

Market definition

Understanding competition law

Competition
law 2004

Since 1 May 2004 not only the European Commission, but also the Office of Fair Trading (OFT) has the power to apply and enforce Articles 81 and 82 of the EC Treaty in the United Kingdom. The OFT also has the power to apply and enforce the Competition Act 1998. In relation to the regulated sectors the same provisions are applied and enforced, concurrently with the OFT, by the regulators for communications matters, gas, electricity, water and sewerage, railway and air traffic services (under section 54 and schedule 10 of the Competition Act 1998) (the Regulators). Throughout the guidelines, references to the OFT should be taken to include the Regulators in relation to their respective industries, unless otherwise specified.

The following are the Regulators:

- the Office of Communications (OFCOM)
- the Gas and Electricity Markets Authority (OFGEM)
- the Northern Ireland Authority for Energy Regulation (OFREG NI)
- the Director General of Water Services (OFWAT)
- the Office of Rail Regulation (ORR), and
- the Civil Aviation Authority (CAA).

Section 52 of the Competition Act 1998 obliges the OFT to prepare and publish general advice and information about the application and enforcement by the OFT of Articles 81 and 82 of the EC Treaty and the Chapter I and Chapter II prohibitions contained in the Competition Act 1998. This guideline is intended to explain these provisions to those who are likely to be affected by them and to indicate how the OFT expects them to operate. Further information on how the OFT has applied and enforced competition law in particular cases may be found in the OFT's decisions, as available on its website from time to time.

This guideline is not a substitute for the EC Treaty nor for regulations made under it. Neither is it a substitute for European Commission notices and guidelines. Furthermore, this guideline is not a substitute for the Competition Act 1998 or the Enterprise Act 2002 and the regulations and orders made under those Acts. It should be read in conjunction with these legal instruments, Community case law and United Kingdom case law. Anyone in doubt about how they may be affected by the EC Treaty, the Competition Act 1998 or the Enterprise Act 2002 should seek legal advice.

In addition to its obligations under Community law, when dealing with questions in relation to competition within the United Kingdom arising under Part I of the Competition Act 1998, the OFT will act in accordance with section 60 of that Act.

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1 Introduction

¹ The Treaty establishing the European Community.

² References in this guideline to **agreements** should be taken to include decisions by associations of undertakings (see footnote 8 below) and concerted practices, unless otherwise stated or the context demands it.

³ Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty (OJ L1, 4.1.03, p 1).

⁴ European Commission *Notice on the definition of the relevant market for the purposes of Community competition law* (OJ C372, 9.12.97, p 5). A similar approach is also used in the US Department of Justice and Federal Trade Commission *Horizontal Merger Guidelines*, revised 1992.

⁵ While this guideline is specific to Articles 81 and Article 82 and the Act, the OFT will generally use the same approach to market definition in other areas of casework, including mergers and market investigation references. In this regard, it should be noted that the appropriate market definition can differ according to the specific facts of each case. Part 5 of this guideline gives more details.

1.1 Article 81 and Article 82 of the Treaty¹ (Article 81 and Article 82) and the Chapter I and Chapter II prohibitions contained in the Competition Act 1998 (the Act) prohibit agreements² which prevent, restrict or distort competition and conduct which constitutes abuse of a dominant position. EC Regulation 1/2003 (the Modernisation Regulation)³ requires the designated national competition authorities of the Member States (NCAs) and the courts of the Member States to apply and enforce Articles 81 and 82 of the Treaty establishing the European Community (Article 81 and Article 82 respectively) as well as national competition law when national competition is applied to agreements which may affect trade between Member States or to abuse prohibited by Article 82.

1.2 This guideline follows a similar approach to the European Commission's *Notice on market definition*⁴. This guideline provides a conceptual framework within which evidence on market definition can be organised. It also discusses practical issues that may arise in market definition. The OFT will not follow mechanically every step described below in every case. Instead, the OFT will look at evidence that is reasonably attainable and relevant to the case in question⁵.

2 Market definition

The purpose of market definition

- 2.1** Market definition is not an end in itself but a key step in identifying the competitive constraints acting on a supplier of a given product or service. Market definition provides a framework for competition analysis. For example, market shares can be calculated only after the market has been defined and, when considering the potential for new entry, it is necessary to identify the market that might be entered. Market definition is usually the first step in the assessment of market power.
- 2.2** Therefore, market definition is important in the process of establishing whether or not particular agreements or conduct fall within the scope of the competition rules:
- Article 81 and section 2(1) of the Act (**the Chapter I prohibition**) apply only to agreements which have as their object or effect an 'appreciable' prevention, restriction or distortion of competition (see the competition law guideline *Agreements and concerted practices* (OFT401)). The appreciability test usually requires definition of a relevant market and demonstration that the agreement would have an appreciable effect on competition within that market⁶, and
 - Article 82 and section 18(1) of the Act (**the Chapter II prohibition**) apply only to dominant undertakings⁷. The OFT would not consider an undertaking to be dominant unless that undertaking had substantial market power. The definition of the relevant market(s) is a necessary first step in assessing whether an undertaking is dominant.
- 2.3** In addition to its value in providing a framework for competition analysis, an appropriately defined relevant market may provide information that allows an investigation to be closed at an early stage. For analysis under Article 81 and/or the Chapter I prohibition, where an agreement involves undertakings whose combined share of the relevant market is low, the agreement is unlikely to raise competition concerns unless it contains price fixing, market sharing or bid rigging

