

Introduction: the transformation of competition policy in Europe¹

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Competition arises when firms fight for customers by offering them a better deal in terms of price, quality, range, reliability or associated services. It is messy. Some firms lose market share and others exit. Successful firms can make substantial profits. The reward for consumers is that it gives them products they want and at a price that reflects the resource cost of providing them. This book is about how competition policy is used to maintain competition in European markets. Such policies are effective when they stimulate competition but counterproductive if they stifle it. This is a tricky balance to achieve. It requires a subtle understanding of competition economics.

The first three sections of this chapter start from a satellite picture of the economic system and progressively zoom in on the detail of individual markets and business practices. Section 1 introduces the merits of competition as the fundamental force driving the economy in the right direction. It also notes the temptation for businesses to suppress competition, though this is not always easy to do. How can we identify when business practices are likely to be harmful? And how can we balance such dangers against heavy-handed suppression of efficient and innovative strategies? The branch of economics that has developed this understanding is known as industrial organisation. It focuses on individual market outcomes and provides the intellectual foundation for what has become known as the economic (or effects-based) approach to competition policy. Section 2 provides a glimpse of this research into the implications of various business practices under alternative market structures. Section 3 identifies the channels through which a particular business practice may or may not harm competition. This is a helpful step in formulating the economic analysis in a way suitable for legal screening.

¹ I thank Steve Davies for his typically insightful comments. Neither he nor the authors of the case studies bear any responsibility for the views contained in this chapter.

The economic approach to competition policy has not always been favoured in Europe (or in North America). Different countries have had different motivations for laws relating to competition. Some interventions have been more anticompetitive than pro-competitive. In recent years, however, there has been a fundamental shift towards the economic approach. There has also been a unifying focus provided by the European Commission – the world’s only supranational competition agency. Section 4 gives a flavour of these early differences and the evolving convergence.

Each of the seventeen case studies in this book illustrates both the economic approach and how far it has (and sometimes has not) developed in Europe. Section 5 completes this introductory chapter by explaining the organisation of the book into three parts. It is left to separate introductions for each part to outline each case study and sketch the relevant legal background.

1. The benefits of competition

It is a marvel of the market economy that the apparent chaos of competition results in such significant benefits. The system works because market prices summarise a vast amount of information on supply and demand conditions in a way that is most relevant for commercial and private buyers. If these prices are set competitively, the outcome has a strong claim to be the most efficient that can be achieved.

The essential economic benefits were articulated with enduring clarity by Adam Smith in *The Wealth of Nations*, first published in 1776. Competition not only keeps prices low and close to cost,² it also reduces costs as firms fight for market share and survival.³ Individual producers may be driven by a selfish profit motive and have no direct interest in the welfare of unrelated

² ‘... the price of free competition ... is the lowest which the sellers can commonly afford to take, and at the same time continue their business’. ‘The price of monopoly is upon every occasion the highest which can be got’ (Book I, Chapter VII).

³ This applies both aggressively – ‘in order to undersell one another, have recourse to new divisions of labour, and new improvements of the art, which might never otherwise have been thought of’ – and defensively – ‘Monopoly ... is the great enemy of good management, which can never be universally established but in consequence of the free and universal competition which forces every body to have recourse to it [i.e. good management] for the sake of self-defence.’ As quoted in Vickers (1995). Sir John Hicks (1935) summarised this in his famously pithy phrase: ‘The best of all monopoly profits is a quiet life.’

customers, but as long as the process is competitive it is as if an ‘invisible hand’ guides the outcome so that it is indeed beneficial for consumers.^{4,5}

Modern economics has honed and formalised Adam Smith’s insight in a number of ways that enable a deeper understanding of competition and its benefits. One approach, known as general equilibrium theory, derives a sufficient set of conditions such that apparently anarchic, decentralised decision making across many different markets results in a Pareto efficient economy, which is to say an outcome in which no one could be made better off without making someone else worse off. Competitive pricing is the first of these essential conditions. In contrast, textbook monopoly pricing is Pareto inefficient because output is restricted, driving a wedge between consumer valuation and marginal cost. Other conditions necessary for an efficient economy are the absence of uncompensated externalities and no distortions due to asymmetric information. This particular formalisation of the efficiency of a competitive economy is known as the first fundamental theorem of welfare economics.⁶ Other approaches highlight more dynamic aspects of the competitive process and identify further benefits for technical progress.⁷

Economic history provides much macroeconomic evidence on the economic benefits of a broadly competitive market economy. For example, Douglass North (1991) contrasts how the early colonists of North America took British institutions with them, and these enabled competitive markets to develop based on secure property rights and decentralised decision making. In contrast colonisation of South America took place at a time of bureaucratic, centralised monarchy in Spain and set in place institutions such that ‘wealth-maximizing behaviour by organizations and entrepreneurs (political and

⁴ ‘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. We address ourselves, not to their humanity but to their self-love, and never talk to them of our necessities but of their advantages’ (Book I, Chapter II); ‘... by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention’ (Book IV, Chapter II).

⁵ Competition also has a more controversial claim to political benefits, in particular the promotion of freedom. On this view, it does more than deliver the best opportunity to satisfy consumer wants – it is also desirable because it allows individuals to make their own choices (even if those choices may be against their own best interests). Hayek (1960) makes the classic case and Sen (1993) provides a recent critique. The political benefits are also stressed in German *ordo-liberalism* where the benefits are expected not through individual choice but through the avoidance of a political process dominated by monopolies hand in hand with government (see Gerber, 1998).

⁶ A second fundamental theorem proves that concerns about social inequality should not undermine the attractions of efficient competitive markets as long as there are suitable tax and social insurance schemes.

⁷ For example, see Schumpeter (1943) on competition as ‘creative destruction’; also Kirzner (1978) on entrepreneurship and competition. See also section 2.

economic) entailed getting control of, or influence over, the bureaucratic machinery' (i.e. competition was diverted away from satisfying customers and into gaining political influence). The consequent, contrasting economic development of America north and south of the Rio Grande is clear to all.

