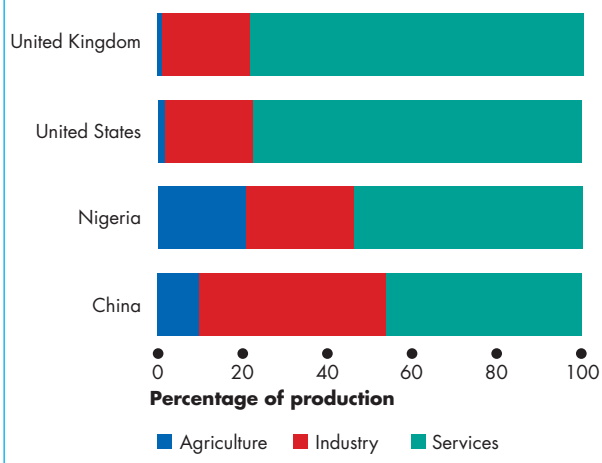
Goods and services are the objects that people value and produce to satisfy wants. Goods are physical objects such as golf balls. Services are actions performed such as cutting hair and filling teeth. By far the largest part of what people in the rich industrial countries produce today is services such as retail and wholesale services, health services and education. Goods are a small and decreasing part of what we produce.

What?

What we produce changes over time. Every year, new technologies allow us to build better-equipped homes, higher-performance sporting equipment and even deliver a more pleasant experience in the dentist's chair. And technological advance makes us incredibly more productive at producing food and manufacturing goods.

Figure 1.1 shows some differences in what is produced in four countries. In the UK and the US, 80 per cent of production is services and agriculture accounts for only 1 per cent of total production. In China and Nigeria, it is agriculture and industry goods that have the largest production percentages. What explains these differences in what is produced in the rich UK and US and the poorer China and Nigeria?

Figure 1.1 Changes in What We Produce



The rich UK and US produce more services than goods. The poorer China and Nigeria produce a larger percentage of goods and a smaller percentage of services.

Source of data: Statisticstimes.com. 2015

MyEconLab Animation

How?

Goods and services get produced by using productive resources that economists call **factors of production**. Factors of production are grouped into four categories:

- Land
- Labour
- Capital
- Entrepreneurship

Land

The 'gifts of nature' that we use to produce goods and services are called **land**. In economics, land is what in everyday language we call *natural resources*. It includes land in the everyday sense together with metal ores, oil, gas and coal, water, air, wind and sunshine.

Our land surface and water resources are renewable and some of our mineral resources can be recycled. But the resources that we use to create energy are non-renewable – they can be used only once.

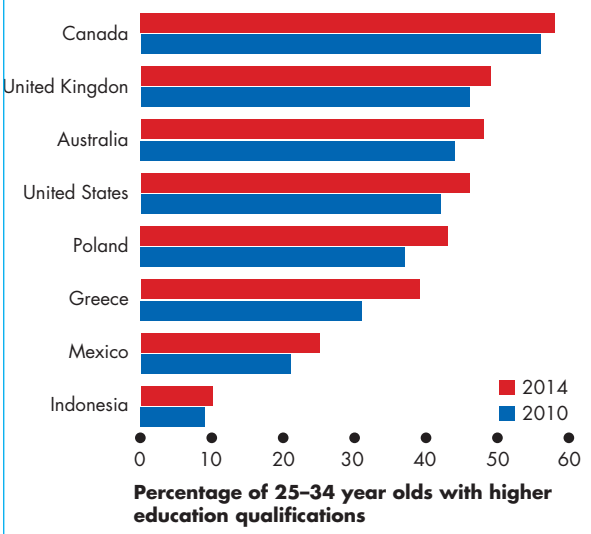
Labour

The work time and work effort that people devote to producing goods and services is called **labour**. Labour includes the physical and the mental efforts of all the people who work on farms and construction sites and in factories, shops and offices.

The *quality* of labour depends on **human capital**, which is the knowledge and skill that people obtain from education, on-the-job training and work experience. You are building your own human capital today as you work on your economics course, and your human capital will continue to grow as you become better at your job.

Human capital expands over time and varies between countries. Figure 1.2 shows the percentage of young people with higher education qualifications in different countries. This measure of human capital is increasing over time.

Figure 1.2 A Measure of Human Capital



Education is a major source of human capital. The figure shows the percentage of 25–34 year olds with higher education qualifications in eight countries in 2010 and 2014. This measure of human capital has increased in all the countries.