⁶ An exception is where agreements have as their object the prevention, restriction or distortion of competition. In these cases, market definition is not necessarily a prerequisite for finding an infringement: see Case T-62/98 *Volkswagen AG v Commission* [2000] ECR II-2707 at paragraphs 230 to 232. The relevant market would, however, need to be defined in order to determine the **relevant turnover** of an undertaking, one of the factors which the OFT takes into account for the purpose of determining the amount of any penalty (see the *OFT's Guidance as to the appropriate amount of a penalty* (OFT423)).

⁷ The term **undertaking** is not defined in the Treaty establishing the European Community or the Act but its meaning has been set out in Community law. It covers any natural or legal person engaged in economic activity, regardless of its legal status and the way in which it is financed. It includes companies, firms, businesses, partnerships, individuals operating as sole traders, agricultural cooperatives, associations of undertakings (e.g. trade associations), charities, non profit making organisations and (in some circumstances) public entities that offer

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goods or services on a given market. For further details, see the competition law guideline *Agreements and concerted practices* (OFT401).

⁸ See the competition law guideline *Agreements and concerted practices* (OFT401).

⁹ See the competition law guidelines *Abuse of a dominant position* (OFT402) and *Assessment of market power* (OFT415).

¹⁰ The focus of the investigation may be a product or a service. The term **product** is used for convenience and should be interpreted throughout this guideline to mean good, service or property right.

restrictions⁸. Market definition is also important when assessing whether an undertaking's market share is below market share thresholds set out in certain block exemptions.

- 2.4** For analysis under Article 82 and/or the Chapter II prohibition, undertakings with low market shares will usually not possess market power individually. Therefore, an investigation of an individual undertaking whose market share is low can normally be closed at an early stage⁹.

The hypothetical monopolist test

- 2.5** The process of defining a market typically begins by establishing the closest substitutes to the product¹⁰ (or group of products) that is the focus of the investigation. These substitute products are the most immediate competitive constraints on the behaviour of the undertaking supplying the product in question. In order to establish which products are 'close enough' substitutes to be in the **relevant market**, a conceptual framework known as the hypothetical monopolist test (the test) is usually employed.
- 2.6** Before describing the test in detail, it should be emphasised that defining a market in strict accordance with the test's assumptions is rarely possible. Even if the test described below could be conducted precisely, the relevant market is in practice no more than an appropriate frame of reference for analysis of the competitive effects. Nevertheless, the conceptual framework of the test is important as it provides a structure within which evidence on market definition can be gathered and analysed.
- 2.7** In essence the test seeks to establish the smallest product group (and geographical area) such that a hypothetical monopolist controlling that product group (in that area) could profitably sustain 'supra competitive' prices, i.e. prices that are at least a small but significant amount above competitive levels. That product group (and area) is usually the relevant market.
- 2.8** If, for example, a hypothetical monopolist over a candidate product group could not profitably sustain supra competitive prices, then the candidate product group would be too narrow to be a relevant

market. If, on the other hand, a hypothetical monopolist over a subset of a candidate product group could profitably sustain supra competitive prices, then the relevant market would usually be narrower than the candidate product group.

- 2.9** The steps in applying this approach are as follows. We start by considering a hypothetical monopolist of the **focal product** (i.e. the product under investigation¹¹) which operates in a **focal area** (i.e. an area under investigation in which the focal product is sold).
- 2.10** We then ask whether it would be profitable for the hypothetical monopolist to sustain the price of the focal product a small but significant amount (e.g. 5 to 10 per cent¹²) above competitive levels¹³. If the answer to this question is 'yes', the test is complete. The product and area under the hypothetical monopolist's control is (usually) the relevant market.
- 2.11** If the answer to this question is 'no', this is typically because a sufficiently large number of customers would switch some of their purchases to other substitute products (or areas)¹⁴. In this case, we assume further that the hypothetical monopolist controls both the focal product **and** its closest substitute¹⁵. We then repeat the process, but this time in relation to the larger set of products (or areas) under the hypothetical monopolist's control.
- 2.12** As before, we ask whether it would be profitable to sustain prices 5 to 10 per cent above competitive levels. If so, the test is complete. The relevant market is (usually) the focal product and its closest substitute. If not, we assume that the hypothetical monopolist also controls the second closest substitute to the focal product and repeat the process once more. We continue expanding the product group in this way (i.e. by adding the next best substitute) until we have found a group of products (or areas) for which it is profitable for the hypothetical monopolist to sustain prices 5 to 10 per cent above competitive levels (by adding the next best substitute)¹⁶.
- 2.13** When the test is complete for the first time, the relevant market has usually been defined. However, occasionally it will be appropriate to define the relevant market to be wider than the narrowest product

¹¹ Where there is more than one product under investigation, the test will usually be applied separately for each of the products.

