A Framework for the Design and Competition Law and Policy

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A Framework for the Design and Implementation of Competition Law and Policy

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PREFACE

A dynamic and competitive environment, underpinned by sound competition law and policy, is an essential characteristic of a successful market economy. Many developing and transition economies that have undertaken significant market-oriented reforms, such as trade liberalization, privatization, and deregulation, are now also recognizing the need to implement rules safeguarding effective competition. Since 1990 more than 35 developing and transition market economies have enacted or substantially revised competition laws.

The benefits that flow from competition include increased economic efficiency, innovation, and consumer welfare. Effective enforcement of competition law and active competition advocacy can also be powerful catalysts for successful economic restructuring. This in turn fosters flexibility and mobility of resources, which in the current global business environment are critical elements for the competitiveness of firms and industries across nations. Although the field of competition law and policy is evolving rapidly and includes many different viewpoints on specific issues, recognition is growing that effective competition law is important in shaping business culture and that its proper implementation needs to allow for the education of businesspeople, government officials, the judiciary, and the interested public.

To satisfy the growing demand for information on current approaches and practices in competition law and policy, the project Framework for the Design and Implementation of Competition Law and Policy was initiated by the Business Environment Group in the World Bank's Private Sector Development Department, with the subsequent participation of the Directorate for Financial, Fiscal, and Enterprise Affairs of the Organisation for Economic Co-operation and Development, under the auspices of its Centre for Co-operation with Non-Members.

This book highlights the main issues that arise in the design and implementation of competition law and policy. It was written to assist countries in developing an approach that suits their own needs and conditions and to help them design and implement sound and consistent competition laws and policies.

The report is the result of the collective effort and close cooperation of leading experts and practitioners in the field, although some members of the project team were more closely involved than others in writing specific portions of this document. Initial drafts were widely circulated among team members, who actively exchanged their ideas and comments. In a number of cases significant modifications were made to incorporate the team's observations.

The project owes much of its success to the active participation of team members who are also full-time officials of competition agencies. Their contributions, as well as the generosity

of the respective competition offices in granting the staff members time away from their regular responsibilities, are gratefully acknowledged.

Finally, it should be noted that the views expressed in this volume are those of the team and individual participants and do not necessarily represent the official views of any particular institution.

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Chapter 1

Objectives of Competition Policy

Broadly defined, competition in market-based economies refers to a situation in which firms or sellers independently strive for buyers' patronage in order to achieve a particular business objective, for example, profits, sales, or market share. Competition in this context is often equated with rivalry. Competitive rivalry may take place in terms of price, quantity, service, or combinations of these and other factors that customers may value.

Tensions in competition law and policy

Competition forces firms to become efficient and to offer a greater choice of products and services at lower prices. In a competitive market economy, price (and profit) signals tend to be free of distortions and create incentives for firms to redeploy resources from lower- to higher-valued uses. Decentralized decisionmaking by firms promotes efficient allocation of society's scarce resources, increases consumer welfare, and gives rise to dynamic efficiency in the form of innovation, technological change, and progress in the economy as a whole.

However, firms also have incentives to acquire market power, that is, to obtain discretionary control over prices and other related factors determining business transactions. Such market power may be gained by limiting competition by erecting barriers to commerce, entering into collusive arrangements to restrict prices and output, and engaging in other anticompetitive business practices. These examples of imperfect competition are generally viewed as market failures that result in inefficient allocation of resources and adversely affect industry performance and economic welfare.

Such market failures enable sellers to deliberately reduce output so as to extract higher prices at the expense of consumers and society in general. Additionally, questions arise as to what constitutes equitable distribution of the gains from trade between sellers, or between producers and consumers.

A spectrum of views has been expressed in this regard. Broadly speaking, the two ends of the spectrum can be described in terms of economic and noneconomic—or efficiency and public interest—approaches to competition policy. At one end is the view that the sole purpose of competition policy is to maximize economic efficiency. Under this view there is no room for sociopolitical criteria such as fairness and equity in the administration of competition policy. Such criteria are viewed as ill-defined and loaded with subjective value judgments, and therefore not able to be applied in a consistent manner. The opposite view is that competition policy is based on multiple values that are neither easily quantifiable nor reduced to a single economic objective. These values reflect a soci-

This chapter was prepared by principal team member R. Shyam Khemani, with input from members of the Competition Law and Policy Committee of the Organisation for Economic Co-operation and Development.

ety's wishes, culture, history, institutions, and perception of itself, which cannot and should not be ignored in competition law enforcement. Within the spectrum a range of views has been expressed on the relative weights to be attached to different factors.

In addition to these debates there is a certain tension between law and economics. Whatever the objectives of competition policy, there is still the issue of how they should be attained. There is an inherent tension between the need for a clear set of legal rules to foster certainty in the application of competition policy and the need to consider specific facts. While competition policy aims at correcting market failure arising from imperfect competition, precise legal rules cannot be formulated across all types of actual or potential anticompetitive situations. For example, an outright prohibition or a per se approach may well be adopted against price-fixing agreements, while a rule-of-reason approach that evaluates facts on a case-by-case basis is likely to be more appropriate in certain types of business practices such as exclusive dealing contracts.

Another source of tension is the priority attached to competition policy relative to the rank order assigned to other government policies. In most industrial countries competition legislation is a general law that applies to all economic activities and sectors unless specific exemptions are granted. Given the extensive interface competition policy has with other government policies, there are areas in which the respective objectives may be complementary such as in the case of initiatives directed at deregulation and privatization of state-owned corporations. However, in other areas such as trade, investment, and regional development policies conflicts may often arise. The extent of consistency, or its lack, in different government policy measures can support or thwart the objectives of competition policy.

MAJOR OBJECTIVES OF COMPETITION POLICY

Canada and the United States enacted competition legislation toward the end of the last century (in 1889 and 1890, respectively). While many objectives have been ascribed to competition policy during the past hundred years, certain major themes stand out. The most common of the objectives cited is *the maintenance of the competitive process or of free competition,* or the protection or promotion of effective competition. These are seen as synonymous with striking down or preventing unreasonable restraints on competition. Associated objectives are *freedom of trade, freedom of choice, and access to markets.* In some countries, such as Germany, *freedom of individual action* is viewed as the economic equivalent of a democratic constitutional system. In France emphasis is placed on competition policy as a means of *securing economic freedom,* that is, freedom of competition.

Initially, the primary objective of maintenance and promotion of effective competition was to counter private restrictions on competition; hence competition laws in most countries continue to prohibit price-fixing agreements and abuse of dominant market position. However, during the past two decades or so, the role of competition policy has expanded significantly to *include lessening the adverse effects of government intervention in the marketplace.* For instance, in Italy competition law applies to both public and private firms; firms supplying public services or operating a monopolistic position are exempted from competition law only within the limits of the mission attributed to them. The provisions in Canada's Competition Act are similar.

Improving access and opening markets by reducing barriers to entry through deregulation, privatization, tariff reduction, or removal of quotas and licenses, and marketing board schemes are specifically highlighted as important objectives in the administration of competition policy in several industrial countries.

These actions do not necessarily imply that competition authorities have a direct mandate over commercial, regulatory, and privatization policies in these jurisdictions. However, through inter- and intragovernmental participation in the development of public policies and by making submissions and interventions in regulatory proceedings, competition authorities can wield influence favoring market-determined solutions.

In some countries competition authorities can analyze whether regulatory measures from the public sector will negatively affect competition and strive to have any measures that unreasonably limit competition amended or abolished. In Sweden the Competition Ombudsman may propose changes to existing regulations that would enhance the competitive environment. Other countries, however, do not believe that government encouragement of state monopolies, or "national champions," at the cost of reduced competition in domestic markets would enhance their competitiveness, performance, or welfare. They have found that such national champions and public utilities, shielded from the full effects of competition, respond insufficiently to their markets and that improvements in productivity are slow; there has been widespread recognition that there is more to competition than simply applying competition legislation, since liberalization, deregulation, and privatization have also acted as stimuli to markets.

Other commonly expressed objectives of competition policy are *prevention of abuse of economic power* and thus protection of consumers and of producers who want the freedom to act in a competitive manner; and *achievement of economic efficiency,* defined broadly so as to encourage allocative and dynamic efficiency through lowered production costs and technological change and innovation.

During the past two decades the focus has been on attaining economic efficiency, so as to maximize consumer welfare. For example, the Antitrust Enforcement Guidelines for International Operations of the U.S. Department of Justice (1988) state that the purpose of antitrust laws is to establish broad principles of competition that are designed to preserve an unrestrained interaction of competitive forces that will yield the best allocation of resources, the lowest prices, and the highest quality products and services for consumers.

A major theme of competition legislation in the United States was once the explicit preference for pluralism in terms of the diffusion of economic power throughout the economy. Lawmakers viewed a concentration of economic power as a threat to dispersed decisionmaking, the foundation of democratic society. The argument was that large firms, with their aggregation of resources, resemble private governments not subject to external constraints or public accountability. This concern has also led to a tendency to protect small businesses, which is frequently in conflict with the objectives of maximizing economic efficiency and consumer welfare.

In various countries these objectives are juxtaposed without any particular ranking of priorities. Different views persist as to which objectives should receive greater emphasis, although increased emphasis on the efficiency objective is apparent in a number of jurisdictions.

In the United States, for example, the Supreme Court has since the mid-1970s consistently decided antitrust cases with the economic efficiency objective in mind. This has also been the thrust of the enforcement policies adopted by U.S. competition agencies during the past 25 years or so. France's administration of competition emphasizes innovation and the dynamic efficiency of firms. In Canada the preamble of the Competition Act states that its purpose is to maintain and encourage competition in order to promote efficiency. However, the importance that many of these countries attach to efficiency does not imply the exclusion of other objectives of competition policy.

SUPPLEMENTARY OBJECTIVES OF COMPETITION POLICY

In response to sociopolitical concerns various objectives of competition policy other than economic efficiency and enhanced consumer welfare have been identified. These include *protecting small businesses, preserving the free enterprise system, and maintaining fairness and honesty.* Some objectives, such as *moderating or curbing inflation,* recur over time, on the grounds that price stabilization measures are less likely to succeed when monopolistic tendencies exist in an economy.

In addition, economists have argued that competition policy must recognize the effects that business practices such as mergers may have on employment, breakdown of communities and regional development through plant closures, reorganization of material sourcing, and production, distribution, and financing decisions. The issue of absentee ownership and the lack of local presence or commitment by "head office management" has also been raised.

The respective weights and priorities attached to these and other objectives of competition policy have remained largely ambiguous and hence are the subject of intense debate. The inherent conflicts between some of these objectives heightens the controversy. The only areas of consensus apparent across different jurisdictions are that:

- The objective of competition policy is to protect competition by striking down or preventing those private (and where possible, public) business restraints that adversely interfere with the competitive process.
- The competitive process should be protected not to maintain and promote competition for competition's sake but to achieve other objectives.

Thereafter, consensus breaks down within and across countries. Although competition is recognized as the process that fosters effective use or efficient allocation of society's resources, the supremacy of this objective has not been uniformly accepted. Moreover, there is disagreement over what constitutes private restraint to competition. The relative importance and balance between efficiency and the various other economic-social-political objectives that competition policy can advance remain to be identified.

POSSIBLE CONFLICTS AMONG MULTIPLE OBJECTIVES

The multiple objectives of competition policy are not necessarily the product of a well-defined, consistent set of principles. While the essential core of competition legislation has remained intact—the maintenance or protection of competition through the prevention of private restraints on trade and abuses of economic power—the changing emphasis on various objectives and the pressure to increase the number of goals have been notable. Although these shifts support the proposition that competition policy can adapt to changing economic, social, and political conditions, these shifts also imply that competition policy may be the subject of *political compromise.*

Attempts to take into account multiple objectives in the administration of competition policy may give rise to conflicts and inconsistent results. For instance, protecting small businesses and maintaining employment could conflict with attaining economic efficiency. With the small business objective, competitors rather than competition may be protected. In addition, such concerns as community breakdown, fairness, equity, and pluralism cannot be quantified easily or even defined acceptably. Attempts to incorporate them could result in inconsistent application and interpretation of competition policy. Clear standards would be unlikely to emerge, thereby leading to uncertainty and distortions in the marketplace and the undermining of the competitive process.

However, it has been argued that the intent of competition policy encompasses more than allocative efficiency. Competition policy as

expressed in the laws enacted by representative governments aims to serve the broad *public interest* and thus includes sociopolitical goals. Although economic analysis provides valuable insights into business dynamics and the probable effects of a commercial practice in the marketplace, economics is not law. Moreover, there is intense debate among economists about what types of market structure and business environment are likely to yield the most efficient, dynamic, and innovative economy. Nor do economists agree on the assessment and distribution of the gains of economic efficiency. The debate, in part, centers on whether to maximize consumer welfare or total economic welfare.

The pursuit of economic efficiency may in some situations give rise to increased consumer and producer surplus as a result of higher levels of output at the same or lower prices. These circumstances may also yield higher profits for businesses. In such instances, the proponents of economic efficiency would not differ in their viewpoints. However, a conflict may arise if producer surplus increases at the expense of consumer surplus, even if the total surplus (economic welfare) of society as a whole rises. Generally, competition policy would assign greater importance to consumer surplus.

Notwithstanding disagreements among economists, it is widely acknowledged that the application of economic analysis imparts a greater degree of precision and predictability in the enforcement of competition policy. Economic tools can be used effectively to analyze noneconomic concerns, such as the *fairness or equity* implications of enforcement decisions, or to systematically assess the effects of different business practices and market structures. Competition policy incorporates both legal and economic principles, and both disciplines play mutually supporting roles.

However, if competition policy is to address the broad public interest, then what constitutes the public interest? Public interest is an elusive and amorphous concept. In many cases public interest can be widely divided, and what might be considered clearly in the public interest by one party may be seen as less important by another. The complexity of the public interest approach to competition policy may thus produce significant tension between different stakeholders. Implementation of competition policy itself risks becoming captive to the political process if it attempts to serve different interest groups, which may not be conducive to maintaining or promoting effective competition. In other words, although the public interest approach to competition policy permits the consideration and balancing of different economic, social, and political objectives, the independence with which this policy can be administered can easily become constrained.

INSTRUMENTS OF COMPETITION POLICY

Competition policy embodies different kinds of instruments that are conventionally categorized as either structural or behavioral (conduct). The structural instruments relate primarily to mergers and monopolies or the dominance of a firm's market position. The conduct-oriented components relate to business behavior such as price-fixing and other collusive agreements, vertical restraints, and the abuse of dominant market position. While the structure and conduct instruments of competition policy tend to be applied separately, the relationship between market structure and business conduct is interactive.

Proponents of different views about the objectives of competition policy typically share common ground when it comes to cartel agreements. Such agreements are widely acknowledged as blatant attempts to replicate the monopolistic behavior of raising prices above competitive levels by reducing output. This conduct results in the misallocation of resources and a reduction in economic welfare. Most economists and practitioners of competition law strongly condemn price-fixing and similar forms of collusive arrangements, such as

bid-rigging. Against this backdrop of general consensus, however, different legal and economic standards have been adopted to attack price-fixing agreements in different jurisdictions. In Australia, the European Union, Germany, and the United States, for example, price-fixing is *per se* illegal and subject to criminal penalties. In Canada, although such agreements are treated as criminal acts, they must affect a substantial part of the market. In Spain, Sweden, and the United Kingdom, a *rule-of-reason* standard is applied to judge the legality of price-fixing agreements.

In other areas of business conduct, such as vertical restraints (resale price maintenance, tied selling, exclusive dealing, and geographic market restrictions) attention focuses primarily on the legal and economic standards to be applied to these practices. Economists of different persuasions generally would argue that the rule of reason should be applied to vertical restraints; the arguments for efficiency and the lessening of competition can be valid depending on specific situations. In this connection competition policy authorities may need to decide where the burden of proof should lie with regard to the adverse economic effects of vertical restraints—with the authorities or with the parties involved? A stringent policy might impose high opportunity costs in terms of dynamic efficiencies forgone. The basic objectives of competition policy should thus incorporate a balancing of these concerns.

Differences in approach toward vertical restraints may still persist, not so much because of differences in economic and legal standards as because of the philosophical underpinnings of competition policy objectives. As indicated earlier, jurisdictions such as France and Germany place particular emphasis on the freedom of economic action for individual market participants. In the European Union vertical restraints are generally seen as conflicting with the basic policy objective of market integration.

Regarding the structural provisions of competition policy, the presence of monopoly or dominant firm position in markets is not per se illegal in Western industrial countries. However, recognizing that such market structure characteristics may give rise to abuse of economic power, specific types of conduct are subject to investigation and remedy. Included would be practices such as predatory pricing, preemption of scarce raw materials or distribution channels, and the acquisition of customers or suppliers in ways that prevent or eliminate entry by a competitor. These and other practices need to be examined on a case-by-case basis as they could be part of a legitimate business strategy designed to gain competitive advantage rather than to restrict competition. There may be a thin line between the use and abuse of economic power, and a firm's monopoly or dominant market position may indeed reflect superior competitive performance.

The most significant disagreements on the objectives and instruments of competition policy arise in the treatment of mergers. A wide variety of motives may underlie the corporate decision to increase size through the acquisition of an existing business rather than by undertaking internal expansion and new investment. In the case of horizontal mergers, competition authorities are especially interested in two possible motives: the increase in market power or in economic efficiency, or both. Distinguishing between the two has been recognized as a complex task.

Essentially, two types of policy approaches have been used to control market power that may stem from horizontal mergers: the structural and the cost-benefit approaches. Though clear-cut distinctions cannot easily be made given the interaction between market structure and business conduct, the *structural approach* emphasizes a competition test that examines whether the increased levels of concentration resulting from a merger will likely give rise to the substantial lessening of competition. This approach implies that anticompetitive business practices by large firms can be avoided by preserving an unconcentrated environment through

the prevention of mergers beyond a particular market share or size threshold.

The *cost-benefit approach* is basically neutral in that it starts out with no general stance with respect to mergers among relatively large firms. The actual or possible exercise of postmerger market power is evaluated on a case-by-case basis, taking into account such considerations as efficiencies and other benefits that may arise from the mergers. This is not to say that structural considerations are irrelevant to this policy approach. However, concentration or market share data, along with information on other economic factors such as barriers to entry and foreign competition, may be used to establish whether, after a merger, firms are likely to be in a position to lessen or prevent competition substantially through discretionary control over market prices, output, and related factors. In other words, this approach focuses more on the actual or possible market behavior of merging firms than on the market dominance the merger may bring about.

The other dimensions of merger policy are the extent to which specific transactions are to be evaluated in terms of economic efficiency, public interest and benefit, or some combination. Viewed in this manner, there is a connection between the policy approach and the substantive criteria applied in assessing mergers that bears directly on the objectives of competition policy. A structural (concentration-market share) approach would foster pluralism and diffusion of economic power. However, while this approach might protect competition, it could do so at the expense of economic efficiency. The behavioral-economic efficiency combination might have the opposite effects.

Among industrial economies, Canada probably places the greatest emphasis on economic efficiency and the least on concentration or market share of firms. What is evaluated and considered important is the postmerger conduct of firms and their ability to exercise market power by raising and maintaining prices. Mergers that, while perhaps lessening competition substantially, are expected to realize offsetting gains in efficiency are specifically exempted in the legislation on mergers.

In Australia until recently, a structural criterion prohibited mergers that may lead to market dominance unless authorization was received on the basis of a public interest-benefit analysis. The United States employs specific concentration-market share indices to screen mergers, but the review process places significant emphasis on predictions of postmerger exercise of market power by the merged firm and its rivals, as well as on the efficiency-enhancing aspects of the merger.

In summary, the range of differing viewpoints on the objectives of competition policy tends to be reflected also in the instruments, criteria, and legal and economic standards applied in administering competition policy. These standards have clearly evolved in different ways within countries. The economic efficiency criterion tends to be unidimensional whereas the public interest criterion is multidimensional, with efficiency being only one of many factors to be considered. The issue of implementing competition policy is the differing weights to be assigned to different factors.

INTERFACE BETWEEN COMPETITION POLICY AND OTHER PUBLIC POLICIES

Competition legislation is usually a law of general application: it applies to all sectors of economic activity unless special exemptions are provided. Given this wide purview, there are complex interrelationships between competition policy and other public economic policies. Although the nature of this interface is largely determined by country-specific factors, the list of public policies that influence the state of competition policy prevailing in an economy tends to be quite lengthy. This factor has a direct bearing on the extent to which competition policy objectives can be pursued without being constrained by or conflicting with other public policy objectives. The central issue is the priority

attached to competition policy objectives in the overall framework of government policies.

An assessment of the impact of various public policies on competition is beyond the scope of this volume. However, a list of microindustrial government policies that can support or adversely impinge on the application of competition policy would include:

- Trade policy, including tariffs, quotas, subsidies, antidumping actions, domestic content regulations, and export restraints.
- Industrial policy.
- Regional development policy.
- Intellectual property policy.
- Privatization and regulatory reforms.
- Science and technology policy.
- Investment and tax policies.
- Licenses for trades and professions.

In addition, various sector-specific policies in environment, health care, telecommunications, cultural industries, financial markets, and agricultural support schemes tend to have measures more likely to restrict than to promote the objectives of competition policy. The formulation and implementation of these and other policies need to be tuned to take into account competition principles. Consistency in government decisionmaking can be ensured in this manner and distortions in the marketplace avoided. Indeed, the case can be made that competition policy should be viewed as the fourth cornerstone of government economic framework policies along with monetary, fiscal, and trade policies.

THE OBJECTIVES OF COMPETITION POLICY AND THE ROLE OF COMPETITION POLICY AUTHORITIES

Administration of competition policy is more reactive than proactive. Competition authorities, for the most part, respond to market developments such as mergers or price-fixing agreements to protect the competitive process. Public perception of competition agencies tends to be that they are law enforcement bodies. Even within government the input of competition authorities in the formulation of economic or sectoral policies has historically been limited. In a few jurisdictions competition agencies are empowered to intervene in regulatory and trade-related matters.

To achieve the major objectives of competition policy, competition authorities need to consider augmenting and altering their role in the economy. A proactive stance should be adopted to promote competition by attacking not only infringements of the law but also institutional arrangements and public policies that interfere with the appropriate functioning of markets. Through analysis of market conditions that adversely affect economic performance and adoption of solutions that violate free market principles the least, the role of competition as an instrument of overall government policy would be strengthened.

CONCLUSION

This overview of the different objectives of competition policy indicates that in most jurisdictions the basic objectives are to maintain and encourage competition in order to promote efficient use of resources while protecting the freedom of economic action of various market participants. Competition policy generally has been viewed as a way of achieving or preserving a number of other objectives as well: pluralism, decentralization of economic decisionmaking, prevention of abuses of economic power, promotion of small business, fairness and equity, and other sociopolitical values. These supplementary objectives tend to vary across jurisdictions and over time, reflecting the changing nature and adaptability of competition policy as it seeks to address current concerns of society while remaining steadfast to the basic objectives.

The inclusion of multiple objectives, however, increases the risk of conflicts and inconsistent application of competition policy. The interests of different stakeholders may constrain the inde-

pendence of competition policy authorities, lead to political intervention and compromise, and erode one of the major benefits of the competitive process, namely, economic efficiency. In most cases the conflicts between economic efficiency and other policy objectives either are insignificant or can be balanced. Nevertheless, the rank and weights attached to the multiple objectives of competition policy remain largely ambiguous and need to be defined. This is necessary to ensure both business certainty and public accountability. The views articulated in this and subsequent chapters of this volume suggest that the administration and enforcement of competition law and policy should assign the greatest importance to fostering economic efficiency and consumer welfare.

Another issue is the relationship between competition and other government framework policies. These other policies tend to inject market distortions that impede the competitive process. Therefore, competition policy authorities need to be involved proactively in government policy formulation to ensure that markets remain open, free, flexible, and adaptable. Competition policy should be considered the fourth cornerstone of government framework policies along with monetary, fiscal, and trade policies.

Chapter 2

Market Definition and Assignment of Market Shares

Market definition is usually the first, and often the most important, task in competition analysis. All calculations, assessments, and judgments about the competitive implications of any given conduct depend on the size and shape of the relevant market. In a case involving possible abuse of dominance, for example, if the defined market is small and the enterprise under investigation has a large share of that market, the enterprise could be considered dominant. If, on the other hand, the defined market is larger and the enterprise's share is small, it might not be considered dominant. Where a merger is involved, the relevant market might include both the merging firms, in which case competition is more likely to be hurt. If only one firm is involved, there is less cause for concern.

This chapter presents a theoretical approach to market definition that, although difficult to apply rigorously, provides a framework for investigations. To define a relevant market is to describe the context for the exercise of market power—the ability of an enterprise to profitably raise price above competitive levels for a significant period of time. (Price in this context includes all attributes of a product as well as ancillary services that are provided with it.)

Thus, the process of defining a market proceeds backward because it begins by provisionally assuming that a firm (or firms) is exercising market power. It then proceeds to define, through a series of questions, the boundaries of the smallest market in which such conduct could be sustained. After that market is defined, the actual conduct in question is examined to determine whether it has or would have an anticompetitive effect.

A market has two components: its product and its geographic reach. The product market describes the good or service that is bought and sold; the geographic market describes the locations of the producers or sellers of the product. The process for defining the market is very similar in both cases. The task is to include all close substitutes for the products or sources of supply offered by the parties that are under inquiry. An accepted method for doing so is to approach the analysis from the demand side—to determine the extent to which purchasers would readily switch between alternate products or sources of supply. In this discussion, seller preferences and actions are not strictly considered to be part of market definition, but rather part of a distinct process that follows after market definition, namely the assessment of competition. Some competition authorities consider both buyer preferences and seller preferences to be part of market definition. This difference is largely one of approach, not of substance, as discussed further below.

This chapter was prepared by principal team member John Clark, with input from R. Shyam Khemani.

PRODUCT MARKETS

One definition of a product market is:

> A product or group of products and a geographic area in which it is sold such that a hypothetical, profit-maximizing firm that was the only seller of those products in that area could raise prices by a small but, significant and non-transitory amount above prevailing levels. (OECD 1993)

Under this definition the inquiry begins by assuming that there is a monopolist in a provisional market for one of the party's products (taking each of several products separately, if appropriate). Then, the investigator asks whether, if the hypothetical monopolist raises the price of the product by a "small but significant amount" for a "nontransitory" continuous period, a sufficient number of buyers would switch to other products so as to make the price increase unprofitable for the hypothetical monopolist. If such substitutes exist, they are included in a new provisional product market, and the original question is repeated for the new market. The process continues until no more close substitutes can be identified. Three elements of this process bear additional discussion: the price increase, the reaction of buyers, and the "smallest market" principle.

Price increase

The hypothetical price increase must affect only the product in the provisional market. Its price must rise while the prices of substitutes remain stable. Thus, as a corollary, the price increase must not be inflationary. Also, the increase must be assumed to be nontransitory, that is, expected to continue in the foreseeable future. Buyers are less likely to adjust their purchasing practices in response to a price change that is perceived to be short term, especially if costs may be incurred. A transitory price increase does not harm consumers significantly—the primary concern of competition enforcement.

The hypothetical price increase must be small, yet significant. A small increase is specified because buyers will react to such a change by switching only to close substitutes. A large price increase would point to more distant substitutes, possibly supporting an erroneous conclusion that those substitutes exert strong competitive pressures on the product in question. A market so defined would be too large for accurate competition analysis. Still, the price increase must be significant enough to generate some buyer reaction. Because it is costly to learn about alternative inputs, a very small price increase may cause no buyer reaction. How large is "small but significant"? Some countries (such as the United States and Canada) use a 5 percent increase in most cases. One might use a larger percentage, for example, if the value added at the relevant stage of production were small relative to the value of the product, or if high inflation were to make real prices difficult to measure.

Reaction of buyers

Not all buyers need be willing to switch to close substitutes; only enough of them need to force the hypothetical monopolist to rescind the price increase. How many is that? Answering that question is theoretically possible, given enough information about demand elasticities (percentage change in quantity demanded divided by percentage change in the product price) and the profit margins of sellers in the market. But such information is almost never sufficiently available. Usually, the decision must be made on the basis of more general and accessible evidence on the substitutability of products.

"Smallest market" principle

The process begins with a hypothetical "smallest market"—a single product manufactured by one of the parties, for example—and that mar-

ket is widened only as long as close substitutes can be identified. This practice avoids creating markets that are too diverse and unwieldy and whose structure possibly obscures the recognition of anticompetitive conduct.

Example of market definition process

A simple example might help to illustrate how the market definition process works. Assume that a merger is proposed between two manufacturers of traditional razors and blade cartridges. Their razors and cartridges are of a similar design, employing a handle, or razor, and a disposable blade cartridge. Each enterprise has developed a recognized brand name for its products, which are sold at retail establishments throughout the country. A few other branded products also exist. Other manufacturers, however, make razors and cartridges that look like those of the merging parties and are sold at the same retail outlets. But these carry the private brand of the retailer and are sold at lower prices than those of the merging parties.

Still other manufacturers make disposable razors—a one-piece razor and blade that is thrown away after the blades become dull. One manufacturer makes a proprietary razor and cartridge system employing a unique design, which the manufacturer claims is superior to other shaving systems and which is priced higher than the merging parties' products. Finally, electric razors are widely sold throughout the country. What is the relevant market?

One could begin by assuming that the market consists solely of branded traditional razor and cartridge systems like those sold by the merging parties. (In other merger cases one might begin with the product made or sold by just one of the parties if their products differ in any significant way.) Assume that a monopolist in this provisional market raised its price by 5 percent for a nontransitory period. Would a sufficient number of consumers switch from these products to others so that the monopolist could not profitably sustain this price increase? Assume the investigators determine that many buyers would switch to private-label brands. The same hypothetical question is then asked for the new provisional market of branded and private-label traditional razors and blades. The process may or may not result in the inclusion of disposables, the higher-priced proprietary product, and electric razors.

The above example illustrates some counterintuitive aspects of market definition:

- Products need not be perfect substitutes to be in the same market.
- Products need not have identical qualities to be in the same market.
- Products need not have identical prices to be in the same market.
- Different parts of a relevant market can be subject to different consumer tastes or preferences.

Note that the relevant question is not whether two given products are close substitutes for all buyers, but whether there are a sufficient number of buyers at the margin so that the hypothetical anticompetitive price increase cannot be profitably sustained. This point can be illustrated in the blade versus electric-razor example. It is probably true that most men strongly prefer either blades or electric razors and would not switch back and forth in response even to moderate changes in relative prices. On the other hand, young men are constantly entering the market. These buyers have not yet established any shaving habits and are likely to be much more sensitive to relative prices, (which include not only the initial price of the razor but also the perceived costs of operation and blade replacement over time). An important question then is what proportion of the total demand for razors is accounted for by beginning shavers? If the number is significant, and if the manufacturers cannot discriminate between new and established shavers, blade and electric razors could be in a single market.[1]

Practical aspects

It is difficult to apply this market definition model directly. Merely asking market participants for their views on what would happen in the event of such a hypothetical price increase seldom yields answers in which one can have confidence—for at least two reasons. First, business people are not used to thinking in hypothetical terms; their reaction to the question may not be grounded in their actual experiences. Second, business people working in the relevant market may respond strategically to such a question. Their answers may be colored by their perceptions of how the outcome of the investigation could affect them. Thus the investigator must usually acquire a great deal of practical information about the product in question and its possible substitutes—and about the willingness and ability of buyers to switch.

In some cases the correct market definition may be obvious and there may be no serious dispute between the competition agency and the parties to the investigation. Often, however, the answer will not be clear, and then a careful inquiry is necessary.

A first step is to acquire a good understanding of the product's attributes and its possible substitutes—their properties and uses, their prices, and how they are made and sold. Then the investigator should become familiar with how buyers make decisions about substitutes, particularly about the costs of switching. The best evidence that products are close substitutes shows that buyers have shifted between products in response to relative price changes, and that sellers base their business decisions on the prospect of such substitutions. Sources of relevant evidence include:

- Internal documents of the parties under investigation.
- Internal documents of third parties.
- Interviews with the parties under investigation and with third parties.
- Trade associations or statistical bureaus that assemble information on the relevant product.
- Wholesalers or retailers of the same or similar products.

GEOGRAPHIC MARKETS

The geographic market is defined by buyers' views of the substitutability of products made or sold at various locations. If buyers of a product sold at one location were to switch to buying the product from a source at another location in response to a small but significant and nontransitory price increase, then those two locations are in the same geographic market. Otherwise, those two locations are in different geographic markets.

In practice, the limits of geographic markets are often determined by transportation costs, transportation time, tariffs, and regulations. For example, the markets for sand, gravel, cardboard boxes, refuse hauling, and other "heavy but low-value" products are often quite small because the cost of transportation over long distances is large relative to the cost of the product itself. Transportation costs can also indirectly affect the limits of geographic markets. For example, the manufacturer of a sophisticated and expensive machine that could be easily shipped long distances may still not be able to sell to distant customers because the cost of providing technical service—transporting technicians or maintaining inventories of spare parts at distant locations—may be too high. The time required to transport a perishable product over long distances may also limit the size of the geographic market.

Tariffs and other trade barriers can do the same. If foreign producers must pay a tariff, the resulting increase in the cost of their product may dissuade domestic consumers from buying it. Then the geographic market from the perspective of domestic consumers would not extend beyond the domestic market. In considering the effect of tariffs, however, it is impor-

tant to consider the dynamic, forward-looking aspect of market definition. For example, a tariff that effectively limits the participation of foreign firms might cease to do so if domestic producers raised their prices a small but significant amount.

Regulations, such as those protecting health and safety, or licensing requirements can serve as barriers. For example, a dairy might be licensed to sell milk in one administrative region but not in another. Or, a professional, such as a health care worker, may be licensed to practice in one region but not in another. It is important to recognize, however, that except in situations where tariffs, regulations, or other external barriers are determinative, relevant geographic markets do not necessarily correspond to convenient political or administrative boundaries.

Evidence relevant to determining geographic markets is similar to that relevant to product markets, though some differences include transportation costs and tariff and nontariff barriers. Evidence of buyers switching locations in response to relative price changes and of sellers making decisions on the basis of the possibility of such switching is most persuasive. The sources of relevant evidence on geographic market definition are similar to those relating to product market definition.

