

LIBRIS

We know
books

ECONOMICS

N. GREGORY MANKIW
AND MARK P. TAYLOR



$\sum_{T}^{M} 5^e$

FIFTH EDITION

 CENGAGE

Australia • Brazil • Mexico • Singapore • United Kingdom • United States

About the authors ix
 Preface x
 Acknowledgements xiii

PART 1 Introduction to economics 1

- 1 What is economics? 1
- 2 Thinking like an economist 15

PART 2 The theory of competitive markets 33

- 3 The market forces of supply and demand 33
- 4 Background to demand: Consumer choices 74
- 5 Background to supply: Firms in competitive markets 105
- 6 Consumers, producers and the efficiency of markets 141

PART 3 Interventions in markets 159

- 7 Supply, demand and government policies 159
- 8 Public goods, common resources and merit goods 189
- 9 Market failure and externalities 204

PART 4 Firm behaviour and market structures 231

- 10 Firms' production decisions 231
- 11 Market structures I: Monopoly 242
- 12 Market structures II: Monopolistic competition 267
- 13 Market structures III: Oligopoly 280
- 14 Market structures IV: Contestable markets 304

PART 5 Factor markets 315

- 15 The economics of factor markets 315

PART 6 Inequality 347

- 16 Income inequality and poverty 347

PART 7 Trade 367

- 17 Interdependence and the gains from trade 367

PART 8 Heterodox economics 401

- 18 Information and behavioural economics 401
- 19 Heterodox theories in economics 416

PART 9 The data of macroeconomics 433

- 20 Measuring a nation's well-being and the price level 433

PART 10 The real economy in the long run 463

- 21 Production and growth 463
- 22 Unemployment and the labour market 485

PART 11 Long-run macroeconomics 509

- 23 Saving, investment and the financial system 509
- 24 The monetary system 535
- 25 Open-economy macroeconomics 569

PART 12 Short-run economic fluctuations 595

- 26 Business cycles 595
- 27 Keynesian economics and IS–LM analysis 614
- 28 Aggregate demand and aggregate supply 637
- 29 The influence of monetary and fiscal policy on aggregate demand 657
- 30 The short-run trade-off between inflation and unemployment 674
- 31 Supply-side policies 703

PART 13 International macroeconomics 719

- 32 The causes and aftermath of the financial crisis 719
- 33 Common currency areas 755
- 34 The future of the European Union 774

About the authors ix
 Preface x
 Acknowledgements xiii

PART 1 INTRODUCTION TO ECONOMICS 1

- 1 What is economics?** 1
 - The economy and economic systems 1
 - How people make decisions 3
 - How people interact 6
 - How the economy as a whole works 9
- 2 Thinking like an economist** 15
 - Introduction 15
 - Economic methodology 15
 - Schools of thought 25
 - The economist as policy advisor 26
 - Why economists disagree 27

PART 2 THE THEORY OF COMPETITIVE MARKETS 33

- 3 The market forces of supply and demand** 33
 - The assumptions of the competitive market model 33
 - Demand 35
 - Shifts versus movements along the demand curve 37
 - Supply 40
 - Supply and demand together 44
 - Prices as signals 47
 - Analyzing changes in equilibrium 48
 - Elasticity 53
 - The price elasticity of demand 53
 - Other demand elasticities 61
 - Price elasticity of supply 62
 - Applications of supply and demand elasticity 67

- 4 Background to demand: Consumer choices** 74
 - The standard economic model 74
 - The budget constraint: What the consumer can afford 76
 - Preferences: What the consumer wants 80
 - Optimization: What the consumer chooses 86
 - Conclusion: Do people really behave this way? 98
 - Behavioural approaches to consumer behaviour 98
- 5 Background to supply: Firms in competitive markets** 105
 - The costs of production 105
 - Production and costs 106
 - The various measures of cost 109
 - Costs in the short run and in the long run 115
 - Summary 116
 - Returns to scale 117
 - What is a competitive market? 123
 - Profit maximization and the competitive firm's supply curve 125
 - The supply curve in a competitive market 132
 - Conclusion: Behind the supply curve 137
- 6 Consumers, producers and the efficiency of markets** 141
 - Consumer surplus 141
 - Producer surplus 146
 - Market efficiency 150