¹² The OFT will normally consider a price 5 to 10 per cent above competitive levels to be **small but significant**. However, this is only an indicative range. If a price sustained 5 to 10 per cent above competitive levels would not be profitable but a higher price would be, a hypothetical monopolist could profitably sustain prices significantly above competitive levels and so the test is complete.

¹³ When carrying out the test, we assume that the hypothetical monopolist is not subject to economic regulation that would affect its pricing behaviour and that the prices of products outside of the hypothetical monopolist's control are held constant at their competitive levels. However, while not considered as part of the test, the issues of regulation and the pricing strategies of competitors would be considered as part of the overall competitive assessment.

¹⁴ Sometimes the pricing strategy would not be profitable because of responses by other suppliers – this is known as supply side substitution and is discussed in Parts 3 and 4.

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¹⁵ The best substitute to the focal product could be another product sold in the same area or the focal product sold in a different area.

¹⁶ Although the test discussed here refers to a hypothetical monopolist, it should be noted that an undertaking with less than 100 per cent of a relevant market may nevertheless have market power. For example, suppose the market has been defined such that a hypothetical monopolist would profitably sustain prices at, say, 10 per cent above competitive levels. First, since market power is a matter of degree, this leaves sufficient room for an undertaking with less than 100 per cent of the market to exercise market power by sustaining prices above competitive levels, even if that undertaking would not increase prices by as much as a hypothetical monopolist. Second, an undertaking with less than 100 per cent market share may have the ability to weaken any competition that it faces and thereby consolidate its market power even further. Third, undertakings in the market may dampen competition by co-ordinating their behaviour. In the extreme, if they colluded perfectly, a group of undertakings could behave as if they were a hypothetical monopolist. These issues should be considered as part of the assessment of market power. See the competition law guideline *Assessment of market power* (OFT415).

¹⁷ Time is a further dimension that is sometimes relevant, see Part 5.

group (or area) that passes the test (see, for example, the discussion of supply side substitution in Parts 3 and 4).

Practical issues

- 2.14** In practice, defining a market requires balancing various types of evidence and the exercise of judgement. However, it is not an end in itself. Where there is strong evidence that the relevant market is one of a few plausible market definitions, and the competitive assessment is shown to be largely unaltered by which one of these market definitions is adopted, it may not be necessary to define the market uniquely.
- 2.15** A market definition should normally contain two dimensions: a **product** and **geographic area**¹⁷. It is often practical to define the relevant product market first and only then to define the relevant geographic market. Parts 3 and 4 below discuss some of the issues that may arise when defining product and geographic markets and applying the principles set out above.
- 2.16** Part 5 discusses further practical issues such as market definition when prices may already exceed competitive levels. It also describes how the relevant market should be defined according to the facts and competition issues of each case. Part 6 discusses market definition in the context of after markets.

3 The product market

The demand side

- 3.1** This part discusses some of the practical issues that need to be addressed when defining the relevant product market.
- 3.2** As described above in Part 2, the market definition process usually starts by looking at a relatively narrow potential definition. This would normally be one (or more) of the products which two parties to an agreement both produce, or one (or more) of the products which are the subject of a complaint about conduct, i.e. the focal product (or focal group of products). Previous experience and common sense will normally indicate the narrowest potential market definition, which will be taken as the starting point for the analysis.
- 3.3** As set out in Part 2, the next question is whether a hypothetical monopolist of the focal product could profitably sustain prices a small but significant amount above competitive levels. The price increase must be large enough that a response from customers is reasonably likely, but not so large that the price rise would inevitably lead to a substantial shift in demand, and so lead to markets being defined so widely that market shares convey no meaningful information on market power. The OFT will normally consider a price 5 to 10 per cent above competitive levels to be **small but significant**¹⁸.
- 3.4** Following the price rise, customers may switch some of their purchases from the focal product to other substitute products (**demand side substitution**). It is not necessary for all customers, or even the majority, to switch. The important factor is whether the volume of purchases likely to be switched is large enough to prevent a hypothetical monopolist profitably sustaining prices 5 to 10 per cent above competitive levels¹⁹.
- 3.5** Substitute products do not have to be identical to be included in the same market. For example, in its report on *Matches and Disposable Lighters*²⁰, the then Monopolies and Mergers Commission included matches and disposable lighters in the same market because customers viewed them as close substitutes. Similarly, the products' prices do not have to be identical. For example, if two products

¹⁸ See Part 5 for a discussion of whether the current price is a reasonable proxy for the competitive price.

¹⁹ The customers most likely to switch are sometimes called 'marginal' customers. Where a relatively high proportion of marginal customers purchase a product, a sustained 5 to 10 per cent price rise above competitive levels is less likely to be profitable.