PRICE DISCRIMINATION

There may be some diversity among buyers of a given product. The product may have more than one use, with some buyers using the product for one purpose, and others using it for a different purpose. The range of possible substitutes may differ substantially according to use. For example, a particular chemical may be used as an input in two or more different manufacturing processes. The buyers who use it for one process may be able to switch relatively easily to another product, although buyers who use it for a second purpose may not.

Our hypothetical monopolist would maximize profits by charging the two groups different prices, the group with no close substitutes having to pay the higher price. If the monopolist can profitably sustain such price discrimination, then the use for which a higher price can be sustained constitutes a separate product market. The same analysis holds for geographic markets. If a monopolist at one location can profitably discriminate against a group of buyers in one area by charging a higher price (net of transportation costs), that area would be considered a separate market.

Two conditions are necessary for successful price discrimination. The seller must be able to identify the buyers who would pay a higher price, and arbitrage among the different buyer groups must be difficult. Impediments to successful arbitrage include additional costs associated with resale and measures taken by the primary seller to identify and prevent or punish such activity.

The razor example illustrates a situation with potential for price discrimination. Longtime shavers are less likely than beginning shavers to switch between blades and electric razors. A monopolist of blade systems would charge higher prices to established shavers if it could, creating a market of blade razors for older shavers and a market of all razors for new shavers. But because it is difficult for the manufacturer to sell its products separately to these two groups, price discrimination would be unlikely.

MARKET DEFINITION IN ABUSE OF DOMINANCE CASES

The hypothetical monopolist paradigm for market definition may not be fully applicable in abuse of dominance cases because the monopolist may be real, not hypothetical. Prices may already be above competitive levels. Therefore, asking whether an additional price increase could be sustained may be irrelevant. Indeed, the

same issue could arise in any type of case, including mergers.

There is no easy way out of this dilemma. It would be a mistake to assume that current prices are not at the competitive level, even in abuse of dominance cases. Where suspected, however, anticompetitive conduct is relevant to market definition. Market definition and analysis of competitive effects can proceed simultaneously. In any case a careful inquiry into substitutability and sources of supply at different price levels is also necessary.

AGGREGATED AND LINKED MARKETS

A given product may take several forms, sizes, or capacities. Shoes are a common example. A consumer with size 9 feet would not consider sizes 8 or 10 as substitutes. Viewed strictly from the demand side, the relevant product market would be size 9 shoes. But such a market makes no sense because all shoe manufacturers make shoes in all common sizes. This is a form of "production substitution" (discussed below in connection with identifying firms in the market). When production substitution is nearly universal among firms supplying a group of products, the products may be aggregated into a single market, for example men's work shoes in sizes 7–13.

Linked markets are a related phenomenon. Many different types of a given product may be produced, among which there is no universal production substitution. Consider passenger automobiles, which come in many different sizes and shapes and with widely varying features. The prices of new cars may differ by as much as a factor of five. It is not likely that all automobiles are acceptable substitutes for any given buyer, but many buyers would consider a subset of products within the continuum as reasonable substitutes.

The provisional product market would begin with only one or a few products in the continuum, for example, of economy cars, but would expand successively to include more products according to the methodology discussed above. This methodology could produce a product market consisting of products along a major portion of the continuum, even though no single buyer would consider all such products close substitutes. In the same way several regions could be linked into a single geographic market. If there are enough buyers at the margin of any two regions in which there are alternative sources of supply, a series of such regions could constitute a single market, even though buyers at one end of the market would not consider sources of supply at the opposite end as practical alternatives.

The theoretical may have to give way to the practical when linked markets are an issue. Drawing sharp delineations in the product or geographic continuum may not be possible. One should look for obvious breaks or gaps, where there are relatively few buyers at the margin.

MONOPSONY MARKETS

Market power can also be exerted on the buying side of a market—monopsony power. When this is the concern, the same methodology for defining markets is employed, but the questions are posed differently, as mirror images of those asked when investigating monopoly power.

The exercise of monopsony power results in prices that are *below* competitive levels. Thus when defining product markets, one assumes that a hypothetical monopsonist lowers its prices a small but significant amount for a nontransitory period and then asks whether a significant number of sellers would in turn produce alternative products so that the price decrease would become unprofitable for the monopsonist. If the answer is yes, the market must be expanded to include those substitute products. In defining a geographic market, one asks whether, after a price decrease by a hypothetical monopsonist, a significant number of sellers would switch to selling their products in other locations. If the

answer is yes, the geographic market is expanded to include those substitute locations.

A fairly common example of monopsony power in transition and developing economies is in the processing of agricultural products. Assume that there is a single processor of beef in an area with many cattle farmers. If the beef processor lowered the price it paid for cattle by a small but significant amount for a nontransitory period of time, would cattle farmers switch to producing hogs in numbers sufficient to make the price decrease unprofitable for the processor (presumably by causing an unacceptable reduction in the processor's sales of beef)? If so, hogs must be included in the relevant product market. A similar question should be asked about the geographic market: would a significant number of farmers sell their livestock to processors at other locations?

IDENTIFICATION OF FIRMS IN A MARKET

An analysis of a market cannot proceed until its structure is fully described. In addition to characterizing the demand side, the sellers or producers must be identified and their market shares assigned. This exercise is forward looking. Firms that currently supply the market are of course included. Additionally, firms that may quickly and easily switch in and out of the market, usually by converting existing productive assets to alternative uses, should also be considered as currently in the market. Current sellers take such firms into account when making their own decisions about output and prices. Thus these firms have an effect on the market.

Consider the case of two chicken processors. One produces whole and cut-up chickens for sale at retail; the other processes chicken meat for use as an ingredient in other foods, such as soups. The two processors use similar equipment and could convert their plants to either use quickly and inexpensively. Although the two types of processed chicken are probably not close substitutes for most buyers, and thus are in separate product markets, the two processors should be considered as participating in both markets, given these facts. Indeed, if such production substitution were universal among chicken processors, the product market could be conveniently defined as "chicken processing." But other characteristics of the market may make production substitution difficult. The processors of whole and cut-up chickens may have developed brand identities, for example, which would be expensive and time consuming for other types of processors to develop.

Two additional points should be made on this subject. First, the supply-side substitution response must be distinguished from what is usually referred to as the entry response. The supply-side substitution response customarily involves the use of existing assets to begin producing another product, while the entry response usually involves a commitment of time and new resources, a significant portion of which can be considered as sunk. (See annex 1 on barriers to entry for a complete discussion of this important topic.) Of course, both responses are forms of entry, and the distinction may not be clear in a given case. But as long as both responses are fully considered, the result of the analysis will be the same.

Second, although the method of analysis set forth in this chapter treats market definition and identification of sellers as separate steps, with the focus only on the demand side as the basis for market definition, competition agencies in some countries consider both demand and supply-side aspects in defining markets. These different approaches should not generate different outcomes, however.

MARKET SHARES

Firms that are included in the market must be assigned market shares, which are considered to be indicators of a firm's importance in a market.

Since competition analysis is usually forward looking, market shares should also reflect the likely future significance of firms in the market. Market shares can be measured in several ways—in money value, units of sales, units of production, production capacity, or size of reserves.

If products within a market are sufficiently homogeneous, such as refined metals or agricultural products, then unit sales can be used to measure market shares. Market shares of heterogeneous products, including many types of consumer goods, may be better measured by value of sales. Market shares can be measured in terms of capacity, particularly in manufacturing industries, but capacity can be misleading if quality is variable. For example, a given capacity may not be economically suitable for producing the relevant product at the required level of quality. Such capacity should be discounted or eliminated from market share calculations.

A measurement problem arises if firms are vertically integrated, that is, if firms produce an intermediate product that is used internally in producing a final product. To what extent should such firms be considered sellers in the market for the intermediate product? A vertically integrated firm may sell some of its intermediate product in the merchant market, and those sales should be included in that market. Vertically integrated firms that use all of their intermediate goods internally are more problematic. They would probably not be considered currently in the market. Still, the question must be asked: to what extent and how quickly would they begin selling in the intermediate market in the event of a small but significant and nontransitory increase in price? In answering this question, attention should be given to the extent to which the firm must make additional investments in sales or distribution capacity to begin selling the intermediate product in the market and the extent to which the diversion of capacity to the merchant market would lower profits from sales of its final product.

A few additional special cases may be of interest:

- Some markets are characterized by large, infrequent transactions—for example, orders for the construction of large electric power generation stations. Sales made within a given year may not adequately characterize the significance of the firms in the market, because there are so few transactions within that period. In such cases shares of sales over a longer period would present a more accurate picture.
- In some markets sales are made through a competitive bidding process. Several firms may bid regularly for contracts. If these firms are essentially equivalent as bidders, they could be considered to have equal market shares. The share of each firm is $1/N$, where N is the number of bidders.
- If a foreign firm exports the product to the relevant market, the firm should be included in the list of market participants. Its current sales in the relevant market might be the best measure of its significance (much of its capacity located abroad might not be available to produce exports for the relevant market). But, if sales from that firm's country are subject to an import quota, then its future competitive significance might be less than its current share would indicate. It would be advisable to discount that share in some way.

In all cases market shares, however calculated, should be critically examined for their efficacy in describing the significance of firms in the market. When appropriate, these calculations should be discounted or augmented with other relevant information. For example, the market share of a firm currently selling a large quantity of a raw material but with sharply declining reserves should be discounted (or market shares should be calculated on the basis of reserves). Similarly, a firm with deteriorating or obsolete capital stock should be considered less significant than a firm with the same level of sales but with a technologically advanced capi-

tal stock. Likewise, a new firm possessing advanced technology or state-of-the-art equipment but with relatively few current sales should be accorded greater significance in the competitive analysis than its current sales warrant.

NOTE

1. In fact, however, when the Gillette Company and Wilkinson Sword proposed to merge in 1989, the transaction was investigated by competition agencies in several countries, all of whom defined the relevant market as including "wet" shaving products only, not electric razors (OECD 1994, 69).

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Chapter 3

AGREEMENTS

Agreements among competitors, often referred to as "horizontal" agreements, are implicit or explicit agreements that restrict competitors' ability to act independently. The term encompasses a broad range of conduct, from joint ventures, joint advertising or marketing, or trade association activities, to price-fixing and bid rigging. There are also agreements between upstream and downstream firms that are deemed to fall within the scope of competition policy, often termed "vertical" agreements. Part I of this chapter discusses horizontal agreements, and part II provides a brief introduction to vertical agreements from a perspective of competition law and policy.

PART I: HORIZONTAL AGREEMENTS

Not all agreements between competitors hurt competition. Many joint activities are competitively beneficial—they may foster efficiencies, reduce risk, create new or improved products or methods of distribution, or improve information flow and thereby the competitive functioning of a market. For example, competitors may jointly construct a new plant that none could build independently, conduct research and development that none could afford independently, jointly purchase supplies and thereby reduce their costs, form a network of suppliers to offer a new product or reduce costs (such as local moving companies joining together to offer a nationwide moving service or accountants forming an accounting firm), or form a trade association to gather statistics and operational information that each can use to make their operations more efficient.

By contrast horizontal agreements among competitors may simply eliminate competition, restricting output and raising prices. Or, horizontal agreements may serve some procompetitive purposes but at the same time unduly restrict competition. A competition agency must distinguish between agreements that reduce competition on balance and those that promote competition on balance or are at least competitively neutral. A policy that is too restrictive will preclude competitively beneficial conduct; a policy that is too lax will allow competitors to suppress their natural rivalry, raise prices, and reduce output, thus injuring both consumers and the economy.

DISTINGUISHING BETWEEN PROCOMPETITIVE AND ANTICOMPETITIVE AGREEMENTS

Certain horizontal agreements are anticompetitive. Without question these agreements are intended solely to eliminate competition among companies. These agreements do not involve integration of operations, creation of a new prod-

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uct or method of distribution, or any other joint effort intended to further competition. Such agreements are often referred to as "naked" restraints of trade, cartel behavior, or collusion. Examples are price-fixing, bid rigging, and allocation of territories or customers—and boycotts or refusals to deal in support of these practices. These agreements are unambiguously harmful; they have no redeeming economic or social benefits. Most countries view cartel agreements as the most serious competition offenses, and in some countries cartel agreements are prosecuted as crimes.

In fact, some countries treat cartel agreements as illegal regardless of whether the set prices or output restrictions are reasonable or not. Under such an approach—called a per se approach in the United States—the prosecutor or victim need only prove that the agreement was made and that it could be anticompetitive. It is no defense that the agreement was not carried out or that it did not have an anticompetitive effect. Nor does the plaintiff need to prove that the defendants have sufficient market share to raise prices or reduce output. Use of such a rule eliminates the necessity for the prosecutor or victim to prove that prices are higher than they would have been without the agreement or that prices are unreasonable. Use of this rule also prevents the conspirators from arguing that competition should not be the rule in an industry.

Other countries do not employ a per se rule, but cartels are treated strictly everywhere. In the European Union cartels are prosecuted vigorously as violations of Article 85 of the Treaty of Rome, and large fines may be imposed. In the United Kingdom restrictive agreements must be registered, and in practice cartel agreements are subsequently rejected by authorities.

The use of straightforward rules, such as the per se prohibition, simplifies the judicial process and provides clear guidance for businesses. But it is important that such rules not sweep too broadly, stifling conduct that could enhance competition. Thus in recent years the U.S. courts, for example, have restricted application of the per se rule to agreements that will not enable potentially procompetitive integration of the companies' economic activities or create a new product or distribution methods.

Agreements that may enhance competition should be evaluated to determine whether they are procompetitive or anticompetitive on balance. A five-step analysis can be employed:

- Is the restraint inherently likely to restrict output and raise prices?
- Is the restraint naked or is it obviously related to some procompetitive integration of economic resources?
- Will the restraint restrict output and raise prices, or otherwise create or facilitate the exercise of market power?
- Is the restraint necessary to achieve the asserted procompetitive goals?
- Do the restraint's procompetitive benefits outweigh its anticompetitive risks?

Answering all five questions requires a complex analysis, but there are several shortcuts. If the agreement involves a naked restraint inherently likely to restrict output and raise prices, such as bid rigging or price-fixing, the analysis can end because the restraint is clearly illegal. Otherwise, the restraint must be evaluated more fully in light of the markets involved, the effects or potential effects of the agreement, the market positions of the parties to the agreement, and the relationship between the restraint and the alleged procompetitive justification. If there is a weak relationship between the restraint and the alleged procompetitive justification, a full market analysis may not be necessary to conclude that the restraint is on balance anticompetitive. Similarly, if the parties to the agreement together do not control a significant share of the market, it may be possible to conclude without a full market analysis that the agreement could not have anticompetitive effects. It follows, then, that the

greater the joint market share of the parties, the closer the scrutiny that should be given to the alleged justifications.

Determining whether the agreement will enable the exercise of market power can be done directly if the restraint has been in place for a substantial period of time. Have prices risen or output fallen? If the restraint has not been in place for long or its effects are ambiguous, a structural approach can be used. It calls for defining the relevant product and geographic markets, measuring the market shares of the parties to the agreement and the ease with which other firms may enter the market, and examining how the restraint is likely to operate within the relevant market.

Focus then turns to an evaluation of whether the restraint is reasonably necessary to achieve a legitimate procompetitive goal. First, the relationship of the restraint to the procompetitive goal must be evaluated—the relationship should be clear. If so, then it must be determined whether there is an alternative means to accomplish the goal that poses less of a threat to competition. The parties need not choose the least restrictive means, only a reasonable means, given the alternatives.

In most instances such analysis will resolve whether an agreement is likely to have anticompetitive effects. Only rarely should an enforcement agency or the judicial system have to explicitly balance procompetitive benefits against the risk of anticompetitive harm.

CARTEL AGREEMENTS

The attractiveness of cartels to business people has long been recognized. Adam Smith, often recognized as the father of modern economics, wrote in 1776 in *The Wealth of Nations*, "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."

Specific cartel agreements

There are many possible types of cartels, but all reduce output and raise prices by eliminating competition among the parties to the agreement. The most common types of cartel agreements among sellers are price-fixing agreements, bid-rigging agreements, customer allocation agreements, territorial allocation agreements, and output restriction agreements. The most common among buyers are price-fixing agreements, allocating agreements, and bid-rigging agreements.

Cartels may not eliminate all competition. Competitors may agree only to eliminate competition for certain customers or in certain areas of the country. Or, cartel members may agree on price but still compete on service or on quality. Some or all of their monopoly profits may be "competed away" in these restricted forms of competition. Limited cartels are still harmful, however: prices will be higher and output lower than they otherwise would be. Cartels may be imperfect in another way—some members may cheat, for example, by selling below the agreed price or outside their assigned territory. A cartel may have to make a substantial effort to keep or bring members back in line. While such nonprice competition and cheating may reduce the harm of the cartel, it does not eliminate it.

Frequently, businesses pursue the shelter of collusive arrangements as a retreat from the challenges of the marketplace. Companies in many countries, especially those with previously centrally planned economies, may see collusion as bringing order to the marketplace, assuring a healthy industry or eliminating ruinous competition. But the operation of competitive forces is now almost universally recognized as being the best means of allocating resources in the economy and maximizing economic welfare.

Collusion seriously undermines this process by suppressing the natural rivalry among firms. Collusion causes firms to function more

like a monopoly. This conduct has an immediate, negative impact on consumers. They are consuming fewer products and paying more for them. Collusion may negatively affect all stages of the production cycle because it can lead to price increases or restrictions on the availability of intermediate goods or other needed inputs. This situation has a direct impact on the profitability of firms and on their ability to compete. The increased cost of raw materials due to collusion by input suppliers can result in serious cost disadvantages to intermediate-goods producers, as well as higher costs to ultimate consumers.

An effective and well-enforced competition policy prohibiting collusion will help to achieve broader economic goals by encouraging greater efficiency and economic growth. Competitive markets can enhance international performance, increase employment, and lay the groundwork for higher standards of living. Collusion is also damaging in that it undermines public confidence in the competitive market system.

PRICE-FIXING. Price-fixing is a term generically applied to a wide variety of actions taken by competitors having a direct effect on price (see box 3.1). The simplest form is an agreement on the price or prices to be charged to some or all customers. If customers have no alternatives to the cartelized product and cannot easily reduce their consumption, the price increase may be very large. At a minimum, cartels will generally set prices above those of the least-efficient producer in the market.

In addition to simple agreements on which price to charge, the following are also considered price-fixing:

- Agreements on price increases.
- Agreements on a standard formula according to which prices will be computed.
- Agreements to maintain a fixed ratio between the prices of competing but nonidentical products.
- Agreements to eliminate price discounts or to establish uniform discounts.
- Agreements on credit terms that will be extended to customers.
- Agreements to remove products offered at low prices from the market so as to limit supply and keep prices high.
- Agreements not to reduce prices without notifying other cartel members.
- Agreements to adhere to published prices.

BOX 3.1

Price-fixing in the sugar industry

For several years three leading sugar-producing firms conspired to restrict output and inflate prices of sugar. They also agreed on a strategy to control the supply of sugar in particular areas. Sugar, whether produced from cane or beet, is a homogeneous product. At the time of the conspiracy sugar substitutes were not readily available, and customers had no alternatives. The conspirators controlled the only three sugar refineries in the market, accounting for approximately 90 percent of sales.

The producers partially controlled direct sales to large customers, such as wineries, candy manufacturers, and small independent sugar importers, by paying a premium above the world price to foreign producers. These purchases were made through offshore corporations and re-invoiced at a much higher price to the refinery.

When a new, competitive refinery tried to enter the market, the cartel notified foreign producers that they would stop purchasing sugar from anyone who supplied the new refinery. The leading manufacturer designed a new way of pricing sugar, and this system was immediately adopted by the others. The new entrant took 10 percent of the market, but the remaining share was split exactly as it had been before the arrival of the new competitor.

- Agreements not to sell unless agreed-on price terms are met.
- Agreements to use a uniform price as the starting point for negotiations.

Usually, price-fixing schemes include mechanisms for detecting and punishing cheating (this is discussed further below).

BID RIGGING. Bid rigging is an agreement between parties over which competitor will win a tender—often from government agencies (see box 3.2). This agreement may be accomplished by one or more bidders agreeing to refrain from submitting bids, or by the bidders agreeing on a low bidder and then bidding above that firm's intended (and inflated) price. The tendering process is designed to promote fairness and ensure that the lowest possible prices are received. Bid rigging subverts this competitive process.

The mechanisms for bid rigging are numerous and varied, but generally fall into the following categories:

- *Bid suppression.* One or more competitors agree to refrain from tendering or to withdraw a previously submitted tender so that another company can win the tender. The parties to the agreement may administratively or judicially challenge the tenders of companies that are not party to the agreement or otherwise seek to prevent them from tendering, for example, by refusing to supply materials or quotes for subcontracts.
- *Complementary bidding.* The competing companies agree among themselves who should win a tender, and then agree that the others will submit artificially high bids to create the appearance of vigorous competition. Or, the losing companies may submit competitive prices, but along with other unacceptable terms.
- *Bid rotation.* The competitors take turns being the winning tender, with the others submitting high bids. The companies agreeing will generally try to equalize the tenders won by each over time. A strict pattern of rotation is often a clue that collusion is present.

BOX 3.2
Bid rigging in printed business forms

Continuous, manifold business forms used for computer printout paper, snap-set forms, and similar products were supplied to a government by four major printers. Historically, the government tendered original orders but placed reorders with the firm that had supplied the first order. After concluding that it could get better prices by tendering all orders, the government began doing so from a list of qualified printers, including the four major firms. The resultant price declines became a concern to the major companies and their sales managers. Not only were profit margins lowered, but also the executives felt the pinch in reduced sales commissions and management bonuses.

The sales managers of the four companies met and agreed on a bidding strategy. The price book of the market leader, available to all, was used to determine benchmark prices for each product for all of the companies. It was agreed that when a tender was called, the previous supplier of the particular form would bid at or below the benchmark price, whereas all others would bid higher. After a while the companies concluded that this method was too difficult and agreed that the former supplier would simply tell the competition how much it was bidding and the others would bid higher or not at all.

During the conspiracy, about 300 separate tenders were called by the government, and bidding patterns were consistent with the agreements. The arrangement started to break down after the entry of a new competitor, which began winning bids. The new firm was approached to try to induce it to join the existing arrangement. The new competitor complained to the authorities and provided the initial information that led to the start of the investigation.

CUSTOMER AND TERRITORIAL ALLOCATION. Prices can be controlled by agreements among firms to allocate markets or customers among them, thus eliminating competition (see box 3.3). Market-division agreements may have a greater impact on competition than price-fixing. The single remaining market occupant is freed of competition with respect to prices, service, quality, and innovation. Market-allocation agreements eliminate the need to police the pricing practices of the companies party to the agreement and the need for producers with different costs to agree on appropriate prices. Thus market allocation may eliminate some of the pressures that frequently cause price-fixing agreements to break down.

Firms can decide to allocate markets geographically or according to customers or classes of customers. When the colluding companies face competition from other firms, these companies may allow each other to compete freely while continuing to allocate those areas or customers with which they do not face outside competition.

Prosecution of cartels

In virtually all jurisdictions cartels are illegal. In many countries cartel agreements receive severe sanctions, usually in the form of heavy fines. In the United States and Canada cartels are prosecuted as crimes. Corporations may be fined many millions of dollars—in 1996 a U.S. corporation was fined $100 million for the price-fixing of lysine, an animal-feed additive. In some countries culpable individuals may also be fined. In the United States individuals convicted of cartel activity may be sentenced to jail terms of up to three years for each violation.

It is important that fines or other penalties be sufficiently severe to create a deterrent. Cartels are difficult to detect, and unless penalties are very stringent, conspirators may feel that the benefits from the illegal conduct will outweigh the risk of punishment. Thus fines must substantially exceed the expected cartel profits. In this regard prosecution of individuals involved in cartel activity is an especially effective deterrent.

Attempts to justify cartels

Sometimes firms that participate in cartel agreements attempt to defend their activities as proper and beneficial. These arguments are in fact challenges to the value of competition itself in particular industries or under particular circumstances. Such arguments have generally been rejected by competition agencies and judicial authorities, because in most circumstances

BOX 3.3
Territorial allocation in pipe sales

The six major suppliers of cast-iron pipe allocated sales among themselves. First, they designated "reserved cities" in which one supplier was granted the right to make all pipe sales. The other firms agreed to bid higher on all tenders and not to seek negotiated sales in those cities. In other cities the right to be the winning bidder was itself put up for bid among the conspirators. The highest bidder in the firms' secret auction had the right to all sales in that city for a designated period of time and the other five divided the price paid for that right among themselves. At other times the right to win a particular contract was auctioned among the conspirators.

The remaining cities in the area served by the six firms were declared "free," and all six were free to compete for sales there. This agreement persisted for many years before it was detected and the firms were prosecuted. Adjustments in the allocated cities were made over time to reflect the changing strengths and weaknesses of the companies, but purchasers of cast-iron pipe consistently paid inflated prices.

competition will generate the best outcome for consumers and the overall economy.

THE INDUSTRY CANNOT FUNCTION WITH COMPETITION. The industry claims that cutthroat competition will destroy small companies, and the remaining firm will have a monopoly. This is the most common argument made in favor of cartels. But in very few cases—as in natural monopolies—will competition drive out all but one firm. Most sectors have room for a number of firms that can be profitable in the long run, since a firm that is big enough to be efficient is still much smaller than the entire market.

Why, then, is this argument so commonly made? Probably because it often seems true to competitors, especially in times of change or intense competition. If a market has shrunk, if new competitors have entered, if some competitors have become more efficient, or if a new technology has been introduced, all firms will feel pressure; competition will weed out the less efficient firms. For a period of time all firms may show losses. Eventually, however, a number of efficient, profitable, competing firms will remain. It is true that competition may drive less efficient competitors from the market, but this is part of the dynamic process of competition. Less efficient competitors will be compelled to reduce costs or exit the market, and consumers will obtain the best possible goods at the lowest possible prices.

THE INDUSTRY COMPETES ON SERVICE AND QUALITY. Participants claim that consumers will benefit if all firms agree on one price and then compete to provide better service or better quality. If a cartel succeeds in raising prices, firms may still compete by offering better service or quality. But this is not what consumers demand. If it were, the improved quality or service would be provided without an agreement to raise price. Some firms would offer better quality or service at a higher price, and customers could chose to buy from them. The cartel takes this choice away from consumers.

SAFETY AND QUALITY WILL DECLINE. In some markets determining product quality may be a problem—but a cartel is not the answer. Quality judgments are usually best left to the consumer. But in a few cases the consumer cannot determine quality. An example is medicine or medical service. The consumer is not qualified to judge the quality of medicine or medical service, and the consequences of making the wrong choice may be harmful. In such markets some kind of government regulation is often required. Sometimes nongovernment institutions will be created to provide the necessary safety information. Either way, safety and quality concerns can be addressed directly. A cartel is not necessary.

Companies may also argue that if they face significant competition on prices, they will spend less on safety. In fact firms may feel pressured to cut their costs on safety-related items, but a cartel will not solve that problem. Even within a cartel some firms are more efficient than others. Regulation may be needed to prevent firms from cutting back on safety, but a cartel will not solve this problem.

A CARTEL IS NECESSARY TO STOP UNFAIR AND UNETHICAL COMPETITION. In making this claim companies want to be able to easily monitor compliance with the cartel price. Discounts, rebates, better terms of sale, and similar arrangements are common forms of competition, especially in oligopolistic industries with public price lists. Industry's ideas of "fair" trade are generally that no one cheats on the cartel price.

Detection and proof of cartels

Cartel cases are difficult to investigate because of the inherent difficulties in detecting covert arrangements and because of the scope and complexity of many cartels. The prosecutor must discover and prove that a crime has been

committed, as well as discover and prove who the perpetrators were. Cartels take many forms, ranging from explicit written agreements to informal arrangements, which the law must address. Competition laws frequently allow both direct and indirect evidence of conspiracy. Most conspiracies must be proven through insiders and through circumstantial evidence. Often the only people who know that a cartel is operating and how it is operating are the participants.

Indications that a cartel is functioning may come from customers, competitors, or disaffected members of the conspiracy or may be seen in market performance. The competition agency must have a visible public presence so that those concerned can confidently present complaints. The agency should also monitor the media, trade publications, statistics, and documents of public record for indications that a market is not performing competitively. One criterion for identifying collusion that has proven effective in the United States and that was recently adopted in Canada and the European Union is to offer immunity from prosecution or leniency in punishment to companies (and individuals) that provide evidence that can be used to prosecute other culpable parties.

How cartels operate. To uncover cartels, one must understand how they operate. It is particularly important to understand the problems that cartels face and how they deal with those problems. A cartel must convince most of the significant competitors in the market to raise prices above the competitive level and keep them there long enough to earn monopoly profits. Cartel members must agree on which price to charge, which output to produce, or how to allocate markets or customers, and they must prevent cheating. The cartel is likely to reveal its existence in dealing with each of these complicating factors.

If prominent competitors are not members of the cartel, it cannot function successfully for long. These outsiders may sell for a price lower than the cartel price and increase output, putting pressure on the cartel members to reduce their price or lose sales. If an outsider competes more directly with one cartel member than with others, the outsider may create internal conflict within the cartel.

Attempts to enlist universal participation may create evidence of the cartel. Documents internal to the cartel complaining about an outsider's failure to participate may surface. Or letters or other documents that refer to the cartel may be sent to the outsider. An outsider approached about joining a cartel can report the attempt. Talking to companies that were approached but did not join, as well as those that did join, is useful because they may have been given an explanation of the cartel's activities. To secure the cooperation of parties with inside information, the authority may promise complete or partial immunity from prosecution for an individual or company.

It is important to note that a cartel can sometimes operate without including all firms. A competitive fringe of small firms may operate outside a cartel. If the firms in that fringe cannot expand their output easily, the cartel can function without including them. Similarly, some customers may not be able to turn to companies outside the cartel, for example, because of their location or because of the customers' particular product requirements. Companies may cartelize sales to those customers even if they compete on sales to other customers.

The cartel members must agree on the cartel's fundamental terms, such as price. But cooperation may not be easy because different firms may prefer different prices: a firm with higher costs will prefer a higher cartel price, while a firm with lower costs will want a lower price—but one that will still generate a monopoly profit. If several products are involved, the cartel members may have to agree on an entire schedule of prices. If one firm's product is not identical to another's, the members will have to

agree on the ratio of the two prices. They may also have to decide if certain extras are included, such as delivery.

Similarly, a cartel that allocates customers, geographic territories, or bids must agree on how to divide them up. The members may have to engage in bargaining, for example. In general, the process of reaching an agreement is likely to produce evidence of a cartel's existence, and the more complicated the agreement, the more evidence is likely to be created.

Cartels are inherently unstable. Generally, each member is capable of producing and selling more than the amount allowed, because a cartel operates by raising price and restricting output. Any member can increase its profits greatly by producing more and selling it for less than the agreed price. But if all members renege on the agreement, the cartel will break apart.

Therefore, the cartel's collective interest is to ensure that no member cheats by lowering its price. Members can also cheat in a variety of other ways: offering secret discounts, raising the quality of their product, or paying delivery or similar costs. Cartels that typically experience such deception take steps to prevent, detect, and punish it. Some of the best evidence of a cartel agreement can be found from such policing. For example, cartel members may communicate with each other about suspected cheating, they may selectively lower prices in the cheater's area, or they may threaten the cheater.

MARKETS LIKELY TO HAVE CARTELS. Considering the problems of cartels described above, it is possible to identify the characteristics of markets that are most likely to have cartels. These characteristics will assist in selecting fruitful investigations.

Markets are most likely to have cartels if many of the following characteristics apply:

- There are few firms, or only a few large important firms (it is easier for a few players to agree than for many to agree).
- The firms are similar in cost structure, processes, goals, degree of vertical integration, or number of products produced (similar firms can agree more easily).
- The relevant product is homogenous, such as flour, sugar, or cement. In such a market an agreement on price can be relatively simple.
- The product does not have close substitutes. If it did, a price increase would drive customers to switch to the substitute.
- Customers will not or cannot significantly reduce the amount of product that they purchase, even if the price increases. That is, demand is inelastic at the competitive price (and the cartel can raise the price relatively easily).
- Information about sales transactions, that is, who sold how much to whom for what price, is widely available. The more such information that is available, the easier it is to police a cartel.
- A bidding process is involved. Markets with bidding often have bid-rigging cartels, perhaps because a bidding process often involves a few similar firms with available information on their sales.

THE CARTEL QUICK CHECKLIST. It is always useful to begin an investigation of a cartel by asking three questions:

- What do you suspect? Theorize about a cartel agreement that might exist. Does the theory make sense?
- How would the cartel have worked? Consider the steps needed to build such an agreement. How would the cartel have been formed? How would it have included all important sellers? How would members have reached the terms of the agreement? How would they have policed the agreement?
- What evidence might exist? What evidence would have been created at each step of the process?

EVIDENCE USUALLY FOUND IN CARTEL CASES. Direct evidence is the clearest and best. Examples include written agreements among firms, a statement by a participant, an internal memorandum written to report a meeting with competitors in which an agreement was reached, notes of telephone conversations with competitors, or a statement by a person who was approached by the cartel to join it.

It is rare, but not unheard of, to find written agreements setting out all the terms, conditions, and details of a collusive agreement. In such cases the industry may not have considered itself subject to competition law, and agreements among competitors were thus readily published. This phenomenon is more common in countries in which competition law is relatively new. Usually, however, if such written agreements exist, participants are aware of the risks involved and take steps to hide the documentation. Copies of agreements have been found under rugs, above false ceilings, and in executives' homes. These documents are generally created because it is often unwise to trust one's co-conspirators.

Even if no specific written agreement is found, most participants tend to keep notes of important events. Diaries, internal memos reporting on meetings, telex messages, faxes, letters, computer files, and e-mail are valuable sources of information. An executive may destroy incriminating information but his or her secretary may keep a copy. The key for the investigator is to think about likely hiding places or forgotten pockets of information.