Back in Europe, the former command economies of central and eastern Europe provided a natural experiment lasting over forty years in the second half of the twentieth century. Contrast the fortunes of Poland and Spain.⁸ Both countries were Catholic and had populations of around 25 million in the 1950s (and 40 million by the end of the century!). They had similar geographic areas and agricultural economies. In 1950, Poland had a per capita gross domestic product (GDP) of around \$750 and Spain only \$500. Over the next forty years, Poland was a highly centralised economy with little room for competitive markets. Spain's economic system was market based.⁹ By 1990, when Polish communism formally ended, Spanish per capita GDP was four times higher than in Poland. The comparative evolution of the communist command economy of East Germany and the social market economy of West Germany over the same period provides an even sharper contrast of fortunes.

This is not to say that competitive markets solve all economic problems. They do not. As we shall see in the next section, there are occasions when some apparent restrictions of competition can be justified. Furthermore, competition appears to create some problems when inefficient firms lay off workers and successful firms pay huge bonuses to senior managers while their activities deplete resources and contribute to climate change. Complementary economic and social policies are essential to create a pleasant and sustainable society. This is not the place to develop the economics of unemployment, environmental pollution and social equity, though these are important issues. The point to note is that they are best addressed by complementary policies of education, environmental regulation, taxation and social insurance, but not by abandoning competitive markets.

These broad-sweep ideas and observations establish the firm presumption that a broadly competitive market economy has very much more to recommend it than one dominated by central planning or monopoly. However, there are numerous possible variants of a market system and many were tried across Europe in the second half of the twentieth century (and not just eastern communism versus western markets). Within western Europe there were

⁸ See Sachs (1993).

⁹ Though economic and political freedom were severely compromised by Franco's dictatorship until his death in 1975.

national differences in degrees of state ownership and state subsidies to private business, price, entry and trade regulation, and policies in relation to cartels. The evidence mounted that state ownership was less efficient than private ownership and from the 1980s privatisation began to roll across Europe, reaching the East in the 1990s following the collapse of communism.

Another influence around this time was the single European market programme, which aimed to eliminate non-tariff barriers to trade within the European Community. Further reforms liberalised entry into previously regulated markets. One high-profile example was the deregulation of airline competition and consequent appearance of low-cost airlines using a very different business model to the very uniform product previously offered by national flag carriers. There are continuing moves to deregulate in other areas such as energy. Further EU initiatives have attempted to reduce the impact of state subsidies, at least inasmuch as they distort competition between firms located in different Member States.¹⁰

While many national differences remain, there is an increasing European consensus that a prosperous economy responsive to consumer needs is best achieved by private ownership, deregulation of entry and a limit on state subsidies (at least when given by other countries!).¹¹ Of course, this is a multifariously interpreted consensus that is characteristic of the cultural cassoulet that is Europe.

The issue then becomes: should firms be left completely free to compete as and how they wish, or would complete *laissez-faire* result in firms themselves subverting the competitive process? The pressure on firms to maximise profits provides an alert to the dangers. Business life is much easier if competition is suppressed, even if it is also less productive and less creative. This observation is not new. Adam Smith recognised it back in 1776 when he wrote about the enduring temptation to fix prices.¹² Although it can be hard for firms to act on

¹⁰ See Davies *et al.* (2004) for some interesting, accessible case studies of the benefits of deregulating markets.

¹¹ See Megginson and Netter (2001) for a review of the empirical literature on the ownership effects of privatisation. Nickell (1996) provides an example of evidence that competition enhances productivity, and Aghion *et al.* (2004) of evidence showing how foreign entry raises domestic productivity.

¹² 'People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices' (Smith, 1776, Book I, Chapter X). He was less optimistic about the ability to legislate against such conspiracies. His next sentence reads: 'It is impossible indeed to prevent such meetings, by any law which either could be executed, or would be consistent with liberty and justice. But though the law cannot hinder people of the same trade from sometimes assembling together, it ought to do nothing to facilitate such assemblies; much less to render them necessary.' Modern advocates of competition policy are less pessimistic. Although the law in a free society indeed cannot prevent meetings, it can try to stop competitors discussing price when they meet.

these temptations, especially if the number of rivals is high or entry is easy, some form of referee is necessary to stop the invisible hand turning into a fist. To understand the referee's role, we need to dig deeper into the operation of individual markets.

2. Understanding business practices and market competition

The economics of industrial organisation (IO) provides a detailed theoretical and empirical understanding of how firms compete, whether it be in natural resource, manufacturing, utility, retailing or other service markets. The theory develops how rational profit-maximising firms must be expected to behave in markets with a limited number of firms (i.e. oligopolies). Since senior managers are under a fiduciary duty to their shareholders to maximise shareholder value, it is reasonable to assume that this is the way that experienced managers will indeed behave. But if they are tempted to relax or pursue non-profit objectives, there are other pressures that encourage them back to profit: supervision and performance monitoring within the firm, incentive schemes (e.g. bonuses, share options), internal promotion and external job offers for the most successful managers, threat of takeover by a more profit-oriented management team and natural selection in a competitive product market.