Source of data: OECD, Education at a Glance 2015 Table A1.3a.

MyEconLab Animation

Capital

The tools, instruments, machines, buildings and other constructions that businesses now use to produce goods and services are called **capital**.

In everyday language, we talk about money, shares and bonds as being capital. These items are *financial capital.* Financial capital plays an important role in enabling businesses to borrow the funds that they use to buy capital. But financial capital is not used to produce goods and services – it is *not* a factor of production.

Entrepreneurship

The human resource that organises labour, land and capital is called **entrepreneurship**. Entrepreneurs come up with new ideas about what and how to produce, make business decisions and bear the risks that arise from these decisions.

How are the quantities of factors of production that get used to produce the many different goods and services determined?

For Whom?

Who gets the goods and services that are produced depends on the incomes that people earn. A large income enables a person to buy large quantities of goods and services. A small income leaves a person with few options and small quantities of goods and services.

People earn their incomes by selling the services of the factors of production they own:

1 Land earns **rent**.
2 Labour earns **wages**.
3 Capital earns **interest**.
4 Entrepreneurship earns **profit**.

Which factor of production earns the most income? The answer is labour. Wages and fringe benefits are around 70 per cent of total income. Land, capital and entrepreneurship share the rest. These percentages have been remarkably constant over time.

Knowing how income is shared among the factors of production doesn't tell us how it is shared among individuals. You know of lots of people who earn very large incomes. Music mogul Simon Cowell earns £34,744 an hour and actress Emma Watson earn £13,175 an hour.

You know of even more people who earn very small incomes. People who serve fast food earn £5 an hour.

Some differences in income are persistent. On average, men earn more than women and whites earn more than ethnic minorities. Europeans earn more on average than Asians, who in turn earn more than Africans. A typical annual income in the poorest countries of the world is just a few hundred pounds, less than the equivalent of a typical weekly wage in the richest countries of the world.

Why is the distribution of income so unequal? Why do Simon Cowell and Emma Watson earn such huge incomes while a tax driver earns just £7.20 an hour? Why do university graduates earn more than people with only a few GCSEs? Why do Europeans earn more than Africans? Why are the incomes of people living in Asia rising so rapidly?

Economics provides answers to all these questions about what, how and for whom goods and services are produced. And you will discover these answers as you progress with your study of the subject.

The second big question of economics that we'll now examine is a harder question both to appreciate and to answer.

Do Choices Made in the Pursuit of Self-interest also Promote the Social Interest?

Every day, you and 509 million other EU citizens, along with 7.2 billion people in the rest of the world, make economic choices that result in *what, how* and *for whom* goods and services get produced.

Self-Interest

A choice is in your **self-interest** if you think that choice is the best one available for you. You make most of your choices in your self-interest. All the choices that people make about how to use their time and other resources are made in the pursuit of self-interest. When you allocate your time or your budget, you might think about how your choices affect other people and take that into account, but it is how *you* feel that influences your choice. You order a home delivery pizza because you're hungry, not because the delivery person needs a job. When the delivery person shows up at your door, he's not doing you a favour. He's pursuing *his* self-interest.

The big question is: Is it possible that all the choices that each one of us makes in the pursuit of self-interest could end up achieving an outcome that is best for everyone?

Social Interest

An outcome is in the **social interest** if it leads to an outcome that is the best for society as a whole. It is easy to see how you decide what is in your self-interest. But how do you decide if something is in the social interest?

To help you answer this question, imagine a scene like the following: Ted, an entrepreneur, creates a new business. He hires a thousand workers and pays them £10 an hour, £1 an hour more than they earned in their old jobs. Ted's business is extremely profitable and his own earnings increase by £1 million per week. You can see that Ted's decision to create the business is in his self-interest – he gains £1 million a week. You can also see that the decisions to work for Ted are in the self-interest of the workers – they gain £1 an hour (say £40 a week). And the decisions of Ted's customers must be in their self-interest otherwise they wouldn't buy from him. But is this outcome in the social interest?

The economist's answer is 'Yes.' It is in the social interest because it makes everyone better off. There are no losers.

Efficiency and the Social Interest

Economists use the everyday word 'efficient' to describe a situation that can't be improved upon. Resource use is **efficient** if it is not possible to make someone better off without making someone else worse off. If it is possible to make someone better off without making anyone worse off, society can be made better off and the situation is not efficient.