²⁰ Cm 1854, 1992.

perform the same purpose, but one is of a higher price and quality, they might be included in the same market. The question is whether the price of one sufficiently constrains the price of the other. Although one is of a lower quality, customers might still switch to this product if the price of the more expensive product rose such that they no longer felt that the higher quality justified the price differential.

²¹ From a customer's point of view, switching costs can be defined as the real or perceived costs that are incurred when changing supplier but which are not incurred by remaining with the current supplier.

²² *Aberdeen Journals Limited v Office of Fair Trading (No. 2)* [2003] CAT 11 at paragraph 128.

²³ *Ibid.*, at paragraph 175 *et seq.*

3.6 The important issue is whether the undertaking could **sustain** prices sufficiently above competitive levels. Customers may take time to respond to a sustained rise in the price of the focal product. As a rough rule of thumb, if substitution would take longer than one year, the products to which customers eventually switched would not be included in the same market as the focal product. Products to which customers would switch within a year without incurring significant switching costs²¹ are more likely to be included in the relevant market. However, the relevant time period in which to assess switching behaviour may be significantly shorter than one year: for example, in industries where transactions are made very frequently. A case by case analysis of switching is therefore appropriate.

3.7 Evidence on substitution from a number of different sources may be considered. Although the information used will vary from case to case and will be considered in the round²² the following evidence and issues are often likely to be important:

- Evidence from the undertakings active in the market and their commercial strategies may be useful. For example, company documents may indicate which products the undertakings under investigation believe to be the closest substitute to their own products. Company documents such as internal communications, public statements, studies on consumer preferences or business plans may provide other useful evidence²³.
- Customers and competitors will often be interviewed. In particular, customers can sometimes be asked directly how they would react to a hypothetical price rise, although because of the hypothetical nature of the question, answers may need to be treated with a degree of caution. Survey evidence might also provide information

on customer preferences that would help to assess substitutability: for example, evidence on how customers rank particular products, whether and to what extent brand loyalty exists, and which characteristics of products are the most important to their decision to purchase.

- A significant factor in determining whether substitution takes place is whether customers would incur costs in substituting products. High switching costs relative to the value of the product will make substitution less likely.
- Evidence on product characteristics may provide useful information where customer substitution patterns are likely to be influenced significantly by those characteristics. Where the objective characteristics of products are very similar and their intended uses the same this would be good evidence that the products are close substitutes. However, the following caveats should be noted. First, even where products apparently have very similar characteristics and intended use, switching costs and brand loyalty may affect how substitutable they are in practice. Second, just because products display similar physical characteristics, this does not necessarily mean that customers would view them to be close substitutes. For example, peak customers may not view rail travel during off peak times to be a close substitute for rail travel at peak times²⁴. Third, products with very different physical characteristics may be close substitutes if, from a customer's point of view, they have a very similar use²⁵.
- Patterns in price changes can be informative. For example, two products showing the same pattern of price changes, for reasons not connected to costs or general price inflation, would be consistent with (although not proof of) these two products being close substitutes. Customer reactions to price changes in the past may also be relevant. Evidence that a relatively large proportion of customers had switched to a rival product in response to a relatively small price rise in the focal product would provide evidence that these two goods are close substitutes²⁶. Equally price divergence over time, without significant levels of substitution, would be consistent with the two products being in separate markets.

²⁴ See Part 5 for a discussion of how time may affect market definition.

²⁵ See paragraph 3.5 for example.

²⁶ Although switching behaviour may be distorted if current prices are significantly different from competitive prices. See Part 5 for a discussion of market definition when prices are not competitive.

- Evidence on own or cross price elasticities of demand may also be examined if it is available. The own price elasticity of demand measures the rate at which demand for a product (e.g. the focal product) changes when its price goes up or down. The cross price elasticity of demand measures the rate at which demand for a product (e.g. a rival product) changes when the price of another product (e.g. the focal product) goes up or down.
- In some cases **critical loss** analysis may be relevant. One definition of critical loss is the minimum percentage loss in volume of sales required to make a 5 (or 10) per cent price increase on a product unprofitable. The critical percentage tends to be lower when an undertaking has a high mark up over unit costs (since each sale lost entails a relatively large loss in profit). However, the fact that an undertaking can set a high mark up might also demonstrate that its current customer base is not particularly price sensitive. These potentially opposing effects might need to be balanced and assessed in conjunction with other evidence (e.g. estimates of elasticities of demand); and
- Evidence on the price:concentration relationship may also be informative. Price:concentration studies examine how the price of a product in a distinct area varies according to the number (or share of supply) of other products sold in the same area. These studies are useful where data are available for several distinct areas with varying degrees of concentration. For example, if observations of prices in several geographic areas suggest that when two products are sold in the same area, prices are significantly lower than when they are not, this might suggest that the two products are close substitutes (provided that it is possible to distinguish this from the effect of other factors which might explain the price differences).