The most familiar issue investigated in IO is how the power to set price above cost is related to the number and relative size of firms in the market.¹³ Price is always a core element of competition but it is rarely the only element. The literature has been developed to understand a very wide range of strategies used by firms. It investigates how firms compete when they choose prices, including price discrimination, quantity and bundling discounts and price restraints and guarantees, product design, quality and range, investments in capacity, distribution, marketing and research and development (R&D), the range of production and distribution activities undertaken within the firm, and the nature and content of contracts entered into with customers, other firms as suppliers, or joint ventures. IO investigates the optimal choice by each firm, the ramifications and responses of its rivals, and how these can be anticipated. Thus, even when each firm makes its decisions unilaterally, the whole market is affected and we

¹³ The core modelling technique originates from Cournot (1838), but Adam Smith already had the nub of the idea: 'If this capital [i.e. relevant assets sufficient to trade in a town] is divided between two different grocers, their competition will tend to make both of them sell cheaper, than if it were in the hands of one only; and if it were divided among twenty, their competition would be just so much the greater, and the chance of their combining together, in order to raise the price, just so much the less.' As quoted in Stigler (1987).

are interested in working out the implications for all firms and consumers once everyone has adjusted their pricing and other relevant decisions.¹⁴

Each market has different characteristics which influence the strategies firms choose and the competitiveness of outcomes. Such characteristics include the degree of production and distribution economies of scale and scope, availability of risk capital, technology, scarce skills and management expertise, market size, other entry barriers and the number of firms, scale, stability and lumpiness of demand, knowledge, sensitivity and rationality of consumer behaviour, consumer network benefits or switching costs, potential for technological improvement, scope and security of intellectual property rights, technological lock-in, transaction costs of doing business with other firms, contract, competition, trade and other laws, and market history. IO theory now provides a large and expanding toolkit for the analysis of markets with different blends of such characteristics.¹⁵

One preliminary insight is that some apparently quite different business practices can be equivalent in their effects. As a very simple example, suppose a supplier wants a retailer to charge no more than a certain maximum price when selling its product. If the demand curve is known, then the supplier could achieve exactly the same effect by requiring the retailer to sell an equivalent minimum quantity. A maximum price or a minimum quantity are alternatives that are equivalent in their effects.¹⁶ The importance of this is that a poorly designed competition policy may both prohibit resale price restrictions and allow quantity incentives. Even without considering whether intervention against such strategies is desirable, we can say that it is inconsistent to outlaw one and permit the other.

Other insights relate to pricing and investment incentives. For example, the time and effort needed to develop a new product may not be forthcoming if

¹⁴ An outcome such that no firm has an incentive to deviate from its current strategy is known as a Nash equilibrium. A companion concept of subgame perfect Nash equilibrium is appropriate when firms make long-term investment or product design decisions in anticipation of the consequences for future pricing behaviour.

¹⁵ An introduction to IO theory can be found in a number of textbooks and handbooks. Tirole (1989) is old, but it remains as a classic on the modern foundations of industrial organisation theory. Church and Ware (2000) is more recent and more applied. Motta (2004) is most recent and most direct in applying the approach of IO to competition policy issues. Three volumes of *Handbook of Industrial Organization* (Schmalensee and Willig, 1989, and Armstrong and Porter, 2007) include some excellent review articles. Less demanding textbooks that still provide good introductions to industrial economics at a level similar to the exposition in this book include Cabral (2000), which has a more European perspective than others such as Carlton and Perloff (2000) or Pepall *et al.* (2008). Klein and Lerner (2008) provide a useful compilation of classic journal articles.

¹⁶ Quantity discounts can also have an equivalent effect, though none of these strategies is exactly equivalent if the demand curve is uncertain.

non-inventors can immediately copy someone else's invention. This is familiar as the justification of patents (i.e. time-limited monopoly rights). Similarly, expert advice, samples and other services provided 'free' by some retailers would not be sustainable if low-service retailers can undercut price and free-ride. This loss of marketing support might be solved by certain types of exclusionary behaviour: refusing to sell through low-service retailers ensures that high-quality retailers capture the benefit of their investment in premises and training. Economic analysis can help distinguish such cases from others where refusal to deal is just a means of preserving or enhancing market power.

Empirical substance to IO theories is provided by a large body of econometric studies that tests theoretical predictions and identifies other patterns to explain. A general finding is that, just as the theory suggests, market outcomes are highly sensitive to the specific characteristics of the market. This means that there are no simple rules like 'four firms are necessary (or sufficient) for effective competition' or '50 per cent market share is necessary (or sufficient) for a firm to be able to raise price substantially above the competitive level'. Nevertheless, there is much empirical knowledge relating to competition and productivity growth,¹⁷ pricing,¹⁸ entry, exit and market concentration,¹⁹ contracts and investment,²⁰ and experimental markets.²¹

There is space to provide only one illustrative example of this rich econometric literature. Bresnahan and Reiss (1991) investigate five retail and professional service markets in around 150 isolated American towns of varying sizes. Entry barriers are low in these markets but each firm must incur some fixed costs. As expected, the authors find that larger towns can support more firms in each product market, but how many more? If price did not fall with entry, the number of firms should be proportional to market size, but if each extra firm introduces more competition such that price and margins fall, then greater sales for each firm will be needed to cover fixed costs. Consequently, the greater the competitive effect of entry, the larger must be the incremental size of market in order to support that entry. Using this insight, they find that reasonably competitive outcomes can be established by a market structure of between two and four firms. Thus, we learn that, even for reasonably similar types of market, different numbers of firms may be necessary to establish

¹⁷ See Ahn (2002) for a review.

¹⁸ See Berry and Reiss (2007) and Hendricks and Porter (2007) for partial reviews. There is also much econometric work on collusion and cartel behaviour, as well as numerous case studies (e.g. on airline pricing).

¹⁹ See Berry and Reiss (2007) and Sutton (2007) for reviews.

²⁰ See Lafontaine and Slade (2007) for a review.

²¹ See Holt (1995) and selective reviews in Plott and Smith (2008).

competition and this number *may* be as small as two. However, it would be unwise to project this finding on firm numbers into a wider generalisation for more complex markets; for example, these small-scale trades were chosen because they operate in the shadow of a fairly immediate threat of entry. Furthermore, more differentiated product markets may require more firms to establish a competitive outcome.