PART 3 INTERVENTIONS IN MARKETS 159

- 7 Supply, demand and government policies** 159
 - Controls on prices 159
 - Taxes 163
 - Subsidies 170
 - The tax system 171
 - The deadweight loss of taxation 172
 - Administrative burden 178
 - The design of the tax system 179
 - Taxes and equity 181

LBDRIS | We know BOOKS

8 Public goods, common resources and merit goods 189

The different kinds of goods 189
 Public goods 190
 Common resources 194
 Merit goods 197
 Conclusion 199

9 Market failure and externalities 204

Market failure 204
 Externalities 204
 Externalities and market inefficiency 206
 Private solutions to externalities 210
 Public policies towards externalities 213
 Public/private policies towards externalities 216
 Government failure 220
 Conclusion 225

PART 4 FIRM BEHAVIOUR AND MARKET STRUCTURES 231

10 Firms' production decisions 231

Isoquants and isocosts 231
 The least-cost input combination 236
 Conclusion 238

11 Market structures I: Monopoly 242

Imperfect competition 242
 Why monopolies arise 243
 How monopolies make production and pricing decisions 247
 The welfare cost of monopoly 252
 Price discrimination 254
 Public policy towards monopolies 258
 Conclusion: The prevalence of monopoly 261

12 Market structures II: Monopolistic competition 267

Competition with differentiated products 268
 Advertising and branding 272
 Conclusion 276

13 Market structures III: Oligopoly 280

Characteristics of oligopoly 280
 Game theory and the economics of cooperation 284
 Entry barriers in oligopoly 296
 Public policy towards oligopolies 297
 Conclusion 299

14 Market structures IV: Contestable markets 304

The nature of contestable markets 304
 The limitations of contestability 308
 Summary 310

PART 5 FACTOR MARKETS 315

15 The economics of factor markets 315

The marginal product theory of distribution 315
 The demand for labour 315
 The supply of labour 319
 Equilibrium in the labour market 323
 Other theories of the labour market 325
 Marxist labour theory 325
 Feminist economics and the labour market 326
 Monopsony 327
 Wage differentials 329
 The economics of discrimination 334
 The other factors of production: Land and capital 337
 Economic rent 340
 Conclusion 341

PART 6 INEQUALITY 347

16 Income inequality and poverty 347

The measurement of inequality 348
 The political philosophy of redistributing income 355
 Policies to reduce poverty 359
 Conclusion 362

PART 7 TRADE 367

17 Interdependence and the gains from trade 367

The production possibilities frontier 367
 International trade 372
 The principle of comparative advantage 376
 The determinants of trade 379

The winners and losers from trade 380
 Restrictions on trade 384
 Criticisms of comparative advantage theory 391
 Other theories of international trade 392
 Conclusion 396

PART 8 **HETERODOX ECONOMICS 401**

18 Information and behavioural economics 401

Principal and agent 401
 Asymmetric information 402
 Behavioural economics 408
 Conclusion 412

19 Heterodox theories in economics 416

Introduction 416
 Institutional economics 419
 Feminist economics 422
 Complexity economics 425
 Conclusion 428

PART 9 **THE DATA OF MACROECONOMICS 433**

20 Measuring a nation's well-being and the price level 433

Marxist economics 433
 The Austrian school 434
 Keynesianism 435
 Monetarism 435
 The nature of macroeconomics 436
 The economy's income and expenditure 436
 The measurement of gross domestic product 438
 The components of GDP 441
 Real versus nominal GDP 444
 The limitations of GDP as a measure of well-being 448
 International differences in GDP and the quality of life 450
 Measuring the cost of living 451
 The Consumer Prices Index 451
 Correcting economic variables for the effects of inflation 456
 Conclusion 458

PART 10 **THE REAL ECONOMY** **IN THE LONG RUN 463**

21 Production and growth 463

Economic growth around the world 463
 Growth theory 465
 Productivity 465
 The determinants of economic growth 467
 Causes of growth 471
 Endogenous growth theory 475
 Economic growth and public policy 476
 Conclusion: The importance of long-run growth 481

22 Unemployment and the labour market 485

Identifying unemployment 485
 The causes of unemployment 488
 The natural rate of unemployment 494
 Marx and the reserve army of the unemployed 501
 The cost of unemployment 501
 Conclusion 503