Price discrimination

- 3.8** The test described in Part 2 assumes that the hypothetical monopolist charges all customers the same price for the focal product. However, in some cases the hypothetical monopolist may be able to charge some customers a higher price than others, where the price difference is not related to higher costs of serving those customers. This is called **price discrimination**. Price discrimination requires that

customers cannot arbitrage²⁷. The undertaking could be able to discriminate between customers due to a variety of reasons, for example:

- some customers may face such high switching costs that they might be **locked in** to purchasing a particular product (e.g. a customer might use a product as an input to its production process and switching to a rival product might entail costs of quality assuring that product, as well as adjusting its production process)
- customer demand may differ according to time, e.g. demand for transport services at peak times is much less price sensitive than off peak demand for the same service, and
- customer demand for an input may differ according to the purpose for which it is used (for example, if different manufacturers transform the same input into different end products, they may have different derived demands for that input)²⁸.

²⁷ For example, customers purchasing at low prices must not be able to sell on sufficient quantities to customers paying higher prices to undermine price discrimination.

²⁸ Derived demand describes the situation where the input purchaser's demand for the input is derived from the demand for the final product that the input is used to make.

²⁹ However, from a supply side perspective peak and off peak travel may be in the same market. Supply side substitution is discussed below.

³⁰ This may be a legal or technical constraint on price setting or may be a commercial constraint on the supplier.

3.9 Where a hypothetical monopolist would (or would be likely to) price discriminate significantly between groups of customers, each of these groups may form a separate market. If so, a relevant market might be defined as sales of the relevant product in the relevant geographic area to a particular customer group. For example, a hypothetical monopolist of a train service might be able to price discriminate between peak and off peak customers. In this case, peak travel and off peak travel might be in separate markets²⁹.

3.10 By contrast, where an undertaking is unable to price discriminate, this may lead to the relevant market being wider than the focal product or focal area. For example, suppliers may face price constraints³⁰ such that they must set a uniform price across products or across geographical areas. Although it might in theory be profitable for a hypothetical monopolist to raise price in the focal area, perhaps because substitutes are unavailable, the existence of a price constraint may make such a price rise unprofitable, because it would require that prices are also raised in other areas where substitutes are present. Price constraints may thus lead to the relevant market being widened beyond the focal area. In a given case, evidence on the extent to which prices are constrained and the effect of the constraint

on substitution would need to be considered when assessing the appropriate relevant market.

Chains of substitution

3.11 Sometimes a focal product will be part of a long and unbroken chain of substitutes. For example, consider five products labelled A to E, which are differentiated by their perceived quality³¹. The closer two products are in the alphabet, the more substitutable they are from the point of view of customers. Thus consumers whose favourite product is C consider B and D to be very good substitutes for C but consider A and E to be poorer substitutes for C. Even though all products in the chain are substitutes, this does not mean that the whole chain is the relevant market. For example, it may be that a hypothetical monopolist of three products next to each other in the chain could profitably sustain prices 5 to 10 per cent above competitive levels³². In short, the hypothetical monopolist test is a way of determining what range of products in the chain constitutes the relevant product market.

The supply side

3.12 This section addresses how the supply side of the market might be relevant to market definition.

3.13 If prices rise, undertakings that do not currently supply a product might be able to supply it at short notice and without incurring substantial sunk costs³³. This may prevent a hypothetical monopolist profitably sustaining prices 5 to 10 per cent above competitive levels. This form of substitution is carried out by suppliers and hence is known as **supply side substitution**.

3.14 An example is the supply of paper for use in publishing³⁴. Paper is produced in various different grades dependent on the coating used. From a customer's point of view, the different types of paper may not be viewed as substitutes, but because they are produced using the same plant and raw materials, it may be relatively easy for manufacturers to switch production between different grades. A

³¹ E.g. speed of spin cycle for washing machines, or sharpness of picture definition for digital cameras.

³² It is worth noting that market definition may differ according to the focal product. In the example given, products A, B and C may form the relevant market when product B is the focal product, while products B, C and D may form the relevant market when product C is the focal product.

³³ In this context, a sunk cost is a cost incurred on entering a market that is not recoverable on exiting that market. These could, for example, include investments in product placement, distribution and production technology.

³⁴ The European Commission, in the course of a merger investigation, defined the market for the supply of paper for use in publishing based on supply side substitution in Case IV/M166 *Torras/Sarrío* OJ [1992] C58/00, [1992] 4 CMLR 341.

hypothetical monopolist in one grade of paper might not profitably sustain supra competitive prices because manufacturers currently producing other grades would rapidly start supplying that grade.

3.15 Analysing supply side substitution raises similar issues to the analysis of barriers to entry (discussed further in the competition law guideline *Assessment of market power* (OFT415)). Supply side substitution can be thought of as a special case of entry – entry that occurs quickly (e.g. less than one year), effectively (e.g. on a scale large enough to affect prices), and without the need for substantial sunk investments. Supply side substitution addresses the questions of whether, to what extent, and how quickly, undertakings would start supplying a market in response to a hypothetical monopolist attempting to sustain supra competitive prices.