The IO approach also provides a guide to defining a meaningful market. This is important because market definition is not usually as clear-cut as well-defined trades in isolated towns. There are always two dimensions to be assessed: the range of products that compete and the geographic extent of the market. How can we determine, for example, whether apples and bananas are in the same market? Some people will find them close substitutes as healthy snack fruits but others will have a strong personal preference (e.g. it takes good teeth to bite into a crisp apple). Economic meaning can be put into the issue by asking whether a hypothetical monopolist of bananas would be able to raise price without so many consumers switching to other fruit such that this price rise would be unprofitable. If the answer is yes, then bananas can be considered to be a separate market, but if the answer is no, then the banana market is too narrowly defined for competition purposes so we need to consider a wider definition (e.g. bananas and apples). Starting from a narrow product market, potential substitutes can be added until the hypothetical monopolist could profitably raise price. This approach to market definition gets to the heart of its use to understand competition. A similar approach can be applied to geographic market definition by asking: would a hypothetical monopolist in Germany be able to raise price without losing customers to French or Dutch firms?

This summary of IO analysis has so far focused on understanding the world that we observe. It can also help in passing judgement: would a feasible intervention in the market improve social welfare? This gets to the core of the economic analysis necessary for good competition policy. Consumer welfare is measured by consumer surplus (i.e. the excess of consumer willingness-to-pay over what they actually have to pay) and producer welfare is measured by profits (which may be distributed to shareholders or shared with employees). Total welfare refers to the sum of the two. It is a virtue of the approach that the welfare of consumers and firms can be analysed separately and then an evaluation can be made using an appropriate weighting.²²

²² See Farrell and Katz (2006) for a discussion of appropriate welfare objectives in the context of competition policy.

As an example of this welfare approach, consider a horizontal agreement between firms to share a market according to regions. This conveys monopoly power in each region and raises prices and profits for all firms. However, consumer surplus falls and the standard monopoly analysis shows that consumers lose more than the firms gain. Next, consider a vertical agreement between a manufacturer and a supplier. This might take many forms, but as a freely negotiated deal it must be expected to raise profits for both. However, unlike a cartel, this need not come at the expense of the manufacturer's customers. In fact, they may benefit if some of the efficiency is passed through as a price cut. This suggests a very different welfare analysis and consequent policy stance towards horizontal and vertical restraints. Similar considerations apply to horizontal compared with vertical mergers. Nevertheless, there are specifiable circumstances where a vertical restraint or vertical merger may foreclose rivals and harm consumers. By the 1970s, the Chicago School had highlighted the benign features of vertical restraints but had used restrictive assumptions to get the message across. More nuanced game theoretic analysis began to pick away at the potential for foreclosure and it is only from the 1990s that a significant post-Chicago consensus has begun to develop.²³

The next step is to formulate the economic analysis in a way suitable for legal scrutiny.

3. Harm and redemption in competition analysis

Modern competition policy is about refereeing free markets to ensure there is no foul play. The idea is to let those offering the best deal win customers. To pursue the sporting analogy, competition economics appraises tackles so that the competition is robust and exciting without breaking down into lethargy, match fixing or kicking the other side off the field.²⁴ If there is an offence, the referee has to decide how serious it is and how to deal with it most effectively. It is not the referee's job to protect weak competitors from losing. The best referees blow their whistles infrequently but are firm and clear in their decisions when they do. They gain the respect of the players, foul play is deterred and there should be little for them to do except to observe the game very closely. I start with markets where it is not possible to create a sufficiently level playing field for a competitive game to begin.

²³ See Kovacic and Shapiro (2000) for a history of economic ideas in relation to US antitrust policy.

²⁴ Competition economics can also advise on best rules for the game (e.g. guidelines for implementing competition policy). This book focuses on the role as referee.

Markets where competition is not feasible. Some markets are natural monopolies in the sense that economies of scale are so large relative to the size of the market that only one firm can supply at reasonable cost efficiency. This can arise particularly with major distributional infrastructures like electricity, gas or water networks. Conventional competition cannot be created in such markets, so it is necessary to regulate price and other aspects of their investment programme and service quality.²⁵ Sometimes the domain of natural monopoly can be reduced by vertical separation. For example, ownership of electricity generation can be separated from the distribution network as a first step to creating a competitive market in generation. A deep-rooted problem with price regulation is that a regulator knows less than the regulated firm about its costs, demand and technological and market opportunities. This makes it extremely difficult to set the right price without eroding efficiency and innovation incentives – price regulation should be applied only when strictly necessary. The economics of the pricing game between regulator and regulated is quite different to that between firms and it lies outside the scope of this book.²⁶

This leaves us with the field of play for competition policy. Our agenda lies between the levels of control implied by full economic regulation and complete *laissez faire*. It is relevant for that preponderant part of the economy where markets work pretty well, but where it may be possible for firms to subvert competition by creating or abusing market power.²⁷ It is possible to categorise a number of ways in which competition may be harmed.

Unilateral effects. A firm may act alone to raise price. When it does, this is likely to have a knock-on effect for other firms which find it profitable to raise price probably by a little less. Consumer harm may also come through non-price elements of the product offer (e.g. reduced service support or product development). It is sometimes also argued that price discrimination can be abusive, but the circumstances always require very careful analysis.²⁸

Cartels and coordinated effects. A group of firms may coordinate to raise price. This is known as a cartel if they coordinate explicitly (e.g. by exchanging information about price intentions or coming to a verbal agreement to share the market). It is known as tacit collusion or ‘coordinated effects’ if they do so

²⁵ It may be possible to create competition *for* the market by an appropriate auction of monopoly rights, but this still requires a regulatory apparatus of the sort discussed in this paragraph.

²⁶ See Armstrong and Sappington (2007) and Laffont and Tirole (1993) for the economics of regulation. Price regulation is not entirely missing from this book because it can be used to remedy a specific problem in an otherwise competitive market (e.g. see Chapters 3 and 7).

²⁷ See Geroski (2004).