In the Ted story everyone is better off, so it improves efficiency and the outcome is in the social interest. But notice that it would also have been efficient if the workers and customers had gained nothing and Ted had gained even more than £1 million a week. But would that efficient outcome be in the social interest?

Many people have trouble seeing the outcome in which Ted is the only winner as being in the social interest. They say that the social interest requires Ted to share some of his gain either with his workers in higher wages or with his customers in lower prices, or with both groups.

Fair Shares and the Social Interest

The idea that the social interest requires 'fair shares' is a deeply held one. Think about what you regard as a fair share. To help you, imagine the following game.

I put £100 on the table and tell someone you don't know and who doesn't know you to propose a share of the money between the two of you. If you accept the proposed share, you each get the agreed shares. If you don't accept the proposed share, you both get nothing.

It would be efficient – you would both be better off – if the proposer offered to take £99 and leave you with £1 and you accepted that offer.

But would you accept the £1? If you are like most people, the idea that the other person gets 99 times as much as you is just too much to stomach. 'No way' you say and the £100 disappears. That outcome is inefficient. You have both given up something.

When this game is played in a classroom experiment, about a half of the players reject offers of below £30.

So fair shares matter. But what is fair? There isn't a crisp definition of fairness to match that of efficiency. Reasonable people have a variety of views about it. Almost everyone agrees that too much inequality is unfair. But how much is too much? And inequality of what: income, wealth or the opportunity to work, earn an income and accumulate wealth?

You will examine efficiency again in Chapter 2 and efficiency and fairness in Chapter 5.

Questions about the social interest are hard ones to answer, and they generate a lot of discussion, debate and disagreement. Let's take a closer look at these questions with four examples:

- Globalisation
- The information-age monopolies
- Climate change
- Financial instability

Globalisation

The term *globalisation* means the expansion of international trade, borrowing and lending, and investment.

When Nike produces sports shoes, people in Malaysia get work; and when China Airlines buys new aeroplanes, Europeans who work in Airbus Industries build them. While globalisation brings expanded production and job opportunities for some workers, it destroys many European jobs. Workers across the manufacturing industries must learn new skills, take service jobs, which are often lower paid, or retire earlier than previously planned.

Globalisation is in the self-interest of consumers because they can buy low-cost goods and services produced in other countries. It is also in the self-interest of the multinational firms that produce in low-cost regions and sell in high-price regions. But is globalisation in the self-interest of the low-wage worker in Malaysia who sews your new running shoes and the displaced shoemaker in Northampton? Is it in the social interest?

ECONOMICS IN THE NEWS

The Invisible Hand

From Brewer to Bio-tech Entrepreneur

Kiran Mazumdar-Shaw trained to become a master brewer and learned about enzymes, the stuff from which bio-pharmaceuticals are made. It was impossible for a woman in India to become a master brewer, so the 25-year-old Kiran decided to create a bio-pharmaceutical business.

Kiran's firm, Biocom, employed uneducated workers who loved their jobs and the living conditions made possible by their high wages. But when a trade union entered the scene and unionised the workers, a furious Kiran fired the workers, automated their jobs and hired a smaller number of educated workers. Biocom continued to grow and today, Kiran's wealth exceeds $1 billion.

Kiran has become wealthy by developing and producing bio-pharmaceuticals that improve people's lives. But Kiran is sharing her wealth in creative ways. She has opened a cancer treatment centre to help thousands of patients who are too poor to pay and created a health insurance scheme.

Source of information: Ariel Levy, 'Drug Test' *The New Yorker*, 2 January 2012

The Questions

- Whose decisions in the story were taken in self-interest?
- Whose decisions turned out to be in the social interest?
- Did any of the decisions harm the social interest?

The Answers

- All the decisions – Kiran's, the workers', the union's and the firm's customers' – are taken in the pursuit of self-interest.
- Kiran's decisions serve the social interest: she creates jobs that benefit her workers and products that benefit her customers. And her charitable work brings yet further social benefits.
- The union's decision might have harmed the social interest because it destroyed the jobs of uneducated workers.