3.16 When assessing the scope for supply side substitution, the evidence from some or all of the following sources may be relevant:

- potential suppliers might be asked whether substitution was technically possible, about the costs of switching production between products, and the time it would take to switch production. The key question is whether it would be profitable to switch production, given a small (e.g. 5 to 10 per cent) price increase above competitive levels
- potential suppliers might be asked whether they had spare capacity or were free or willing to switch production. Undertakings may be prevented from switching production because all their existing capacity was tied up, e.g. they may be committed to long term contracts. There might also be difficulties obtaining necessary inputs or finding distribution outlets. Undertakings may be unwilling to switch production from an existing product to a new one, if producing the former product is more profitable than the latter
- although potential suppliers may be able to supply the market, there may be reasons why customers would not use their products, so the views of customers might be sought, and
- more generally customers may also be able to supply wider information about potential suppliers. Customers that are

businesses (not consumers) might take actions to encourage potential suppliers to enter.

3.17 In some cases, where there are high levels of supply-side substitutability, it may be appropriate to define a market with reference to the similarity of production methods. For example, in the paper example used above, it may be more appropriate to define the market as 'the supply of paper for use in publishing', rather than have numerous defined markets for individual grades of paper in which, given the high levels of supply-side substitutability, the competitive assessment would be qualitatively similar.

3.18 The OFT will not factor supply side substitution into market definition unless it is reasonably likely to take place, and already has an impact by constraining the supplier of the product or group of products in question. What matters ultimately is that all competitive constraints from the supply side are properly taken into account in the analysis of market power. Whether a potential competitive constraint is labelled **supply side substitution** (and so part of market definition) or **potential entry** (and so not within the market) should not matter for the overall competitive assessment³⁵. If there is any serious doubt about whether or not to account for possible supply side substitution when defining the market and calculating market shares, the market will be defined only on the basis of demand side substitutability, and the supply side constraint in question will be considered when analysing potential entry³⁶.

³⁵ Although this distinction may be relevant when determining whether market share thresholds have been met. It will also affect an undertaking's 'relevant turnover' for the purpose of calculating any penalty.

³⁶ Some competition authorities prefer to define markets solely on the demand side, leaving supply side issues to the analysis of new entry. Both approaches are valid and should produce the same conclusions on the question of market power, provided that supply side issues are examined at some point.

4 The geographic market

- 4.1** Geographic markets are defined using the same process as that used to define product markets. The geographic market may be national (i.e. the United Kingdom), smaller than the United Kingdom (e.g. local or regional), wider than the United Kingdom (e.g. part of Europe including the United Kingdom), or even worldwide. This part outlines some practical issues which are particularly relevant to geographic market definition:
- demand side issues
 - supply side issues, and
 - imports.

The demand side

- 4.2** As with the product market, the objective is to identify substitutes which are sufficiently close that they would prevent a hypothetical monopolist of the focal product in one area from profitably sustaining prices 5 to 10 per cent above competitive levels. The process starts by looking at a relatively narrow area – the **focal area**. This might be the area supplied by the parties to an agreement or the subject of a complaint about conduct or, if that area were relatively wide, past experience might suggest a narrower area that is more appropriate. The hypothetical monopolist test is applied to this area, and repeated over wider geographic areas as appropriate until the hypothetical monopolist would find it profitable to sustain prices 5 to 10 per cent above competitive levels in the area(s) in question (see Part 2 for further details of the test).
- 4.3** The principles applied in defining the geographic market are the same as those for the product market. For example, the analysis of price discrimination and chains of substitution would proceed in the same way as set out in Part 3 above. The evidence used to define geographic markets on the demand side will usually be similar to the information used to define the product market (see paragraph 3.7). In addition to that evidence, the value of a product in relation to costs of search and transport is often an important factor in defining geographic markets. The higher the relative value, the more likely

customers are to travel further in search of cheaper supplies. The mobility of customers may also be a relevant factor.

- 4.4** For consumer products, geographic markets may often be quite narrow, e.g. where sufficient numbers of consumers are unlikely to switch to products sold in neighbouring towns or regions, let alone countries. For wholesaling or manufacturing markets, customers may be in a better position to switch between suppliers in different regions, providing transport costs are not too high.

The supply side

- 4.5** This entails looking at the potential for undertakings in other (e.g. neighbouring) territories to supply the focal area. When defining the geographic market, supply side substitution is analysed using the same conceptual approach set out for the product market. Therefore, the main evidence will usually mirror the information gathered on product market definition (see paragraph 3.16). Where the price of a product is low relative to its transport costs, this might indicate a relatively narrow geographic market.

Imports

- 4.6** When considering whether the geographic market should be defined more widely than a national market, data on imports may be informative. Significant imports of the product may indicate that the market is wider than a national market. However, the presence of imports in a territory will not always mean that the market is international, for a number of reasons. First, imports may come only from international operations of domestic suppliers, in which case they may not act as an independent constraint on domestic firms. Second, in order to import on a larger scale, international suppliers may require substantial investments in establishing distribution networks or branding their products in the destination country. Third, there may be quotas which limit the volume of imports into the destination country. These factors may mean that suppliers of the relevant product located outside the national market would not provide a sufficient constraint on domestic suppliers to be included in the same relevant geographic market.