In some jurisdictions search warrants may be served on companies or individuals likely to have relevant evidence. In other jurisdictions document demands and subpoenas for testimony may be used. Simultaneous searches or service of document requests on all suspected cartel participants can minimize the destruction of evidence. Declarations or written depositions under oath are also frequently used to provide essential evidence and to fill the gaps between documentary and circumstantial evidence already obtained.

Circumstantial evidence may be used to support direct evidence, and in some cases it may constitute the bulk of the evidence. Care must be taken in interpreting indirect evidence, however. Investigators should look for behavior that makes sense only if a cartel exists. For example, suspicions should be raised if all the competitors in a market announce on the same day that their prices will increase by exactly the same amount. Further investigation may eliminate other possible explanations, such as a sudden increase in costs, a sudden change in demand for their product, or a sudden change in the price of a substitute product.

Similarly, if a series of projects is put out for public bidding and two competitors always alternate in winning the bid, bid rigging should be suspected. Another fertile area to look for circumstantial evidence is in the policing behavior.

It is important, however, to distinguish between indirect evidence pointing to the existence of a cartel and evidence of consciously parallel conduct in concentrated industries. In economic theory *conscious parallelism* refers to uniformity of behavior, whether in pricing or in other competitive conduct, commonly exhibited by firms in an oligopolistic industry selling a homogenous product. Uniformity arises not from agreements but from each firm taking into account its rivals' likely reaction in determining business strategies, for example, recognizing that a price cut will be matched by all competitors, thereby producing only a brief competitive advantage. Such uniformity by itself is not proof that a cartel has been operating. Antimonopoly investigators often find evidence of similar or identical practices that may be informative but is nearly always ambiguous.

The investigator must look beyond such uniformity. Potentially fruitful matters to investigate are how prices have been established and how they have changed. For example, suppose

that historically prices changed frequently and varied slightly among firms. If pricing suddenly were to become identical and stable, an investigation should focus on that time period. Similarly, if prices were stable for long periods but occasionally became volatile for short periods, a cartel might be operating. The episodes of volatility could indicate cheating. Was policing attempted when the first firms reduced prices? How did prices become stable again? Answers to these questions can help determine whether there was a cartel.

Other indications that conduct is collusive rather than simply consciously parallel include opportunities to conspire, such as meetings or telephone calls among members of the industry. Perhaps the most powerful indicator is evidence that particular conduct would be in an individual firm's best interest only if that party knew that the other firms would engage in the same conduct.

Noncartel agreements among competitors

What if an agreement is not a naked restraint of trade? What if the agreement involves an integration of some or all of the companies' research, manufacturing, marketing, or distribution operations, or entails the creation of a new or improved product or method of distribution? If the interfirm cooperation increases efficiency, this conduct should not be condemned out of hand, as are cartels that offer no potential efficiencies. Once a restraint is shown to potentially enhance efficiency, then the investigator must determine whether the restraint is necessary to achieve the asserted procompetitive goals and whether the agreement also has the potential to create or facilitate the exercise of market power.

If the agreement has potential procompetitive and anticompetitive effects, the competition authority faces the difficult problem of trying to balance the risk of harm against the potential for benefits. Luckily, the net competitive effect of most horizontal restraints will become clear before the competition agency is forced to perform this task. Many restraints will have no significant potential for competitive harm, particularly those in which the parties to the restraint together have only a small share of the market or those in which the restraint on the independent market action of the parties is quite limited. Other restraints will not create procompetitive benefits, or such benefits could be obtained with much less restraint.

Often the first step in assessing the competitive effect of a restraint is to define the relevant markets. Restraints in unconcentrated markets are unlikely to hinder competition sufficiently to warrant concern. Similarly, even in a concentrated market, if the parties to the restraint have a small market share, they are unlikely to be able to influence pricing or output. Thus defining the market and evaluating the market shares of the active parties may be a quick way to determine potential competitive effects. But in many instances defining a market may prove to be difficult. In such cases it may be possible to reach a conclusion more quickly by evaluating the relationship of the restraint to the asserted benefit. If a benefit is not clear or the restraint is not reasonably related to the benefit, the restraint could be considered unjustifiable without fully assessing the relevant market and the positions of the parties.

Treatment of noncartel horizontal agreements in various jurisdictions

Most competition laws take a liberal view of horizontal agreements other than cartels—such agreements are allowed unless there is a good reason to prohibit them. In the United States, for example, only agreements that "unreasonably" restrict competition are prohibited. In each case the purpose and effect of the agreement are evaluated, and the agreement is prohibited only if it is, on balance, harmful to competition.

In the European Union such agreements are covered by Article 85 of the Treaty of Rome. They are prohibited if they "have as their object or effect the prevention, restriction, or distortion of competition." But even agreements that restrict competition may be permitted if they "contribute to improving the production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit," provided that the agreements do not impose unnecessary restrictions on the firms involved or allow those firms to eliminate competition with respect to a substantial part of the product affected.

In Canada a judge in a leading case stated (italics added):

> As has often been said, every contract is a contract in restraint of trade: the commercial freedom of the contracting parties is limited by their obligations to perform the contract. To the extent that any general criteria exist they seem to require an assessment of *the nature and purpose of the acts* which are alleged to be anti-competitive and the *effect* that they have or may have on the relevant market. An analysis is required which takes into account the commercial interest of both parties served by the conduct in question and the *degree of restraint or distortion* of competition which results.

Article 6 of Poland's Antimonopoly Act justifies horizontal agreements if they "are objectively necessary from a technical or economic viewpoint to conduct an economic activity and do not result in a significant restraint of competition." The common thread through all of these antimonopoly laws is that horizontal agreements may be prohibited if they restrict competition significantly, but even an agreement that does so will be evaluated to determine whether it has benefits that outweigh the harm.

Joint ventures and agreements to work together

Competitors sometimes cooperate to become better at competing in the market. Such agreements include joint ventures and specialization agreements. The firms may have different strengths, but by cooperating they may become more effective or better able to create a new product or service that they could not provide separately. Such agreements can take many forms. For example, firms operating in different regions could form a team that together would cover a much larger area. A firm that has a good-quality product but a poor sales distribution network could team up with a firm with a mediocre product but a large and efficient sales network. These agreements are often called joint ventures, but the particular legal form of the agreement is not important.

Another form of cooperation is a specialization agreement. Suppose that two firms are both making a full line of products, but they decide that they could save money if one firm made only large products and the other firm made only small products, so that each could capture economies of scale in production. The firms might enter into a specialization agreement, or joint venture. Each would specialize in manufacturing the products that it makes best but would sell both products under its own name.

The distinguishing feature of such horizontal agreements is their intent: to make participants better competitors. One quick test of this intent is to examine whether significant competition will be left in the market. If not, then the purpose and actual effects of the joint venture must be examined more closely.

An example of the treatment of such agreements is found in the EU regulation of specialization agreements (Regulation 417/85 on Block Exemption of Specialization Agreements). This regulation allows firms that account for less that 20 percent of the market to conclude specialization agreements. Of course, this analysis requires that the relevant market be

defined and that market shares and concentration be measured.

A simple rule of thumb for evaluating such joint ventures is to ask whether competition would be harmed if the cooperating firms merged (see chapter 4 on mergers). If the competition law would not be violated by a complete merger, then any cooperative agreement that is less than a complete merger will not violate the competition law.

Joint ventures will often contain agreements that restrict competition between the participating firms. Such restrictions may be necessary to make cooperation feasible. For example, if the firms develop and sell a product together, they need to be assured of each other's loyalty. If one firm could at any time leave the joint venture and take with it all the knowledge and skill developed jointly, cooperation will not succeed. Fear of such an event might deter firms from entering into a joint venture in the first place. Thus noncompetition clauses in joint venture agreements may be necessary.

These secondary agreements are sometimes called "ancillary" agreements and should be judged by whether they further the procompetitive purposes of the venture and whether they are reasonably necessary to its success. In addition, investigators should ask whether the beneficial purposes of the joint arrangement could be accomplished with a more limited restriction on the members' ability to compete.

Facilitating practice agreements

A facilitating practice agreement calls for the adoption of a practice—sharing information, adopting a product standard, or adopting particular contracting or pricing practices—that makes it easier for a cartel to operate or for firms in an oligopolistic market to avoid competing with each other, even without any explicit cartel agreement. These facilitating practices may take many forms, including information exchanges, product standardization, most-favored nation or price-protection clauses, and delivered pricing systems. These actions do not directly restrain competition, but they make it easier for the industry to reach a tacit (or explicit) agreement on pricing or output. As such, a facilitating practice agreement may reduce competition, although an explicit agreement on price or output cannot be proven.

These agreements are generally evaluated by assessing how likely they are to facilitate oligopolistic pricing. The steps in the analytical process are: defining the relevant market, determining its structural and competitive conditions, and determining how the practice will increase prices. If the potential for tacit or explicit cartel pricing would rise significantly then adoption of the practice is anticompetitive. Four factors characterize most facilitating agreements:

- They occur in markets whose characteristics are conducive to the formation of cartels.
- They include most of the significant competitors in the market.
- They make it easier to reach or maintain a tacit or explicit cartel price or output.
- They have no procompetitive benefits, or any benefits that do exist could be achieved with less risk to competition.

Facilitating practices fall into two functional categories: practices that make it easier to reach an agreement and practices that lessen incentives to cheat.

PRACTICES THAT MAKE IT EASIER TO REACH AN AGREEMENT. The sharing of information may make it easier to reach an agreement on price increases or output restrictions. Incomplete or delayed information about rivals' prices, transactions, and costs can complicate reaching an oligopolistic pricing accord. Agreements to share information that can eliminate or reduce this problem can take a variety of forms: post-transaction price verification, cost and customer information compiled by trade associations or the companies themselves, or public or private

announcements of future prices. The information exchange may involve either private information or information that is publicly available but difficult or costly to compile.

Information exchanges, like most other facilitating practices, can enhance competition functions. As a general rule markets perform more efficiently when firms have good information about demand and supply. But if markets are highly concentrated, thus raising the possibility of tacit collusion, sharing detailed customer- and supplier-specific information, particularly about current or future prices, or sharing future production and capacity plans may eliminate a barrier to anticompetitive behavior.

Other practices, such as agreements that all suppliers will price their products on a delivered basis (that is, absorbing freight costs), that an agreed-on differential will be maintained among products and services, or that products will be sold in standardized sizes or forms, can also make it easier to reach a consensus on an anticompetitive outcome. It is important to remember, however, that these practices are not always anticompetitive. They are suspect only when other conditions in the industry support explicit or tacit cartel conduct.

PRACTICES THAT LESSEN THE INCENTIVES TO CHEAT. These practices either make it easier to police pricing and output in the industry, and thus to detect cheaters, or reduce or eliminate the gains from cheating. Information exchanges make it easier to detect cheating, particularly if detailed information is exchanged about transactions on a regular and current basis.

Other practices that may reduce the gains from cheating are price-protection and most-favored nation clauses. Price-protection clauses hold that the seller will either meet any price that the buyer is able to obtain from another supplier or release the buyer to purchase from the other seller. Most-favored nation clauses hold that the seller will give the buyer the best price offered to any customer. Again, these practices are not always anticompetitive. In fact, they can benefit customers in many circumstances. When adopted by most or all participants in highly concentrated industries, however, and when other conditions are conducive to the formation of a tacit or explicit cartel, these practices can serve as self-policing enforcement mechanisms.

Firms can effectively deter cheating only if they maintain an arsenal of credible punishment threats. This is another area in which facilitating practices can have an anticompetitive impact. The most credible punishments are those that target a particular rival whose cheating has been discovered. But targeted punishments may not always be possible, and therefore maintaining general threats may be important. Meeting competition clauses can serve as such a threat, as can carrying large inventories or excess production capacity.

EVALUATION OF THE FACILITATING PRACTICE. To evaluate the likelihood that a facilitating practice will hurt competition, one must determine whether the proposed practice will reduce impediments to the creation or maintenance of a cartel. If the practice has such an effect in an industry that is otherwise susceptible to cartel formation and in which entry or fringe expansion is difficult, this conduct is likely to be injurious to competition. But in industries that already have several complicating factors, elimination or diminution of one of them would not likely harm competition.

Cooperation agreements that may restrict competition

Examples of cooperation between competitors that may hurt competition include exchange of information, restriction of advertising, and setting of standards.

INFORMATION EXCHANGES. Exchange of price information should be evaluated by considering several factors: the likelihood that the practice will

enable pricing coordination (how detailed, current, and customer- and supplier-specific it is); whether the information is publicly available or available only to competitors; whether structural conditions in the industry make pricing coordination a credible risk; the uses to which the information is put; and procompetitive justifications for the exchange. Statistical reports on historical prices (say, six months or older) or production—circulated by a third party such as a trade association—in which the data are aggregated and do not identify specific customers, suppliers, or transactions are unlikely to have an anticompetitive effect and may have significant benefit. At the other end of the scale, direct communications between or among competitors about current prices, output, or capacity utilization or expansion raise much more substantial questions about motive and competitive impact.

AGREEMENTS RESTRICTING ADVERTISING. Competitors may agree to restrict their advertising by not advertising at all, not advertising prices, not advertising in certain media, not using comparative advertising (advertising that compares one firm's product to others' products), or agreeing on the contents of advertisements. Agreements to restrict advertising could be made in connection with a cartel agreement, in which case the restriction should be treated as part of the cartel pact.

Competitors that restrict advertising may justify their behavior by arguing that advertising is undignified or inappropriate, especially within a profession or other service industry (where such restrictions are often found). They may argue that consumers will not be able to understand the important facts about the product or service and that advertising will mislead them. Or they may argue that price advertising will lead some competitors to lower prices and consequently reduce quality.

Advertising serves an important function in a competitive market: it makes information available to consumers. For example, it may identify sellers or providers, explain new products, or provide information about product quality and prices. Advertising may be an important means for a new firm to enter a market or for a firm to expand its market share. Thus eliminating or restricting advertising can reduce the effectiveness of competition and raise barriers to entry. Studies show that within a given industry prices tend to be lower if price advertising is allowed. These studies have not supported the argument that advertising, if truthful, confuses customers or leads to a lowering of quality. Although false advertising can mislead consumers, regulation is better left to a public institution than to a group of competitors with strong incentives to protect themselves, not consumers.

AGREEMENTS TO SET STANDARDS. Setting standards for goods and services generally benefits consumers and can make markets operate more efficiently. Standards inform consumers of important product characteristics, they facilitate the compatibility of products that are complements, and they can be used to establish minimum levels of quality necessary to protect consumer health and safety. Although the adoption of standards will exclude nonconforming products or services from the market, that effect by itself is not a sufficient basis for condemning the practice as anticompetitive. The benefits from standardization may far outweigh the loss of competition. Competition law must focus on competition, not on protecting individual competitors.

Standards can serve society in several ways. They may provide consumers with increased information, enabling them to make better decisions about the products they want to buy. Standards can bring the forces of supply and demand to equilibrium more quickly and can help the benefits of new technologies spread more efficiently. Standards relating to health and safety protect consumers who do not have suf-

ficient information to make their own judgments or who are buying products that cannot be easily evaluated.

Still, standards can have anticompetitive consequences. Standard setting may protect supracompetitive pricing by raising the costs of rivals, excluding them from competing effectively, or by raising unwarranted barriers to entry. For example, members of an industry may use standards to protect a price-fixing conspiracy by deliberately excluding innovative or lower-priced products through the adoption of restrictive standards.

One factor must almost invariably be present before standard setting can be competitively harmful: control over market access. Before any standard is considered to be exclusionary, it must be shown that its imposition could restrain trade or competition. If compliance with the standard is not critical to marketplace acceptance of a product or if there are viable alternatives to compliance, then it is unlikely that the standard would restrain competition.

Exclusion may take place through abuse of the certification process, that is, denying approval to products that would satisfy reasonable requirements for performance or health and safety. Or, anticompetitive standard setting may involve adopting coordination or interconnection standards (for example, relating to the interaction of different types of telecommunications devices) that are unduly restrictive. These standards may set minimum and maximum performance requirements, or impose unnecessarily detailed design requirements. Such standards are more restrictive than necessary to ensure effective interconnection or coordination, and may impede innovation and design improvement.

The most important factors to consider in evaluating a standard are fairness of the standard-setting process and certification procedures, and the nature of the criteria used in the standards. If the maker of the standards accepts input from interested parties, maintains adequate records of the process and of the reasons for its decision, and there is legitimate justification for the standard and the way that it is applied, the procompetitive benefits are likely to outweigh any risk of competitive harm.

Standards based on performance rather than design criteria are superior. Performance criteria measure the ability of a product to do its job, rather than how it goes about doing that job. These are much less likely to deter product innovation or improvement. Similarly, standards setting forth minimum performance criteria are superior to those based on maximum criteria.

Boycotts and joint refusals to deal

A horizontal agreement among competitors not to deal with other competitors, suppliers, or customers is a joint refusal to deal or a boycott. Such agreements could be cartel conduct or part of a noncartel agreement associated with a potentially procompetitive joint venture or agreement to cooperate.

Joint refusals to deal with customers unless they agree to pricing or other terms set by the participating firms are simply means of imposing these terms. Such conduct is treated as per se illegal in jurisdictions that distinguish between per se and rule-of-reason analysis. There is no arguable enhancement of efficiency associated with such conduct. Similarly, if competitors join together to pressure suppliers or customers to stop dealing with another competitor, they are also engaging in cartel conduct. Firms that have a cartel agreement will want to punish any outsider who disrupts the cartel or any member who cheats. An effective means of doing so is jointly refusing to deal with any supplier that sells to the errant competitor or jointly refusing to sell to any customer that buys from that competitor.

But even if firms have not formed an explicit cartel, it may be in their interest to exclude or disadvantage a competitor—especially if the targeted competitor is a disruptive force. For example, suppose that the firms in a market

have generally similar costs. They may have reached a tacit pricing accommodation, although not explicitly agreed-on prices or output. If a new firm begins to compete, it may threaten them, especially if this competitor is relatively more efficient and has lower costs. Even if the existing firms have not formed a cartel, it is in their collective interest to exclude the low-cost outsider or at least raise the outsider's costs.

In general, boycotts that should be treated as anticompetitive are characterized by efforts to disadvantage competitors by either directly denying or coercing suppliers or customers to stop dealing with those competitors. The boycott often shuts off access to a needed input (product, facility, or market). Frequently, the boycotting firm possesses a dominant market position. In addition, there are generally no efficiencies associated with such conduct. The likelihood of anticompetitive effects is clear, and the possibility of pro-competitive effects is remote.

However, some joint refusals to deal can create efficiency benefits, rendering markets more competitive. Some refusals to deal "serve economic efficiency or advance the group's general economic self-interest without seeking to diminish any other group's profits. Others even advance social and moral goals largely unrelated to the group's business or economic interest.... It would seem necessary, at least initially, to assess their economic impact beyond the advantage they create for the group engaged in the boycott" (Gellhorn and Kovacic 1994, 213–14).

An example of a potentially procompetitive agreement is a joint purchasing arrangement made among a group of small competitors. Such an arrangement may capture economies of scale in purchasing and warehousing, and thereby enable the group to compete more effectively with larger rivals. Such a purchasing organization may restrict membership to prevent other competitors from obtaining the cost reductions that the members receive. Excluded competitors can, of course, establish their own purchasing organizations. Indeed, it is probably better for competition if several purchasing organizations are formed rather than a single large one.

The competition official must distinguish refusals to deal that are on balance harmful from those that are beneficial. The following questions should help in this process:

- What proportion of firms in the market are part of the agreement? An agreement among all or almost all firms in a market is more likely to be harmful than an agreement that represents only a small proportion of a market.
- To what extent is a competitor excluded or disadvantaged? Unless the competitor is seriously disadvantaged or rendered unable to compete, it is unlikely that competition will be harmed. If the competitor has alternative ways of obtaining the same or similar benefits, the exclusion will not likely be harmful.
- What is the purpose of the agreement? Does the agreement create efficiencies, for example, by integrating the operations of the participants, by creating a new or improved product or method of distribution, or by otherwise generating cost savings? Or is the only apparent purpose of the agreement to exclude or disadvantage competitors? What are the claimed benefits of the agreement? Have they materialized?
- Could the benefits be achieved without excluding or disadvantaging a competitor? Is the restriction reasonably related to the benefits of the agreement? How do the restrictions further the procompetitive purposes of the venture? Are there less restrictive means for achieving the same benefits? If so, and if such alternatives are not more costly or less effective, on balance the exclusionary restriction may be harmful.

Trade associations and lobbying

Trade associations carry out many legitimate, positive functions, such as educating members about technological and other advances in the

industry, identifying potential problems with products, facilitating training on legal and other administrative issues, and acting as advocate or lobbyist before governmental bodies. But trade association meetings also can provide a forum for cartel activities, and trade associations themselves may occasionally become involved in anticompetitive activities. The sharing of competitively sensitive information can foster or support tacit or explicit collusion, and trade associations are often ideally situated to facilitate such anticompetitive exchanges. Trade association meetings may also create a forum for discussing industry conditions that may range beyond legitimate bounds and result in agreements to limit output or stem price decreases. Finally, because trade association meetings bring competitors together, unlawful agreements may be hatched in informal meetings or social gatherings away from official activities.

A common trade association activity is communicating with the government on behalf of its members. In a democratic society all citizens and their organizations should be encouraged to do so. But trade associations may try to persuade the government to take anticompetitive actions. The association could ask for monopoly authority, legalized cartels, import restrictions, the setting of cartel prices or restricting of entry, or special restrictions or prohibitions on competitors. Should such activities be subject to competition law?

These issues extend beyond competition policy, including free speech and the right to petition one's government. This activity is occurring in the political arena, not the marketplace. The result of such conduct could be highly anticompetitive and harmful to consumers, but condemning such conduct under the competition law could ultimately cause even greater harm to a country's democratic institutions. There is a clear and important role for the competition agency in this context, however—that of competition advocate (see chapter 6).

The United States has created an exception to the protection of joint lobbying and permits a challenge under the competition law to joint conduct that constitutes an abuse of government process, such as filing baseless lawsuits simply to injure a competitor or filing false information with a patent claim to improperly exclude competitors. Of course, cartel conduct undertaken by government suppliers does not qualify as lobbying nor do suppliers' attempts to force the government to raise prices that they receive.

Export cartels

Export cartels concern only export transactions, and are legal in many countries, which specifically exempt such conduct from the coverage of the competition law. The logic of these exemptions is that export cartels harm only foreign consumers, who are not the concern of national governments. Even where such cartels are lawful, however, the cartel's activities may have spillover effects in the domestic market. In the course of reaching agreement on export prices or terms of sale, for example, the participants may exchange information about domestic prices or output that would permit them to reach an explicit or tacit agreement affecting the domestic market.

While export cartels may be lawful in the exporting country, they may be prosecuted by the importing countries, depending on the extraterritoriality provisions of their competition laws. In any case increased cooperation between competition authorities and pressures to harmonize competition policy worldwide are likely to result in the elimination of export cartel exemptions or at least make them impractical.

PART II: VERTICAL AGREEMENTS

Some agreements between an upstream firm, for example, a manufacturer or a wholesaler, and a downstream firm, such as a retailer, may fall

within the scope of competition policy. These agreements may be explicit or implicit. Firms may choose to enter into detailed written contracts, or they may simply rely on verbal agreements or established practices collectively known to participants.

Regardless of the specific form taken by a vertical agreement, treating participating upstream and downstream firms as a single vertical structure is central to the economic analysis of the agreement. The decisions of the vertical structure, some made at the upstream level, some at the downstream level, and some jointly, determine the costs of production, the nature and quality of the product or service being sold, the price at which this product or service is sold, the quantity sold, and the geographic markets or customers that are or are not to be served. These decisions also determine the total profits collectively earned by participating firms, subject to external constraints. The distribution of profits among the firms in the vertical structure will be determined in large part by the terms of the agreement.

The terms of the agreement also affect the decisions of participating firms, either by placing direct obligations on them or by changing incentives to make certain choices. The specific terms of the agreement therefore affect economic efficiency.

From the point of view of economic analysis, if not legal analysis, vertical agreements can be thought of as an intermediate form of vertical integration. Although firms are not necessarily integrated in terms of ownership, vertical agreements can result in varying degrees of de facto integration and coordination of decisionmaking between upstream and downstream firms. However, it is important to note that relationships between a parent company and a subsidiary should not be regarded as vertical agreements. A subsidiary is part of a parent company, that is, such a firm is already completely or partially integrated through ownership linkages.

Vertical agreements can, in principle, occur at any stage of the supply or distribution process for a product or service. In practice, attention has been concentrated on restrictive agreements in retail distribution. Examples of restrictive vertical agreements include:

- Resale price maintenance agreements, whereby retail price is fixed by the producer or price floors or ceilings are imposed.
- Exclusive distribution agreements, whereby distributors are assigned exclusivity within a geographic area, or over particular types of clients, or over specific products.
- Exclusive dealing agreements, whereby downstream firms are prohibited from dealing with competing producers or distributors.
- Tie-in sale agreements, whereby downstream firms are required to purchase a certain range of products before being allowed to purchase a particular product. An extreme example of this kind of agreement is "full line forcing," requiring downstream firms to purchase an entire product range.
- Quantity forcing, whereby downstream firms are required to purchase a minimum quantity of a product.

This list is by no means exhaustive. Agreements between upstream and downstream firms can be very complex, incorporating many mutual commitments and obligations. Franchise agreements, for example, can be quite elaborate and may sometimes incorporate one or more of the restrictive types of provisions listed above.

These provisions may have desirable effects. They may lower prices because of increased output by existing firms arising from the expansion of demand and economies of scale; prices may also fall as new firms are encouraged to enter the market. Vertical restraints generally ensure that sellers earn a minimum profit margin that allows for greater efforts to promote a product. Competition between different brands, for example, may also be heightened if competing firms provide incentives to promote their

respective brands through vertical restraints. That is, although price competition between dealers of the same branded product may be restricted by means of vertical agreements, competition between different brands may be encouraged because of the incentives for increased sales efforts that profit margins under vertical agreements provide. Vertical restrictions may also facilitate the entry of new firms. In some situations, in order for new products (or firms) to penetrate the market, heavy sales promotion rather than price competition has to be relied on.

Vertical restrictions can also have ambiguous effects. For example, vertical restrictions that require the provision of such services as detailed instructions on how to use a product may benefit many consumers, though not necessarily all of them. The cost of the additional services is added to the price of the product, but some groups of consumers may or may not be willing to pay the higher price in exchange for such services. Generally speaking, first-time buyers benefit more from detailed instructions on how to use a product than those who already have used it.

Vertical agreements can also have undesirable effects. They may be used to help cartelize an industry or prevent market entry. For example, a network of resale price maintenance agreements can be used by a group of colluding manufacturers to enforce a price-fixing agreement by making it more difficult to cheat on the cartel, since vertical agreements facilitate monitoring of the retail price of a product (see also the discussion on this subject in Chapter 4, Mergers). A dominant incumbent may also make it difficult or even impossible for rivals to enter the market by tying up scarce distribution channels through exclusive distribution agreements.

From a competition law and policy point of view, vertical agreements are most likely to be harmful when at least one of the transacting parties is dominant in either the upstream or downstream markets. For this reason, the competition effects of certain vertical arrangements or business practices are discussed in Chapter 5, Abuse of Dominance.

In this context, a three-step approach to the analysis of restrictive vertical agreements can be applied. First, the analysis should focus on signs of the collective exercise of market power or the presence of market dominance at the upstream or downstream levels. If none of the participants in the agreement is dominant in its respective markets and market structures are such that the agreement is not likely to facilitate collusion, it is unlikely that the agreement will be harmful. Second, if these structural concerns exist, the effect of the agreement on competition should be closely examined. Finally, if competitive concerns persist, the analyst should determine whether there are significant efficiency gains arising from the agreement that outweigh the harm to competition.

It must also be noted that even restrictive vertical agreements that involve dominant firms can result in efficiency gains. This requires caution in dealing with such cases so that efficient market developments are not impeded. The types of efficiencies that are relevant in this analysis are discussed in Annex 2, Efficiency Defenses.

REFERENCE

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Appendix 3.1

Case Study: Prosecution of a Cement Cartel in the Slovak Republic

This case provides an example of successful prosecution of a nationwide cartel agreement in a transition economy. Beginning in 1992 the Antimonopoly Office of the Slovak Republic began receiving a series of complaints from cement purchasers alleging unlawful agreements between cement producers. Customers reported that they were unable to deal with more than one producer or that they were forced to purchase more expensive cement from distant producers. Initially, after reviewing some documents and conducting oral hearings, the Antimonopoly Office was unable to confirm these allegations. Some of the producers' conduct could be explained, for example, by the poor credit records of some customers. The Antimonopoly Office nevertheless continued to monitor the cement industry and regularly visited producers and the cement producers association.

In 1993 an important breakthrough occurred during a routine visit by an investigator from a local branch of the Antimonopoly Office. The investigator found a letter from an official of the Cement Association of the Slovak Republic suggesting a nationwide division of markets. The letter, addressed to the directors of all Slovak cement producers, discussed an "application" by a firm to establish a new cement facility in a particular town. This prompted the Antimonopoly Office to conduct a statistical analysis of data on prices, production, exports, and inventories of the domestic cement producers. The pattern of price changes could not be explained objectively, which gave rise to strong suspicions that prices had been set artificially. There was still insufficient evidence of an agreement among cement producers, however. The investigation then focused on individuals who could have had direct knowledge of an agreement.

First, the authorities contacted former employees of the alleged cartel members, particularly those who had been fired or otherwise forced to leave. Former employees were identified from company records obtained by the Antimonopoly Office. One of the people contacted provided significant details about a market allocation agreement among the cement producers.

The next step was to interview witnesses at the offices of the cement association. Since the Antimonopoly Office knew the identity of the people involved in implementing the agreement, the investigators were able to prepare for the interviews in advance. During the interviews some of the responses clearly contradicted others. Witnesses who were suspected of lying were informed of the legal consequences. Some witnesses then described the implementation of the agreement in detail in exchange for a promise not to prosecute them for their original inaccurate stories. At this point, the experts from the Antimonopoly Office decided to visit some cement producers without prior announcement. Teams of two or three investigators examined written materials relating to the case before conducting the interviews. Faced with written proof

and minutes from the legal hearings, top officials of these enterprises could not deny the basic facts of the agreement.

The evidence revealed that cement producers had entered into agreements restricting competition for at least two years. In 1991 the parties had agreed to a regular exchange of basic economic data about their firms (output, costs, exports, inventories, profits, numbers of employees, and average wages and salaries). They reported this information monthly to a consulting firm, which compiled and distributed it to the producers. The consulting firm also prepared documents establishing a geographic division of markets among the producers and suggesting production quotas for each producer. Documents prepared by the consultants contained such statements as: "The particular region shall be supplied exclusively by the producer located therein. If there is no producer in a region, a principal supplier shall be designated." These plans were first discussed by the commercial directors of the producers and then agreed to by the managing directors.

In 1994 the Antimonopoly Office issued an order prohibiting all cement producers from engaging in market division, setting sales quotas or exchanging information that could facilitate the coordination of such illegal agreements. The office also imposed fines totaling Sk19.96 million (US$0.7 million) on the entrepreneurs who had participated in the agreements—the highest fine that had ever been imposed by the Antimonopoly Office. The parties appealed the decision to the Supreme Court of the Slovak Republic, which upheld the decision.

Chapter 4

MERGERS

Enterprises can combine in several ways. One firm may purchase from another firm all of its outstanding securities, all or some of its operating assets, or a significant share of its outstanding securities.[1] Alternatively, two firms may exchange securities to form one firm. Such transactions may be the result of an agreement between the two enterprises, or the takeover may be unsolicited, unexpected, or even "hostile"—that is, resisted by the target enterprise. Established practice has been to label any transaction in which two independent actors are combined into one a merger, resulting in the strengthening of one actor and the elimination of the other.

WHY ARE WE CONCERNED ABOUT MERGERS?

Standard theoretical analysis of competition describes a range of market structures—from a perfectly competitive market with many competing firms, none of which can influence the market price individually, to an oligopoly, in which the market consists of a few firms, each having some power over the market price but constrained by the rivalry of the others, to a monopoly, in which a single firm sets the price unilaterally. Sometimes market structures become more concentrated over time as a few firms succeed and grow while others fail. Some firms grow not because of their own competitive efforts but because of a merger.

A firm's exercise of market power can harm consumers (and other producers), through higher (rather than competitive) prices, reduced output, and poorer quality products. Competition authorities must identify and control the abuse of market power. The rationale for merger control is simple: it is far better to prevent firms from gaining market power than to attempt to control market power once it exists. Effective merger policy requires a judgment concerning the impact of a merger on competition before the merger has occurred.

Most mergers pose little or no threat to competition in any market. Many simply are investments by firms with available cash. Others seek the fuller use of an underused enterprise resource (for example, an enterprise that has developed expertise in the marketing of one consumer product may believe that it could use its expertise to market other consumer products, or an enterprise that has developed a new technology may seek new applications for that technology). Still other mergers may reduce competition, but so slightly or in a market that is so competitive that consumers are not harmed.

However, some mergers would seriously harm competition by significantly increasing the probability of exercising market power. These are the transactions that the competition authority seeks to identify and prevent. To understand why, it is useful to begin by dividing

This chapter was prepared by principal team members Peter Bamford, David Elliott, Russell Pittman, and Margaret Sanderson.

mergers into three categories based on their likely impact on the competitive process: horizontal, vertical, and conglomerate. Horizontal mergers take place between two firms that are actual or potential competitors—that is, they sell the same products or close substitutes. The term *horizontal* signifies that the two enterprises are at the identical level in the chain of production—for example, two manufacturers of steel, two distributors of beer, or two retailers of electronics equipment competing for customers within a given geographic area.

Vertical mergers take place between firms at different levels in the chain of production—firms that have actual or potential buyer-seller relationships. Examples include a merger between a brewer and a beer distributor (whether or not that brewer was using that distributor at the time), and a merger between a coal mine and an electricity generator. Finally, conglomerate mergers are neither horizontal nor vertical, that is, the firms neither produce competing products nor are in an actual or potential buyer-seller relationship.