²⁸ See Chapters 1, 4, 9 and most explicitly 11 for a discussion of those circumstances.

without explicit contact (e.g. by observing each other's behaviour and withholding from competitive pricing). The latter is far harder to achieve than explicit collusion, but both result in higher prices than if each firm acts unilaterally.²⁹

*Horizontal mergers that eliminate an actual or potential competitor.*³⁰ The reduction of competition depends on the extent to which product ranges are viewed by customers as substitutes and the effectiveness of remaining rivals at filling the competitive gap. The merger may enhance unilateral effects (e.g. by reducing the loss of sales following a price rise) or coordinated effects (e.g. by eliminating a 'maverick' price cutter). It may also have a positive side if it facilitates synergies and so enables the merged firm to compete more effectively.

Strategies that reduce competition by excluding rivals (known as foreclosure). The unilateral market power of an incumbent is indirectly enhanced by strategies that deter entry, force exit or raise a rival's costs. These are known as exclusionary abuses. For example, exclusive contracts may be signed to reduce a rival's purchasing options or customer opportunities or to raise their supply prices; rebates and quantity discounts or product bundling may also be used to squeeze market opportunities for rivals; or a vertically integrated firm may refuse to deal with an upstream or downstream rival. A vertical merger may similarly enhance the prospect of foreclosure. Alternatively, a firm may make its core product incompatible with a rival's complementary range or a few firms may agree an industry standard that disadvantages a rival. The problem is that it is also quite possible for these forms of behaviour to be beneficial for consumers, even if competitors are harmed (see Section 2). This makes the analysis of such strategies highly contentious in competition analysis and they require particularly careful economic analysis.³¹

Strategies that soften competition between existing rivals. A firm may take actions or invest to reduce the incentive for firms in the market to compete for customers. For example, it may differentiate its products so as to make them less close substitutes to those offered by others. Alternatively, it may build limited capacity so it has no great incentive to capture customers from rivals.

²⁹ In terms of IO theory, a unilateral effect is a Nash equilibrium in the one-shot game and a coordinated effect is a higher-price equilibrium in the repeated game.

³⁰ We use the term 'merger' to include acquisitions of individual businesses from another firm or a joint venture that could have been an independent business.

³¹ It is also possible that a firm may set prices below-cost for sufficient time to force exit, or invest in excess capacity to threaten a predatory response to entry. However, closer economic scrutiny of predatory pricing suggests this type of behaviour is rarely rational unless reputation effects carry over to other markets.

Another example is a commitment to match a rival's price, which undermines the rival's incentive to cut price in the first place. However, it is extremely difficult to distinguish competition suppression of this type from active competition, natural caution or customer service.³²

Customers can soften or stiffen competition. The behaviour of customers plays a crucial role in incentivising firms to compete. Competition relies on them responding to price differences and switching between the offerings of rival firms. However, particularly if the customers are final consumers, they do not always have the time, ability or inclination to search for the best offer. Even if aware of a better offer, they may be deterred by the risk and cost of switching brand or supplier. While firms cannot be held responsible for consumer ignorance or sloth, they can exploit it if they act to obfuscate choices or make switching difficult. This is an area of increasing research and relevance to competition policy. Yet customers can stiffen competition by negotiating discounts or by creating the conditions for fierce competition (e.g. putting a large contract to tender). Thus, buyer power can reduce or eliminate failings in upstream competition.³³

Having identified channels of harm, we can turn to redemption. If the economic analysis reveals that a business practice is harmful to competition, what should be done about it? For some practices, most notably price-fixing cartels, there is no saving grace and they should clearly be prohibited. However, for other practices (e.g. restrictive contracts and mergers), there may be parts that are problematic and other parts that cause no competitive harm. In such cases, it is often possible to eliminate the harm while allowing the unproblematic part to proceed. This might be achieved by requiring the parties to a horizontal merger to divest overlaps in their product ranges while allowing other parts of the merger to proceed. In vertical mergers, or where a vertically integrated dominant firm is excluding competitors by refusing access to an essential asset, the concerns may be alleviated by requiring the firm to grant access to competitors on appropriate terms. In the case of restrictive contracts, it may be possible to limit duration or change particular terms in order to retain beneficial incentives while eliminating the damage to competition.

While it is crucial that a remedy should be effective in eliminating the competitive harm, success should not be penalised and wise policy follows a principle of minimum necessary intervention. It is the essence of competition

³² But see Chapter 3 for an example where such behaviour was at least discussed.

³³ Chapter 4 discusses whether buyer power can be abused.

that firms should seek to produce more efficiently, to entice customers to buy from them and to experiment with novel strategies. An important way in which the law brings some balance between the general incentive to compete and the specific strategy under scrutiny is to take account of how market power has been achieved.

This is best illustrated by thinking about high prices associated with high market shares. A similar market structure and market power might be achieved by a single large firm with a 50 per cent market share, or a tight cartel with the same share and product range, or a horizontal merger creating the same share and range. The first of these may have achieved market share over time by controlling costs, providing a product consumers want and being an effective competitor. We still need to be alert to potential abuses of this market position, but investigation can await a serious complaint. The merger must come under routine scrutiny because it is not the result of customer choice. Nevertheless, they may provide a quick way to achieve synergies which ultimately do benefit customers. A classic cartel, however, can have no such justification as it does not have the possibility of creating efficiencies and is in place only to make life easy for firms and to exploit consumers. This underpins *per se* illegality and tough enforcement including active policies to encourage cartel discovery.

Having set out the economic approach to competition policy, we can now see how this fits in with the law and practice that have evolved in Europe.

4. Competition policy in Europe³⁴

Competition policy is the set of laws, institutions, precedent, analysis, guidelines and evolving regulatory practice that aims to prevent firms from subverting competition. Americans refer to this as ‘antitrust policy’. Few of the original laws were motivated by the single purpose of protecting competition. There have also been many national differences across Europe. A brief diversion into US competition policy provides some perspective.