PART 11 **LONG-RUN MACROECONOMICS 509**

23 Saving, investment and the financial system 509

Financial institutions in the economy 509
 Present value: Measuring the time value of money 515
 Managing risk 517
 Asset valuation 522
 Saving and investment in the national income accounts 523
 The market for loanable funds 526

24 The monetary system 535

The meaning of money 535
 The role of central banks 541
 The European Central Bank and the Eurosystem 542
 The Bank of England 543
 Banks and the money supply 543
 The central bank's tools of monetary control 547
 Money growth and inflation 550
 What is inflation? 550

The costs of inflation 559
 Deflation 563
 Conclusion 564

25 Open-economy macroeconomics 569

The international flows of goods and capital 569
 The prices for international transactions:
 Real and nominal exchange rates 574
 A first theory of exchange rate determination:
 Purchasing power parity 577
 A macroeconomic theory of the open economy 580
 Supply and demand for loanable funds and for foreign currency exchange 581
 Equilibrium in the open economy 584
 How policies and events affect an open economy 586
 Conclusion 591

**PART 12
 SHORT-RUN ECONOMIC
 FLUCTUATIONS** 595

26 Business cycles 595

Trend growth rates 596
 Causes of changes in the business cycle 602
 Business cycle models 604
 Macroeconomic models of the economy 608
 Conclusion 610

27 Keynesian economics and IS–LM analysis 614

The Keynesian cross 614
 The multiplier effect 618
 The IS and LM curves 623
 General equilibrium using the IS–LM model 626
 From IS–LM to aggregate demand 628
 Conclusion 634

28 Aggregate demand and aggregate supply 637

Three key facts about economic fluctuations 637
 Explaining short-run economic fluctuations 638
 The aggregate demand curve 640

The aggregate supply curve 642
 Two causes of economic fluctuations 648
 New Keynesian economics 652

29 The influence of monetary and fiscal policy on aggregate demand 657

How monetary policy influences aggregate demand 657
 How fiscal policy influences aggregate demand 664
 Using policy to stabilize the economy 667
 Conclusion 669

30 The short-run trade-off between inflation and unemployment 674

The relationship between inflation and unemployment 674
 The Phillips curve 675
 Shifts in the Phillips curve: The role of expectations 678
 The long-run vertical Phillips curve as an argument for central bank independence 684
 Shifts in the Phillips curve: The role of supply shocks 685
 The cost of reducing inflation 687
 Inflation targeting 692
 Reflecting on the Phillips curve 696
 Conclusion 698

31 Supply-side policies 703

Shifts in the aggregate supply curve 703
 Types of supply-side policies 707
 Conclusion 715

**PART 13
 INTERNATIONAL
 MACROECONOMICS** 719

32 The causes and aftermath of the financial crisis 719

The causes of the crisis 719
 The efficient markets hypothesis 726
 The financial crisis and sovereign debt 734
 The sovereign debt crisis 739
 Austerity policies: Too far too quickly? 743
 The productivity puzzle 747

33 Common currency areas 755

The euro 755

The benefits and costs of a common
currency 757

The theory of optimum currency areas 760

Is Europe an optimum currency area? 763

Fiscal policy and common currency
areas 766

The fiscal compact 769

Conclusion 770

34 The future of the European Union 774

The euro 774

Italy 777

Brexit 777

Conclusion 785

Glossary 788

Index 798

Credits 810

List of formulae 812

INTRODUCTION TO ECONOMICS

1

WHAT IS ECONOMICS?

THE ECONOMY AND ECONOMIC SYSTEMS

Every day, billions of people around the world make decisions. They make decisions about providing for the fundamentals in life such as food, clothing and shelter and how they use non-work time for leisure and domestic tasks. Making these decisions involves interaction with other people, with governments and business organizations. At any time, individuals could be mothers, fathers, sons, daughters, carers, employers, employees, houseworkers, producers, consumers, savers, taxpayers or benefit recipients. Many, but not all, of these interactions are related to some sort of exchange, normally with the use of a medium of exchange such as money, and sometimes to a direct exchange of services. Individuals purchase goods and services for final consumption and provide the inputs into production – land, labour and capital. We refer to these individuals collectively as ‘households’. The organizations which buy these factors and use them to produce goods and services are referred to collectively as ‘firms’.