Kiran Mazumdar-Shaw, founder and CEO of Biocom

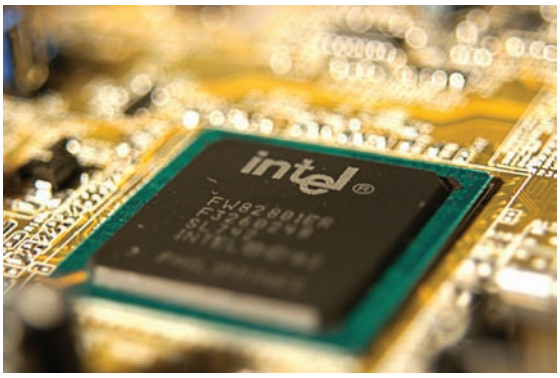
The Information-Age Monopolies

The technological change of the past 40 years has been called the *Information Revolution.* Bill Gates, a co-founder of Microsoft, held a privileged position in this revolution. For many years, Windows was the only available operating system for the PC. The PC and Mac competed, but the PC had a huge market share.

An absence of competition gave Microsoft the power to sell Windows at prices far above the cost of production. With lower prices, many more people would have been able to afford and buy a computer.

The information revolution has clearly served your self-interest: It has provided your mobile phone, laptop, loads of handy applications, and the Internet. It has also served the self-interest of Bill Gates who has seen his wealth soar.

But did the information revolution best serve the social interest? Did Microsoft produce the best possible Windows operating system and sell it at a price that was in the social interest? Or was the quality too low and the price too high?



Climate Change

Burning fossil fuels to generate electricity and to power aeroplanes, cars, and trucks pours a staggering 28 billion tonnes—4 tonnes per person—of carbon dioxide into the atmosphere each year. These carbon emissions, two-thirds of which comes from the US, China, the EU, Russia and India, bring global warming and climate change

Every day, when you make self-interested choices to use electricity and petrol, you leave your carbon footprint. You can lessen this footprint by walking, riding a bike, taking a cold shower, or planting a tree.

But can each one of us be relied upon to make decisions that affect the Earth's carbon-dioxide concentration in the social interest? Must governments change the incentives we face so that our self-interested choices are also in the social interest? How can governments change incentives? How can we encourage the use of wind and solar power to replace the burning of fossil fuels that brings climate change?

Financial Instability

In 2008, banks were in trouble. They had made loans that borrowers couldn't repay and they were holding securities the values of which had crashed.

Banks' choices to take deposits and make loans are made in self-interest, but does this lending and borrowing serve the social interest? Do banks lend too much in the pursuit of profit?

When UK banks got into trouble in 2008, the Bank of England bailed them out with big loans backed by taxpayer pounds. Did the Bank of England's actions serve the social interest? Will the bailout encourage UK banks to repeat their dangerous lending in the future?

We've looked at four topics and asked many questions that illustrate the potential conflict between the pursuit of self-interest and the social interest. We've asked questions, but we haven't answered them because we have not yet explained the economic principles needed to do so. We will answer these questions in future chapters.

REVIEW QUIZ

1. Describe the broad facts about *what, how* and *for whom* goods and services are produced.
2. Define the four factors of production and give an example of each one. What is the income earned by the people who sell the services of each of these factors of production?

Do these questions in Study Plan 1.2 and get instant feedback. Do a Key Terms Quiz.

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AT ISSUE

The Protest against Market Capitalism

Market capitalism is an economic system in which individuals own land and capital are free to buy and sell land, capital and goods and services in markets. Markets for goods and services, along with markets for land and capital, coordinate billions of self-interested choices, which determine what, how and for whom goods and services are produced. A few people earn enormous incomes, many times the average income. There is no supreme planner guiding the use of scarce resources and the outcome is unintended and unforeseeable.

Centrally planned socialism is an economic system in which the government owns all the land and capital, directs workers to jobs and decides what, how and for whom to produce. The Soviet Union, several Eastern European countries and China have used this system in the past but have now abandoned it. Only Cuba and North Korea use this system today. A few bureaucrats in positions of great power receive huge incomes, many times that of an average person.

Our economy today is a **mixed economy**, which is market capitalism with government regulation.

The Protest

The protest against market capitalism takes many forms. Historically, **Karl Marx** and other communist and socialist thinkers wanted to replace it with *socialism* and *central planning*. Today, thousands of people who feel let down by the economic system want less market capitalism and more government regulation. The **Occupy Wall Street** movement, with its focus on the large incomes of the top 1 per cent, is a visible example of today's protest. Protesters say:

- Big corporations (especially big banks) have too much power and influence on governments.
- Democratically elected governments can do a better job of allocating resources and distributing income than uncoordinated markets.
- More regulation in the social interest is needed – to serve 'human need, not corporate greed'.
- In a market, for every winner, there is a loser.
- Big corporations are the winners. Workers and unemployed people are the losers.