In the US, the Sherman Act of 1890 prohibited cartels and ‘monopolisation’ strategies (roughly equivalent to ‘abuse of dominance’ in Europe). It provided for criminal sanctions, including imprisonment, and gave powers to break up

³⁴ Some of the histories in this section rely on the OECD Reviews of Competition Policy Frameworks, including EU (2005), France (2003), Germany (2004) and UK (2005). Motta (2004) Chapter 1 provides an extended introduction to the US and EU.

dominant firms. In 1914, the Clayton Act provided for merger control and treble damages for private actions (i.e. actions not instigated by a government agency). It also introduced the control of price discrimination. The interpretation of this powerful set of laws has evolved substantially over the last century. Until the 1970s, the laws were used to protect small competitors and restrain large corporations, as well as to control cartels. There was sometimes an aversion to efficiency-creating practices, including mergers, even for firms with negligible market power because these might harm rivals. A substantial number of business practices became *per se* illegal, so could not be used even when they enhanced efficiency. Since then, however, there has been a fundamental, though incomplete, shift towards a 'rule of reason' or 'economic effects' approach. The struggle for the ascendancy of the economic approach can be seen in the cases in Kwoka and White (1989 and later editions).

Competition policy in Europe is more recent, as is the economic effects-based approach to its implementation. Also, the absence of treble damages has left enforcement in the hands of competition authorities, while many actions in the US are taken privately. The following review does not cover differences in institutions, legal traditions or the relationship between agencies and courts. It focuses on the evolution of the role of competition policy and the place of economic analysis. It aims to show how the latter is achieving an increasingly important role across Europe.

The most influential competition policy has developed at the EU level, which has also proved the model for reform in current and aspirant Member States. It started with the original EU Treaty in 1957. This included key Articles 81 and 82 prohibiting anticompetitive agreements and the abuse of a dominant position.³⁵ The Treaty also had provisions for liberalisation of markets, equal application to state-owned and private firms, and control of state aid. A major theme has been the use of competition provisions to pursue the objective of an integrated European market.³⁶ In 1957, there were only six Member States, but three waves of expansion during 1973–95 brought in most west European countries and most of the former communist central Europe was embraced during 2004–7.

³⁵ These Articles were originally numbered 85 and 86. Key elements of the competition policy were already established in relation to coal and steel under the Treaty of Paris (1951). To avoid confusion, I refer in this chapter to the political and economic entity of the European Community since its inception as the European Union (EU), even though that name dates only from 1993. The Treaty is more usually referred to as the EC Treaty. However, I reserve 'EC' for the executive and administrative institutions of the European Commission, particularly DG Competition (previously DG IV) located in Brussels.

³⁶ See Chapter 11 for an example of the conflict between integration and economic effects as objectives.

The provisions of the EU Treaty on restrictive agreements and abuse of dominance were activated in 1962 in a way that centralised enforcement in the European Commission (EC).³⁷ Implementation was initially slow and rule based, and there was little activity on cartels. Fines for violating prohibitions could theoretically be as much as 10 per cent of turnover, but high fines were rare until very recently. Even comparing the 2000s (up to mid-2008) with the 1990s, the number of prosecuted cartels has trebled and the value of fines has risen fifteen-fold. Explicit merger regulation was not passed until 1989 but it soon became established as an active area with the ability to meet tight deadlines. It also proved a seedbed for new ideas.³⁸ The economic approach to mergers, agreements and abuse of dominance has pervaded a growing set of official guidelines on how competition analysis should be done. Important examples include market definition (1997), vertical restraints (2000), horizontal cooperation agreements (2001), horizontal mergers (2004), non-horizontal mergers (2007) and exclusionary abuses by dominant firms (2008).³⁹ Note the important economic distinction between horizontal and vertical (non-horizontal) issues, which is not apparent in the original law. Last but not least, the economic approach has also received important support and impetus from some appeal decisions by the Court of First Instance (CFI) and the European Court of Justice (ECJ).⁴⁰

The year 2004 saw the implementation of a series of major reforms that reinforced the economic approach and pushed it out to Member States. Member States were enabled to enforce the full treaty provisions on agreements between firms and required to appraise agreements in the same way as the EC. The European Competition Network of National Competition Authorities was created to share best practice. Reform of the merger regime included a symbolic change in wording of the substantive test from 'dominance' to a 'significant impediment to effective competition'; although

³⁷ The first Commissioner for DG Competition (then known as DG IV) was German and the next four were Dutch or Luxembourgish. Part of the competition culture they brought was influenced by that in their home countries; see the following paragraphs. The sixth was an Irishman who, as a member of the reforming Delors Commission in the late 1980s, introduced merger regulation at the European level.

³⁸ See Lyons (2007) for a review of EC merger control.

³⁹ These are all available on the DG Competition website.

⁴⁰ For the role of the courts and the evolution of precedent, see Furse (2006), Jones and Sufrin (2007) or Whish (2008). Essentially, the EC makes decisions which can be appealed by interested parties to the CFI. The CFI conducts a judicial review of the decision to ensure that it is well argued and takes proper account of the evidence. If it thinks this has not been done, it uses language like 'this part of the decision is vitiated with manifest error' and refers it back to the EC for proper consideration. The CFI does not replace the EC's economic judgement but it does clarify appropriate principles for analysis. A further appeal over the CFI decision can be made to the ECJ.

the practical impact is likely to be modest, it signals a clearer emphasis on economic effects. The new post of Chief Competition Economist was created, with fixed three-year terms for a leading academic IO economist to advise the Commissioner on policy and the Commission on cases. The chief economist was also given a permanent team of around twenty PhD trained economists to advise case teams.⁴¹ Thus, the economic approach has become embedded.⁴²

The Treaty's competition law applies only to activities that may affect trade between Member States. Although this has been interpreted quite widely, it still leaves much room for national policies. The main elements of modern German competition law were established in the same year as the original EU Treaty but the motivation was different. Historically, German law permitted registered cartels, which were legally enforceable until forbidden by the occupying forces after World War II. The disasters of the first half of the twentieth century had culminated in an unholy alliance between Nazism, big business and cartels. In response, an intellectual movement known as *ordo-liberalism* saw strong competition policy as essential to protect individual freedom and to act as a bulwark against political and corporate repression. In order not to be corruptible, *ordo-liberals* argued that policy should be implemented formulaically and without discretion. The Act against Restraints of Competition (ARC) was passed in 1957, since when the independent Bundeskartellamt enforces a ban on cartels, controls the abuse of a dominant position and since 1973 controls mergers. This history has resulted in strong policy implementation that has been market share and form based, leaving little room for more nuanced economic analysis. A 1999 ARC amendment brought the law into line with Articles 81 and 82.⁴³

⁴¹ There is also an advisory group of academic IO economists, Economic Advisory Group on Competition Policy (EAGCP), with a mandate to support DG Competition in its economic reasoning and to provide advice to the Commissioner on topics of special interest. Written advice is published on the DG Competition website. Eight of the thirteen members of the current EAGCP are authors of chapters in this book, as is the current Chief Competition Economist.