4.7 Conversely a lack of imports does not necessarily mean that the market cannot be international. The potential for imports may still be an important source of substitution should prices rise. For example, when the European Commission looked at a merger between bus manufacturers in Germany, it found that although imports were low at the time, there were no significant barriers to imports from the rest of the EC should prices in Germany rise³⁷.

³⁷ Case IV/M477
Mercedes-Benz/Kassbohrer OJ
[1995] L211/1, [1995] 4
CMLR 573.

5 Other issues

Temporal markets

5.1 A third possible dimension to market definition is time. Examples of how the timing of production and purchasing can affect markets include:

- peak and off peak services. This can be a factor in transport services or utilities such as electricity supply
- seasonal variations, such as summer versus winter months, and
- innovation/inter-generational products. Customers may defer expenditure on present products because they believe innovation will soon produce better products or because they own an earlier version of the product, which they consider to be a close substitute for the current generation.

5.2 A time dimension might be appropriate where:

- it is not possible for customers to substitute between time periods. For example, peak customers might not view peak and off peak train tickets as substitutes, and
- suppliers cannot substitute between time periods. For example, capacity to produce fruit may vary between time periods and it may not be possible to store fruit from one period to another.

5.3 To some extent, the time dimension is simply an extension of the product dimension: i.e. the product can be defined as the supply of train services at a certain time of day.

The competitive price versus the current price

5.4 Throughout this guideline, the test has been couched in terms of a hypothetical monopolist profitably sustaining prices above **competitive levels**. However, where an undertaking has market power, it may operate in a market where the current price is substantially different from the competitive price.

5.5 For example, an undertaking with market power may well have already raised prices above competitive levels to its profit maximising level. If so, the undertaking would not profitably sustain prices above

current levels. If it tried to sustain higher prices, consumers would switch to purchasing other products. However, it would be wrong to argue that these products prevented the undertaking from exercising market power and so it would usually be inappropriate to include them in the relevant market. This problem is sometimes known as the **cellophane fallacy** after a US case involving cellophane products³⁸.

³⁸ *US v El Du Pont de Nemours & Co* [1956] 351 US 377.

³⁹ Evidence on market definition may be distorted if prices are sustained below competitive levels, as, for example, may occur in an investigation of predatory pricing. See *Aberdeen Journals (No. 2)* at paragraph 262.

- 5.6** The possibility that market conditions are distorted by the presence of market power (or other factors) will be accounted for when all the evidence on market definition is weighed in the round. For example, where prices are likely to differ substantially from their competitive levels, caution must be exercised when dealing with the evidence on switching patterns as such evidence may not be a reliable guide to what would occur in normal competitive conditions³⁹.

Previous cases

- 5.7** In many cases a market may have already been investigated and defined by the OFT or by another competition authority. Sometimes earlier definitions can be informative when considering the appropriate product or area to use on commencing the hypothetical monopolist test. However, although previous cases can provide useful information, the market definition used may not always be the appropriate one for future cases. First, competitive conditions may change over time. In particular, innovation may make substitution between products easier or more difficult, and so change the market definition. Therefore, the relevant market concerned must be identified according to the particular facts of the case in hand⁴⁰.
- 5.8** Second, a previous product market definition that concerned an area outside the United Kingdom would not necessarily apply to an area in the United Kingdom if the purchasing behaviour of customers differed significantly between those two areas.
- 5.9** Third, behaviour by an undertaking with market power can affect market definition. For example, suppose an earlier investigation had defined a market to be relatively wide because of the scope for both demand side and supply side substitution. A dominant undertaking in

⁴⁰ *Aberdeen Journals Limited v Director General of Fair Trading (No. 1)* [2002] CAT 4 at paragraph 139.

that market might raise customer switching costs or foreclose some possibilities for supply side substitution. If so, this might affect the appropriate definition of the relevant market.

Differentiated products

5.10 When markets contain differentiated products (i.e. products that are differentiated by features such as brand, location or quality) there may not be a clear cut off point delineating the boundary of the market. This can mean that there is no clear distinction between products that are 'in' the market and those that lie outside it. Therefore, even if two products do not lie within the same market for the purposes of one investigation, this does not rule out the possibility that they will be in the same relevant market in another⁴¹.

Markets with portfolios of products

5.11 In some cases the relevant product market may consist of 'bundles' of what are otherwise distinct products. For example, if a relevant product market was 'one stop grocery shopping', the market may include bundles of groceries that normally make up a weekly shop. Whether this is appropriate depends on the investigation. For example, if the investigation concerned the supply of a particular grocery item to a retailer, it would usually be appropriate to consider that item as a distinct product as opposed to bundled together with other products. The perspective of customers will be important in assessing the appropriate frame of reference.