Occupy movement at St Paul's Cathedral

The Economist's Response

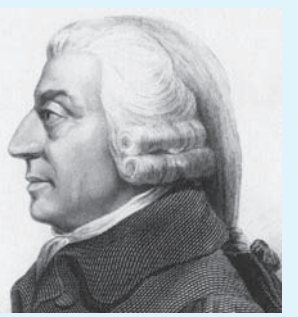
Economists agree that market capitalism isn't perfect. But they argue that it is the best system available and, while some government intervention and regulation can help, government attempts to serve the social interest often end up harming it.

Adam Smith (see p. 53) gave the first systematic account of how market capitalism works. He says:

- The self-interest of big corporations is *maximum profit.*
- But an *invisible hand* leads decisions made in pursuit of self-interest to *unintentionally* promote the social interest.
- Politicians are ill-equipped to regulate corporations or to intervene in markets, and those who think they can improve on the market outcome are most likely wrong.
- In a market, buyers get what they want for less than they would be willing to pay and sellers earn a profit. Both buyers and sellers gain. A market transaction is a 'win–win' event.

'It is not from the benevolence of the butcher, the brewer or the baker that we expect our dinner, but from their regard to their own interest.'

The Wealth of Nations, 1776



Adam Smith

The Economic Way of Thinking

The questions that economics tries to answer tell us about the *scope of economics,* but they don't tell us how economists think and go about seeking answers to these questions. You're now going to see how economists go about their work.

We're going to look at six key ideas that define the *economic way of thinking.* These ideas are:

- A choice is a *trade-off.*
- People make *rational choices* by comparing benefits and costs.
- *Benefit* is what you gain from something.
- Cost is what you *must give up* to get something.
- Most choices are 'how-much' choices made at the *margin.*
- Choices respond to *incentives.*

A Choice Is a Trade-Off

Because we face scarcity, we must make choices. And when we make a choice, we select from the available alternatives. For example, you can spend Saturday night studying for your next economics test or having fun with your friends, but you can't do both of these activities at the same time. You must choose how much time to devote to each. Whatever choice you make, you could have chosen something else.

You can think about your choice as a trade-off. A **trade-off** is an exchange – giving up one thing to get something else. When you choose how to spend your Saturday night, you face a trade-off between studying and hanging out with your friends.

Making a Rational Choice

Economists view the choices that people make as rational. A **rational choice** is one that compares costs and benefits and achieves the greatest benefit over cost for the person making the choice.

Only the wants of the person making a choice are relevant to determine its rationality. For example, you might like your coffee black and strong but your friend prefers his milky and sweet. So it is rational for you to choose espresso and for your friend to choose cappuccino.

The idea of rational choice provides an answer to the first question: *What* goods and services will be produced and in what quantities? The answer is those that people rationally choose to buy!

But how do people choose rationally? Why do more people choose an iPad rather than a Microsoft Surface? Why has the UK government chosen to improve the A1 and M1 motorways joining the North and the South rather than build a new rail track? The answers turn on comparing benefits and costs.

Benefit: What You Gain

The **benefit** of something is the gain or pleasure that it brings and is determined by **preferences** – by what a person likes and dislikes and the intensity of those feelings. If you get a huge kick out of updating your Facebook page every day, that activity brings you a large benefit. If you have little interest in listening to a news pod cast, that activity brings you a small benefit.

Some benefits are large and easy to identify, such as the benefit that you get from being at university. A big piece of that benefit is the goods and services that you will be able to enjoy with the boost to your earning power when you graduate. Some benefits are small, such as the benefit you get from a slice of pizza.

Economists measure benefit as the most that a person is *willing to give up* to get something. You are willing to give up a lot to be at university but you would give up only an iTunes download for a slice of pizza.

Cost: What You *Must* Give Up

The **opportunity cost** of something is the highest-valued alternative that must be given up to get it.

To make the idea of opportunity cost clear, think about *your* opportunity cost of being at university. It has two components: the things you can't afford to buy and the things you can't do with your time.

Start with the things you can't afford to buy. You've spent all your available income on tuition, residence fees, books and a laptop. If you weren't at university, you would have spent this money on going to clubs and films and all the other things that you enjoy. But that's only the start of your opportunity cost. You've also given up the opportunity to get a job. Suppose that the best job you could get if you weren't at university is working at HSBC as a trainee earning £18,000 a year. Another part of your opportunity cost of being at university is all the things that you could buy with the extra £18,000 you would have.