The amount of interaction between households and firms – the amount of buying and selling which takes place – represents the level of **economic activity**. The more buying and selling there are, the higher the level of economic activity. Households and firms engaging in production and exchange in a particular geographic region are together referred to as the **economy**.

economic activity how much buying and selling goes on in the economy over a period of time

economy all the production and exchange activities that take place

Economics studies the interactions between households and firms in relation to exchange and the many decisions which are made in so doing. It also covers situations where some output is produced without the receipt of an income, such as the work done by unpaid carers and homemakers. It explores how people make a living; how resources are allocated among the many different uses they could be put to; and the way in which our activities influence not only our own well-being but also that of others and the environment.

There are three questions that any economy must face:

- What goods and services should be produced?
- How should these goods and services be produced?
- Who should get the goods and services that have been produced?

To satisfy these questions, economies have resources at their disposal which are classified as land, labour and capital.

- **Land** – all the natural resources of the earth. This includes mineral deposits such as iron ore, coal, gold and copper; oil and gas; fish in the sea; and all the food and raw materials produced from the land.
- **Labour** – the human effort, both mental and physical, that goes into production. A worker in a factory producing precision tools, an investment banker, an unpaid carer, a road sweeper, a teacher – these are all forms of labour.
- **Capital** – the equipment and structures used to produce goods and services. Capital goods include machinery in factories, buildings, tractors, computers, cooking ovens – anything where the good is not used for its own sake but for the contribution it makes to production.

land all the natural resources of the earth

labour the human effort, both mental and physical, that goes into production

capital the equipment and structures used to produce goods and services

Scarcity and Choice

It is often assumed that these resources are ultimately scarce in relation to the demand for them. As members of households, we invariably do not have the ability to meet all our wants and needs. Our needs are the necessities of life which enable us to survive – food and water, clothing, shelter and proper health care – and our wants are the things which we believe make for a more comfortable and enjoyable life – holidays, different styles of clothes, smartphones, leisure activities, the furniture and items we have in our houses, and so on. Our demand for these wants and needs is generally greater than our ability to satisfy them. **Scarcity** means that society has limited resources and therefore cannot produce all the goods and services households demand. Just as a household cannot give every member everything they want, a society cannot give every individual the highest standard of living to which they might aspire. Because of the tension between our wants and needs and scarcity, decisions must be made by households and firms about how to allocate our incomes and resources to meet our wants and needs.

scarcity the limited nature of society's resources

Economics investigates the issues arising due to the decisions that households and firms make as a result of this tension. A typical textbook definition of **economics** is 'the study of how society makes choices in managing its scarce resources and the consequences of this decision-making'. This definition can, however, mask the complexity and extent of the reach of economics. We might characterize households as having unlimited wants, but not everyone in society is materialistic, which the idea of unlimited wants might imply. Some people are more content with the simple things in life and their choices are based on what they see as being important. These choices are no less valid but reflect the complexity of the subject. Some people choose to maintain their standard of living through crime. A decision to resort to crime has reasons and consequences, and these may be of as much interest to an economist as the reasons why firms choose to advertise their products or why central banks make decisions on monetary policy.

economics the study of how society manages its scarce resources

Some might point out that the very idea of scarcity should be questioned in some instances. In Greece, Spain and some other European countries, there are millions of people who want to work but who cannot find a job. It could be argued that labour is not scarce in this situation, but job vacancies certainly are. Economists will be interested in how such a situation arises and what might be done to alleviate the issues that arise as a result of high levels of unemployment.

The study of economics, therefore, has many facets but there are some central ideas which help define the field even though economics draws on related disciplines such as psychology, sociology, law, anthropology, geography, statistics and maths, among others. These central ideas provide themes around which this book is based, and which form the basis of many first-year undergraduate degree courses.

HOW PEOPLE MAKE DECISIONS

The behaviour of an economy reflects the behaviour of the individuals who make up the economy. We will now outline some of the core issues which economics explores in relation to individuals making decisions.

People Face Trade-offs

Households and firms must make choices. Making choices involves trade-offs. A **trade-off** is the loss of the benefits from a decision to forego or sacrifice one option, balanced against the benefits incurred from the choice made. When choosing between alternatives we must consider the benefits gained from choosing one course of action but recognize that we must forego the benefits that could arise from the alternatives. To get one thing we like, we usually must give up another thing that we might also like. Making decisions, therefore, requires trading off the benefits of one action against those of another.

trade-off the loss of the benefits from a decision to forego or sacrifice one option balanced against the benefits incurred from the choice made

To illustrate this important concept, we provide some examples below.