Wholesale products

5.12 When considering the substitutes of a wholesale product, it may be necessary to consider substitution possibilities at the downstream level. For example, suppose a supplier produces a wholesale product A which is a necessary input for supply of a retail product B. Suppose also that a vertically integrated supplier that does not supply a substitute wholesale product supplies a product C which is a substitute for B at the retail level. The ability of customers to substitute to product C from product B at the retail level may constrain the ability to raise the price of the wholesale product A.

⁴¹ For example, recall the discussion of chains of substitution at paragraph 3.11 where products A to E were all substitutes for each other (to varying degrees) and where a hypothetical monopolist of three products next to each other in the chain could profitably sustain supra competitive prices. In this case, if the focal product is B alone, it is possible to define products A, B and C to be the relevant market. However, when investigating the conduct of an undertaking that supplies both products B and E, the appropriate frame of reference for the competitive assessment may include products A to E. (Of course, the analysis of competitive effects would account for the fact that customers do not view all products to be equally good substitutes.)

6 Market definition for after markets

6.1 An after market is a market for a **secondary product**, that is, a product which is purchased only as a result of buying a **primary product**. For example, a customer would purchase a printer cartridge (a secondary product) only for use with a printer (the primary product). Another example is replacement heads for razors (the secondary product) and razors (the primary product). The primary product and the secondary product are **complementary**⁴².

⁴² Products A and B are complementary products if the demand for product B goes up when the price of product A goes down by a relatively small amount, other things being equal.

6.2 Three possible types of market definition are often put forward as regards after markets:

- a **system** market: a unified market for the primary product and the secondary product (e.g. a market for all razors **and** replacement heads)
- **multiple markets**: a market for primary products and separate markets for the secondary product(s) associated with each primary product (e.g. one market for all razors, individual markets for each type of replacement head), and
- **dual markets**: a market for the primary product and a separate market for the secondary product (e.g. one market for all razors, a separate market for all replacement heads).

6.3 The appropriate definition depends on the facts of the case. A system market may be appropriate either where customers engage in **whole life costing** (see paragraphs 6.5 to 6.6 below) or where reputation effects mean that setting a supra competitive price for the secondary product would significantly harm a supplier's profits on future sales of its primary product.

6.4 Where neither of the conditions set out in paragraph 6.3 applies, a multiple markets or a dual markets definition may be appropriate. The former is likely where, having purchased a primary product, customers are locked in to using only a restricted number of secondary products that are compatible with the primary product. A dual markets definition is appropriate where secondary products are compatible with all primary products (and perceived to be so by customers).

Whole life costing

- 6.5** Whole life costing occurs where customers correctly anticipate the cost of future necessary purchases of the secondary market product when buying the primary product. For example, if a razor (with a 'life' of five replacement heads) costs £10, and each replacement head costs £2, the whole life cost of the razor would be £20. This depends on customers being able to form reasonable expectations on future prices of the secondary product when purchasing the primary product.
- 6.6** Whole life costing means that customers view the purchase of the primary and secondary product as a **system**, or a **unified deal**. Where whole life costing would make it unprofitable for a hypothetical monopolist to raise the price of the secondary market product above the competitive level it may be appropriate to adopt a system market definition. In this context it is appropriate to consider whether:
- it is relatively easy to obtain and comprehend information on the secondary market product, and relatively easy to predict how much of the secondary market product is likely to be required over the life time of the primary product, so that customers are **able** to whole life cost
 - the price of (or likely expenditure on) the secondary product is a relatively high proportion of the primary product's price, so that customers are **likely** to whole life cost, and
 - **sufficient** customers are able and likely to whole life cost so that it would be unprofitable for a supplier to set a supra competitive secondary market product price due to the number of customers that would adapt their purchasing behaviour in the primary market (within a reasonable period of time)⁴³.

⁴³ This requires that enough, but not necessarily all, customers whole life cost and that it is not possible to price discriminate between those who do and those who do not.

Reputation

- 6.7** A supplier might not wish to increase prices of its secondary product for existing customers if that would earn it a reputation for exploitation and significantly reduce its ability to attract new or repeat

customers to its primary product. Reputation is more likely to be important where suppliers have the prospect of relatively large numbers of new or repeat customers and where undertakings cannot price discriminate between new or repeat customers and other customers.

Competition law guidelines

The OFT is issuing a series of competition law guidelines. New guidance may be published and the existing guidance revised from time to time. For an up-to-date list of guidance booklets check the OFT website at www.of.gov.uk

All guidance booklets can be ordered or downloaded from the OFT website at www.of.gov.uk Or you can request them by:

phone 0800 389 3158

fax 0870 60 70 321

email oft@ecgroup.uk.com

post EC Group, PO Box 366, Hayes UB3 1XB

Published by the Office of Fair Trading
Printed in the UK on paper comprising 75% post-consumer waste and 25% ECF pulp
Product code OFT403
Edition 12/04 Printed 12/04/2,000
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