Of course, mergers between two multiproduct firms may be simultaneously horizontal, vertical, and conglomerate, and each aspect of the merger must be analyzed separately to understand the likely competitive outcome. Furthermore, even when a merger raises competitive concerns in one set of products, it may not in another set. In these situations, it may be possible to solve the competitive problems without having to prevent consummation of the entire merger. This solution is discussed below.

Do horizontal mergers hurt competition?

Almost all competition laws identify and prohibit two forms of anticompetitive conduct apart from mergers: abuse of a dominant position by a single firm and certain restrictive agreements by two or more firms. Anticompetitive mergers are those that significantly increase the likelihood of such conduct. Horizontal mergers are the most suspect in this regard, since, by definition, they reduce the number of independent competitors in a particular market. The anticompetitive effects of horizontal mergers can be separated into two broad categories: unilateral effects and coordinated effects.

UNILATERAL EFFECTS. A merger that has anticompetitive unilateral effects creates a single firm with substantial market power or significantly increases the market power already enjoyed by a single firm. In the worst situation a merger may create a monopoly. Even if a monopoly is not found, a merger could create a firm with high enough market power—or strengthen the position of a firm that already has market power—so that it can raise its price above the competitive level, to the long-lasting harm of consumers. In either case true market power requires not only a large market share but also barriers to entry, so that new firms, or existing firms operating in other markets, cannot easily enter the market in response to high prices and profits. In most countries mergers having this anticompetitive effect are the type frequently challenged by competition authorities.

Another type of anticompetitive unilateral effect may occur in markets with heterogeneous products. Heterogeneous products have distinctive characteristics, for example, technical specifications or brand image, that appeal more to certain buyers than to others. Thus even in a market in which many products compete and are reasonably close substitutes for each other, some may be closer substitutes than others.

In such circumstances different competitors operate as more or less binding constraints on a particular seller's pricing (for which pricing is a shorthand for all competitive behavior). If that seller were to raise its price unilaterally, it would expect to lose some sales to all firms in the market. But it would lose most sales to competitors that produce the closest substitutes.

Thus a merger between two competitors selling products that are close substitutes is likely to be most attractive to the firms involved and most dangerous to competition. Following the merger, if the firm raises its price, a large percentage of the sales that would have been lost are now kept within the same firm. The closer is the acquired product as a substitute, the more is the constraint on pricing eased by the merger, and the more likely is the result of the merger to be a unilateral increase in price for at least that product (and likely the product of the acquired firm as well).[2] Under these circumstances, a horizontal merger may be challenged even if there are several firms operating in the market.

COORDINATED EFFECTS. The concerns of coordinated effects are somewhat different. A horizontal merger may reduce competition by making it easier for the firms remaining in the market to coordinate their behavior—the competitive price, quantity, and quality may not be reached. Rather, such firms earn some amount of monopoly or oligopoly profits for themselves. Examples of such coordinated behavior include both explicit and implicit agreements over the price to be charged, which seller to serve a given geographic territory, and which seller to serve particular customers (for greater detail, see Chapter 3, Agreements). One popular paradigm holds that for such an agreement to be successful it must meet four conditions:

- All significant firms in the market must be persuaded to join the colluding group.
- These firms must then be able to agree on their future anticompetitive behavior (on what price to charge, for example).
- The firms must be able to detect whether a participating firm is cheating on the agreement in order to gain more than its fair share of sales (for example, by charging a price slightly lower than the agreed price but still higher than the competitive price).
- The firms must be able to collectively punish such a cheating firm so as to maintain the terms and coherence of the original agreement.

Experience has shown that such anticompetitive agreements are more likely to occur and be successful in industries having certain characteristics: product homogeneity, open bidding, frequent sales in small volumes, and similarity of costs among firms. Moreover, given such characteristics, reaching and maintaining an explicit or implicit agreement is easier for a smaller number of firms than for a larger group. Thus in certain industries mergers may make it more likely that the remaining firms will engage in coordinated anticompetitive behavior.

A special case of horizontal mergers that sometimes causes concern is that in which the merging parties are judged to be potential rather than actual competitors. A firm that is not actually selling in a market but is perceived as a likely future seller—and may be poised to enter the market if prices rise sufficiently—is likely to have a salutary effect on the competitive behavior of firms already in the market. Of course, it is not always easy for existing competitors or competition authorities to evaluate the intentions of an enterprise that is not currently operating in the market. One often useful strategy is for competition authorities to examine the documents of the enterprise already in the market that analyze and counsel action based on the state of market competition. If the potential competitor has an impact on the behavior of the incumbent competitor—if its likely reaction is taken into account when the incumbent determines its pricing or marketing strategies—the documents should demonstrate this.

A merger between an important competitor and an important potential competitor, especially if no other firms are similarly poised, could remove the competitive discipline provided by the potential entrant. Experience shows that the loss of potential competition is likely to be of greatest concern when a dominant domestic firm

is acquired by an important multinational firm that produces the same product. Similarly, if geographic markets are local or regional, important potential competition may be provided by a significant seller of the same product in a nearby market. Note, however, that if other significant potential entrants remain after such a merger, the loss of potential competition is not likely to be significant.

Can vertical mergers be anticompetitive?

Vertical mergers are less likely to result in a loss of competition because they do not immediately reduce the number of competitors in a market. Economic and legal research in the past quarter century has greatly improved our understanding of the motives behind vertical agreements, including vertical mergers, demonstrating that such agreements are often beneficial to both firms and consumers. For example, they may facilitate long-term investment, enhance product quality, and enable new firms to enter the market. Nevertheless, circumstances exist in which vertical mergers may hurt competition, and these circumstances may arise relatively more frequently in developing and transition economies.

A vertical merger may enhance a dominant firm's position by increasing the difficulty of entering its market. Consider a dominant or monopoly firm that manufactures a particular product. A smaller competitor considering expansion, for example, by building a new manufacturing facility, may need to purchase certain critical raw materials. Similarly, a potential entrant may need to contract with suppliers of warehousing, transportation, or distribution services in that market. If the dominant firm merges with suppliers of critical inputs or services, it may be able to deny these products or services to potential competitors and thus protect (or entrench) its dominant position.

Such a vertical merger may immediately harm consumers if the potential competition from one of these outside firms was constraining the pricing of the dominant firm. What is more likely is that the merger will harm consumers in the future. Potential entrants, already facing the difficult prospect of competing with a dominant local manufacturer, now would have to acquire more distant raw materials or set up their own transportation and distribution systems. Market entry in transition economies is often made difficult by more generalized factors, such as poorly operating markets for capital, land, and labor (see Annex 1, Barriers to Entry). The necessity of entering a market at two levels instead of one—say, at both the manufacturing and distribution levels—may exacerbate some of these problems and act as an effective entry barrier. Antimonopoly authorities may challenge vertical mergers if they are convinced that such mergers are motivated by a desire to entrench a dominant position.

The most important condition needed to challenge a vertical merger on these grounds is that one of the parties occupy a dominant position in its market. A second necessary condition is that control of the vertically related market by the dominant firm could increase the barriers to entry into its own market.

Another anticompetitive effect of vertical mergers is that they may facilitate collusion among firms at a given level in the manufacturing or distribution chain. Imagine, for example, that two manufacturing firms want to collude on price. If they sell a significant portion of their output to, say, wholesalers, who are free to choose their own resale prices, then one of the four conditions listed above for successful collusion may not exist: if prices diverge at the retail level, the manufacturing firms may be unable to determine with certainty whether the divergence arises because one of the firms is cheating on the cartel or simply because downstream sellers use differing markups. Acquisition of these downstream sellers might be a solution to the manufacturers' problem and thus may worry competition authorities.

Rarely, however, is a vertical merger challenged on the grounds that it will facilitate collusion. Absent direct evidence of anticompetitive intent by the merging parties, there should be good evidence, based on the four conditions listed above, that collusion is possible and would be much more likely to occur after the merger.

Should authorities fear conglomerate mergers?
Competition authorities in most countries tend to ignore conglomerate mergers, which have neither horizontal nor vertical components. By definition these mergers involve firms operating in unrelated markets. There are a few exceptions, however.

First, in some quarters there is a fear of conglomerate firms in general, not because of their conglomerate nature per se but because of their size. The fear is that certain firms may become so large, especially in terms of assets, that they have an advantage over other firms in the competitive process: they will be able to finance larger advertising campaigns, for example, or survive longer periods of intense price competition, even to the point of predation, because of the deep pockets they have accumulated.

Although predatory behavior is certainly a concern of competition authorities, the simple fact of a firm's large size is seldom sufficient to justify action. Conglomerate mergers are rarely challenged on these grounds. Authorities widely believe that well-operating capital markets will allow other firms to finance expansion to compete with larger rivals if expansion is economically justified.

But in countries where capital markets do not work smoothly, the concern over conglomerate mergers could be more pressing. Some economies are characterized by a few large groups of diversified enterprises containing, in addition to manufacturing and service firms, large financial institutions. Absent efficient capital markets, the members of such a group may enjoy a competitive advantage over rivals in their ability to obtain capital on more favorable terms. In this case the analysis of conglomerate mergers becomes theoretically indistinguishable from that of vertical mergers. Financial capital becomes the input in short supply. Its control by a dominant firm may render entry more difficult. The conglomerate merger that forms such groups may then become competitively suspect.

A concern has been expressed in some quarters that conglomerate mergers can enhance the likelihood of "mutual forbearance." If conglomerate firms compete with each other in more than one market, each firm may decide independently to compete less vigorously with its conglomerate rival in a market in which it is strong because of fears that the other will retaliate in a market in which it is weak. A live-and-let-live policy may develop that is comfortable for the two firms but not beneficial for consumers. This theory is not often employed against conglomerate mergers, however, as there is usually no credible evidence that such an effect is likely to result from a merger.

HOW ARE MERGERS ANALYZED?

Since most mergers do not harm competition seriously and are themselves part of the competitive process, competition authorities must examine them quickly, particularly if a decision needs to be made before the merger is consummated. There are two basic stages in merger inquiries. The first is to determine whether the merger raises any competitive concerns. This determination can be achieved without a full analysis, and in most cases the competition authority will not take further action. But if the possibility of competitive harm is identified, a more complete examination is required. At any stage in the analysis, however, the competition authority may conclude that there is no basis for concern. At that point the investigation should be closed, both to conserve the scarce resources of the agency and to avoid

unnecessary delay in completing what could be an efficiency-enhancing transaction.

Most merger control laws are written generally. They declare that mergers are unlawful and should be blocked by the competition authority if they will "substantially harm competition." It is left to the competition authority to interpret and employ this broad standard. Given that most mergers do not harm competition, the analysis is necessarily complex. Some competition authorities have issued guidelines describing to the public the process that they will use in analyzing mergers, especially horizontal mergers. Although these guidelines differ in detail, they are broadly consistent in their approach. A well-known example is the five-step process contained in the 1997 U.S. Department of Justice and Federal Trade Commission Horizontal Merger Guidelines. (An excellent discussion of these guidelines is found in Ordover and Willig 1993, 139–50.) The five steps are:

- Market definition and description.
- Identification of firms that participate in the relevant market and their market shares.
- Identification of potential adverse effects from the merger.
- Analysis of ease of market entry.
- Identification of efficiencies that might arise.

Market definition and description

A market may be loosely defined as consisting of all goods that are close substitutes from the customers' point of view. (Of course, many customers are firms, not individuals.) The commonly accepted view is that there are two components to a market: product and geographic. Often a product market is defined first—based on which products customers consider close substitutes—and then a geographic market is defined—based on the ability of customers to purchase from different production locations. Substitutability and location are determined most accurately by the reactions of customers to relative changes in prices or sources of supply. Developing a detailed description of the chain of supply, from raw materials and manufacture to ultimate consumer, is helpful for setting the relevant market in context.

No aspect of merger analysis is more important than market definition. Frequently, how the market is defined determines whether a particular merger is judged anticompetitive and unlawful. A market that is defined too broadly, for example, can result in either of two types of errors. Two firms may be judged to be competitors when they are not, resulting in an erroneous decision to prevent a merger that is not anticompetitive. Or, a merger of two competitors may be considered insignificant, resulting in an erroneous decision not to prevent an anticompetitive merger. Similar errors can occur when markets are defined too narrowly.

Consider this example. In 1986 in the United States the Coca-Cola Company announced its intention to purchase the Dr. Pepper Company and merge their operations. Each company manufactured carbonated soft drinks with different flavors. The authorities could have determined that the relevant product markets were relatively narrow, one such market consisting, for example, solely of cola drinks. In that case the two firms would not have been actual competitors, and the merger probably would not have been anticompetitive. On the other hand, the authorities could have defined the relevant market much more broadly, including several types of beverages, such as carbonated beverages, coffee and tea, fruit juices, milk, and even water. Then, the two firms would have been competitors, but in a market so large that their merger could not be considered anticompetitive.

The U.S. Federal Trade Commission investigated the proposal and concluded that the two firms competed in a market that it labeled "carbonated soft drinks." In that market Coca-Cola

was the largest firm with more than 37 percent of U.S. sales in 1985, and Dr. Pepper was the fourth largest firm (after PepsiCo and Philip Morris, producer of Seven-Up) with almost 5 percent of U.S. sales. The commission argued that the merger would significantly reduce competition and asked a court to prevent it. The court determined that although there might be some competition among several different types of beverages, in fact the principal competition to Coca-Cola was other carbonated soft drinks, and that such drinks constituted a market.[3] The court ordered that the merger not take place. (For a more detailed discussion of this case, see White 1994.)

Identification of relevant firms and their market shares

Much of competition analysis is forward looking, particularly in merger analysis, in which the purpose is to identify the likely future effects of a transaction. Thus firms considered to be in the relevant market include not only those that currently sell there, but also those that could easily begin to sell there through "production substitution"—switching production from one product to another. Likewise, the market shares of firms already producing in that market should be calculated in a manner that best characterizes their future significance.

Mergers that occur in unconcentrated markets or that do not greatly increase concentration are not likely to hurt competition. The concentration analysis is a useful screen, for use in identifying relatively quickly which transactions may be benign. While it is difficult to generalize about what level of concentration will generate concern in different countries, a merger that gives a firm a market share exceeding 35 percent or that involves a firm that already has a market share greater than 35 percent probably merits further inquiry. The competition community generally agrees, however, that a significant increase in concentration resulting from a merger is not itself a sufficient basis for preventing the merger. The competition authority must go further and determine the likely competitive effects of the transaction.

Identification of potential adverse effects

Within the category of harmful horizontal mergers, those that create or enhance a dominant position are the most common, especially in transition or developing economies. There, markets are likely to be highly concentrated initially, often because privatization has resulted in a single leading or dominant firm. Mergers or acquisitions by such firms, especially of new and potentially more efficient competitors, may raise concerns. Careful inquiry should be made, however, into whether the resulting firm would in fact be dominant after the merger. Although it might be much larger than its rivals, much of its capacity could be inefficient and outmoded. Then, conditions for entry and expansion of smaller firms are critical to the analysis.

The second type of anticompetitive unilateral effect discussed above occurs in markets characterized by differentiated products. It can be illustrated by a recent merger of bread companies in the United States. In many geographic markets the two enterprises that proposed merging were the leading producers of branded white bread sold in grocery stores. Other products did arguably offer some competition, including other brands of white bread, "private label" (for example, store brands) white bread, white bread freshly baked in the grocery store, and other kinds of bread (rye, wheat, or potato). But information received from both the merging parties and their customers made it clear that the two brands were the closest competitors to one another and that each engaged in competitive behavior targeted against the other that benefited consumers. The U.S. Department of Justice feared that in the geographic markets in which the two firms dominated, the merger would lead to price increases for both products,

since sales lost from one brand to the other would now be internalized by the merged firm. The department sought and won a settlement leading to the divestiture of brands and, where necessary, physical assets to other bakers in those locations.

Finally, horizontal mergers may increase the likelihood of collusion or other anticompetitive coordination. Such mergers may be observed in transition or developing economies when newly privatized enterprises, uncomfortable in a competitive environment, seek ways to return to more familiar cooperative arrangements.

Assessing probable competitive effects is difficult. The inquiry cannot be conducted in a vacuum; it must be made in the context of the affected market. Thus the competition authority should seek information from enterprises actually or potentially participating in that market, including the internal documents of the merging parties. However, the views of the merging parties should also be considered. Their bias in favor of the merger is obvious and must be taken into account. But they can still offer important insights into market operations.

Barriers to entry

In merger analysis as in other areas of competition policy, particularly those involving issues of dominance, the entry analysis can be critical to the outcome of the investigation. A merger could make certain anticompetitive conduct more likely, but if attempts at such conduct would be defeated within a reasonable period of time (such as two to three years or sooner) by new entry, the merger cannot be considered anticompetitive. Thus entry analysis attempts to determine whether and how quickly new firms would enter the market in response to the hypothesized anticompetitive activity.

Firms that could quickly and easily begin production in a market can be considered market participants since they are assumed to already influence the market. The entry analysis attempts to determine the extent to which firms not currently influencing the market would choose to enter following anticompetitive activity. The question is commonly structured as follows: if, after the merger, prices in the relevant market rise above competitive levels by a noticeable amount, would new entry occur quickly enough and at a sufficient scale to make it unprofitable for current sellers to sustain the higher price?

Consider the most important parts of this question more closely:

- *Price increase.* The price increase of concern is often described as one that is "small but significant and nontransitory." The specific example that is often used is a price increase of 5 percent that will last "for the foreseeable future." But this guide may be changed in particular circumstances. Also, the hypothesized price increase should be real, not simply inflationary.
- *Likelihood of entry.* Entry must be likely to take place following a price increase. Authorities can identify domestic or foreign firms that may be candidates for entry and interview their officials to learn more about that possibility. If the initial analysis suggests that entry is likely, but no firm can be found that would be interested in entering under the conditions hypothesized, another barrier to entry may exist that has not been identified.
- *Timeliness of entry.* Firms must be likely to enter quickly enough so that consumers are not significantly harmed by the loss of competition. Two years is often given as a criterion for timeliness, though in some cases—especially in durable goods markets—a longer period may be appropriate.
- *Sufficiency of entry.* Entry that is likely and timely must also be of sufficient scale to counteract the loss of competition that would otherwise take place following the merger.

Efficiencies defense

Most competition laws provide for some form of efficiencies defense. Competition experts generally agree that a merger that would significantly harm competition should nevertheless be allowed if the benefits to the public (sometimes called efficiencies) are of greater magnitude than the losses to competition. There is no consensus, however, on the specific elements of the defense. What types of efficiencies should be recognized, and how should they be measured? How should public benefits be balanced against the harm to competition? Must the efficiency gains be passed on to consumers as lower prices or better products rather than simply enjoyed by producers as lower costs and higher profits?

Identifying and quantifying efficiency gains is technically challenging. Quantifying the expected harm from the loss of competition may be even more problematic. Furthermore, most countries pose an additional requirement that the proposed merger be the least anticompetitive means of achieving the efficiencies. This means that an inquiry into alternatives must also be undertaken.

Although it is difficult for competition authorities to consider the issue of efficiencies explicitly, they should do so in appropriate circumstances. Efficiency considerations could be implicitly recognized in the standards used for determining anticompetitive mergers. Standards that are set sufficiently high, that is, standards that prohibit only mergers that are clearly anticompetitive, automatically authorize most efficiency-enhancing transactions without requiring explicit consideration of the issue.

A special form of efficiencies defense is the so-called failing-firm defense. For example, if a firm is about to go out of business, it is difficult to see how consumers would be worse off if its assets were purchased by a competitor rather than be allowed to leave the market. In many countries mergers that would otherwise be considered anticompetitive are approved if they meet the requirements of the failing-firm defense. However, just because a firm is about to go out of business does not necessarily imply that its productive capacity will leave the market. Thus the law in many countries imposes four conditions on the defense:

- The firm will be unable to meet its financial obligations in the near future.
- The firm will be unable to reorganize successfully under bankruptcy laws.
- The firm has made good-faith but unsuccessful efforts to find alternative purchasers who would keep the assets in the relevant market and not reduce competition as much as the proposed merger.
- Without the merger, the firm's assets would leave the relevant market.

WHAT INFORMATION IS RELEVANT TO MERGER INVESTIGATIONS?

Access to relevant information is the most important factor for ensuring that a merger assessment is accurate. In a world with perfect information an enforcement agency would need to examine only the demand and supply functions facing the merging parties to assess whether the merger would likely harm competition substantially. Unfortunately, enforcement agencies do not live in such a world and must turn to indirect sources of information.

Assessing demand and supply

It is important to know both demand and supply conditions to accurately predict the competitive behavior of firms. Knowing only the premerger costs of the parties and their premerger markup over costs is not sufficient to predict postmerger competitive behavior. One also needs to know how buyers and competitors will react to a firm's attempts to raise prices. If a sufficient number of buyers will turn to alternative sources of supply and make a price increase unprofitable then the merger is not like-

ly to harm competition substantially. This is true even in cases in which the postmerger market share appears to be high.

To assess demand and supply conditions, enforcement agencies must obtain the following information:

- The identity, views, strategies, and behavior of buyers and competitors.
- End uses, and physical and technical characteristics of the relevant product(s) and their close substitutes.
- Costs to buyers of switching to close substitutes.
- Costs to competitors of adapting or constructing production processes and distribution and marketing systems.
- The existence of second-hand, reconditioned, or leased products.
- Price relationships and relative price levels.
- Shipment patterns.
- Transportation costs.
- Production and sales of the relevant product over several years.
- Methods, costs, and time horizons required for entry into the relevant market.
- Regulatory practices and other government constraints.
- Foreign competition.
- Change and innovation in the industry.

This information is necessary for defining the product and geographic market, identifying competitors, calculating market shares, and determining the likely competitive effects of the merger and conditions of entry.

Considering the special case of foreign competition

In many countries foreign competition is an important factor constraining the ability of domestic firms to exercise market power. In theory, foreign competition can be considered when delineating market boundaries. In practice, however, it is often dealt with separately. A number of factors are specific to the assessment of foreign competition.

Foreign firms may not sell to domestic markets because of tariffs, in which case it is important to assess whether the tariff would continue to constrain entry following a postmerger price increase. Ordinarily, the significance of foreign firms to domestic competitors varies directly with the level of the tariff. Also, import quotas and voluntary restraint agreements place a ceiling on the extent to which foreign firms may participate in the domestic market. If foreign competitors are currently at or near their quota limits, they cannot be relied on to provide additional competition in the domestic market after a price rise.

In some cases import quotas are calculated as a percentage of a product's total domestic sales. The effect of such quotas could be to reduce imports after imposition of an anticompetitive price increase in the domestic market. Such a price increase is achieved by a reduction in output, which has the effect of reducing the volume of imports from the country subject to the percentage quota.

In addition to tariffs and quantity restrictions, a number of other factors could limit the effectiveness of foreign competition:

- Regulations that impose product-quality or labeling standards and specifications or that impose license or permit requirements.
- Difficulty in meeting demands for service, spare parts, or delivery.
- Threats of antidumping actions or countervailing duties.
- Government procurement or other "buy local" policies.
- Foreign ownership restrictions.
- Exchange rate fluctuations.
- Formal and informal arrangements for global market allocation within multinational enterprises that have domestic affiliates or among independent multinational firms.
- International product standardization within such enterprises.

- Terms of license, franchise, and noncompetition contracts between foreign firms and their domestic subsidiaries.
- Conditions in the home markets of foreign competitors.
- An industry's susceptibility to supply interruptions from abroad.

It may be the case, particularly in transition and developing economies, that artificial constraints on foreign entry have only recently been removed, so that foreign competition in domestic markets may not be an issue at present. But conditions may be right for such entry in the near future. Relevant factors include:

- The existence of cross-border distribution systems.
- The amount of information that domestic buyers have about foreign firms.
- Whether foreign suppliers have been placed on approved sourcing lists.
- The existence of significant excess capacity held by foreign firms.
- The similarity between the needs of domestic buyers and the needs of customers of foreign firms.
- Exchange rate trends.
- The existence of technology licensing agreements, strategic alliances, or other affiliations between domestic buyers and foreign firms.

Finally, the efficiencies and failing-firm defenses require specialized information. If efficiencies are being advanced as a rationale for the merger, the enforcement agency must obtain information related to the projected cost savings, the time frame needed to achieve these savings, investments or other costs required, and possible alternatives to the proposed merger as means of achieving the savings. If one of the parties to the merger is claimed to be a failing business, the enforcement agency must obtain detailed information relating to the firm's current and projected financial health and to the firm's efforts to solve its financial problems in ways other than the proposed merger.

WHAT ARE THE SOURCES OF RELEVANT INFORMATION?

Several sources of important information in a merger inquiry are available, including the merging parties, existing and potential competitors, customers, suppliers, and public and government sources. In a comprehensive merger investigation no single source is sufficient. Moreover, there may be different sources within a given class, such as large and small customers, requiring the enforcement agency to seek information from a cross-section of participants. Although publicly available information is useful to enforcement agencies, a comprehensive inquiry almost always requires access to private, confidential, and commercially sensitive information. Therefore, the enforcement agency must be able to safeguard confidentiality for parties that provide such information.

Merging parties

The first source of information sought—and often most important—is the merging parties. The parties' initial submissions often allow enforcement agencies to determine quickly whether the merger in question will require detailed examination. Since most mergers do not threaten competition, it is often possible to make such a determination solely from this information, assuming it is truthful and complete, or together with other publicly available information.

In some cases the merging parties are asked to provide more detailed information regarding their business activities. Enforcement agencies ask questions about internal matters such as product lines, customers, suppliers, and market shares and about external matters such as the relevant market, competitors and their market shares, the availability of substitutes, the role of foreign and potential competition, the nature of innovation and change in the market, and the extent of government regulation.

How the competition authority obtains information from industry participants, including both the merging parties and third parties such as customers and suppliers, varies across countries. The means selected depend on the legal tools that are available to the agency to extract information as well as on prevailing business practices. Usually, the most important source of information from the merging parties is their business documents. Assuming that such documents were prepared in the ordinary course of business and not specifically for the merger investigation, they are usually highly credible and may provide important insights into issues such as market definition and possible competitive effects of the transaction.

The parties may also provide information that they have created specifically for enforcement agencies. This information obviously may be biased, but it should also be given careful consideration. In some cases the enforcement agency may want an officer of the company to take an oath attesting to full compliance. Enforcement agencies should also be prepared, if necessary, to use their subpoena powers where possible.

Since the information required is usually commercially sensitive, each party may be encouraged to make its submission separately. Although the parties may need to cooperate to provide some information (for example, relating to possible overlapping product lines, or to efficiency claims), the exchange of confidential information should be limited as much as possible. Information exchanged during merger negotiations that do not ultimately result in a consummated transaction may later facilitate collusion and thus violate the provisions of competition law relating to restrictive agreements.

Third parties

Industry contacts other than the merging firms—third parties—are also important sources of information. Buyers, for example, can provide information on market definition. Actual and potential competitors can help the investigator learn about entry conditions. (See the appendix at the end of this chapter for a sample list of questions used by officers of the Canadian Competition Bureau when contacting competitors and customers of the merging parties.)

On balance, third parties may be considered more objective than the merging parties, but the investigator should be aware of these parties' interests in the outcome of the investigation. For example, if competitors believe that a merger will significantly reduce competition, it is in their interest that the merger be approved. Conversely, if the merger will increase competition by creating a more efficient firm, competitors would prefer that the merger not take place. In these situations the information or opinion provided by the competitor may be biased, although the investigator should not automatically assume so. Still, objective information provided by competitors, such as sales volumes or costs of entry, is more reliable than subjective information, such as an opinion about the possible effect of the merger. However, buyers are more likely than competitors to take an interest in preserving competition and reaching efficient outcomes in the market. Their views about the effects of a given merger ordinarily carry greater weight with the competition authority.

Enforcement agencies may contact third parties in several ways. As with the merging parties, letters may be sent to market participants seeking their response to questions, or internal business documents may be sought. Such information may be provided voluntarily or by way of court order or subpoena. Telephone interviews may also be used in addition to, or in lieu of, letters or subpoenas. Also, it is not unusual for third parties to initiate contact with enforcement authorities. Any such complaints should receive careful attention from the investigator.

Authorities should make efforts to request only relevant information. Requests that are unnecessarily broad impose burdens on the party that must assemble and produce the information and on the competition agency that must review it. In particular, a merger investigation should not be used to look into other matters. The agency should be willing to discuss the request for information with the parties in advance so as to eliminate unnecessary burdens. The process of gathering and verifying information may be a continuous one, involving many interactions between the parties and the enforcement agency in the course of the investigation.

In more complex cases it may be necessary to consult industry or economic experts in addition to industry participants. Experts may be needed to fully explain the structural and behavioral characteristics of an industry, particularly one in which the agency has no previous experience. In addition, experts are often consulted when the failing-firm and efficiencies defenses are invoked.

If the competition agency has sufficient concerns to seek to prevent the merger, it should discuss these concerns with the merging parties before making a final decision. The agency should do so without disclosing confidential information or internal deliberative processes and invite a response. These discussions are almost always useful. The agency may have erred in its analysis—and, if this is so, it is far more efficient and fair to correct the error before formal proceedings have begun rather than after. Further, such discussions in advance of formal proceedings could, if the applicable laws and procedures permit, lead to a settlement without the need for formal proceedings or appeals.

WHAT ARE EFFECTIVE REMEDIES FOR MERGERS?

The merger control laws in most countries do not include punitive remedies, such as fines, for anticompetitive mergers. Instead, the goal is simply to remove the anticompetitive threat to the marketplace. The means for achieving this end can be separated into three categories: prevention of the merger in its entirety, or if the transaction has been consummated, full dissolution or breakup of the merged entity; partial divestiture of assets or operations sufficient to eliminate the anticompetitive effects, while permitting the underlying transaction to proceed; and orders regulating or modifying the conduct of the merged firm to prevent the feared anticompetitive effects. The first two remedies can be considered as structural, the third behavioral. Structural remedies are generally preferred. They are more effective in the long run and, equally important, do not require continuing oversight or regulation by the competition agency. It is strongly advised that structural remedies be implemented before consummation of the proposed merger. It is difficult and time consuming, and at times impossible, to undo a merger after it has occurred.

Structural remedies

If a merger is judged to be anticompetitive, its prevention is obviously an effective remedy, and often the most appropriate. But in some cases it may be possible to restructure the transaction to eliminate its anticompetitive aspects. For example, one or both of the merging firms may operate in many markets (product or geographic), but the merger may be anticompetitive in only a few. If assets could be divested in those few markets so that competition is maintained, the merger could be permitted. This partial divestiture remedy is becoming increasingly common in many countries, though it is not always easy to accomplish. Legal, institutional, and business frameworks conducive to such complex transactions must be present.

The first task of the enforcement agency when considering a partial divestiture is to identify a package of assets that can be divested to ensure sufficient competition in the affected mar-

kets. If the divested business is to operate as a separate, stand-alone competitor, the asset package must be viable and able to profitably operate as a going concern. Alternatively, assets could be sold to an entity already operating in the relevant industry. That firm could use the assets to enter new markets or to compete more effectively in its present markets. Viability as a stand-alone operation may be less important in that situation. If only a single asset is to be divested, such as a brand name, the purchasing firm must have additional resources—financial, managerial, production facilities, sales organization—to successfully use the asset. Thus there are three considerations in assembling an asset package for partial divestiture: the package must ensure adequate competition in the affected markets after divestiture, the package must be commercially viable, and the package must be of sufficient size and potential profitability to attract prospective purchasers.

As noted above, if a merger is to be stopped, it should be stopped before consummation if possible. The same is true of partial divestitures: the policy of "fix it first" is desirable for at least three reasons. First, if a partial divestiture proves to be impossible, the entire merger can still be blocked. Second, the merging parties have a strong incentive to complete the divestiture so that they can proceed with their merger. Third, the merger cannot have harmful anticompetitive effects before the divestiture is completed. In some cases, however, the merger may have been completed without the agency's consent. Or, the parties may convince the agency that it is impossible to delay consummation until divestiture is completed and that they should be permitted to complete the merger and sell the assets afterward. The agency should agree to such an undertaking only if it has confidence that the sale can be accomplished quickly and effectively, and if other safeguards exist.

It is far preferable that a divestiture be completed before consummation of the underlying merger. Otherwise, an agency should use this remedy only when it is confident that a sale to an acceptable purchaser can be achieved quickly. The agency should adopt standardized procedures for divestitures, from which it rarely deviates. As agencies gain experience with partial divestitures, it is likely that they will employ this remedy more frequently than any other.

Safeguards. Principal among the safeguards that should be insisted upon if a merger is allowed to go forward before a divestiture is completed is an agreement by the parties to "hold separate" from the merged firm the assets to be divested. A hold-separate agreement will help to ensure that the value of the business to be divested is not eroded. It will also reduce the opportunity for coordinated conduct between the merged enterprise and the divested entity following the divestiture and will heighten the merged firm's incentives to complete the sale quickly. Finally, it will ensure that the merger does not harm competition before divestiture is completed. The hold-separate agreement should require that the business to be divested operates apart from the rest of the enterprise, usually with different managers, and that the business is supplied with adequate resources including capital to maintain its value and competitiveness.

Other safeguards that are important when the underlying merger has been consummated include agreements on the timing of the divestiture and for a third party, or trustee, to assume responsibility for the sale if the parties are unsuccessful after a brief time (discussed further below). The agency may also require that the merged enterprise hold separate a particularly valuable part of its operations, but not a part slated to be sold to another party. This is known as a "crown jewel" provision. The enterprise will be able to take possession of the crown jewel only after the divestiture is completed, creating a strong incentive for the firm to divest quickly.

PROCEDURES. It is important that effective and impartial procedures for carrying out the divestiture be devised. These procedures will of course be subject to prevailing business practices in each country. Common issues include: Who will conduct the negotiations and sale? What is the role of the competition agency? How will the price for the divested assets be determined? How much time will be allotted for completion of the sale? How can the divestiture agreement be enforced?