Example 1 Consider an economics undergraduate student who must decide how to allocate their time. They can spend all of their time studying, which will bring benefits such as a better class of degree; they can spend all their time enjoying leisure activities, which yield different benefits; or they can divide their time between the two. For every hour they study, they give up the benefits of an hour they could have devoted to spending time in the gym, riding a bicycle, watching TV, sleeping or working at a part-time job for some extra spending money. The student must trade-off the benefits from studying against the benefits of using their time in other ways.

Example 2 A firm might be faced with the decision on whether to invest in a new product or a new accounting system. Both bring benefits – the new product might result in improved revenues and profits in the future, and the accounting system may make it more effective in controlling its costs, thus helping its profits. If scarce investment funds are put into the accounting system, the firm must trade-off the benefits that the new product investment would have brought.

Example 3 When people are grouped into societies, they face different kinds of trade-offs which can highlight the interaction of individuals and firms within society in general. An example is the trade-off between a clean environment and a high level of income. Laws that require firms to reduce pollution raise the cost of producing goods and services. Because of the higher costs, firms can end up earning smaller profits, paying lower wages, charging higher prices, or some combination of these three. Thus, while pollution regulations give us the benefit of a cleaner environment and the improved levels of health that come with it, they can have the cost of reducing the incomes of the firms' owners, workers and customers.

Efficiency and Equity An important trade-off that has interested economists for many years is the trade-off between efficiency and equity. In economics, efficiency deals with ways in which society gets the most it can (depending how this is defined) from its scarce resources. An outcome can be identified as being efficient by some measure, but not necessarily desirable. **Equity** looks at the extent to which the benefits of outcomes are distributed fairly among society's members. Often, when government policies are being designed, these two goals conflict. Because equity is about 'fairness' it inevitably involves value judgements. Differences in opinion lead to disagreements among policymakers and economists.

equity the property of distributing economic prosperity fairly among the members of society

There are some economists who dismiss the idea of a trade-off between equity and efficiency as a myth in some contexts, because the idea has been generalized to all situations. The historical context and origins of many economic ideas are important to understand. The origins of the equity and efficiency trade-off came from Arthur Okun in the 1970s. There are some economists who argue that improving equality can lead to improvements in efficiency – in effect that it is possible to have a bigger cake and to eat it.

Policies aimed at achieving a more equal distribution of economic well-being, such as the social security system, involve a trade-off between the effects of a benefits system versus the effects on the efficiency of the tax system that pays for it. A government decision to raise the top rate of income tax on what it considers 'the very rich' but to abolish income tax for those earning the minimum wage is effectively a redistribution of income from the rich to the poor. It provides incentive effects for some in society to seek work, but may reduce the reward for working hard, so some in society choose to work less or even move to another country where the tax system is less onerous. Whether the trade-off is a 'good' thing is dependent on the philosophy, belief sets and opinions of the decision-makers, and the power which they have in society. Recognizing that people face trade-offs does not by itself tell us what decisions they will or should make. Acknowledging and understanding the consequences of trade-offs is important, because people are likely to make more informed decisions if they understand the options they have available.

SELF TEST You will often hear the adage 'there is no such thing as a free lunch'. Does this simply refer to the fact that someone must have paid for the lunch to be provided and served? Or does the recipient of the 'free lunch' also incur a cost?

Opportunity Cost

Because people face trade-offs, making decisions requires comparing the costs and benefits of alternative courses of action. In many cases, however, the costs of an action are not as obvious as might first appear.

Consider, for example, the decision whether to go to university. The benefits are intellectual enrichment and a lifetime of better job opportunities. In considering the costs, you might be tempted to add up the money you spend on tuition fees, resources and living expenses over the period of the degree. This approach is intuitive and might be a way in which non-economists would approach the decision. An economist would point out that even if you decided to leave full-time education, you would still incur living expenses and so these costs would be incurred in any event. Accommodation becomes a cost of higher education only if it is more expensive at university than elsewhere.