⁴² Neven (2006) provides a fascinating analysis of this process, including the evolving case law. One illustrative statistic he compiled relates to the rise of specialist consultancies providing economic advice on competition issues in Europe. Prior to 1994, their turnover was less than £1 million p.a. Turnover grew to £7 million in 1999, after which it more than trebled by 2004. It has almost certainly grown significantly since then. Part of this was driven by an increase in cases, but not all of it. Over the same period, the economics advice share of professional fees (including legal advice) rose from around 5 per cent to 15 per cent, which was similar to the share in US cases. See also Vives (2009) for a series of reviews of and reflections on the first half century of EC competition policy.

⁴³ The Dutch preference for cartels lasted much longer than in Germany. Dutch competition law for most of the twentieth century was honoured only in its breach. Numerous cartels riddled the economy and private and public regulation often controlled entry. Significant reform in the 1990s culminated in the establishment of a new enforcement agency, the NMa, in 1998.

Meanwhile, the UK, which did not join the European Community until 1973, was developing its own traditions. War and recession in the first half of the twentieth century saw the previous century's liberalism descend into restrictive practices and cartels, often with state collaboration. In 1948, an Act established a commission to investigate monopolies and restrictive practices, with the apparent aim to reduce unemployment.⁴⁴ The Commission was to have little effect until given powers of merger control. The lack of genuine concern for competition was demonstrated by the associated nationalisation programme that was creating public monopolies. A restrictive practices court was set up in 1956 and was a considerable success in eliminating explicit cartels.⁴⁵ Merger control was introduced in 1965, the Office of Fair Trading was established in 1973 and there was other piecemeal legislation up to 1980 which created a rather unfocused set of laws. Policy was based on a 'public interest' test which was primarily interpreted on competition grounds but could include other issues such as employment or regional matters. Price controls and government-sponsored industrial restructuring prevailed until the late 1970s. From the mid-1980s, a radical programme of privatisation put highly concentrated markets and monopolies in private hands, supervised by a set of specialist regulators. Other potentially competitive markets were deregulated. A ministerial declaration stated that the public interest was to be interpreted in terms of competition alone (i.e. economic effects). Two major reforms brought much-needed consolidation of this tangle of legislation and replaced the 'public interest' with explicit competition tests: the Competition Act (1998) introduced the EU prohibitions and fines for anti-competitive practices and abuse of dominance and the Enterprise Act (2002) greatly stiffened penalties for cartels (e.g. gaol sentences and disqualification from directorships) and introduced formal competition tests for mergers and market investigations. The latter have been a long-standing and distinctive feature of UK competition policy.

France can lay claim to one of the earliest competition laws when the Revolution listened to Adam Smith and prohibited cartels in 1791. This was incorporated into the Napoleonic Code but fell into disuse during the nineteenth century. Post-World War II legislation included the principle of abuse of dominance and merger control, but implementation was weak and secondary to bureaucratic direction of the economy, state ownership and the creation

⁴⁴ See Wilks (1999).

⁴⁵ Covert cartels were another matter. The punishment for cartel membership was that you had to promise not to do it again – and you could be punished for contempt of court only if you did.

of national champions. A marked change in the consensus was manifested in the 1986 *ordonnance* on competition and freedom, which set out to raise competition above administrative intervention, incorporated the competition provisions of the EU Treaty and established a more powerful Conseil de la Concurrence. More recent reforms have made merger control more independent and the economic approach is gaining ground. Nevertheless, there remains a political distrust of competition and approval for common pricing as an expression of equality and social solidarity. Substantial state ownership also remains with full or controlling interests in leading firms ranging from utilities to manufacturing and transport.

Italy, like France, has a long tradition of pervasive state intervention and ownership in large-scale industries. The economy is also riddled with regulations on pricing, entry and product quality. The complexity is greatly increased by the devolved powers of the regional governments. There was no tradition of competition policy until the 1990 Competition Act establishing a new Antitrust Authority. Although the new law's objectives are formally very broad public interest, the new authority has established early credentials for a competition focus.

Most other European countries also came late to national competition legislation but now have it in place and, with many national quirks, attempt to emulate methods of analysis similar to those of the EC. The same applies to both east and west. The collapse of the former communist regimes of east and central Europe brought new competition laws echoing those in the EU Treaty as a way to consolidate and protect the new economic freedoms (e.g. Hungary and Poland both introduced new laws in 1990).

Over the last ten years, the rhetoric of the economic approach has arrived. The implementation still has a long way to go. This is demonstrated by a number of the case studies in this book. Each European country also has its own idiosyncrasies and there is much progress still to be made. However, there is a clear direction of travel and the pace is picking up.

What has driven this? As the above accounts of different regimes show, the EC has had a powerful demonstration role. Adoption of an EC-style policy has also become a necessary condition for accession to the EU. But that does not explain why the EC practice evolved this way or why many Member States have supported this evolution and others have not fought too hard against it. Globalisation has been another force. Merging firms now need to get anti-competition clearance from several countries and this is much easier if a similar approach is used in each jurisdiction. Given the trend in US implementation since the 1980s, there is much corporate support for a similar trend in Europe.