In principle one or both of the merging parties, depending on which is the owner of the assets to be divested, may conduct the sale. The parties are intimately familiar with the assets and could efficiently identify potential purchasers. Moreover, if completion of the underlying merger is made contingent on a successful partial divestiture, the parties have a strong incentive to work quickly. In some countries, however, the merging parties are given only a relatively short time to complete the sale (for example, six months), particularly if the merger has been consummated, after which an independent third party assumes the obligation. This offers another incentive to the merging parties to complete the sale as quickly as possible.

The competition agency has two principal interests in the purchaser: it must have the ability and intent to operate successfully in the relevant market and the divestiture itself should not be significantly anticompetitive. The agency should retain the right to veto any proposed purchaser or any other aspect of the sale that threatens to undermine these requirements. Otherwise, the agency should not interfere with a divestiture agreement arranged by the merging parties or by an independent third party. The seller is entitled to receive the highest possible price for its assets but should not be able to impose a minimum price. A price lower than the liquidation value of the assets should be avoided, however; otherwise the purchaser may liquidate the assets rather than operate them competitively. This problem can be avoided initially by selecting an asset package that is demonstrably viable.

The amount of time needed to successfully complete the divestiture depends to a great extent on prevailing business practices in each country. It is obviously important that the divestiture take place as quickly as possible to avoid a diminution in the competitiveness of the assets in the relevant market. In countries where the divestiture remedy is often used, 12 months is usually the longest divestiture period allowed. It may be as short as three to six months.

The ability of the competition agency to enforce a divestiture agreement is obviously important. Applicable laws and procedures should enable the agency to apply to the courts for sanctions or remedial orders if the parties do not observe their obligations. Absent such enforcement mechanisms, the divestiture process may break down at some point, especially if the underlying merger has been consummated, leaving the agency with no viable alternative for effective relief. For its part, the agency should monitor the divestiture process closely. It may have developed its own criteria for an acceptable purchaser, which it can share with the seller.

Behavioral remedies

The third type of relief in merger cases is behavioral—imposing orders or obligations on the merged entity to modify or limit its future conduct. Such orders might include obligations to supply a product or service to a certain class of customers for a period of time, or obligations to refrain from entering into certain types of contracts, such as requirements contracts, or, at the extreme, obligations not to raise prices by more than a specified amount for a period of time. Such orders are usually less satisfactory than structural relief. Most of them are excessively regulatory, especially those that purport to control prices or output in some way. They require continual oversight by the competition agency, preempting scarce resources that should be

devoted to more important matters. Also they may be rendered ineffective, irrelevant, or, at worst, competitively harmful over time as market conditions change.

Where the behavioral order is used, it should prescribe a discrete mode of conduct that can be easily monitored, and the obligation should be set for a specified, limited period of time. In Canada, for example, a merger was approved on the condition that the parties work toward the removal of tariffs that were limiting imports of the relevant product into Canada. The Canadian Competition Tribunal's order also held that if the tariffs were not removed within a fixed period of time, the parties would be required to divest an important manufacturing plant. The designated plant was held separately during the interim period. Following this order, tariffs were removed within the scheduled period, and these imported products established a presence within Canada.

A common type of behavioral remedy employed in several countries is a requirement that the merged enterprise license a relevant portion of its proprietary technology to other firms as a means of introducing new competition. In fact, such a remedy is more structural than behavioral: technology is a form of property—intellectual property—and licensing such property is a form of divestiture.

WHAT ARE THE DETAILS OF PREMERGER NOTIFICATION?

Most merger control laws require premerger notification, that is, notification of an intent to merge in advance of consummation. The purpose of such a requirement is obvious: to permit the authority to investigate the transaction and, if necessary, to prevent or amend it before it is consummated. Premerger notification laws vary among countries, reflecting different economic and political conditions. But many such laws have several aspects in common.

Not all mergers need be notified in advance. Such a requirement would add a significant and unnecessary compliance burden for the business community and an equally unfortunate burden for the competition agency, which would have to review the notifications. Experience has shown that usually only larger mergers pose significant risks to competition. Thus the law should set a minimum threshold size below which mergers need not be reported.[4] The size threshold, or thresholds, may be expressed in terms of annual sales (turnover), total assets, or both. The size of the transaction (the value of the securities or assets to be acquired or merged) and the size of the parties (minimum size of either party) should be incorporated into the threshold. The threshold should be expressed in a way that permits, if possible, automatic adjustments for inflation (for example, (x) minimum wages).[5]

The law (or implementing regulations) should specify the information that must be supplied with the notification. In most countries the initial notification is not extensive. It should contain enough information to alert the competition agency to possible competitive problems. The agency will then gather additional information in order to make a more informed decision. The initial premerger filing usually contains the following information:

- Names and addresses of the firms involved in the transaction.
- Description of the transaction, for example, merger, acquisition of assets or shares, joint venture; the value of assets or shares acquired; and copies of any relevant documents relating to the transaction, such as the merger agreement.
- Timing of the transaction.
- Financial information on the merging firms, including sales or turnover and total assets, and copies of relevant annual or other financial reports.
- Details of the organizational structure of the merging firms and of affiliated firms,

and details on significant ownership interests.

- Description of the products and services supplied by each firm.

In some countries the following information is also required in the initial filing:

- A description of the relevant markets served by each firm and their shares in each.
- The reasons for the merger and its expected benefits.
- Certain annual reports and financial statements and internal documents analyzing the merger prepared for corporate decisionmakers.

After the initial filing the parties are required to wait for a set period of time before consummating the transaction. This waiting period is customarily not long, perhaps a month or so. During the initial waiting period, the agency has the power to require that the parties submit additional, specified information. The issuance of this second request extends the waiting period further, while the parties gather the requested information and the agency reviews it. The law may provide that the waiting period is suspended until the parties substantially comply with the second request, after which the period again begins to run. This scheme provides a strong incentive to the parties to gather the information quickly and to make a complete response. However, the agency should not have unlimited discretion to extend the waiting period by repeated or overly technical requests for information.

The notification rules should allow the agency and the parties some flexibility to modify procedures. They could agree to extend the waiting periods, for example. Or, the agency should have the power to shorten the waiting period once it has determined that it will not challenge the transaction. The law should grant the agency the power to adopt rules and regulations after giving the public adequate notice to implement the notification procedures and provide exemptions from the reporting requirements for transactions thought unlikely to present competitive concerns. Finally, the law should set adequate sanctions, usually in the form of fines, to deter and punish violations of the notification requirements.

NOTES

1. The purchase by one firm of less than all of the securities of another may be considered a merger if it permits the purchasing firm to significantly influence or control the acquired firm. If the securities of the acquired firm are held by many shareholders, owners of a relatively small share of its securities—perhaps as small as 10 or 20 percent—may be able to significantly influence or even control the actions of the firm. The extent of control must be determined for each transaction.

2. On the other hand, the easier it is for other firms in the market to reposition their own products to replace the close competition that had been offered by the acquired product, the less likely it is that the merger will allow the merged firm to raise prices.

3. The principal evidence that the judge relied upon in reaching this decision was the internal marketing documents of Coca-Cola, which expressed continuous concern about the competitive reactions of sellers of other carbonated soft drinks to possible actions by Coca-Cola, but no concern regarding (or even mention of) the reactions of manufacturers of milk, coffee, or other drinks.

4. This does not mean, however, that mergers below the size threshold are not subject to the merger control law. The competition authority should retain the power to challenge such mergers, breaking them up after consummation if necessary or preventing their consummation if it learns about them in advance other than through premerger notification. Some countries' laws permit the parties to submit voluntary notifications to the competition authority. The rules and procedures of the notification law apply fully to these voluntarily submitted notifications.

5. In some countries the notification threshold is expressed in whole or in part in terms of a mini-

mum market share; for example, a merger that results in a market share in excess of 25 percent must be reported. The difficulty with such a test is that it is subjective: it requires the merging parties to define the relevant market for purposes of notification of the transaction. Market definition is a complex exercise. The parties might define the relevant market or markets in such a way that notification is not required. Their market definition could be wrong, however, and even if done in good faith, it could result in failure to notify a potentially anticompetitive merger.

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Appendix 4.1

Sample Competitor and Customer Interview Guides

Note: Not all questions will be appropriate for any given interview. This list is intended to be a comprehensive one from which relevant questions or issues can be selected to fit the circumstances of each interview.

Sample Competitor Interview

Part I. Basic company information

1. Address of the company's head office and branch offices and location of manufacturing plants and distribution centers.

2. General description of the company's overall business, including product range, total sales, and asset value.

3. Ownership structure of the company.

4. Position of the individual being talked to and length of service with the company. If the individual has any concerns about talking openly over the phone, offer a letter or suggest that the individual get authorization from a superior within the company.

5. Identify whether the company has any connection with the merging parties that could influence its answers.

Competitors will often be concerned about discussing sensitive business information over the phone with a stranger. Thus it will be important to relay the confidentiality safeguards written in the competition legislation.

Part II. Product market

Actual competition

6. Does the company sell, in any market, products that could be considered substitutes to those of the merging parties under examination with respect to:

- The company's view.
- Physical similarities.
- Similar end use.
- Same customer base.
- Similar relative price.
- Similar absolute price.
- Similarity in manufacture, distribution, and marketing.

7. Regarding these factors, list the other companies that currently manufacture substitute products.

Potential competition

8. Does the company currently have any plans to sell, in any market, products that could be considered substitutes to those under review? If so, when will they be available for sale?

9. Could the company sell, in any market, products that could be considered substitutes to those under review with respect to:

- Cost of adding the requisite capacity.
- Availability of the product or inputs into its production.
- Patents or other proprietary rights.

10. If it could, what price rise or other conditions would be required to make the commitment, and when would the products be available for sale?

Competitors will often be guarded in their responses to questions concerning strategic plans, especially over the phone. Other than providing them with a description of the confidentiality safeguards available in competition legislation, in writing if necessary, there is little that can be done to ensure accurate responses. In other situations overly ambitious responses may be proffered. Then detailed questioning that focuses on the barriers to entry can often result in a more realistic estimate of the likelihood of entry.

PART III. GEOGRAPHIC MARKET

Actual competition

11. How is the product in question usually transported, what are the costs, and what percentage of average shipment value do they represent?

12. What is the maximum distance that the product under review can be profitably shipped?

13. What is the maximum distance that the product under review is regularly shipped?

14. What is the average distance that the product under review is currently shipped?

15. Where are your competitors' plants located?

16. What is the extent of the geographic market served by the parties' plants?

17. What is the extent of the geographic market served by each plant that you operate?

18. What is the extent of the geographic market served by each plant that your competitors operate?

19. Which other companies and plants undertake nontransitory shipments into the geographic market(s) served by the parties' plants?

Where competitors actually ship, profitability is the best indicator of the current geographic market. Care should be taken when dealing with shipments that, because of transport costs, are not profitable. Although such shipments may not continue and therefore may not be a postmerger factor, some companies are willing to absorb some losses to maintain a presence in a market. In such situations an understanding of the reasons why this is the case should be gained before making a determination whether these shipments are likely to be transitory in nature.

Potential competition

20. Are there any characteristics that limit the distance the product can be shipped, such as regulatory restrictions, perishability, or a low value-to-weight ratio?

21. Are there any local set-up costs associated with first-time shipments into a new geographic market?

22. What price increase or other condition would be required before you would be willing to ship significant and nontransitory quantities into the nominal market? The nominal market refers to the geographic market comprising actual competitors as defined by questions 12–20. This market should be expanded to include potential suppliers that would ship into the proximate market within one year in response to a significant price increase.

23. Have you had any past shipments into the nominal market?

24. Do you have any plans to begin shipments into the nominal market in the near future?

25. Do you have sufficient production capacity available to ship significant and nontransitory quantities of the product into the nominal market?

26. What volume of the product would your firm have to ship into the nominal market to have an effect on prices?

27. Where are (other) potential competitors' plants located?

As with competitors' estimates of the relevant product market, care must be taken

since answers may be either guarded or overly optimistic.

PART IV. MARKET SHARE AND CONCENTRATION

28. In your view, which companies compete in the sale of the relevant product in the geographic market?

29. What are their respective shares (and on what basis—sales, units, capacity—are market shares estimated)?

30. Have these shares remained constant, or have certain companies increased their share over time?

31. What level of growth has the overall industry experienced during the recent past? What are your expectations for the future?

32. Do any of the smaller companies exert a disproportionate influence within the industry in terms of price, service innovation, and the like?

Although those contacted may be reluctant to estimate market shares because precise sales figures are unavailable, ask for their best estimate based on personal knowledge. This may be your only source of information on market shares upon which to corroborate or refute the parties' claims, and, if the disparity is large and other sources are unavailable, may lead you to piece together your own estimates based on individual sales figures.

PART V. SUBSTANTIAL HARM TO COMPETITION

33. With regard to previous price movements in this industry and also the price sensitivity of customers, what would be considered a significant real price increase?

34. To what extent, if any, could the merged entity raise prices by this level?

35. What would be the response of competitors currently supplying the market served by the merged entity to such a price rise?

36. How long could the merged entity sustain higher prices without losing so much market share as to make it unprofitable to maintain such a price increase?

37. Do customers possess any countervailing power, such as the ability to quickly switch to other suppliers or vertically integrate to provide their own internal supply?

38. Do orders tend to be large and infrequent?

39. What is the nature of supply arrangements between customers and suppliers?

40. Do customers divide their purchases among suppliers or insist on having secondary suppliers?

41. Do customers regularly monitor industry prices?

42. Can customers easily integrate into the business of supplying themselves with the product under review? Is there any history of this in the industry?

43. Is innovation in design, marketing, production, and distribution important in this industry? If so, are either of the parties to the merger known to be innovators?

44. Are either of the parties to the merger known to be particularly vigorous or effective competitors?

45. Has there been any indication in the past of anticompetitive acts, such as collusion or facilitating collusive behavior?

Price rise estimates will often vary significantly, with competitors who have a vested interest in thwarting their rivals' merger plans sometimes giving the highest estimates. When questioning in this area, it is important that respondents understand that their estimates are in real (inflation-adjusted) terms and are directly attributable to the merger.

PART VI. BARRIERS TO ENTRY

46. Describe the obstacles facing a *de novo* entrant into the market served by the parties to the merger with respect to:

- Capital costs of manufacturing and distribution.

- Tariff or regulatory barriers.
- Patents and other proprietary rights.
- Scale economy advantages.
- Access to scarce resources.
- Product differentiation.

47. What type of price rise would be needed to overcome these obstacles?

48. How long would it take to overcome these obstacles?

49. Describe the obstacles to entry facing an existing manufacturer that currently does not ship into the market served by the parties to the merger?

50. What type of price rise would be needed to overcome these obstacles?

51. How long would it take to overcome these obstacles?

52. Do either of the parties to the merger have a history of aggressive behavior in the face of new entry or in response to the actions of other incumbents?

53. How much excess capacity currently exists in the industry, and how much of it is accounted for by the parties to the merger?

54. What capital costs are associated with adding capacity, and what proportion of those are nonrecoverable in the event that the capacity is sold for other uses?

PART VII. EFFICIENCIES

55. Comment on the viability and magnitude of any savings in the cost of design, production, marketing, and distribution claimed by the parties as a result of the merger.

56. After the merger, will there be sufficient competitive pressure placed on the parties to ensure that they attain any claimed efficiency gains?

Competitors in the same industry as the parties to the merger will often be in a good position to comment on the viability of any efficiency gains that are claimed. But, given the reduction in competitive pressure that may accompany the merger, it is equally important to assess the likelihood that steps will be taken postmerger to attain them.

PART VIII. OTHER CONSIDERATIONS

57. Would you be willing to sign a statement and testify as a witness for the competition authority if need be?

58. Would you be a cooperative witness if you were subpoenaed by the competition authority?

These questions would generally only be asked in cases that have a good probability of resulting in a legal challenge before the courts or quasi-judicial competition authority. They do, however, tend to lead to more realistic answers, since the possibility exists that the respondent will be subject to public and expert scrutiny. Because they may also tend to reduce the willingness to cooperate that anonymity fosters, they should be asked at the end of an interview.

SAMPLE CUSTOMER INTERVIEW

PART I. GENERAL

1. Date of interview.

2. Name, position, and experience of interviewee.

3. Is the interviewee providing personal or corporate views?

4. Ownership, nature, and location of business activities. Length of time in the business. Major customers, competitors, and suppliers, if not already known.

5. Nature of the customer's relationship with the merging parties and industry being examined. Whom did the company buy from currently and in the past? Amount (dollars and volume) purchased. Importance of the product to the customer's total costs (percentage of total costs, if known). Other aspects of the relationship, service, credit, product quality, and so on.

Basic information should be obtained as a matter of practice. It is also important for assess-

ing the credibility and evidentiary weight of the more subjective information that is provided, such as ability to increase prices. The investigator should explain to customers that they are not legally compelled to answer any questions, and that any information provided will be used only for the competition authority's purposes, subject to the confidentiality protections provided by the competition legislation.

PART II. PRODUCT MARKET DEFINITION

6. Describe the characteristics of the product or products purchased from or sold to the merging parties or industry under examination with respect to:

- End-use applications.
- Service considerations, such as delivery, warranties, postal service, and customized specifications.
- Price points per unit.
- Perishable or durable good.
- Degree of product differentiation among suppliers.
- Intermediate or final consumer good.
- Standard contracts.
- Other considerations such as promotional support and brand names.

7. Is the product available through nontraditional channels (such as leased products, secondhand or reconditioned goods, and gray marketers)? Can buyers easily resell the product to other customers (for example, is arbitrage possible)?

8. On what basis do you acquire the product—price, product quality or performance reputation, service considerations, or other factors (such as volume incentive programs)? Rank the importance of these factors in your buying decision.

9. What is the smallest price increase (or reduction in service) that the sellers of the product could implement and sustain over the course of one year that you would consider significant, that is, 2 percent, 5 percent, any increase beyond inflationary levels, 10 percent, 15 percent, and so on. (Henceforth, service refers to nonprice aspects of competition associated with the sale of the product. It does not include other aspects of competition, such as strategic behavior or innovation.)

10. Identify substitute products that you could switch to within the course of one year if sellers tried to sustain the significant price increase (or reduction in service) over that same year.

11. When prices for the product rose in the past (or service levels fell), did enough customers switch to the substitute product(s) identified such that the sellers of the product could not maintain the price increase (or reduction in the level of service)?

12. Are there any switching costs that you would have to bear in order to use the substitute products (such as costs to retool, repackage, break relationships, placate customers, or assume unacceptable product quality risks)?

13. Describe the price points and price trends of the substitute product. Have the price trends for the product sold by the merged entity or industry under examination and the substitute product moved in unison, or is there no significant price correlation between the product and its substitutes?

14. Would you begin production of the product internally or through an affiliate within one year in response to a significant price increase (or decrease in the level of service)? Discuss the practical investment, marketing, impact on downstream customer, and other issues associated with integrating upstream into the production of the product.

15. Are you aware of any producers of other products that could adapt their production processes within one year of a significant price increase (or reduction in the level of service) such that they could commence the production and marketing of the product? Would such entry have a constraining influence on prices (or the level of service) over a one-year time frame?

16. Has entry from related industries occurred in the past in response to a significant price increase (or reduction in the level of service)? Was such entry on a sufficient scale so that the sellers of the product could not sustain the price increase (or reduction in the level of service) over a one-year time frame?

17. Identify all of the firms that currently, or potentially within one year, could supply the product or the substitute products either internally or by adapting existing production facilities within one year in order to commence production and marketing.

PART III. GEOGRAPHIC MARKET

18. Identify the location of sellers of the relevant product that you are currently doing business with or have done business with in the past. What is the customer's practical notion of the geographic market?

19. How significant are transportation costs in the delivered price of the product to your location? Are there other reasons, for example, just-in-time delivery requirements or excessive storage costs, that dictate that suppliers must be in close proximity to their customers?

20. How do prices in increasingly distant areas compare with the price in your area? If sellers in your area imposed a significant price increase, would sellers in increasingly distant areas be able to ship to you and undercut the price increase? Has this ever happened in the past?

21. Are there any practical or other service reasons why you would not do business with a supplier from outside your region? Are there any reasons why a supplier from outside the region that is theoretically able to ship into your territory in response to a significant price increase would not do so (for example, it is at full capacity, may face retaliatory competition in other markets, knows that excess capacity in the market would be brought into play in response to new entry, faces local set-up or distribution costs, its product is perishable)?

22. What is the smallest geographic area in which sellers of the product could impose a significant price increase and maintain that price increase for one year without losing sales to suppliers of the product located in more distant geographic regions? (This question may in fact be a conclusion that the enforcement authority should develop.)

PART IV. MARKET SHARE AND CONCENTRATION

23. Estimate the distribution of market shares in the relevant market (and identify the basis for such estimates).

24. Cite any reasons why the combined market share of the merged entity and other participants in the relevant market may overstate or understate their respective competitive significance (for example, foreign competitors, sales made on infrequent large tenders, cost or strategic advantages held by the merged entity, and position in related markets).

25. Have the distribution of market shares and the share of industry sales held by the top four firms been stable, highly variable, increasing, decreasing, or favoring one or more firms to the detriment of others during the past three years?

Customers will rarely know the exact distribution of market shares, particularly if their notional understanding of the relevant market differs dramatically from the hypothetical monopolist approach. Customers can provide useful information, however, on standards used to measure market shares and the relative competitive weight the enforcement authority can attribute to its estimates.

PART V. OTHER FACTORS

Foreign competition

26. Cite any practical or observed experience with buying from a foreign competitor. Has there

been any new entry by foreign competitors in the past three years? When foreign competitors have entered, did they have an impact on prices or service? Did they sustain their entry? Did customers initiate their entry? What could cause foreign competitors to exit the market? How did incumbent competitors react to their entry? Were there any antidumping complaints?

27. Describe any practical limitations facing foreign competitors relative to:

- Tariffs, import quotas, voluntary export restraints, dumping complaints, licensing requirements, and other regulatory impediments to import competition.
- Distribution and marketing requirements for entry.
- Capacity constraints or absence of a sufficient profit incentive to warrant entry.
- Local preference, uncertain product quality, or post-sales servicing ability.
- Just-in-time or other delivery considerations.
- Currency fluctuations.
- Possible competitive retaliation by competitors in the relevant market or potential disruption of supply relations with customers that have cross-border operations.

28. How do prices for the relevant product of the closest foreign supplier compare with prices in your area? Is the price of the foreign supplier plus transportation costs, plus the tariff (if any), plus brokerage and any other associated shipping costs (for example, insurance) competitive with the existing price level of the product in your territory? Would the foreign supplier's delivered price become competitive if the merging parties or other participants imposed a significant price increase (or reduction in the level of service)?

29. How long would it take for foreign suppliers to ship its product into the relevant market on a large enough scale so that a price increase (or reduction in service) resulting from the merger could not be sustained? More than one year? More than two years?

30. If the foreign firm(s) entered the market, would this heighten competitive rivalry in that the foreign firm would have to offer lower-than-prevailing prices or better service, product quality, and so on in order to acquire business on a sufficient scale to warrant the cost of their entry? Or, would foreign firms enter to capitalize on higher prices and exit once market conditions became less favorable? Would it be relatively easy for the foreign firm to reenter the market if they did decide to exit?

Business failure

31. If the company being acquired were purchased by a different firm or if its assets were liquidated, would a greater degree of competition in the relevant market result than if the subject transaction took place?

32. If the merger did not take place, would the acquiring party remain in the market or cease to exist in its current form? Could it survive if it cut back on certain operations?

Realistically, it is unlikely that customers can contribute a great deal to this issue.

Acceptable substitutes

33. Describe any factors that would mitigate against increasing production of the substitute product or inducing enough customers to switch to the substitute product such that potential competition from acceptable substitutes could not constrain the exercise of market power over a two-year period.

Barriers to entry

See question 27 for barriers to international trade. For questions on barriers to sources of competition from potential product substitutes, see questions 12, 14, and 15. For questions on barriers to sources of competition from geographic areas outside the relevant geographic market, see question 21. In each case the investigator must make a determination that these sources of competition will materialize in the relevant

market on a scale that is sufficient to constrain a material price increase in less than two years.

34. Can the smaller firms in the market easily expand their sales, production, or both such that a material price increase in the market could not be sustained for more than two years? What has happened in the past when smaller firms have increased production or attempted to do so?

35. Has there been any new entry or exit in the relevant market within the past three years? What impact, if any, have these events had on price, service, and the level of competition generally?

36. Describe the characteristics of new entrants. Were they large- or small-scale entrants, did they survive, what industries and geographic areas did they come from, how long did it take them to get established, what was the source of their financing or ownership?

37. Is demand for the product increasing or decreasing? Is the rise in demand sufficient to warrant new entry? Would a material price increase induce entry? In either case would new entry raise the level of competitive rivalry in terms of prices or service?

Effective competition remaining

38. Which firms tend to be the most aggressive competitor in terms of price discounting, service, and innovative marketing, packaging, and so on.

39. Does any one firm dominate in terms of pricing, service, marketing, and so on in that when this firm implements a price change, the other firms in the market institute a similar change?

40. Have firms in the market been able to impose price increases each year, beyond levels that are cost (or inflation) justified? Have prices risen even though there is excess production capacity among suppliers? How have suppliers explained or attempted to justify such increases?

41. Describe any relevant, firm-specific facts, such as ownership, or product or customer orientation, or behavioral considerations, such as a history of price-following, traditional patterns of supplying only certain customers, that suggest that the level of competition in the relevant market will be materially lower as a result of the merger.

42. Describe what the merging parties will attain in terms of cost advantages, market position, sales force coverage, intellectual property, control over essential facilities, and so on that would suggest that the other competitors in the relevant market will not be as aggressive as in the past.

43. Describe how the level of competitive rivalry changed, if at all, as a result of previous mergers in the industry.

Removal of a vigorous and effective competitor

44. Is the firm being acquired considered a vigorous and effective competitor? Describe what will be lost in the market in terms of price competition, service, innovation, market certainty, specialized products, and so on.

Change and innovation

45. Is there a high degree of change and innovation in the market in terms of new products or production technologies, marketing and distribution channels, or changing consumer tastes, regulatory environment, downstream market, and so on.

46. What has been the most recent innovation in the market? When did it occur?

47. Describe the competitive state of the market: evolving, stable, or declining? Do suppliers recognize the ability of competitors to retaliate if one supplier introduces price discounts, increased levels of service, or other production or marketing innovations to try to maintain market stability?

48. Will the merger increase the level of change and innovation in the market and force other competitors to follow suit with similar innovations?

49. Will the merger remove from the market a particularly innovative competitor that is viewed as a competitive threat by the acquiring firm or other competitors?

Market transparency

50. Is information about competitive activity among suppliers easily and quickly made available to customers, other competitors, or both ?

51. Are secret discounts off list prices common?

52. Do suppliers issue common price lists or employ common pricing formulas (for example, common base points for delivered prices)?

53. How often do you purchase the product or take delivery—or both? How is the product purchased: open tenders, only from qualified suppliers, formal contracts, and so on ?

54. Describe the nature of supply contracts: length of term, meet the competition, right of first refusal, renewal provisions, pricing changes, and so on.

55. Cite examples of past procompetitive or anticompetitive conduct. Cite examples of explicit or implicit collusive behavior.

Vertical mergers

56. How much unintegrated capacity will remain upstream and downstream? How will this affect the level of competition at either stage? For example, if your supplier or a potential supplier is also your competitor in the downstream market, how will this influence your ability to compete?

57. Would the merger reduce the amount of unintegrated capacity upstream or downstream to the extent that potential entrants would have to enter both markets in order to provide entry on a scale that is large enough to constrain a material price increase? What additional costs or time delays are associated with two-stage entry?

58. Would unintegrated competitors in both the upstream and downstream markets have to vertically integrate in order to remain competitive with the merged entity or other vertically integrated competitors? Indicate whether this is likely to materialize within two years.

Conglomerate mergers

59. Would the acquiring firm have entered the market and raised the level of competition in the absence of the merger?

Customers realistically cannot contribute a great deal to this issue.

PART VI. SUBSTANTIALITY

60. Can the customer increase prices or pass on cost increases to their customers?

61. Will the merger result in a material price increase, a reduction in the level of service, or both that can be sustained over a two-year period? If yes, then:

- What is the magnitude of the material price increase—2 percent, 5 percent, 10 percent, or more?
- Describe how nonprice aspects of competition will be adversely affected.
- Will the lessening of competition materialize uniformly throughout the market or will it have a greater or lesser impact in certain regions or on certain customers?

62. How will the customer respond to a material price increase:

- Refuse to accept it.
- Absorb the cost increase.
- Produce the product internally.
- Pass it on to its customers.
- Make other adjustments so that its overall costs will not increase.

63. Would prices increase or the level of service diminish irrespective of the merger because of increasing demand, capacity shortfall, inflation or other cost increases (such as higher wages or taxes), or anticipated exit of a supplier?

64. If prices are anticipated to increase irrespective of the merger, will the merger raise the

magnitude, or accelerate the timing of such price increases?

65. Have the suppliers of the product passed on cost reductions in the past?

66. Have the suppliers of the product increased prices in the past, even though they had excess production capacity?

Simply asking customers if they are "concerned" usually does not generate very good information. Customers may not be concerned about mergers because they can pass on price increases, the product is a minor item in the grand scheme of things, they feel they can take care of themselves, they have good relations with their suppliers "who wouldn't charge unjustified prices," owe money to their suppliers, and so on. Conversely, customers that are concerned may have an ax to grind, dislike foreign ownership, owe money to their suppliers, compete with or supply the merged entity in another market, and so on.

PART VII. OTHER QUESTIONS

67. Would you be willing to sign a statement and testify as a witness for the competition authority?

68. Would you be a cooperative witness if you were subpoenaed by the competition authority?

Obviously, these questions call for some judgment on the investigator's part. Most business people do not want to be seen as a complainant; therefore, only bring up the subpoena issue if the customer "wants to be forced" to cooperate.

Chapter 5

Abuse of Dominance

Abuse of a dominant position, or monopolization, is one of the most challenging areas of competition law in both developed and emerging markets. Situations involving abuse of dominance may range from predatory behavior by firms in isolated local markets for low-technology products (for example, industrial waste collection) to high-tech industries in which access to a network is restricted for anticompetitive purposes.

Abuse of dominance cases may have special importance in transition economies. For example, competition law provisions relating to abuse of dominance may have an important role to play in addressing anticompetitive practices that entrench former state-owned monopoly enterprises. Abuse of dominance provisions may also be useful for easing restrictions on access to distribution systems in local markets.

In cases involving abuse of dominance or monopolization it is essential to ensure that application of the law does not inadvertently curb efficient business practices. It is important to recognize that firms may achieve legitimately a dominant position in a market (for example, through innovation, superior production or distribution methods, or greater entrepreneurial efforts). Moreover, many practices that appear anticompetitive (such vertical market restraints as tying or exclusive dealing requirements) can serve legitimate procompetitive purposes in some circumstances.

Competition law provisions regarding abuse of a dominant position typically include several common elements. First, before the law can be applied it is necessary to define the relevant market in which the possible abuse is realized. Second, it is necessary to establish the existence of a dominant position by a firm or group of firms.[1] Third, it is important to identify specific practices that may be harmful to competition and assess their overall effects in the relevant market(s).

The specific content and application of these elements can vary significantly among countries. For example, some countries' laws specify that a dominant position can be inferred largely or entirely on the basis of a large market share. In contrast, some countries' statutes require consideration of entry conditions and other factors that influence the ability of firms with large market shares to exercise market power. An additional key distinction is that in some countries the mere charging of high prices or the carrying out of other exploitative acts may be treated as abuses, while in others the law focuses on exclusionary conduct by firms that harms the competitive process (that is, conduct preventing competing firms from entering or expanding).

In many—perhaps most—abuse cases fines and imprisonment are not appropriate remedies, because there is no criminal nor anticompetitive intent. In fact, the firm that committed the abuse might well have thought its behavior to be

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completely legitimate. Rather, the appropriate remedies will be either "behavioral" orders to cease conduct that thwarts the competitive process or structural measures—when permitted under the law—to eliminate the ability of the dominant firm to commit the abuse. Certainly if companies do not comply with the decision of the antitrust authority a large fine or other penalty will be appropriate.

In extreme cases efforts by incumbent firms to deter entry by potential rivals may extend to outright criminal conduct (for example, threats to the safety of individuals or corporate facilities, extortion, and so on). Then, competition agencies should seriously consider requesting the assistance of the police or other authorities to bring criminal charges.

Allegations of abuse of a dominant position may sometimes relate to industries that are natural monopolies—those in which a single firm can supply the market at lower costs than two or more independent firms can, usually because of large economies of scale. Such industries may include electricity transmission, natural gas distribution, and, possibly, parts of telecommunications and transportation.[2] In such industries there may be a need to regulate prices. Such regulation might be undertaken either by a specialized agency set up to oversee conduct in the particular industry or by the competition agency itself. But even where there are effective regulatory controls, there may still be a role for competition policy in maximizing the scope for market forces to work and ensuring that regulated firms do not engage in anticompetitive practices in unregulated markets. (For a related discussion, see the later section on remedies.)

ASSESSING THE EXISTENCE OF A DOMINANT POSITION

Determining whether a firm occupies a dominant position in a market involves two principal steps: defining the relevant product and geographic markets and assessing the degree of dominance exercised by the firm(s) within the market.

Defining markets in abuse cases

Specifying relevant product and geographic markets is essential in the development of most competition law cases (see also chapter 1. For additional background on the issues discussed in this section, see Anderson, Khosla, and Monteiro 1996.) As well as providing the basis for analysis, defining markets contributes directly in assessing competitive effects. It often has an important bearing on the application of specific statutes and on the disposition of a case. A narrow definition of a market will tend to result in higher market shares for incumbent firms, often important in establishing market power and, therefore, anticompetitive effects of some business practices.[3]

In most abuse cases definition of the relevant market is likely to be based on functional characteristics of the product and on consumer behavior. These may include physical characteristics of the product, uses to which the product is suited, and evidence about buyers' willingness to switch from one product to another as relative prices change. Other factors, such as switching costs and parallel price movements that indicate substitutability, also may be relevant. Similarly, defining the relevant geographic market is likely to be based on factors, such as transportation costs and perishability, that limit the ease with which products can be moved over long distances.[4]

Markets in antitrust (especially merger) cases are sometimes defined using the "prospective price increase" or the "hypothetical monopolist" approach. This asks whether consumers, faced with a price increase, could easily switch to an alternative product or another supplier. If the answer is yes, then the alternative product and source of supply is included in the relevant market for the case.[5]

The underlying principle—the focus on consumer responses to price increases—can also be useful in defining markets in abuse of dominance cases. The application of these principles, however, is different. That is, abuse or monopoly cases typically relate to a lessening of competition that has already occurred rather than what may occur as a result of a proposed merger. In abuse cases it is likely that prices will already have been raised above competitive levels. And any further increase will probably result in massive substitution by consumers. Such evidence of substitutability is, however, entirely consistent with the exercise of market power in a properly defined market in an abuse of dominance case. Of course, at the investigation stage it is not certain that an abuse has occurred and that prices are currently above competitive levels, but the investigator should be aware of this possibility.