This calculation of costs ignores the largest cost of a university education – your time. For most students, the wages given up attending university are the largest single cost of their higher education. When making decisions it is sometimes more helpful to measure the cost in terms of what other options have had to be sacrificed rather than in money terms. **Opportunity cost** is the measure of the options sacrificed in making a decision. The opportunity cost of going to university is the wages from full-time work that you have had to sacrifice.

opportunity cost whatever must be given up to obtain some item; the value of the benefits foregone (sacrificed)

Calculating Opportunity Costs Opportunity cost is the cost expressed in terms of the next best alternative sacrificed – what must be given up in order to acquire something. As a general principle, we can express the opportunity cost as a ratio expressed as the sacrifice in one good in terms of the gain in the other:

$$\text{Opportunity cost of good } y = \frac{\text{Sacrifice of good } x}{\text{Gain in good } y}$$

Expressing the opportunity cost in terms of good x would give:

$$\text{Opportunity cost of good } x = \frac{\text{Sacrifice of good } y}{\text{Gain in good } x}$$

Opportunity cost can be expressed in terms of either good – they are the reciprocal of each other.

Thinking at the Margin

Decisions in life are rarely straightforward and usually involve weighing up costs and benefits. Having a framework or principle on which to base decision-making can help if we want to maximize benefits or minimize costs. Thinking at the margin is one such framework that economists adopt in thinking about decision-making. **Marginal changes** describe small incremental adjustments to an existing plan of action. Marginal analysis is based around an assumption that **economic agents** (an individual, firm or organization that has an impact in some way on an economy) are seeking to maximize or minimize outcomes when making decisions. Consumers may be assumed to seek to maximize the satisfaction they gain from their incomes, and firms to maximize profits and minimize costs. Maximizing and minimizing behaviour is based on a further assumption that economic agents behave rationally.

marginal changes small incremental adjustments to a plan of action

economic agents an individual, firm or organization that has an impact in some way on an economy

It is important to stop and consider what we mean by the term 'rational' in this context. When some economists use the term '**rational**' in the context of decision-making, it simply means the assumption that decision-makers can make consistent choices between alternatives. We will look at this in more detail later in the book, but at this stage we will express rationality based on decision-makers' ability to rank their preferences and do the best they can with their existing resources. Thinking at the margin means that decision-makers choose a course of action such that the marginal cost is equal to the marginal benefit. If a decision results in greater marginal benefits than marginal costs, it is worth making that decision and continuing up to the point where the marginal cost of the decision is equal to the marginal benefit.

rational the assumption that decision-makers can make consistent choices between alternatives

The assumption of rational behaviour provides a framework around which decisions can be analyzed and has been a basic tenet of economics since the 1870s, with thinkers such as William Stanley Jevons and Carl Menger building on work by David Ricardo and Jeremy Bentham, which became part of the so-called marginalist school. The assumptions of rational economic behaviour have implications which have been subject to criticism. In studying economic models which rely on the assumption of rational behaviour, it is important to remember that if these assumptions are relaxed, outcomes might be very different. We will cover a number of economic models which are based on this assumption, because it provides a view into the way in which economic analysis has developed historically and how it is subject to evolution and change. It also provides a way of thinking about issues which can be contrasted with other ways of thinking when different assumptions are held.

People Respond to Incentives

If we assume the principle of rational behaviour and that people make decisions by comparing costs and benefits, it is logical to assume that their behaviour may change when the costs or benefits change. That

is, people respond to incentives. The threat of a fine and the removal of a driving licence is designed to regulate the way in which people drive and park their cars; putting a price on the provision of plastic bags in supermarkets aims to encourage people to re-use bags and reduce the total number used.

There has been an increase in the amount of research conducted on incentives because the intentions of policymakers do not always lead to the outcomes expected or desired. A fine imposed on parents who are late picking up their children from day care centres might be expected to reduce the number of late pickups, but one study in Israel showed that far from reducing the number of late pickups, parents were willing to pay the fine and the number arriving late actually increased. Such consequences are referred to as 'unintended consequences'.

SELF TEST What sort of incentives might governments put in place to encourage workers to find work and get off welfare benefits? What might be the unintended consequences of the incentives you identify?

HOW PEOPLE INTERACT

Decision-making not only affects ourselves but other economic agents as well. We will now explore some issues which arise when economic agents interact with others.

Trade Can Make Everyone Better Off

The United States and China are competitors with Europe in the world economy because US and Chinese firms produce many of the same goods as European firms. It might be thought that if China increases its share of world trade at the expense of Europe this might be bad news for people in Europe. This might not be the case.