However, the common force operating for convergence of competition appraisal across Europe and America has been the convergence of economic ideas since the 1970s. The academic ideas of IO economists have converged with the unifying application of game theory as a tool for understanding how firms interact in markets, and the use of econometrics to test and measure the impact of such theories. The research and textbooks mentioned in section 2 of this chapter are used internationally, students attend universities internationally and professional competition economists in agencies, consultancies and universities increasingly work internationally. This is a very powerful community of ideas that is illustrated further by the international authorship of this book and the shared mode of analysis with Kwoka and White's American authors. It does not mean that all economists agree in each case, but it does mean that most disagreement is over the facts more than the mode of analysis. This consistent message has proved persuasive in getting more economists appointed to competition agencies and in lawyers wanting to listen to and comprehend their analysis.⁴⁶ Economists still have to work harder to explain the economic approach in a way that is compelling in a legal process.⁴⁷ I hope this book demonstrates that we are improving in this task.

5. Organisation of this book

There are several ways in which a book of case studies might be organised. A very traditional book on industrial economics might have arranged them by industry classification (e.g. manufacturing, services). This would focus on the particular circumstances of individual industries. However, competition issues cut right across industrial classification, so this would provide little help to the reader interested in the economic analysis. Nevertheless, we have provided a table of contents by market to guide the reader who is interested in particular sectors of the economy.

A more attractive organisation might be according to the form of potentially anticompetitive business practice at issue (e.g. pricing practices, product strategies). This would have the virtue of collecting together similar types of economic analysis and it would map more closely into a modern IO textbook.

⁴⁶ The UK has been particularly enlightened in appointing leading IO economists to head its agencies, including four of the last five heads of the Office of Fair Trading (OFT) and the Competition Commission.

⁴⁷ See Vickers (2006), who succinctly discusses this and a number of other themes in this chapter.

However, the real world is rarely that neat and most cases touch on a range of strategies, so the cases are not that easily pigeonholed. The table of contents by business practices provides the student of industrial organisation with a guide to the main strategies discussed in each case.

The chosen organisation of this book reflects the main elements of the law under which the cases were investigated. The law categorises by form of behaviour (e.g. independent action by one firm, agreements between firms, acquisition of ownership). Economic analysis shows how these legal categories are sometimes sensible but can also be misleading. For example, similar economic effects can result from different forms of strategy (e.g. vertical agreements and vertical mergers), but similar legal forms can also have very different economic effects (e.g. horizontal mergers and vertical mergers). Nevertheless, the legal categories will be helpful to lawyers and they also reflect the important context of how market power was acquired (as discussed at the end of section 3).

Thus, the book is arranged in three parts. Part A covers anticompetitive behaviour by firms with market power. This includes two different types of market structure. The first is where there is a single dominant firm which is under investigation for abusing its dominant position. This provides two classic examples of potentially exclusionary behaviour: quantity discounts and incompatibility. Two UK investigations are also included in this part of the book. In both cases, there are several firms apparently competing but with some identifiable concern that the competition is not as effective as it might be. These cases have wider interest because they relate to markets that are more heavily regulated in other countries and which are in the front line of the economic life of most consumers: supermarkets and mobile phones.

Part B considers three types of agreement between firms. The first is cartels, where the offence is clear so the main economic interest is on deterrence, discovery and damages. The second type of agreement is also horizontal (i.e. between firms at the same level of economic activity), but in these cases there are identifiable externalities and benefits from coordination. These cases examine how the balance can be appraised. The third type of agreement is vertical between buyer and seller, in particular, manufacturer and wholesaler or retailer. Such agreements can often be justified as having beneficial effects, but they can also be anticompetitive.

Part C contains case studies of merger appraisal and is also arranged in three subsections. The first applies recent econometric techniques designed to estimate the unilateral effects of horizontal mergers when firms have differentiated products. The second section considers how to form an expectation

of whether a merger will enhance coordinated behaviour. The third looks at cases where the main dimensions of the merger are vertical or conglomerate.

This organisation of cases inevitably leads to some overlap of similar types of economic analysis (e.g. coordinated effects arise in both market investigations and mergers; vertical effects arise in agreements and mergers; two-sided markets arise in agreements and market investigations).⁴⁸ Each part of the book is prefaced by a little more legal background and introduces the individual case studies.

The selection of cases for inclusion in this book was not systematic. As editor, I left it largely to the authors to choose cases they knew well and which interested them for the economic analysis. It turns out that this has provided remarkable balance across each part of the book. However, it may be that this selection method creates a bias towards more controversial interventions and away from cases which have been cleared. In particular, economic expert witnesses and academic advisers are appointed only for difficult cases where the competition authority is at loggerheads with the firms. In the language of statistics, the book may include more Type 1 errors (too much intervention) and fewer Type 2 errors (too little intervention) by European competition authorities. It certainly under-represents clear-cut cases where the authorities got the decision right. This should be borne in mind when reading a case which is critical of a decision for being over-interventionist.

Finally, the real value of a good competition policy is in not just the restoration of competition in a particular case but also the incentive for good behaviour by other firms.⁴⁹ It is far better to encourage firms to act competitively in the first place. Firms and their advisers must understand the rules and how they will be applied. Cases must be argued properly and the economic analysis must be clear. Only then will the appropriate level of deterrence be attained. Effective deterrence means both that anticompetitive practices do not develop and that vigorous competition is not deterred by fear of inappropriate intervention. The payoff to good economic analysis in one case has a multiplier effect in guiding behaviour in many more markets.⁵⁰ We hope that this book will contribute to that end.

⁴⁸ The reader is reminded to use the table of contents by business practice to find these links to similar concepts.

⁴⁹ Fans of contact sports will be aware of the importance of the first few decisions made by a referee to establish the mood and vigour of the competition.

⁵⁰ One recent study suggests that the deterrence effect is an order of magnitude greater than the number of actual cases; see Deloitte (2007).