This point is illustrated by the U.S. cellophane case, which involved allegations that the du Pont de Nemours & Company had monopolized the supply of cellophane in the United States in violation of the Sherman Antitrust Act.[6] The U.S. Supreme Court defined the relevant market as consisting of a broad range of flexible wrappings, including waxed paper and other materials, as well as cellophane. The Court found that these products were perceived as reasonably interchangeable by consumers. Some commentators, however, say that the Court was wrong in defining the market so broadly. In particular, it failed to recognize that consumer willingness to switch to alternative products at a monopoly price is fully consistent with the exercise of market power by a monopolistic firm. As a result it failed to appreciate the extent of market power exercised by the du Pont Company.

More generally in abuse cases, defining the relevant product and geographic markets should take into account the impact of alleged exclusionary practices, which typically sit at the heart of the case. An example: contrast the relevant market useful for assessing a merger of banks offering Visa and MasterCard services with the relevant market necessary for analyzing alleged exclusionary conduct by Visa and MasterCard toward a new low-priced card entrant. The first case would include new card issuers who would enter the industry if the price of credit card services rose significantly. But such potential entrants would be excluded in the second case because firms that would enter only at a higher price are not relevant to assessing the feasibility of entry by a low-price firm (which could result from the elimination of the exclusionary practices; for further discussion of this example, see Salop 1993).

In some cases it may be preferable to look for direct evidence of exploitation of market power (for example, abnormally high prices or profits) rather than focus on market definition. Alternatively, one may look for historical evidence of a decline in output or excessive price increases following implementation of alleged exclusionary practices. The use of such evidence can carry significant problems of interpretation and reliability, however (Fisher and McGowan 1983), but it could be relevant in some cases.

Evaluating the existence of a dominant position

Once the relevant markets have been defined, it is generally a straightforward analysis to determine whether a firm occupies a dominant position. This depends on two main factors: the market share of the dominant firm and the extent of entry barriers.[7]

THE ASSESSMENT OF MARKET SHARES. In general, the greater the market share of an alleged dominant firm, the more likely it is to exercise market power. It is nearly impossible to set out market share thresholds at which a firm can be judged to have or not have significant market power. It is unlikely, however, that a firm with a market share of less than 35 percent would have the ability to reduce output or impose a significant price increase above the competitive level. Conversely,

where a firm has a market share of 65 percent or more, it is much more likely to exercise market power, if significant entry barriers exist.

In addition to its own market share, a firm's ability to exercise market power may also depend on the size of other firms in the market. For example, even if a firm has a market share of 50 percent, its ability to exercise market power may be limited if the rest of the market consists of a small number of competing firms that compete vigorously with the leader as opposed to a cluster of weaker firms that simply adopt prices established by the leader. Finally, even where a single firm has an overwhelming share of a market, it may be unable to exercise market power if entry by new firms or expansion by existing competitors is easy.

ASSESSMENT OF ENTRY CONDITIONS. Identifying entry barriers in abuse cases is not so different from other antitrust cases, for example, merger cases (see annex 1). There are, however, two special considerations in abuse of dominance cases. First, as in defining relevant markets, assessment of barriers to entry should take into account the theory of the case. Barriers that would be ineffective if prices were raised higher than prevailing levels may still be relevant in assessing exclusionary practices that prevent prices from falling below current levels.

Second, the conduct being investigated can in some cases be the most significant barrier to entry. The ability of firms to deter entry through behavioral as opposed to structural barriers is increasingly recognized (Ordover and Saloner 1989). Such entry-deterring conduct includes predatory pricing, exclusionary contractual provisions, tying requirements, and use of fighting brands. Thus valid cases of abuse may sometimes involve markets in which there are few barriers in the more traditional, structural sense of specialized physical assets.[8] Of course, traditional structural barriers in a market would reinforce concerns about the potential anticompetitive effects of restrictive business practices.

IDENTIFYING AND INVESTIGATING ABUSES

Two broad types of business conduct have traditionally been recognized as abusive by competition laws and enforcement agencies:

- Exploitative abuses, in which a firm takes advantage of its market power by charging excessively high prices to its customers, discriminating among customers, paying low prices to suppliers, or through related practices.
- Exclusionary abuses, in which a firm attempts to suppress competition—for example, by refusing to deal with a competitor, raising competitors' costs of entering a market, or charging predatory prices.

These practices are abusive when put in place by a dominant firm because the market does not offer alternatives for consumers. However, when there is sufficient competition in the market, such behavior (especially potentially exclusionary acts) may enhance market efficiency and benefit consumers because it is motivated by the need to compete efficiently, not to make anticompetitive profits. Thus because potentially abusive acts and practices can help promote competition, determining whether such practices constitute abuse is among the most difficult tasks facing a competition agency. A thorough economic analysis of the anticompetitive effects of alleged abusive behavior is needed, even when a firm clearly enjoys a dominant position.

It is worth noting that in some legal systems there is a presumption that certain practices by dominant firms are inherently unfair. This approach has the merit of facilitating the design and enforcement of new competition laws.

With exploitative abuses it is often difficult to clearly say what is an acceptable exercise of market power. For an enforcement agency it is

almost impossible to define the "right" price a dominant firm should charge for the sale of products or services, since accurate and timely information on costs and demand is generally unavailable or expensive to acquire. Therefore, competition agencies should seek to minimize the extent to which they regulate prices of individual firms and focus more on seeking to prevent dominant firms from engaging in exclusionary acts that threaten competition. Some countries specify that setting "excessive prices" can constitute an abuse, but competition agencies are more likely to promote a healthy market economy if they limit their involvement in direct price regulation. Moreover, if firms expect that their prices will be regulated if they grow and capture a sizable share of a market, their incentives for innovation and entry into new markets will be diminished, damaging consumer welfare in the long run.

Exclusionary abuses also require careful analysis. This should take account of the competitive environment in which the firm operates, because a potentially abusive practice (such as exclusive dealing) may also help firms compete more efficiently (by, for instance, improving the quality of service to consumers). A dominant firm may compete aggressively, say, as a reaction to a threat from its competitors not simply to exclude others from a market. Such behavior should not necessarily be considered abusive since it may provide substantial advantages for consumers.

In industrial economies it is important to assess possible efficiency rationales for potentially abusive behavior because competition authorities should not discourage firms to compete aggressively nor punish those that are successful through legitimate means. This concern may not be as great in transition economies, in which dominant positions may be the result of recent privatizations and restructurings, not superior performance over an extended period. (For a further discussion of abuse of dominance cases in transition countries, see appendix 5.2 to this chapter.) Nevertheless, competition agencies should always be aware that potentially abusive acts can in some circumstances yield efficiencies, even for firms with large market shares. Thus efficiency considerations should always be taken into account in analyzing the competitive effects of business practices.[9]

Excessive prices

Prices may be high for many reasons, including surges in demand, high unit costs, and exercise of market power. To prevent a dominant firm from abusing its position and charging excessive prices, antitrust enforcers should be more concerned with the reasons that lead to high prices and profits than with the prices themselves. This is partly because it can be difficult and time consuming for a government agency to determine a firm's costs, which must be known to judge whether prices charged are excessive and to set the "right" price. It can be difficult to determine costs when a firm makes only one or a few products; it can be impossible for a firm that produces lots of products. Moreover, price differences among firms can often be explained, at least in part, by quality differences among products. Thus it is not easy to conclude confidently that prices charged for particular products are excessive and should be reduced.

There is another, serious risk with regulating prices. In a market economy profits serve a critical function: when firms earn high profits, they create an incentive for others to enter the industry. When firms earn relatively low profits, they have an incentive to exit. By responding in this way, firms are more likely to produce goods and services that are highly valued by consumers—efficient and good for consumers and firms. This process requires that prices for the most part be unregulated. When government agencies regulate prices, the crucial role played by profits in providing incentives to enter and exit does not work well.

Of course, some firms cannot or do not enter markets even when profits are high. This is often the case in industries in which firms have been granted a legal monopoly by the government, as in most public utilities.[10] However, many other sectors of the economy may be heavily regulated, making it difficult for a new and more efficient firm to enter the market. Thus an important role for a competition agency can be to advocate removal of legal barriers to entry. Competition agencies can provide recommendations to legislative bodies and other government agencies on how laws and regulations can be modified to strengthen competition and improve efficiency.[11]

There are, however, some industries in which the market can support only one firm even when there are no legal barriers to entry. These natural monopolies can arise when economies of scale or economies of scope (or both) are so strong that the costs of production are lowest when a single firm supplies the market. Examples may include electricity transmission and local water supply.[12] In Western economies the prices and practices of natural monopolies are often not under the jurisdiction of the competition agency but reviewed by regulators. Transition economies may wish to consider a similar approach.

When a regulatory agency does not exist, the competition authority would likely be responsible for ensuring that the industry performs as competitively as possible. If the industry is truly a natural monopoly (that is, cost considerations dictate that only one firm should supply the market), then the competition agency may need to consider regulating prices and practices of the firm. But given the difficulty of regulating prices, such action should be taken only when it is clear that the market is indeed a natural monopoly and that entry cannot be expected to help restore competitive pricing.

Finally, excessive prices may not result from superior efficiency of the dominant firm but from exclusionary practices aimed at abusively extending or maintaining dominance. For example, a vertically integrated dominant firm may refuse to sell some of its products to other firms. Such practices can promote higher prices. For instance, a telephone company may refuse to sell information on subscribers, so that it can be the sole provider in the markets in which such information is most valuable (for example, mailing list services, direct marketing, and marketing research). Competition might then be reduced in these markets. The best course of action is to put a stop to the practices that restrain competition, eliminating the firm's ability to charge excessive prices.

Price discrimination

Price discrimination is the practice of a seller charging different prices according to the profile of the customer and in the absence of appreciable cost differences that might justify different prices. A discriminatory strategy can also involve charging the same price to customers even though there are different costs of supplying them. With price discrimination, a firm may earn higher profits than when it charges a single price (net of costs) to all consumers. Some extra profits may come from increased sales; thus price discrimination can increase a firm's total production.

Price discrimination requires that a firm identify different consumers who are willing to pay different prices.[13] The firm must also be able to prevent arbitrage, that is, prevent the disadvantaged consumers from purchasing the product from the consumers who buy it at a favorable price. In theory, there are few markets where arbitrage is not possible, but in practice arbitrage may require complex contracts or that consumers overcome inertia, uncertainty, and instability—or both. Thus competition agencies should not use theoretical arguments to conclude too quickly that discriminatory practices cannot occur. Nor should they assume too easily that the

conditions for successful price discrimination are easy for a firm to meet.

Showing that price discrimination is harmful to consumers can be difficult. In many cases the difference in price may not be discriminatory because it can be explained by differences in the cost of serving different consumers. For example, consumers who pay higher insurance premiums or higher interest rates may be more risky—and thus more costly to supply—than consumers who pay lower rates. In other cases price differences for what appears to be the same product can be explained by quality differences. To rule out such cost-based or demand-based explanations, competition agencies would have to estimate a firm's costs. But it is well known that such analysis can be time-consuming and uncertain. Therefore, price discrimination investigations should not be made a high priority.

In theory, discrimination can be exclusionary when a dominant firm charges lower prices to buyers more likely to switch to other suppliers. It is difficult, however, to distinguish this practice from that of a firm selling to customers willing to pay only a lower price and not the nondiscriminating price. This practice (referred to in the economic literature as third-degree price discrimination) can result in more customers being supplied than would be the case with a single price for everyone. In general, if a discriminatory strategy leads to an increase in the quantity sold, then it should be considered procompetitive.

Another way of discriminating among customers is to set up discount schemes. Discounts usually refer to large single orders in which some economies of scale (for example, in transport) lead to a reduction in the total unit cost of supply. Other types of discounts are granted in relation to the total orders placed by a customer in a certain period, for example, a year. Such an effect is greatly increased when a dominant firm sells many products and the discount scheme operates for all sales, irrespective of the quantities of each product bought.

Although they might increase the cost of entry especially when imposed with long-term contracts, discount schemes are a powerful instrument of competition and normally benefit consumers. Moreover, they can be justified on efficiency grounds, since they allow a firm to pass on to customers substantial cost reductions—for example, because they bring about a significant reduction of sales efforts.

Discounts can be restrictive if they become similar to exclusive contracts—that is, if they are granted only to customers that agree not to buy from other competitors, thereby raising barriers to entry. In this case, however, what matters is the exclusive aspect of such contracts (how binding and how lengthy is the exclusivity clause). In fact, the restrictiveness of discount schemes must be analyzed case by case and should be assessed according to the costs they inflict on new entrants and by the disadvantages suffered by consumers.

Tie-ins

A tie-in is the sale of one product (the tying good) on condition that the buyer purchase another product (the tied good). In general, such behavior should not be considered abusive if the firm does not have market power in the tying good. Even when the firm does, establishing that a tie-in is abusive requires detailed analysis of the purpose of the tie-in and the market context.

Sometimes two products are vertically related, with one good an input in the production of the other. If so, the competition agency must try to understand the reasons for the tie-in. In general, a tie-in cannot be motivated by abuse if the two products are used in fixed proportions (as might be the case in an industrial process): the dominant firm could maximize profits by charging a sufficiently high price in the tying market, and the tie-in practices would not increase profits.[14]

Tying is often motivated by the firm's desire to maintain or increase its reputation for qual-

ity or product reliability. This should not be considered abusive since it increases efficiency and market demand. For example, poor servicing of a dominant firm's product by an independent company may negatively influence the reputation of the dominant firm and result in lower sales. To avoid this the dominant firm might sell its products and services together through a tie-in contract. Nevertheless, it is worth considering whether the legitimate aim of the dominant firm to maintain or increase its reputation could be reached by less restrictive means, such as an improvement of its quality control processes.

Tying raises concerns for competition policy when it allows supranormal profits to be made in a properly defined market. This might be the case when tie-in practices raise entry barriers to competitors and enable the exercise of market power in the tied market. Tying can also be an abuse if used to evade price regulation on the tying good. Suppose a dominant firm has market power in its primary product. Suppose further that the dominant firm's price is regulated, which effectively prevents it from earning all of the monopoly profits that it could if there were no regulation. The dominant firm would have an incentive to sell its regulated product on condition that another product is purchased (whose price is not regulated) and then set the price of the bundle to capture all monopoly profits in the regulated good.

Some tie-ins could be used in moderately competitive markets to exploit consumers. In particular, consumers who have bought a relatively expensive durable good may have no reasonable choice but to go to the manufacturer when replacement parts or service is needed—the so-called lock-in effect. Even when the primary product market is competitive, the seller might be able to take advantage of consumers who have already purchased the good and do not have many alternatives for replacement parts. If future consumers of the good are informed of this practice, however, they will consider parts prices when they make their original purchase. In this situation, if the manufacturer also faces competition for the original product, its ability to exploit locked-in consumers will be reduced if not eliminated.

The competition agency must determine whether the conditions necessary for anticompetitive lock-in—imperfectly informed consumers, weak efficiency explanations for the tie-in—exist in sufficient measure to raise competitive concerns. If, for example, the cost of replacement parts is substantial in relation to the price of the durable good, as, say, with a motor car, the replacement parts market would not constitute a properly defined relevant market. Consumers would switch to a different car should they be charged monopoly prices in the replacement parts market. In other words, if consumers were informed about all costs they would incur by purchasing a given product, then the tie should not be worrisome for antitrust authorities since competition in the primary market could provide enough discipline to the firm.

Of course, consumers may be unable to anticipate all costs related to the use of a product and might be subjected to abusive behavior by a dominant firm trying to exploit a possible asymmetry of information.[15] Such a situation may not be common. It refers in general to products bought infrequently, and where exploitation would not appreciably affect future demand for the firm's product. In general, consumers learn from experience. If they are exploited with a tie-in contract and there is competition in the primary market, then their ability to easily switch suppliers may deter the abuse.

Refusal to deal

Competition law does not generally impose on firms a duty to cooperate with competitors. When a firm (even a dominant one) refuses to deal with another firm with which it has a vertical relationship, the result may not be anti-

competitive. For example, a dominant pipeline company's refusal to deal with an oil producer could reflect various procompetitive rationales: poor reputation of the oil producer, efficient management issues, or peak load concerns. In this example, there are circumstances, however, in which a refusal to deal with an additional customer would be anticompetitive. This would be the case if a powerful group of existing customers were to threaten the pipeline owner that they would build another pipeline, should it grant access to some other firms.

Refusal by a dominant firm to grant access to a firm producing a scarce input necessary to operate in a downstream market in which the dominant firm also operates may be an abuse. This may occur when the price of the scarce input is regulated and the firm tries to extend its dominant position in a vertically related (but unregulated) market. The monopolist finds it profitable not to deal with a downstream competitor because it can overcome regulatory constraints on profits by keeping the competitor out and supplying the service itself. Profits would be earned not on the regulated market but on the competitive (unregulated) one. This behavior is particularly common in recently deregulated industries in which some markets are open to competition but others are still legal monopolies.

In *De Montis Catering Roma v. Aeroporti di Roma,* a state-owned company controlling the Rome airport and having an exclusive license to provide maintenance and ground services denied access to the airport premises to a company wishing to compete for airline catering, a service in which the licensee had a de facto monopoly but which was not covered by its exclusive rights. The Italian Antitrust Authority found no justification for the refusal and Aeroporti di Roma was charged with trying to extend its monopoly power in a related market and with hindering competition and damaging users of catering services because of higher prices and lower quality of services supplied by the airport to airlines.

In general, to assess abuse in cases of refusal to deal it is necessary to look at: the market power of the firm, the rationale for the refusal, and the resulting competitive harm. As always, it is critical to properly define the relevant markets. If the relevant downstream market is such that the shut-out firm can sidestep the refusal and still be a competitor, the refusal to deal cannot be anticompetitive. Even when this is not possible, it may be that the facility could be duplicated at reasonable cost in a reasonable time.

Especially in refusal to deal cases, competition agencies should be careful not to mistake injury to competition with injury to individual competitors. Orders requiring firms to provide mandatory access to "essential" facilities should be sought only when the benefits of providing such access clearly outweigh the costs. Thus competition authorities should avoid embracing an excessively broad "essential facilities doctrine," that is, routinely compel firms to deal with rivals, which often benefits competitors but not competition.[16] Indeed, competition agencies that regularly impose on large firms a duty to deal with competitors run a serious risk of discouraging firms from investing in new goods and services for fear that they could not earn an adequate return.

Predatory pricing

Predatory pricing is the practice of a dominant firm selling its products at prices so low as to drive competitors out of a market, prevent new entry, and successfully monopolize the market. The cost can be high, but a predator expects future discounted profits to outweigh present losses and forgone profits. If the firm operates in more than one market, selling its product in some markets at prices below costs may help sustain high cartel prices in others, although supply might be diverted to the market with higher prices.

Predation is condemned not because it results in lower prices now, but because it is likely to lead to reduced output and higher prices

in the future. For this to occur other firms must be weak, there must be barriers to reentry into the market so restoration of competition is not possible after existing competitors have exited, and profits to be gained in the postpredation period must outweigh all losses. These conditions are not normally present, however, in a healthy market economy, and genuine instances of predatory pricing are rare.

Some countries have ruled that prices may only be predatory if they are set below marginal cost. Prices below average variable cost (and below marginal cost), however, can be rationalized in times of distress. Since marginal cost is difficult to calculate, the rule of thumb in antitrust proceedings has been to approximate marginal cost by average variable cost, which is easier (but by no means simple) to measure or estimate. One danger in doing this arises with industries with excess capacity. For these, the average variable cost may be much higher than the marginal cost, and a firm may be accused of predatory pricing even if prices are roughly equal to marginal costs. In any case, charging prices just below competitors' marginal cost (limit pricing) may be exclusionary, but such pricing would not be considered predatory if the firm's price exceeds its marginal cost. Prices above average total cost should never be considered predatory. Prices between average total cost and average variable cost can represent an investment in promotion (they are not sustainable in the long run).

If entry into the market is easy, it is virtually impossible to claim that predatory pricing is occurring, because the firm would be unable to raise prices in the future (Joskow and Klevorick 1979). Although some competitors may suffer losses, these are due to low prices in the market (which benefit consumers), and any losses the dominant firm suffered in an attempt to monopolize the market will not be recovered. Many countries find it useful when assessing predatory pricing allegations to first consider whether there are sufficient barriers to entry or reentry to make predation a viable strategy.[17]

Raising rivals' costs

Raising rivals' costs may be less costly than predatory pricing as a means of excluding competitors from the market, because it may not require a direct reduction in profits for the dominant firm. The 1961 *Pennington* case is often referred to as a classic example.[18] This case involved the strategic use of collective bargaining arrangements by a dominant firm. It was alleged that higher wages industrywide were actively encouraged by large producers to increase the costs of smaller, marginal firms in the U.S. coal-mining industry. Supposedly, a high wage level for the industry benefited capital-intensive firms, since it had a proportionally smaller impact on their costs than on smaller, labor-intensive competitors (Williamson 1968). But it is difficult to actually prove that a dominant firm accepted high wages for its employees just for the sake of raising the costs of its competitors.

Other examples of raising the cost of a small rival is by engaging it in litigation (fixed costs weigh more on a small budget), or strategically advertising to such a degree that it raises sunk-cost investments for small rivals and potential entrants. With advertising, however, such expenses should be more properly considered an investment in the reputation of the firm. Moreover, a firm's reputation may not be limited to the market to which the advertisement is directed. Thus many firms that have gained a reputation in one market use it to enter a different market. For instance, firms with high standing in the fashion industry have used their reputation to move into other markets, such as perfumes or shoes.

Vertical restraints

Vertical restraints are restrictions that an upstream firm (for example, a manufacturer or a

wholesaler) places on its downstream firm (for instance, a retailer). Vertical restraints include exclusive territories (downstream retailer agrees to limit where it sells the product); exclusive dealing (retailer agrees not to sell rival products); and resale price maintenance (retailer agrees not to sell below prices established by the manufacturer). Sometimes they are used together; for example, exclusive territories may be used along with resale price maintenance. When such restraints harm competition, it is usually in a standard horizontal context.

There are two ways in which vertical restraints might harm competition. First, they might be used to support collusion. Second, they may raise rivals' costs, thus creating or strengthening barriers to market entry. Although the second is more relevant to abuse investigations, the first might also apply. For instance, an upstream firm with a dominant position might collude with its competitors and use the vertical restraints as instruments of policing a cartel. At the same time the competitive environment would have also weakened for retailers.

Vertical restraints can also hurt competition when they raise rivals' costs. Because vertical restraints can promote procompetitive outcomes as well as anticompetitive ones, however, it is crucial that competition authorities make this distinction. For instance, antitrust laws would not be violated if a manufacturer used vertical restraints—establishing, say, a network of exclusive dealers—to better control costs and, as a result, expand sales relative to smaller rivals. Higher-cost rivals would be disadvantaged by the dealership network, but the (more efficient) exclusive network should not be considered a violation of antitrust laws.

Another way in which vertical restraints might raise rivals' costs and hurt competition is the following. Suppose a dominant firm in a manufacturing market possesses market power but is not a monopolist, that is, it faces competition from other manufacturers, which restrains the price that the manufacturer can charge its dealers. Suppose also that downstream dealers typically carry products of many upstream manufacturers. Finally, suppose that the manufacturer negotiates with its downstream dealers contracts that contain vertical restraints—say, an exclusive dealing provision. Unless rivals can find alternative dealers, the manufacturer's exclusive dealership network raises rivals' costs of distributing products. Thus prices paid by consumers for rival products increase, permitting the manufacturer with the exclusive network to raise the wholesale price to its exclusive dealership network. Consumers are hurt as a result.

Two additional points should be made about this vertical restraint. First, there must be barriers to entry into the dealer market. If, instead, services provided by a dealer in the exclusive network could be easily replicated by other dealers (that is, barriers to entry are low), then costs of the dominant firm's rivals would not increase and there would be no harm to consumers.

Second, the competition agency must strive to link the exclusive dealership network to higher costs incurred by the manufacturer's rivals. (In some jurisdictions, profits lost are also taken into consideration.) This can be difficult, but it must be done to distinguish an anticompetitive use of vertical restraints from a procompetitive one. Note that it is not sufficient to simply look at the effects of the vertical restraint on rivals. Regardless of whether the network has anticompetitive or procompetitive effects, rivals will experience a decline in market share.

Vertical restraints, even when used by a dominant firm, can promote efficiency. One such use is the prevention of free riding. For example, a manufacturer may use exclusive dealing to prevent dealers from promoting its product to lure consumers into the store but then selling them a rival's product. Alternatively, a manufacturer may require dealers to set a higher retail price to induce retailers to provide important service to consumers or to carry addi-

tional inventories to reduce the chances that consumers will be unable to find the product if demand is particularly strong. Finally, upstream manufacturers may use exclusive territories to provide its retailers with a stronger incentive to promote its product, thereby promoting an increase in interbrand competition at the expense of intrabrand competition.

Abuse and intellectual property

Competition policy and intellectual property rights (including patents, trademarks, copyrights, registered industrial designs, and integrated circuits) are receiving increasing attention from policymakers. Intellectual property rights have figured importantly in several recent competition law cases in western jurisdictions.[19] There are various reasons for this phenomenon. First is the growing importance of knowledge-based industries and the role of technology in such industries. Second, as the world has shrunk and the notion of distinct national markets has become less reflective of commercial realities, there appears to be a growing focus on intellectual property rights as a way to facilitate market control.

In most cases the exercise of intellectual property rights is consistent with the goals of competition policy. Such rights generally strengthen competition in the long run by providing incentives for the development and production of new products and production processes. In most cases it is possible to find a number of substitutes in the market also for products that are protected by intellectual property rights (see, for example, McGrath 1984, 355–65). As a result, the existence and exercise of such rights should not usually be a source of concern to antitrust authorities.

Nevertheless, abuses in the acquisition and exercise of these rights can be a legitimate concern for competition authorities in some cases. Practices that may raise competition issues fall into three main categories: the acquisition of patents, the transfer of technology through licensing arrangements, and cooperative arrangements among innovating firms. These practices raise concerns when they constitute attempts to extend market power by excluding entry into a market, suppressing innovation. At the same time, these practices may also serve legitimate, efficiency-related purposes (OECD 1989).

Licensing agreements are an important means of transfer of technology between firms, especially in the international context. Such contracts are often complex and include an array of vertical and other restrictions on the licensee, including technology grant-backs, tie-ins, territorial market limitations, and field-of-use restrictions in technology licensing agreements. Broadly speaking, the factors to be considered in distinguishing anticompetitive from procompetitive licensing are the same as those in relation to other anticompetitive practices.

In 1995 the U.S. antitrust authorities issued new Antitrust Guidelines for Intellectual Property Licensing. The guidelines emphasize that the treatment of licensing arrangements depends importantly on whether the relationships between the firms involved are primarily horizontal or vertical. Competition is more likely to be harmed when the firms are horizontally related (that is, they are, or in the absence of the license would be, competitors). In this case the licensing arrangement may harm competition by raising prices in an existing market or reducing the pace of innovation. But the licensing arrangement's possible efficiency-enhancing effects should also be considered.

The guidelines set out an antitrust safety zone, within which licensing arrangements will not normally be challenged. These include those in which there are no per se rules and in which the licenser and its licensees together account for no more than 20 percent of the relevant market or markets.

Arrangements falling outside the safety zones depend on various factors:

- Their implications for market structure, coordination of pricing or output, and foreclosure of access to inputs.
- The extent to which they impose exclusivity. The guidelines refer to two specific types: exclusive licenses, which restrict the right of licensors to license others or to use the technology themselves (or both); and exclusive dealing, that is, when a license restrains a licensee from using competing technologies.
- The history of rivalry and the pace of innovation in the markets affected.
- Efficiencies resulting from the arrangement. If these outweigh anticompetitive effects, the arrangements generally will not be challenged (U.S. Department of Justice and Federal Trade Commission 1995, 18–22).

In the past, developing countries have been especially concerned with the use of restrictive licensing practices (for example, tying requirements, exclusive territories, exclusive grant-back clauses, or field-of-use restrictions) in international technology licensing agreements. Competition enforcement should address such practices case by case. A strict approach is likely to be self-defeating. Sweeping prohibition of restrictive practices in international licensing agreements would raise costs or reduce incentives (or both) for technology owners to enter into voluntary arrangements. Voluntary arrangements are also more likely to promote the host country's technological advance rather than to promote compulsory measures; they are more likely to be accompanied by transfer of nonpatented know-how and capital investment, which are necessary to effectively use information protected by intellectual property rights.

ASSESSING ABUSE RESULTING FROM GOVERNMENT INTERVENTION

Broadly, competition laws apply to firms' practices not to government decisions. If a (validly enacted) statute or regulation limits competition unnecessarily, however, a competition agency may have an important role in advocating procompetitive change to the legislation.

In this context it is useful to introduce a kind of hierarchy of the discretionary power of firms. A firm is clearly responsible for its practices if it makes decisions independently of any public intervention. The same is true if the government merely encourages firms to move in certain directions but does not require them to follow specific practices. Further, even if there were a regulatory intervention and the firm had some discretion over its action, practices can violate antitrust rules if the firm could reasonably have engaged in a course of action less restrictive than that chosen.

There are jurisdictions in which a practice stemming from a government decision can still be subject to antitrust proceedings. For example, in the United States the State Action Immunity doctrine imposes implied limits on conduct that may be shielded from liability under antitrust laws by regulatory actions of state and local governments. Behavior of firms subject to regulatory intervention is exempted from the law only if the conduct is undertaken pursuant to a "clearly articulated and affirmatively expressed" state policy and is "actively supervised" by the state.[20]

The possibility of applying antitrust law to private behavior that originates from some legally binding rule or regulation is even stronger in the European Union. The Treaty of Rome, as interpreted by the jurisprudence, limits the possibility for member states to provide firms with special and exclusive rights in order to avoid conflict with other provisions in the treaty, including those on competition. In particular, a government decision can be challenged under EU rules if it leads to behavior by private firms that contradicts competition principles.

Thus public monopolies or the licensing of special and exclusive rights have been considered unlawful if they lead to a company abusing

its dominant position to the disadvantage of consumers. In one case the European Commission ruled that a telecommunications service provider could not be given the power to set standards for telecommunications equipment of which it was a major supplier. Such power would inevitably be abused by the service provider, since it could decide whether the products of its competitors could enter into specific markets.

The concept of abuse developed by the European Court of Justice extends into broader applications in situations in which government action improperly restricts entry into a market. In the case *Hofner and Elser* the European Commission held and the European Court of Justice confirmed that the Federal Republic of Germany contravened article 90 of the Treaty of Rome when it granted exclusive rights to an employment agency.[21] The European Commission concluded that the agency abused a dominant position because it was unable to fulfill consumer demand, an abuse that could exist only because entry into the market was forbidden by law. To eliminate the abuse, the court ruled that the market be opened up to competition.

In most jurisdictions private conduct that is required by regulatory intervention or by law is not subject to antitrust remedies; only practices in situations in which firms enjoy some freedom of choice are so constrained. Conduct by regulated firms outside the market in which they enjoy special or exclusive rights is most likely to be subject to antitrust scrutiny. Regulated monopolies have an incentive to extend their dominant position through exclusionary practices into other markets to gain unregulated monopoly profits.

In *Telsystem v. Sip,* the Italian national telecommunications company, which has a legal monopoly over the public-switched network, refused to lease lines to a smaller company wishing to compete in providing closed user groups services, which had been liberalized under a European directive. Denial of access caused losses and closed the market to the potential competitor, denying also a service to consumers. The Italian Antitrust Authority ruled that the unjustified refusal was aimed at preserving a dominant position in a relevant market different from that in which the monopolist has exclusive rights. The authority decided that such behavior was an abuse of a dominant position.

Another case involving exclusive rights granted to state-owned companies, *Sign v. Stet-Sip,* concerned access to telephone subscribers' lists by a would-be competitor in the market for information services to subscribers. In Italy, as in many other countries, the national telecommunications company has exclusive rights over production and distribution of subscribers' lists and holds dominant positions in downstream activities that use these lists to sell services to consumers and businesses. The refusal to sell subscribers' lists on CD-ROM or to provide access to the on-line database to prospective new entrants was considered an abuse of a dominant position by the Italian Antitrust Authority. The authority observed that no single company could be allowed to duplicate the database and sell the information on the market. The legal monopoly that the company enjoyed could therefore be interpreted as imposing a duty to deal with everyone.[22]

EVALUATING THE EFFECTS OF BUSINESS PRACTICES ON COMPETITION AND EFFICIENCY

In abuse of dominance or monopoly cases it is important to ensure that the law does not inadvertently curb superior efficiency or adoption of efficient business practices. Firms may achieve a dominant position through methods that are perfectly legitimate (through innovation, adoption of superior production or distribution methods, or greater entrepreneurial efforts). Moreover, many practices that appear to be anticompetitive (vertical market restraints, such as tying or exclusive dealing requirements) can serve legitimate procompetitive purposes.