Trade between Europe and the United States and China is not like a sports contest, where one side wins and the other side loses (a zero-sum game). In some circumstances trade between economies can make all better off. Households, firms and countries have different resource endowments; individuals have talents and skills that allow them to produce some things more efficiently than others; some firms have experience and expertise in the production of goods and services; and some countries, like Spain, are blessed by plenty of sunshine which allows their farmers to grow high quality soft fruit. Trade allows individuals, firms and countries to specialize in the activities they do best. With the income they receive from specializing they can trade with others who are also specializing and can improve their standard of living as a result.

However, while trade can provide benefits and winners, there are also likely to be costs and losers. The economic development of some countries in the last 50 years has meant that many people have access to cheap, good quality goods and services as a result of the export of these goods and services. For workers and employers in these industries in developed economies, the competition from developing countries might mean that they find themselves without work or must close their businesses. In some situations, it is difficult for these people to find alternative work, and whole communities can be greatly affected by the changes being experienced. They may not agree that 'trade can benefit everyone'.

The Capitalist Economic System

The economic problem highlights three questions that any society must answer. What goods and services should be produced, how they are to be produced and who will get what is produced are determined by the economic system. An **economic system** is the way in which resources are organized and allocated to provide for the needs of an economy's citizens. In many countries of the world, a capitalist economic system based on markets is the primary way in which the three questions are addressed. A **capitalist economic system** incorporates the principles of the private ownership of factors of production to produce goods and services which are exchanged through a price mechanism. Production is operated primarily for profit.

economic system the way in which resources are organized and allocated to provide for the needs of an economy's citizens

capitalist economic system a system which relies on the private ownership of factors of production to produce goods and services which are exchanged through a price mechanism and where production is operated primarily for profit

Capitalist economic systems have proved capable of raising the standard of living of millions of people over the last 200 years. We can measure the standard of living in terms of the income that people earn which allows them to purchase the goods and services they need to survive and enjoy life. While capitalist systems have increased living standards for many, it is not the case that everyone in society benefits equally. Capitalism has meant that some people and countries have become very rich whereas others remain poor. The existence of the profit motive provides an incentive for entrepreneurs to take risks to organize factors of production. This dynamism in capitalist systems not only leads to developments in technology and capital efficiency which help generate profits for the individuals and firms concerned but also increases knowledge and information in society as a whole, which further contributes to economic development.

Critics of capitalist systems argue that they are inherently unstable and lurch from boom to bust. In addition, capitalist systems favour those who have acquired ownership of factor inputs. Ownership of factor inputs can result in the exploitation of workers. Owners of factors of production can wield considerable economic and political power which can distort resource allocation. Karl Marx spent a large part of his life seeking to understand and analyze the capitalist system and develop theories to explain why it exploited workers and was unstable.

Markets Can Be a Good Way to Organize Economic Activity

The role of markets in capitalist economic systems is central. In a **market economy**, the three key questions of the economic problem are addressed through the decentralized decisions of many firms and households as they interact in markets for goods and services. Firms decide whom to hire and what to make. Households decide which firms to work for and what to buy with their incomes. These firms and households interact in the marketplace, where prices and, it is assumed, self-interest guide their decisions.

market economy an economy that addresses the three key questions of the economic problem by allocating resources through the decentralized decisions of many firms and households as they interact in markets for goods and services

In a pure market economy (one without any government intervention) no one is considering the economic well-being of society as a whole. Free markets contain many buyers and sellers of numerous goods and services, and all of them are interested, primarily, in their own well-being. Yet, despite decentralized decision-making and self-interested decision-makers, market economies have proven remarkably successful in organizing economic activity in a way that can promote overall economic well-being for millions of people, even though it is recognized there are inequalities that will arise.

Planned Economic Systems The inequitable distribution of wealth in capitalist societies which was witnessed in the countries which benefitted from the Industrial Revolution in the 1700s and 1800s led to the development of other economic systems, most notably **planned economic systems**, sometimes referred to as communist systems or *command economies*. Communist countries worked on the premise that central planners could guide economic activity and answer the three key questions of the economic problem. The theory behind central planning was that the government could organize economic activity in a way that promoted economic well-being for the country as a whole and led to a more equitable outcome.

planned economic systems economic activity organized by central planners who decided on the answers to the fundamental economic questions