Determining whether these practices are, in fact, pro- or anticompetitive is a question that should normally be resolved on a case-by-case basis. This will involve reviewing the full implication of evidence and findings of fact establishing that firms occupy a dominant position and have engaged in anticompetitive actions.[23] Thus a firm under investigation may have a high market share, and there may be substantial barriers to entry that would normally support a finding of dominance. Before reaching a final decision, however, the competition authority should consider alternative explanations for structural dominance, such as whether an industry has the characteristics of a natural monopoly. Furthermore, an absence of multiple, independent suppliers in a market at any given time does not necessarily imply that competition has been suppressed, if there are minimal barriers to entry and evidence indicates that the market position of individual firms has shifted over time. Rather, it may be that competition within the market has been supplanted by potential competition.

The views of affected consumers are essential in an analysis of the impact of business practices. The issue to be resolved in abuse cases (as in other antitrust cases) is simply how do the practices under examination affect choices available to users (Pittman 1994)? For example, if a practice such as territorial market restraints has resulted in better service to consumers by preventing free riding, then the conduct would normally be considered procompetitive. However, if a practice makes it more difficult for alternative suppliers to enter the market without offsetting advantages for consumers, it is clearly anticompetitive. Unlike rivals, customers do not have the incentive to complain about practices that lower the dominant firm's costs, but customers may be reluctant to state either informally or formally that the dominant firm is abusing its position.

Another useful analytical tool is to consider the effects of practices with reference to the dynamics of an industry. If a practice is efficiency enhancing, then small as well as large firms will have an incentive to adopt it. In this regard it is relevant to ask: did the firm engage in the practice when it was smaller? Or, if the firm never was small, do its smaller rivals engage in the practice? Or, if such firms do not exist, do firms of all sizes in the same industry in other countries (or similar industries in the same country) engage in the practice? Have the firms that have recently grown used the alleged abusive practice? If so, then the alleged practice may be important to those changes, and it may be counterproductive for competition authorities to intervene.

DETERMINING APPROPRIATE REMEDIES

Thinking about whether there is an appropriate remedy is a useful way to determine whether a case merits attention before significant public resources are committed to it. If there is no practical remedy for an apparent abuse (that is, a remedy that clearly improves the situation and does not entail excessive monitoring costs), then there may be no point in pursuing the case.

The first step in determining an appropriate remedy is to consider whether a case involves premeditated, flagrant anticompetitive conduct (say, harassment or threats of violence to potential entrants) or merely involves conduct that has restricted competition unnecessarily but is not morally offensive or beyond the normal standards of business behavior. If it is the first, then it may be appropriate to seek fines or other punitive sanctions if the relevant legislation permits such remedies. In situations of outright criminal conduct, competition agencies should consider requesting the help of police or other competent authorities and bringing appropriate criminal charges.

If a case does not involve an anticompetitive intent, however, or if there is no evidence of such intent, then fines or imprisonment are not

appropriate. Rather, it is simply a question of finding the most efficient way to reverse the anticompetitive effects. In many cases the appropriate measure will be a prohibitive order that requires the firm or firms to cease engaging in the alleged conduct. To the extent permitted by legislation, the agency may consider seeking a proactive but essentially behavioral remedy, such as requiring the compulsory licensing of technology or the provision of access to essential facilities to establish competition in markets in which it had been suppressed. Or, the agency may seek structural measures by actually breaking up the firm.[24]

In designing and implementing such remedial measures, care must be taken to avoid imposing greater costs than those incurred by the anticompetitive conduct. For example, the most effective way to establish competition in a market may be to break up a dominant firm. If this remedy would prevent the realization of overwhelming economies of scale, however, then it would not be a responsible remedy for any agency to seek.[25] Similarly, an investigation may determine that vertical market restraints (for instance, tied selling or exclusive dealing) have prevented the beneficial entry into a market by new competitors. Vertical market restraints, however, may also serve legitimate procompetitive purposes, such as preventing free riding. Remedies in such cases should seek to deter anticompetitive conduct while permitting contractual restrictions that achieve genuine efficiencies.

A checklist of possible remedies in abuse cases would include the following:

- Order to cease the abusive behavior. This will usually be combined with a fine if the infringement is continuing.
- Imposition of fines on the firm. Criteria for fixing fines include gravity of the infringement, length in time of the infringement, effect of the infringement, nonenforcement of the infringement, difficult market conditions, size and profitability of the undertaking, cooperation of the undertaking, state of the law, repeated infringement, continuation of infringement following clarification of the law, governmental pressure, and amount of unlawful profit from infringement.
- Fines on individuals and imprisonment (or both). Except in extreme circumstances, however, these sanctions are inappropriate in abuse of dominance cases, which typically do not involve criminal intent.
- Order to repay "undue profits." In jurisdictions where such a remedy is possible, however, it is rarely used because such a calculation is extremely difficult to make.
- Divestment or division of firms.
- Order to take certain action, if, for instance, it is necessary to ensure fair treatment of competitors or other market participants.
- Informal settlements. These can sometimes be preferable to lengthy proceedings but should remain an exception.
- Award of damages.
- The special case of government-origin dominance. When dominance has been established by the state, or when the state owns the company, other considerations may come into play. In many countries state companies and state agencies do not enjoy immunity from remedies if they are involved in economic activity. The question may arise, however, whether the activity has taken place under state compulsion (result: no responsibility of the company, but the state may be liable) or not (result: full responsibility of the company).

CONCLUSIONS

Investigating alleged abuses of a dominant position can be among the most challenging and difficult tasks for a competition agency. This is because practices that can qualify as abuses (predatory prices, tie-ins, vertical restraints) can also promote efficiency. Consequently, investi-

gating alleged abuses of a dominant position will require a careful rule-of-reason analysis, in which possible anticompetitive harm is weighed against possible efficiency benefits.

In an investigation of an alleged abuse case the tasks are the same as in other investigations: define the relevant market(s), explain how the alleged abuse acts might harm competition, and explore possible efficiency benefits from the practice. The second task is often called "laying out the theory of the case." Key questions include: How would the practice harm competition? Will it deter or prevent entry? Will it reduce incentives of the firm and its rivals to compete aggressively? Will it provide the dominant firm with an additional capacity to raise price? Will the practice enable the dominant firm to evade price regulation in one or more of its markets? If it is necessary to evaluate possible efficiencies (that is, anticompetitive effects are likely), the competition agency should expect the dominant firm to be able to explain how the practice at issue improves efficiency. Does it generate incentives to provide better service? Does it increase the amount of promotion or advertising? Do consumers benefit from lower prices or greater product availability?

In investigating an alleged abusive practice, the competition agency should obtain information from various sources including: customers of the dominant firm, rivals of the dominant firm, government officials who regulate some aspect of the dominant firm's behavior, competition officials in other countries, and officials representing the dominant firm. The views of rivals, of course, must be viewed with some skepticism because their interests are not necessarily consistent with the goal of competitive markets, and it is important not to equate harm to competitors with harm to competition. In this respect the views of customers are more reliable. How do they evaluate the effects of the alleged practice? Do the practices lower or increase prices and costs? Do they improve incentives? Or, do they tend to raise barriers to entry and expansion without any obvious efficiency rationale? Careful attention to these issues will ensure that abuse of dominance provisions are an effective tool for competition agencies in promoting a healthy and vibrant market economy.

NOTES

1. In some cases, it may not be necessary to establish the existence of an actual dominant position, if a country's law also provides remedies for the offense of "attempted monopolization." In such cases, however, the law usually requires that there be some probability that the subject firm would succeed.

2. It should be noted, however, that because of technological changes, many industries (that is, electricity generation and perhaps most aspects of telecommunications services) that in the past were argued to be natural monopolies are now at least potentially competitive. For this reason, competition agencies should be prepared to examine critically arguments that market dominance is justified by natural monopoly characteristics.

3. The concept of market power refers to the ability of a firm (or a group of firms acting jointly) to profitably maintain prices above competitive levels for a significant period of time. The qualifier "profitably" is important—it denotes the fact that in order to exercise market power, a firm must be in a position to raise prices without losing sales so rapidly that the price increase is unprofitable and must be rescinded, as would be the case in a competitive market (see Landes and Posner 1981, 937–96). In addition to higher than competitive prices, the exercise of market power can be manifested through reduced quality of product or service or a lack of innovation in the relevant market(s).

4. International borders can also be a factor in defining geographic markets in competition law cases, if the relevant product(s) are subject to tariffs or other kinds of government-imposed barriers to transborder movement (see Pittman 1995).

5. Department of Justice and Federal Trade Commission (1992); Canada Director of Investigation

and Research March 1993; Autorità garante della concorrenza e del mercato (1993), European Commission (1997).

6. *United States v. E.I. du Pont de Nemours & Co.*, 118 F. Supp. 41 (D. U.S. Sup. Ct. 1956).

7. In some jurisdictions, additional factors are also evaluated, such as the degree of vertical integration in the sector, and relevant technological and financial factors.

8. An example of such a case is the Canadian case of Laidlaw Waste Systems (see appendix 1 to this chapter).

9. In some legal systems, it is presumed that certain practices by a dominant firm are inherently unfair, and that no efficiency gains can justify further restricting competition in the market.

10. It should be noted that legal monopolists do not always earn high profits. One of the most important consequences of the lack of competition in a market is the resulting tendency toward inefficient behavior and the negative effect that it can have on costs and on technological progress. In many circumstances, dominant firms, especially firms that enjoy a legal monopoly, are engaging in rent-sharing activities with workers and suppliers, so that a part of their market power is shared with other participants in the production process, leading to higher costs, not necessarily higher profits.

11. The European Commission has a strong role in this respect because it can directly require, not only advocate, that member states remove all regulatory impediments to competition that restrict trade among them.

12. Technical and other progress has changed the concept of what can be considered a "natural" monopoly.

13. The issue of the willingness of different consumers to pay different prices may have a reduced relevance when substitute products are hard to come by, and especially if barriers to entry are high.

14. The possibility of establishing barriers to entry should also be borne in mind.

15. For instance, the 1992 decision of the U.S. Supreme Court in the *Kodak* case concluded that tie-ins can be used in moderately competitive markets to exploit certain consumers. See *Eastman Kodak Co. v. Image Technical Services,* 112 S. Ct. 2072 (1992).

16. Problems associated with a broadly based essential facilities doctrine are discussed in Werden (1987).

17. This approach is followed, for example, in Canada, Director of Investigation and Research, Predatory Pricing Enforcement Guidelines (1992). For an example of the European Community approach, see Case C 62/86 *AKSO v. Commission,* I ECR 3359 (1991).

18. *Lewis v. Pennington* (1961) CCH Trade Cases 70,036.

19. In the United States, intellectual property rights figured in the 1994 consent decrees entered in the Pilkington and Wave Soldering matters. See *United States v. Pilkington plc and Pilkington Holdings Inc.* (CCH 1994-2 Trade Cases ~1 70,842) and *United States v. Cookson Group plc et al.* (CCH 1994-1 Trade Cases 170,666). In Canada, intellectual property rights were a key consideration in the NutraSweet matter. See *Canada, (Director of Investigation and Research) v. The NutraSweet Co.* (1990) 32 C.P.R. (3d) 1. In the European Union, intellectual property rights considerations were at the heart of the Magill decision (*RTE and ITP v. Commission,* ECJ, April 6, 1995, joint cases C 241 e 242/91). For the principles governing European Union legislation, see Commission Regulation (EC) No. 240/96 of January 31, 1996, on treatment of certain categories of technology transfer agreements.

20. *California Retail Liquor Dealers Ass'n v. Midcal Aluminum, Inc.,* 495 U.S. 97(1980).

21. Case C41/90 (1991) ECR 1979. In this case, the state was held responsible.

22. Under European Union law and jurisprudence, horizontal and vertical situations can be distinguished. If a supplier is granted a dominant position, as far as its vertical relations are concerned, the "essential facility" doctrine may apply in the sense that access to essential facilities may not be refused.

23. Even when a country's legislation does not include an explicit overall test of market impact, agencies may wish to incorporate such a requirement in

their internal case evaluation process. If the practices being investigated in a particular case would not meet an overall test of anticompetitive effects, then it is questionable whether the case is an appropriate use of the agency's scarce resources.

24. A classic example of a structural order to establish competition in an industry that had been effectively monopolized, through a combination of corporate practices and government regulatory actions, was the break-up in the United States of the American Telephone and Telegraph Company by a court order in the early 1980s. Key aspects of the economics underlying the remedy in this case are discussed in Brennan 1987, pp. 741–93.

25. As noted in the last section, the existence of a natural monopoly is not something that an agency should accept without appropriate evidence. In particular, the mere fact that a market has been dominated by a single firm for years or even decades is not proof of a natural monopoly in an economic sense. Before the breakup of AT&T in the early 1980s, many commentators maintained that this would impose heavy costs on consumers. In retrospect, however, the breakup of this huge dominant firm is widely seen as a useful step that ushered in an era of unprecedented competition, innovation, and new service offerings in the telecommunications industry that yielded large benefits for consumers.

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Appendix 5.1

Case Examples

The Laidlaw Case

The particular practices that were the focus of the case against Laidlaw Waste Systems, Inc., a supplier of commercial waste collection services in local markets on Vancouver Island in the province of British Columbia, Canada, included.[1]

- A series of acquisitions by Laidlaw of competing businesses on Vancouver Island.
- Alleged restrictive provisions in Laidlaw's contracts with customers, including automatic self-renewal ("evergreen") clauses, and "right of first refusal" and "right to compete" clauses.
- Threats of "sham" litigation.

The geographic dimension of the relevant product market was a central issue. The specific issues before the Competition Tribunal concerned the extent of several local markets for lift-on-board service on Vancouver Island. Although the Director of Investigation and Research contended that three such markets could be identified, the respondent took the position that two wider geographic markets should be considered.

The resolution of this issue turned importantly on arguments relating to the "cellophane fallacy." The respondent grounded its argument on the hypothetical monopolist approach, arguing that any attempt it made to raise prices significantly above prevailing levels would be overwhelmed by new competition from alternative suppliers in the two markets. The director argued essentially that the respondent's position was subject to the cellophane fallacy, in that it overlooked the possibility that the prices charged by Laidlaw were already above competitive levels. In this context, evidence that a further increase in prices would induce substitution toward alternative suppliers was consistent with the director's case.

Microsoft Corporation

(Consent decree first issued for public comment July 1994)

In the Microsoft case, the U.S. Department of Justice and Microsoft entered into a consent agreement to settle the department's allegations that Microsoft had violated antitrust laws by engaging in certain contractual practices with computer manufacturers. Although U.S. law does not contain an "abuse of dominant position" provision, this investigation would fall into that category because Microsoft was the leading provider of personal computer operating systems at the time the consent agreement was reached.

The central allegation made by the department was that Microsoft "used monopoly power to induce personal computer (PC) manufactures into anticompetitive, long-term licenses under which they must pay Microsoft not only when they sell PCs containing Microsoft's operating systems but also when they sell PCs containing non-Microsoft operating systems. These anticompetitive long-term licenses have helped

Microsoft maintain its monopoly. By inhibiting competing operating systems' access to PC manufacturers, Microsoft's exclusionary licenses slow innovation, raise prices, and deprive consumers of an effective choice among competing PC operating systems" (Competitive Impact Statement).

In short, although the Microsoft investigation was multifaceted, the central allegations were that Microsoft had market power in the market for operating systems; Microsoft entered into long-term contracts with manufacturers that required the PC manufactures to pay for Microsoft's operating system on each computer that the manufacturer shipped, whether or not the computer actually contained a Microsoft operating system; these contracts raised the costs of Microsoft rivals in the operating system market; and the resulting effect was a lessening of competition. The consent agreement prohibits Microsoft from entering into such contracts.

There remains some controversy in the U.S. antitrust community regarding the economic effect of Microsoft's practices. Those who conclude that Microsoft did not violate the antitrust laws argue, among other things, that Microsoft's contracting practices did nothing more than offer lower prices to buyers willing to commit to purchasing larger quantities. Since volume discounts lead to lower prices, they would not typically be considered violations of the antitrust laws. Other commentators point out that Microsoft may have had a legitimate efficiency rationale—the prevention of pirating—for its somewhat unusual contractual terms.[2]

Litigation over Microsoft's practices continued after the entry of this consent decree. In 1998 the Department of Justice filed new charges against the company.

NOTES

1. *Canada (Director Investigation and Research) v. Laidlaw Waste Systems Ltd.* (1992) 40 C.P.R. (3d) 289 (Competition Tribunal, January 20, 1996).

2. It is worth noting that this was the first widely publicized case of cooperation between the EU and U.S. antitrust authorities. In 1994 the European Commission accepted an undertaking by Microsoft that effectively ended the foreclosure effect of its license agreements concerning MS-DOS and Windows operating systems.

Appendix 5.2

Special Issues of Abuse of Dominance in Transition Economies

Countries in transition from centrally planned economies to market economies face special problems in managing the transition. It may take considerable time to complete the privatization process and to achieve the goal of truly competitive, open markets. Inevitably there will be significant disruption to the lives of many citizens, and there will be calls for measures to ease the hardships that result.

As discussed in chapter 6, Competition Advocacy, there is a natural resistance in the privatization process to the creation of competitive markets, in which former government monopolies are fully subject to competition. There is a tendency instead simply to transform public monopolies into private ones. It is an important function of the competition agency to resist that tendency and to seek to impose competitive structures in the new economy wherever possible. The competition agency and other advocates for competition are not likely to be fully successful, however. It is probable that some markets will be characterized by dominance in the period immediately following privatization. Some, of course, might be natural monopolies, or markets in which total costs of supply can be minimized only when there is just one producer. Examples of natural monopolies are distribution of water, electricity, and natural gas. In other markets, however, there might be dominant firms that are not natural monopolies. One might characterize such firms as "unnaturally" dominant. The hallmark of these unnaturally dominant firms is that they were government-created.

How should the competition agency deal with unnaturally dominant firms? Most competition experts would say that the agency should consider them as it would any dominant firm that was not a natural monopoly. If the firm abuses its dominance the agency should initiate an enforcement proceeding under the country's competition law and apply the appropriate sanction under the law, which, as described in this chapter, could range from an order to cease the abusive conduct, to fines upon the firm or responsible individuals, to structural remedies, such as partial divestitures, or at the extreme, division and restructuring of the firm. Most competition experts would also take the view that high pricing by unnaturally dominant firms should not be treated any differently from high pricing by other dominant firms, that is, it should not be regarded as an abuse of dominance. Market pressures should be relied on to eventually reduce prices to competitive levels.

Others (including political leaders and experts in other fields) might say, however, that this situation in transition countries is unique and requires special remedies. In transition countries unnaturally dominant firms not only have been created by the government but also they are in many cases sustained by governmentally imposed barriers to entry. It could be argued with some justification that such government support combined with other aspects

of transition economies that inhibit the development of new competition, such as imperfect capital markets, will sustain the unnaturally dominant firm for an intolerably long period of time, significantly delaying necessary cost-cutting and harming the country's consumers. The argument could be made that this situation requires the imposition of extraordinary remedies, including possibly limited price controls and an expanded ability to divide unnaturally dominant firms, if only for a limited period of time.

The difficulties with price controls are discussed above in this chapter. Price controls are inferior to competition when competition is possible. There may be strong public support for price controls, however, in situations in transition countries where competition is theoretically possible but not practically so for a significant period of time. If control over prices of unnaturally dominant firms is undertaken in the transition context, the competition agency should urge that the following measures also be adopted:

- Price controls should be implemented only in discrete situations and as a last resort, when no other remedy is appropriate. For example, price controls could be imposed only after the competition office has concluded that a firm has a durable dominant position.
- Price control authority in a given industry that is not a natural monopoly should be expressly limited in time not to exceed a few years.
- Price control authority should be located outside the competition office. Keeping this function separate from competition enforcement ensures at least two important results: the resources of the competition office are not co-opted for regulation, and the competition office will have continued independence to act as advocate for competition as opposed to regulation.

Alternatively, or in addition, the competition law might provide that the competition authority would have the power to break up unnaturally dominant firms in the few years immediately following their creation or privatization, even in the absence of proof that the firm otherwise abused its position of dominance. It will be recalled that the extraordinary remedy of breaking up dominant firms carries with it the risk of eliminating some or all of the efficiencies that may have permitted the firm to achieve its dominance. This risk is less significant in the case of unnaturally dominant firms, however. Those firms did not win their market power through superior performance—they were given it by the government.

A law that provides such a remedy, permitting the restructuring of unnaturally dominant firms in the absence of proof of abuse of the dominant position, should have the following elements:

- It should be applied only to firms that meet the traditional standard for dominance and whose dominance directly resulted from state ownership.
- The power should expire within a few years after the enactment of the competition law.
- The firms resulting from the restructuring should be economically viable, and the restructuring should be designed to minimize increases in the costs of the resulting firms.

Chapter 6

Competition Advocacy

Competition law generally aims at preventing private restrictive business practices that significantly lessen competition, reduce consumer welfare, and result in inefficient use of resources. However, competition may be lessened significantly by various public policies and institutional arrangements as well. Indeed, private restrictive business practices are often facilitated by various government interventions in the marketplace. Thus the mandate of the competition office extends beyond merely enforcing the competition law. It must also participate more broadly in the formulation of its country's economic policies, which may adversely affect competitive market structure, business conduct, and economic performance. It must assume the role of competition advocate, acting proactively to bring about government policies that lower barriers to entry, promote deregulation and trade liberalization, and otherwise minimize unnecessary government intervention in the marketplace.

The role of competition advocacy

Through competition advocacy a competition agency can influence government policies by proposing alternatives that would be less detrimental to economic efficiency and consumer welfare. It can serve as a buttress against lobbying and economic rent-seeking behavior by various interest groups. And it can foster greater accountability and transparency in government economic decisionmaking and promote sound economic management and business principles in both the public and private sectors.

There is a direct relationship between competition advocacy and enforcement of a competition law, and the connection is especially strong in transition and developing economies. Many markets in developing and transition market economies initially tend to be highly concentrated, and sometimes dominated by a single or a few large firms that engage in anticompetitive business practices or lobby the government for special favors. The aim of competition advocacy is to foster conditions that will lead to a more competitive market structure and business behavior without the direct intervention of the competition authority. The more unpalatable alternative is for the competition authority to exercise close and continual supervision of the dominant firms under the competition law. This alternative is more resource intensive, and the results less satisfactory. It represents a return to broad government intrusion in the marketplace, reminiscent of the systems that governments in emerging market economies are leaving behind.

There may be both an explicit, statutory basis for the competition agency's competition advocacy functions and an implied or informal basis. The laws of some countries, such as Canada, Italy, the Republic of Korea, and the

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Russian Federation, give the competition agency a specific mandate to submit its views on particular matters to the appropriate ministry or regulatory agency, for example, on the restructuring of the telecommunications industry. In other countries the law may be silent about the role of the competition agency in such areas. Unless the law forbids participation by the competition agency, however, the agency should, through its law enforcement role, actively seek opportunities to state the case for competition in the public forum. This has been largely the practice in France, Germany, and the United States, for example. It is unlikely that any other party would do so, or be as effective. The benefits to the economy and to consumers from effective competition advocacy are almost certainly to be significant, at least as great as those from more traditional competition enforcement.

There is also a role for competition advocacy in the broader, public arena. The successful establishment of a market economy requires the existence of a competition culture within the country. Both consumers and the business community must have an awareness of competition policy and an understanding of how it will benefit them. The competition agency has an important role in this educational process. In many countries the public does not have significant experience with competition policy or an appreciation of the benefits that flow from the process of competition. Moreover, the first experience many individuals have with free markets, especially in countries in transition from planned economies, is likely to be negative, not positive. With liberalization of markets often comes disruption, as misallocated and inefficient assets are cast aside and jobs are lost, and prices of some products, formerly controlled, rise abruptly to market levels. Under these circumstances the competition agency's task of building public support for competition policy is especially challenging.

The business environment in which firms operate is conditioned by many economic policies. The degree of competition in an economy can be strengthened or weakened according to the way in which these policies are developed and applied. Competition advocacy in transition and developing economies can be most important in the following policy areas:

- Trade liberalization.
- Economic regulation.
- State aids.
- Operations of local government authorities.
- Privatization.

Trade liberalization

Trade policy has important implications for the development of competitive markets. Domestic markets are relatively small in most transition and developing economies and often characterized by dominant firms. Economic, social, and political pressures pose obstacles to opening up such markets by breaking up dominant domestic firms. Imports, on the other hand, can bring about new competition relatively quickly. Thus liberalized trade policies such as reducing tariffs, investment controls, import restrictions and quotas, domestic production or content requirements, and the like are among the most significant measures that can be advocated by the competition agency.

Advocacy of trade liberalization is likely to be controversial. Domestic producers may put up a strong resistance as they may be unable to adapt quickly to new market conditions, and they may find themselves vulnerable to competition from more efficient foreign producers. Moreover, foreign investors in emerging markets may also demand protection against competitive imports as a condition of their investment. As a consequence, protectionism for domestic markets is often politically popular in the early years of new market economies, which makes it difficult for the competition authority to advocate trade liberalization. Indeed, there may be some valid policy reasons, including social concerns, for temporary tariff and nontariff trade barriers in an emerging market economy. In this context the

competition advocate may urge that protectionist measures be strictly related to restructuring programs and that they be temporary.

The role of the competition advocate in the formulation of trade policy is often one of educator—informing policymakers and consumers of the true costs of trade barriers. For example, in most countries the agricultural sector enjoys significant political power and has succeeded in erecting trade barriers that protect locally produced agricultural products. Such measures are grounded in an important social policy—the preservation of agricultural jobs—but often result in significant costs to consumers. Such costs are likely to be relatively greater in transition and developing economies, where citizens spend on average a greater proportion of their income on food than in more developed countries. Experts in the competition agency can make reasonable estimates of the costs to consumers of such measures, which then can be compared with expected benefits. If the costs are disproportionate compared with the benefits, as they are likely to be, the agency can suggest that the social policies embodied in the trade barriers be addressed in a more efficient manner—for example, through direct government subsidies to individuals who lose their jobs as imports increase.

It must be borne in mind that promotion of competition is a long-term process. The competition agency will not always be successful in its efforts to promote trade liberalization, but it should not be discouraged by failures. National economic policies are often the result of compromise. The role of the competition advocate in the formation of trade policy is to ensure that policymakers and the public at large are fully informed of the benefits of liberalized trade to competition and consumer welfare.

Economic regulation

Competition advocacy can play an important role in the legislative process in transition and developing economies. Often the legal system in these countries undergoes dramatic change in a relatively short period of time, and it is important that competition policy be established in the new regime as cohesively as possible. The competition agency should strive to ensure that competition rules are properly and consistently inserted into new legislation and regulations where appropriate.

The competition agency should also be active in promoting competition in regulated industries. Recent technological developments and rethinking by economists have questioned the traditional arguments advanced for economic regulation of sectors (such as electricity and telecommunications) previously considered natural monopolies. Not all aspects of the operations of enterprises in these types of sectors necessarily display increasing returns to scale such that there is room for only one or a few firms in the market. Often the monopoly rights granted by the government are extended through vertical integration into economic activities that can be subjected to competitive pressures. In many cases it is possible to separate natural monopoly elements from potentially competitive activities and the regulatory functions from commercial functions, and also create several competing entities through restructuring.

In several industrial countries (notably Australia, Canada, New Zealand, the United Kingdom, and the United States) such initiatives have been successfully adopted. Thus in the provision of electricity, separation has been made between generation, transmission, marketing, and after-sales service. Similar separation has been put into effect in telecommunications, especially in the markets for long distance services and the provision of equipment, so that consumers are accorded greater choice and lower prices thorough competition. Similar headway has been made in the provision of services in other markets that were previously subjected to extensive regulation—namely, air-

lines, trucking, intercity bus services, railways, and water and sanitation. Few economic issues are likely to be more important or controversial in transition and developing economies than the privatization and restructuring of these infrastructure industries. The competition agency can and should participate in the debate on these issues.

The competition agency may also participate in a limited and appropriate way in the setting of industry standards by government authorities, such as safety and environmental standards or license requirements. The role of the competition agency is not to intervene in the technical aspects of such standards-setting, but to help ensure that the standards are transparent and nondiscriminatory and that they do not unnecessarily restrict competition among service providers.

The competition authority may also act as competition advocate on a case-by-case basis in regulated industries. To the extent that the law permits, it can intervene in specific regulatory proceedings to present the case for competition. Such activities are resource-intensive, however, and the agency should choose its cases carefully. Participation in regulation cases often requires intensive preparation. The agency needs to acquire some technical expertise in the relevant industry if it is to be effective in the proceeding. In such cases it is often useful to work with independent, outside experts who have specific industry expertise.

Finally, in countries that do not have specific laws applying to natural monopolies, the competition authority may have a significant role in the regulation of these sectors. The relevant government ministry may continue to exercise control over the industries, including control of prices and market access, but the competition authority may decide, usually on a case-by-case basis under the competition law, concerns relating to the monopoly's equitable treatment of both new entrants and consumers.

State aids

A general goal of competition advocacy should be to ensure equal conditions for all market operators. This equality may be distorted by government policy establishing different rules for domestic and foreign companies, for state-owned and private firms, or for large and small enterprises. In this regard state aids should receive careful scrutiny by the competition agency. Subsidies, tax and social security rebates, preferential loans, capital injections, public procurement, and other benefits for selected market operators, sectors, or regions can be harmful to competition. For example, a subsidy given for promoting the use of natural gas may place oil suppliers at a competitive disadvantage. To the extent that there are other socioeconomic welfare objectives, such as reducing pollution, a careful cost-benefit analysis needs to be conducted.

Like restrictive trade practices, state aids are addressed in many international agreements, including the General Agreement on Tariffs and Trade (GATT) and several regional integration and trade agreements. Nevertheless, almost all governments continue to employ state aids in some form, and the practice is likely to be more widespread in transition and developing economies, as those governments strive either to make their domestic industries competitive in the world economy or to protect them from more efficient foreign competitors. The experience across countries suggests that these types of policy measures rarely yield successful results, however. They tend to dampen firms' incentives to become efficient. They foster rent-seeking behavior and give rise to high levels of ownership and market concentration—a phenomenon particularly observable in transition and developing economies. Moreover, governments are notoriously poor predictors of market developments, and the adopted strategies soon become costly in several ways. In addition to resulting in various inefficiencies, these practices contribute to fiscal deficits and the development of anticompetitive practices.

The competition agency can act to improve public awareness of the issue and in particular to promote understanding of when certain forms of state aid might be appropriate in addressing specific problems that arise in the transition period. Thus temporary and specific state aids might be appropriate in connection with implementation of restructuring programs in disadvantaged regions and sectors, promotion of research and development activity, and provision of temporary support for enterprises undergoing a difficult adaptation to new, free-market conditions. On the other hand, state aids may inappropriately delay structural changes necessary to render enterprises or sectors economically viable. As in the case of trade policy, the competition office can show how the long-run negative effects of such policies may outweigh their short-run benefits and suggest more direct and efficient means of addressing the social issues that may underlie the policy.

In some countries government procurement practices are a form of state aid, with the state purchasing goods and services from favored enterprises at higher than market prices. The competition office can urge that government procurement be conducted in a transparent and competitive fashion that gives all qualified sellers an equal opportunity to compete. The agency can help to develop procurement procedures that ensure competitive outcomes. It can also assist the government in adopting measures that help to prevent bid rigging and price-fixing on government contracts. In virtually all countries, cartel conduct in government procurement is a serious problem.

OPERATION OF LOCAL GOVERNMENT AUTHORITIES

In some emerging market economies, especially those in transition from centrally planned economies, economic reforms result in ownership by local governments of communal service facilities, such as water supply services and public transport. A conflict of interest exists in this situation, since the authorities are both the owners of these assets and the representatives of citizens' interests. As the owner, the authority is interested in the profitability of its business, which can be enhanced by increases in prices and lessening of quality of services; but such actions clearly may be contrary to the interests of the citizens whom the authorities represent. In most countries (the countries of the former Soviet Union are a notable exception) the competition authority cannot legally intervene against local and national government authorities under the competition law. Thus competition advocacy is the means by which these anticompetitive practices are addressed.

In this situation the competition agency may recommend privatization of the productive assets and the introduction of competition wherever possible. If elements of natural monopoly exist, competition can be introduced through competitive bidding for selection of the most efficient service provider. In other situations public authorities may interact with private enterprises. For example, public transport may be provided both by the local authority and private enterprises. Competition advocacy should attempt to ensure that there is no discrimination in favor of the public authority in the granting of subsidies. When the public authority is in control of an essential facility, competition advocacy should attempt to prevent participation by the authority in potentially competitive upstream or downstream markets. When such integration exists, competition advocacy should prevent discrimination in favor of the public authority in terms of access to the essential facility.

The competition authority may also inform local authorities of some of the most common restrictive business practices of service providers and suppliers, such as bid rigging, and assist them in adopting practices that prevent or detect such practices. The competition agency should also strive for transparency and fairness in administering state aids at the local level.

Privatization

Considerable empirical research has found state-owned enterprises to be less efficient than privately owned firms and has identified a diverse set of explanatory factors (the nature of managerial compensation and incentives, inefficient organizational form and structure, lack of direct accountability and of hard budgetary constraints for managers). In most countries state-owned enterprises are insulated from the discipline of competitive market forces. Aside from benefiting from government-imposed barriers to entry, price regulations, and subsidies, state-owned enterprises in most countries (again, countries of the former Soviet Union are a notable exception) are exempt from the application of the competition law. In every country that makes a serious commitment to the development of a market economy, therefore, privatization of state-owned enterprises has a high priority.

There is an obvious tension in the privatization process between the desire of the state to obtain the maximum price for the privatized assets and need for the creation of efficiency-enhancing, competitive markets. Investors frequently are hostile to competition and are willing to pay more for assets that enjoy a position of market dominance. Thus there is an important role for the competition agency—to ensure that state monopolies are not simply transformed into private ones. The task is not an easy one, however. Privatization is a core element of market-oriented reform. Hence, the competition agency must not create unnecessary obstacles to the process. There may be both legal and political constraints on direct intervention by the agency in the privatization process, but within such limitations the agency's mandate is to seek the creation of markets in which competition can flourish.

In most transition and developing economies a separate agency is created to conduct privatization. However, in many countries the laws also provide for formal participation by the competition agency. Ideally, the competition agency would be notified of significant privatization cases. The agency might have the power to intervene directly in a given privatization case, or it could proceed under the merger control provisions of the competition law. The agency should have the power to require the parties to submit relevant evidence, including information on the assets, operations, and revenues of the enterprise to be privatized and actual and potential competitors. The agency's inquiry should focus on the traditional issues associated with identification of dominance, including proper definition of product and geographic markets, market structure, entry barriers, and other aspects of the market relating to the ability of the privatized enterprise to exercise market power, including particularly the likelihood that imports could discipline such anticompetitive conduct.

If the enterprise would not have a dominant position, the agency should not oppose the proposed transaction. However, if the enterprise would be dominant, the agency should consider requiring (or recommending, if its powers to intervene directly are limited) measures to eliminate the dominant position. The simplest remedy is to encourage new entry by lowering entry barriers, including trade barriers. Sometimes a partial divestiture from the dominant firm of an essential facility or important proprietary technology might be sufficient. The most drastic remedy is a complete restructuring of the enterprise into two or more entities before privatization. Such a restructuring may be possible if there is one or only a few state-owned monopolists operating many plants or facilities, but it is likely to be difficult, both practically and politically. Care must be taken that the assets of the newly created entities are viable, that the firms can operate on an efficient scale, and that they have access to necessary inputs and distribution facilities.

Finally, privatization can be an intensely political exercise. The competition agency should intervene in privatization proceedings

judiciously and in a nonbureaucratic manner. The agency should be well informed and take fully into account the positions of the enterprise and the privatization agency. It must seek to reach a result that is both procompetitive and feasible. And given the political nature of the privatization process, it must convince all participating parties and the public at large of the correctness of its position.

BUILDING PUBLIC AWARENESS OF COMPETITION POLICY

The competition agency faces a formidable task in building awareness and support for competition policy among the citizens and the business community, especially in transition and developing economies.

As a general proposition, the competition agency should conduct its business in public as much as possible, though it faces significant limitations in practice. Many of the agency's deliberations, as is true for all government agencies, are conducted on a confidential basis. Moreover, all competition laws contain strict confidentiality requirements relating to information acquired in investigations or enforcement proceedings. To the extent possible, however, the agency should make information about its activities publicly available.

The agency should regularly publish its enforcement decisions in bulletins sent to interested parties (state administrations, local authorities, business organizations) that are influenced by competition enforcement. In addition, summaries of decisions, and comments by case handlers, should be publicized in the media. Press conferences are an efficient way of developing contacts with journalists.

A useful but technically difficult educational tool for competition agencies is the promulgation of guidelines on specific substantive competition policy areas. Many competition agencies have published merger guidelines or guidelines on restrictive agreements. Most competition laws are written in sparse, general terms, and such enforcement guidelines can help businesses conform to the law. The agency must draw up such guidelines carefully, however. Although the experience of other countries can be relevant (the U.S. Horizontal Merger Guidelines are often consulted in other countries, for example), each country's guidelines must reflect conditions and practices in that country. The agency will be held accountable for its decisions according to its own guidelines, which become the standard by which the relevant conduct is judged in that country.

The agency can also organize conferences, seminars, and workshops to promote understanding of the role of competition in a market economy and to show how its enforcement activities further such goals: how competition benefits both consumers and businesses by ensuring the supply of goods and services at the lowest possible price and highest possible quality; how producers in competitive markets are forced to respond to the demands of their customers; and how competitive markets result in the most efficient allocation of resources, to the benefit of the entire economy.

Competition enforcement will be more effective when there is a community whose members understand and support the concept of competition policy. Such members could include private lawyers who practice in the competition and regulatory arenas, academics with expertise in business and economics, consumer organizations responsible for protection of consumer interests, politicians interested in market-oriented reforms, and the business community itself. The role of the business community is ambiguous, of course. Although business people prefer not to compete with other sellers (or with other buyers in their role of purchasers), they nonetheless benefit from competition among their suppliers and customers. The majority of competition cases in most juris-

dictions arise from complaints made by business people against firms that may have foreclosed important distribution channels or sources of inputs or have charged higher prices through collusion. Vigorous competition in domestic markets provides domestic suppliers with lower prices and hence costs, and makes them more competitive in international markets.

LESSONS FROM OTHER COUNTRIES

Competition law enforcement is both the foundation and the tool for fostering sustainable competitive markets that result in healthy interfirm rivalry, opportunities for new entry, entrepreneurship, increased economic efficiency, and consumer welfare. Competition advocacy can augment these and other benefits of competition. Experience has shown that several factors lead to successful competition advocacy:

- The competition agency must develop relationships with government ministries, regulatory agencies, and other bodies that formulate, enact, and administer policies affecting demand and supply conditions in various markets. Such relationships, based on mutual respect, recognition of professional expertise, and appreciation of the respective responsibilities and policy mandates of different organizations, will facilitate communication and a search for alternatives that are less harmful to competition and consumer welfare.
- Competition advocacy often entails formal appearances and public statements to promote or defend positions in favor of competition. However, competition advocacy need not be confrontational; public opposition to other agencies is at times risky, difficult, and counterproductive. A preferable strategy is to encourage debate and provide accurate information in order to promote better and more informed economic decisionmaking.
- The competition agency must have specific expertise (or must be able to acquire it from outside experts) in the areas in which it seeks to intervene. The agency should suggest alternative policy measures to address competition concerns. Compromises may often have to be made so that the government can achieve other socioeconomic objectives.
- Competition advocacy should be conducted in an open, transparent manner in order to safeguard the integrity and credibility of the competition agency. When confidentiality is required, the competition agency should publish news releases explaining why.
- Competition advocacy is likely to be most effective if the competition agency is independent and insulated from political and bureaucratic interference.
- An informed business press is invaluable for furthering the objectives of competition law policy. Competition agencies need to establish good media relations and explain the role and importance of competition law policy as an integral part of the governments' economic framework.

Annex 1

Barriers to Entry

Most competition cases have to do with market power, and barriers to entry are necessary for market power. In some cases market power is created through mergers or agreements between competitors not to compete. In others the focus is on the abuse of preexisting market power through, for example, restrictive vertical arrangements and predatory pricing. In fact, most abuses of market power are attempts to preserve or expand market power.

Firms have market power individually or collectively when buyers do not have an adequate choice of alternative independent suppliers. In a free-market economy consumers may buy from any firm and since firms can, in general, enter any market. Thus there can never be market power when entry is easy. As soon as one firm or a group of firms attempts to raise prices or lower quality (or both) from competitive levels, a new firm can emerge to serve the market.

Not surprisingly, many cases turn on an assessment of barriers to entry. If barriers are high, market power is possible. If they are low, new entrants can be counted on to restore competitive balance. This chapter provides a guide to evaluating barriers to entry in competition cases.[1]

Consideration of barriers to entry can appear at two points in a competition case. The first is at the market definition stage. If the law dictates that relevant markets should be defined to include potential entrants (supply-side substitution), any analysis of barriers to entry will be necessary to determine which firms are in the relevant market.[2] For example, in a merger of the only two firms in a country making automobile tires, makers of truck tires might be considered to be part of the relevant market—if they could easily switch to producing automobile tires should prices rise above competitive levels.

More commonly, however, the analysis of barriers to entry appears after the market has been defined. The question is: How likely is it that new entry would control uncompetitive behavior in the market? Even a firm with a large market share will have limited market power if a new company enters the market following any attempt to raise prices above competitive levels.[3] A merger, even if it builds a firm with a large share, cannot lead to higher prices if such prices would attract new entrants. Even in cases in which barriers to entry are not technically required to justify antitrust action, analysis of barriers can be useful to screen out cases with few anticompetitive consequences. For example, the approach to predatory pricing adopted in the Canadian Competition Bureau's guidelines suggests that the bureau will investigate whether such pricing could work in the market in question.[4] Predatory pricing is unlikely to be successful if attempts to recoup losses from a

This annex was prepared by Thomas Ross, with input and materials supplied by various team members.

price war are frustrated by the entry of new firms (or even reentry of the victim).

Any analysis of barriers to entry involves two basic steps. First, the most likely entrants are identified. These could be firms in the same industry in other areas; firms in the same area but in a different (but maybe related) industry, upstream (supplier) or downstream (customer) firms vertically integrating either formally or through a strategic alliance with another firm, or firms new to the market. Barriers to entry, however, really mean significant impediments to firms thought most likely to enter. Other firms might face different barriers.[5] The second step is evaluating the magnitude of the barriers facing potential entrants.

DEFINITIONS

Discussion of barriers to entry is complicated by disagreements over a correct definition.[6] The term *barriers* generally refers to conditions or behaviors that restrict the mobility of capital in and out of markets in response to realizations of above- and below-normal profits.[7] This approach takes what are sometimes called exit barriers as a type of entry barrier, since anything that limits an investor's ability to move capital out of an industry when profits are low will reduce interest in investing in that industry. This approach also considers only entry that brings capital into an industry and not entry by acquisition, which merely transfers ownership of existing capital. Since it does not change the number or size of those in the market, there is no reason to expect entry by acquisition to lead to lower prices.[8]

In defining *barriers to entry*, the key question is: Will supracompetitive prices in the relevant market attract entry that will bring prices back down to competitive levels? If the answer is no, we have an impediment to entry.

Probably the first to undertake a careful study of barriers to entry, Bain (1968) considered barriers to be factors that permitted established firms to maintain prices above costs without inducing entry. He suggested that economies of scale, absolute cost advantages, product differentiation, and large capital requirements were barriers.[9]

Stigler (1968), however, saw barriers only in asymmetries between firms—costs that had to be borne by entrants but not by firms already in the industry. So while Bain concluded that economies of scale and large capital requirements were barriers, Stigler (assuming entrants had access to the same technology and capital markets) did not.[10]

Where does all this leave competition authorities wanting to evaluate entry conditions? For competition cases four questions need to be answered:

- If prices rise above competitive levels, would this attract entry and bring new capital to the market?
- If there is entry, would it be of sufficient scale and scope to bring prices back down to competitive levels?
- How long would it take for prices to return to competitive levels?
- If there is no entry, if entry is not of sufficient scale and scope to push prices back down to competitive levels, or if it would take a long time for sufficient entry, what prevented more significant or rapid entry?

Both the Stigler and Bain definitions contribute to the antitrust treatment of barriers. With Bain, the focus is on what stops entry from eroding monopoly profits. Stigler's approach, however, gives us a better idea where to look for barriers that will block entry—that is, to look for asymmetries between firms. So, for example, there should be no worries about economies of scale (as in Bain) deterring entry into the steel industry; rather, attention should be on the size of the sunk component of the initial investment. It is this amount, already in place for the incumbent but not yet for the entrant, that represents what the entrant puts at risk and what can ultimately deter entry.

WHAT ARE THE EFFECTS OF STRUCTURAL BARRIERS?

Some barriers are due solely to conditions outside the control of market participants—basic costs of production, adequacy of capital markets, and activities of governments and regulators.

Regulatory barriers to entry

Governments interfere with entry in several ways, some intentional, some not. Many regulatory barriers are not highly visible. Government policies often only indirectly affect the ease of entry, yet this can make all the difference between a market with high barriers and one with low barriers.

EXPLICIT REGULATORY BARRIERS. The most obvious and direct barrier to entry comes from regulatory restraints on entry. If it is necessary to obtain a special permit or license to operate in a particular market and securing such a permit is difficult or impossible, it is less likely that there will be new entrants to push prices down to competitive levels. Governments take control of entry for many reasons, some good and some bad.

Some regulatory barriers are explicitly directed at blocking entry. For example, many transportation markets have historically had entry regulations, although these have now been relaxed in many countries. When enforced, such regulations can be an absolute barrier to entry.[11] It is still possible, however, that there are unregulated alternatives that will provide some market discipline. For example, in many cities regulated taxis compete with buses, private vehicles, car pools, and bicycles.

In some cases entry might require permits that are costless to obtain from regulators, but which take time to process. This regulation will not block entry, only delay it. Although some prefer the term "impediments to entry" for such restrictions, it must be recognized that they have much in common with barriers to entry—that is, they provide incumbent firms with some protection from competitive forces.[12]

Regulations that influence the use of some inputs can also become barriers to entry. Sometimes this is explicitly intended, sometimes not. For example, zoning restrictions may prevent an entrant from using the best sites for its business. And occupational licensing laws might force an employer to hire workers with credentials that are not needed to do the desired work. If such regulations raise the cost of serving a market and reduce potential profits, they will be a disincentive to entry.

Sometimes these restrictions are not equally applied to incumbents and entrants, as when incumbents avoid new, stricter regulations through some sort of grandfathering provision. The higher cost to new entrants protects incumbents from entry as long as they charge a price lower than the entrants' costs. If regulations raise costs for all firms to the same extent, they may not permit incumbents to make positive profits without encouraging entry. Even so, they prevent entrants from driving prices down to competitive levels.[13]

The classic example of government policies that favor incumbent sellers at the expense of potential entrants is in international trade. Potential entrants from other countries are frequently blocked from entry by tariffs, quotas, or other nontariff barriers. Tariffs were often imposed to generate revenues for governments with limited alternatives but have been used increasingly to protect domestic firms from foreign competition, typically at the expense of domestic consumers.[14] In this era of globalization no review of entry conditions could be complete without consideration of the actual and potential role of foreign competition in the market and of the barriers to trade that might limit that role.

The general importance of explicit regulatory barriers to entry varies from country to country. Years of governmental control of mar-

kets in formerly centrally planned economies leaves them with many such restraints on competition, frequently the most significant barriers to entry. Since many of these regulations are no longer desirable, competition offices of these countries should push for reforms that will free up competition through new entry.

IMPLICIT REGULATORY BARRIERS. In many cases regulations that are adopted for reasons unrelated to entry or competition still limit the attractiveness of entry. Look at environmental policy, which can influence entry decisions in at least two ways. First, policies that mandate lower levels of pollutants in emissions or effluent impose costs on firms. Even if the costs are imposed equally on all, they reduce profits and make the industry less attractive to investors. Frequently, there will be a substantial sunk-cost component that firms cannot recover if they leave the market.

Second, environmental policy hurts entry if it favors established firms over new entrants. When tighter emission and effluent standards are adopted, it is not unusual for older plants to be grandfathered—or at least given a long time to comply. New plants, however, are typically expected to meet the higher standards from the beginning.[15] This gives established firms an absolute cost advantage. They have scope to raise prices either through collusion or mergers without attracting entry.

Other examples of the ways that different public policies indirectly affect entry can be found in labor laws, bankruptcy laws, telecommunications regulation, and workplace safety laws.

Sunk costs

Sunk costs are costs that the firm cannot avoid by withdrawing from the market. They are a sort of entry fee since they represent the cost of entry followed by quick exit. Sunk costs are thus investments that are fully committed to the market once made and that have continuing value only if left in that market.

Sunk costs represent the investment put at risk by the entrant. As such, the size of sunk costs will clearly influence a firm's decision whether or not to enter. The prospective profits from successful entry must be weighed against the costs of unsuccessful entry. If sunk costs are zero, unsuccessful entry is not costly and entrants can be expected to respond quickly to profit opportunities in uncompetitive markets. Even hit-and-run entry can be profitable under these conditions. When such costs are large, however, potential entrants will be much more cautious.

Much of the recent rethinking about Bain-type barriers can be shown to involve examples of sunk investments. Dixit (1980) and Baumol, Panzar, and Willig (1982) showed that economies of scale driven by large fixed costs can discourage entry while allowing incumbents to earn supranormal profits, but only if part of the fixed costs is sunk. The extent to which product differentiation is a barrier to entry depends to a considerable extent on how sunk is the investment in brand names necessary to create the differentiation.[16] Switching costs, often seen to impede attempts at entry, represent a sunk investment (for example, in acquiring information) required to make a particular buyer-seller relationship work efficiently (see Klemperer 1995). Finally, many so-called regulatory barriers are simply sunk-cost problems. If regulations do not block entry but merely attach conditions (for instance, testing for product safety), the cost of satisfying the regulations will be largely sunk.

SUNK AND FIXED COSTS. Not all fixed costs are sunk. Long-run fixed costs are costs that must be incurred for any positive level of output. If two cities are served by a bus line, the long-run fixed cost might be the cost of one bus. But if that bus can be sold at its purchase price (or its lease costlessly cancelled), then this fixed cost is not a sunk cost.[17] Similarly, some of the price of rented space might be a fixed cost: if it is not possible

to operate from smaller premises as a firm reduces output, the lease is at least a partially fixed cost. If the lease can be cancelled at any time, however, this fixed cost is not sunk.[18]

SUNK COSTS AND ECONOMIES OF SCALE. Economies of scale exist when unit costs fall as output expands. It is the spreading of substantial fixed costs over many more units of output that is the main source of scale economies in many industries, though there can be others. If an industry is characterized by substantial economies of scale (relative to the size of the market), there will be room for only a few efficient firms, and this has led many economists to predict uncompetitive outcomes in such industries. If the market is "contestable," however, this need not be the case: if there are no sunk costs or other barriers to entry, potential entry can be expected to discipline pricing behavior (see Baumol, Panzar, and Willig 1982).[19] A firm or collusive group of firms raising price would quickly find itself displaced by an entrant offering lower prices.

Although there is a theoretical distinction between economies of scale and sunk costs, they are empirically related. Substantial economies of scale are frequently the result of large fixed costs associated with plant and equipment (among other things) combining with relatively constant marginal or variable costs.[20] Some of these fixed costs will be sunk. Seldom can all assets assembled for entry be resold at cost or leases cancelled costlessly.

This distinction has important implications for the way competition officials should evaluate economies of scale as a potential barrier to entry. Attention should be particularly focused on the magnitude of the sunk-cost component of fixed costs—that is, economies of scale should be regarded as an indicator of the possible presence of substantial sunk costs.

SOURCES OF SUNK COSTS. Sunk costs can arise, for example, as part of investments in physical and human capital, and in the start-up losses necessary before operations become profitable. Most familiar are investments in specialized capital (machinery, for example) that has limited secondhand value. A robot programmed to perform one highly specialized function on an assembly line may be useless when removed from its place. Much of the money used to purchase that robot will be sunk. Similarly, a piece of expensive farm machinery might be designed for use with a particular crop in a particular location and might be worthless elsewhere.

The normal problems of dissolving a business will be aggravated and sunk costs magnified if there are not good resale markets for equipment freed up as a result of the entrant's departure from the market.[21] This problem is likely to be greater in economies in which markets are just developing.

The costs of buildings and other structures can have a significant sunk component if they are custom designed or if they have a special location. A dam built as part of a hydroelectric generating facility is a clear example. A recent merger case in Canada provided evidence that meat-rendering facilities are so purpose-built that they are almost unusable for anything else. In such cases the resale value will be substantially less than the cost of building.

"Soft" assets, such as knowledge produced by research and development and brand names developed through expensive advertising campaigns, also have significant sunk components. Much of the learning and goodwill accumulated (at a cost) in the time spent in the market will be of no value after exit. In the same way customized computer software with limited application outside that for which it was written can represent a sunk investment.

Another important soft asset can involve regulatory approvals. In many cases regulations require entrants to obtain approvals before being allowed to supply a market—for example, food

and drug laws requiring that products are safe and effective. In contrast to regulatory barriers that absolutely prohibit entry, these laws attach conditions to entry that, while frequently offering social benefits, raise the cost of entry.[22] Meeting regulatory conditions is costly and this spending is largely sunk.[23]

Less obvious, but still important, are sunk costs associated with human resources. Time spent planning and building a firm has a value that is lost should that firm exit.[24] The same is true of education and training specific to a firm. In some industries recruiting, screening, and training employees are major undertakings; and these costs can be substantial even when labor is unskilled. In some low-skill occupations, such as newspaper or flier delivery, the employer's challenge is in screening potential employees to find personnel who will be reliable and honest.

In emerging-market economies these problems are likely to be especially acute. Markets for various inputs are just being created and infrastructure is still underdeveloped. This can mean, for example, that a new entrant must manufacture many of its own inputs, arrange on its own to import other inputs, and give workers basic trade skills. In an industrial economy many such services could be provided more quickly and efficiently by specialized firms and schools. In an economy with less well-developed markets everything takes longer, and time is costly to the entrant.

Another, less frequently recognized sunk cost involves start-up losses endured by an entrant trying to establish itself in a market. Seldom can even a successful business claim to have earned profits from day one. More typically, firms go through a start-up period in which costs exceed revenues. Office or factory space is bought or rented, staff are put on the payroll, advertising begins, and some products are produced to show prospective customers—all before a single unit is sold. These losses are properly viewed as an investment to be repaid when sufficient business is attracted. They represent a sunk cost of entry, and when they are substantial relative to the prospective gains from successful entry, potential entrants will be discouraged.

Some industries have special features that make start-up losses large. For example, when there is a considerable element of learning by doing in production, output will often be marketed at less than cost to sell sufficient quantities to provide the needed learning (see Spence 1981). The difference between the price received for each unit and its current cost of production can be thought of as a sunk investment in future productivity.

Coordination difficulties involving customers can also make entry more difficult by extending the period over which a new entrant will have to endure losses before attracting sufficient business to break even. This arises when the value that customers put on a product (and therefore their willingness to buy) depends on how many other customers are buying that product. A simple example: in the "Southam" case the Canadian Competition Tribunal noted explicitly the importance of start-up losses as a sunk investment put at risk by an entrant into community newspapers. It also recognized that these losses are magnified by a coordination problem: advertisers want to advertise where others advertise,[25] so attractive rates might not bring advertisers to a paper if they do not expect other advertisers to move as well. The only way for a prospective newspaper to deal with this is to begin with special low introductory rates and build business slowly. The tribunal referred to this as "establishing credibility." Recognizing the importance of start-up losses as a sunk-cost barrier to entry was important to the entry analysis in Southam, because they were the only real barriers. Failing to view these costs as a barrier would have led to the conclusion that entry was easy.[26]

HEIGHT OF THE SUNK-COST BARRIER. There is no way to know the precise point at which sunk costs are large enough to be a significant barrier to entry. In practice, data on sunk costs must be combined with information on all other barriers to decide on the likelihood of entry.

The contestability model views sunk costs as the cost of hit-and-run entry. If this was the kind of entry anticipated, the sunk costs required could be compared to the prospective profits from the "hit."

Most entry, however, is unlikely to be intended as the hit-and-run variety. In most cases entrants plan (or at least hope) to stay in the market. Sunk costs then matter because entry is risky. It might fail, leading to the loss of the sunk investment. In this model sunk costs are more like a ticket to a lottery that pays off well if the entry is successful. Thus the absolute level of the sunk cost alone would be a poor measure of the height of the sunk-cost barrier. What matters is the level of sunk costs relative to the prospective gains from successful entry and the probability that entry can be successful. For example, a sunk cost of $100 is minuscule for someone contemplating entry into the automobile manufacturing industry given that success there would result in annual profits of millions of dollars (and maybe much more). But $100 of sunk cost might be prohibitive for a corner lemonade stand that, if successful, would earn $25 a year.

Similarly, the more likely it is that the entrant will be able to secure a permanent place in the market, the less important is the size of the sunk investment. If success is certain, sunk costs are no different from other fixed costs. Thus sunk costs will deter entry only if they are large-relative to the prospective gains of successful entry.

INFORMATION ABOUT SUNK COSTS. As with other barriers to entry, industry insiders (including consultants) are probably the primary source of information about sunk costs. Potential entrants, when asked to describe how they would go about entering the market, will frequently point to obstacles that can be interpreted as sunk costs. Industry insiders can also provide information about recent entry attempts, whether entry failed or succeeded. In many cases involving large-scale equipment and machinery (transportation equipment, for instance), there are organized resale markets with used-goods dealers or brokers who can provide useful information about resale values.[27]

Other structural barriers

Apart from sunk costs, there are other structural factors that can give rise to barriers to entry.

ABSOLUTE COST ADVANTAGES. Clearly, if incumbent firms have some absolute cost advantage over entrants, and entrants are aware of this, entry is problematic. The source of the advantage could be real in that it reflects the incumbents' superior resources or skills; or it could be artificial, created by government policy or by anticompetitive actions taken by incumbents to disadvantage entrants.

One real absolute advantage comes from superior access to key natural resources, such as a rich mine or a prime retail location. Others derive from superior human resources, as in a management team that cannot be replicated by entrants. Steep learning curves can also give established firms absolute cost advantages. The greater experience of the older firms means that they have fine-tuned activities to achieve all possible efficiencies.

All absolute cost advantages give incumbent firms scope to raise prices above competitive levels before they attract entry. Although there is no good reason to punish a firm for being better than others at producing output, authorities have the responsibility to see competition work where it can to maximize market efficiency.

ECONOMIES OF SCALE. Economies of scale in production exist when the unit costs of production fall with increasing output. Economists since Bain have argued that economies of scale can be a barrier to entry because they make entry on a small scale expensive. Stigler asked why entry needed to be small scale: If the entrant had access to the same production technology as the incumbent, why could it not enter on a large scale? The contestability literature, moreover, describes a model in which economies of scale give the incumbent no ability to raise prices even a little above average costs. If it did, entry would be swift and the incumbent would lose its market.

Most entry, however, is not large scale, and most markets are not perfectly contestable. Firms probably choose to enter on a small scale for different reasons, many of them undoubtedly related to the risks associated with large-scale entry in markets in which some costs of entry are sunk and therefore not recoverable on exit.[28] In addition, large-scale entry raises the probability of a more aggressive response by the incumbent.

Economies of scale then can be seen as a sort of marker or indicator that sunk costs or other barriers might be present. In this regard various proposals have been advanced to measure the extent of economies of scale in production. One, the minimum efficient scale (sometimes called the minimum efficient plant size) is generally defined to be the smallest fraction of total market demand that could be produced by a fully efficient firm (or plant). Estimates for an industry can come from econometric, engineering, or survivor studies. Survivor studies look at the sizes that have survived over an extended period in an industry and assumes that survival is proof of efficiency.

The minimum efficient scale, however, does not directly measure any real barrier to entry. It also fails to provide some important information on scale economies of particular relevance to new entrants. It tells how big a firm must be to achieve all efficiencies but does not reveal how less efficient smaller firms will be—and this is crucial. Most markets do not comprise identical firms producing homogeneous products. There is usually scope for some firms to have higher costs than others, particularly if their products have a particular appeal for some buyers. In such a market there can be room for a higher-cost entrant as long as the cost penalty for subefficient production is not too high. An alternative measure is Salop's (1987) minimum viable scale. This measures the total sales an entrant would need to earn just enough profit to justify entry. This is not a purely structural concept, since its calculation will depend in part on assumptions made about market prices postentry. But it may be a better way to capture the significance of economies of scale to a potential entrant.

LARGE CAPITAL REQUIREMENTS. Entering some industries requires substantial capital. In some cases this is because there are huge economies of scale and large cost penalties for subefficient production, implying that efficient entry requires the capacity to serve a large part of the market. While this was a barrier to entry according to Bain (1968), it was not according to Stigler (1968) unless it could be shown that entrants had higher capital costs than incumbents did. Then, it would simply be an absolute cost advantage. But there is no reason to generally assume that incumbents have lower costs of capital than entrants.[29]

Of course, large capital requirements are frequently associated with substantial sunk investments, which likely frightens potential entrants and their financial backers. If there are no sunk costs, why should investors or lenders to a potential entrant worry about the size of the loan necessary to finance entry?

All of this depends implicitly and critically on the existence of well-functioning capital markets. If there are no capital markets, then clearly entry will occur only if the potential entrant has suffi-

cient resources of its own. Larger capital requirements make entry less likely, as fewer potential entrants will have the necessary resources.

In many developing countries and transition economies, capital markets are underdeveloped and financing entry can be a big problem.[30] The lack of industrial infrastructure can exacerbate the problem. This means that the entrant needs even more capital, because it must be prepared to do more things, such as handle its own distribution, manufacture inputs, and so on. As a result, it is important for competition authorities reviewing a case to ask if the most likely entrants have sufficient resources to finance entry and, if not, whether they could raise the necessary funds.

Even when economies of scale and large capital requirements do not create entry barriers, the need to build large and expensive plants means that entry cannot be immediate. In many industries it can take a year or more from a decision to enter and the time that the plant is up and running. To the extent that competition authorities are concerned that the entry be swift (so that the market power has a short life), they have another reason to view potential entry as a less potent force in industries with these characteristics.

NETWORK INDUSTRIES. Network industries are those in which firms that are frequently competitors share some critical common facility. The firms may own this facility as with railroad tracks, or they may rent the facility from somebody else, possibly a government. The classic examples involve transportation and telecommunications, but there are also networks in other industries. Network industries pose special challenges for competition policy for at least two reasons. First, their efficient operation frequently requires some cooperation among competitors to manage and develop the common facility. The challenge here is to find a way to allow them to cooperate when it is efficient, without losing the gains from vigorous competition.

Second, network industries can be difficult to enter. If a potential entrant is denied entry, its only option is to build a network. The problem is that networks tend to be more valuable the more members they have, and any new network will suffer significant disadvantages. Adding network externalities to what are likely significant economies of scale, including large sunk costs, creates a substantial barrier to entry.[31] It is not clear that incumbent firms that control the facility would choose to deny access to new entrants, keeping in mind the network externality benefits. It is a possible response, however, and one that antitrust officials should be prepared for.[32]

WHAT ARE THE EFFECTS OF BEHAVIORAL BARRIERS?

Increasing attention has been paid in recent years to the theory of endogenous barriers—that is, barriers erected by incumbents to protect themselves from entry. Although some of these ideas date back at least as far as Bain, others owe much to recent theoretic modeling of imperfectly competitive markets.

Response of incumbents to entry

Central in the potential entrant's calculation of expected profits from entry will be the response it expects entry to elicit from incumbents. If they accommodate entry by contracting sales, it will be easier than if they start a predatory price war to drive the rival out. Incumbents typically want the entrant to believe (rightly or wrongly) that entry will be met with an aggressive response. There are actions that incumbents can take that might send this message, some more credible than others.

LIMIT PRICING. Limit pricing is the practice by an incumbent firm of pricing so low that, given the economies of scale in a market, there would be no room for an entrant if it believed the incum-

bent would maintain its preentry level of output after entry.[33] Under this assumption, the incumbent could protect itself from entry by even a more efficient rival by choosing a low-enough price. With economies of scale, this limit price will still exceed the incumbent's average cost, leaving it with profits.

There are some objections to viewing limit pricing as a barrier to entry. First, limit pricing can work only if there are economies of scale, and maybe these are the real barrier. Another view is that the commitment to maintain output, however made, is the decisive barrier.

Another objection relates to the assumptions of the model, principally that the entrant believes the incumbent will maintain preentry output after entry (known as the Sylos postulate). Although many postentry duopoly outcomes are possible, the threat to maintain output will not be credible without something to back it up. Most duopoly models would predict some sharing of output in equilibrium, with the incumbent contracting to accommodate entry.

An objection related to the empirical relevance of the model may be more troubling. The limit-pricing model as usually described has one incumbent, but most industries have more than one firm. So, how robust is the model when there are multiple incumbents? The coordination required to make limit pricing work when there is more than one incumbent suggests that it will not be common.

Limit-pricing theories have become more respectable recently thanks to two important theoretical developments. The first recognizes that potential entrants seldom have perfect information about the incumbents they will face if they enter (see Milgrom and Roberts 1982a). That is, if the entrant does not know whether the incumbent is lean and efficient or fat and inefficient, and if entry would only be profitable against an inefficient incumbent, even a fat incumbent might set a low price to bluff the entrant into believing that it is efficient. Note again that there must be some other barrier, such as sunk costs, for this to work; otherwise, there is no cost to entering even if the firm must subsequently withdraw.

The second development involves recognizing that incumbents sometimes have ways to make their commitments to maintain output more credible. These theories focus on factors such as customer-switching costs, excess capacity, and matching terms offered by the entrant to keep customers.

Though these developments might have breathed new life into limit-pricing theory, they have not made a case for limit pricing as a barrier to entry. Rather, they only highlight the fact that something else, sunk costs or restrictive contracts, for example, are the real source of the barrier to entry.

PREDATORY PRICING. If the potential entrant believes that entry will be met with a predatory response, it may choose not to enter. The incumbent's problem is making the entrant believe this when it will usually not be a credible threat. Predatory pricing (setting prices so low that they could be profitable only if they induce exit followed by substantially higher prices thereafter) is a costly and sometimes risky way to compete. It is not clear who will win the price war—the incumbent, large firm charging below-cost prices on large volumes of units, or the small entrant who may sit on the sidelines, selling little and watching the predator lose money. Arguments like these, advanced by McGee (1958) and other members of the Chicago school of antitrust, have persuaded many that firms will not generally adopt predatory tactics and that it would therefore be irrational for entrants to expect such an aggressive response. More recent theoretical work, however, has provided important examples of environments in which predatory pricing might be rational and, therefore, something the entrant should worry about.

If the incumbent has deep pockets while the entrant is financially constrained, it can be profitable for the incumbent to adopt a predatory response to entry and for the potential entrant (knowing this) to refuse to enter. The capital market imperfection that leaves the entrant financially constrained could be based on information problems. If you cannot convince a potential lender that you have a terrific product, the lender might be reluctant to finance a price war. And many lending arrangements provide for the calling of loans if a borrower's financial performance is below expectations. Knowing this, an entrant with current activities in other markets supported by borrowed capital might put those at risk by entering into an expensive price war upon entry. Aware of this weakness, the incumbent might choose predatory pricing.

A firm that operates in multiple markets may introduce predatory pricing against a new entrant in one market, even if it can never fully recoup price-war losses with higher prices after the entrant retreats. The benefit comes from building a reputation for toughness that might deter entry in other markets in which the incumbent operates. Important to this theory is that information is not perfect. There is something about the incumbent that the entrant does not know. It could be that the entrant thinks it unlikely that the incumbent will not be fully rational and value market dominance over profits. It could also be that the incumbent has such low costs that prices that look predatory are profit maximizing (and profitable) for the incumbent after entry (see Kreps and Wilson 1982; Milgrom and Roberts 1982b).

The aggressiveness of the incumbent's response to entry, whether predatory or not, will depend in part on its ability to target price reductions only toward those customers it is most likely to lose to the entrant. It is less costly to defeat an entry attempt if a firm need only cut prices to a few price-sensitive customers while maintaining high prices to others. If that is possible, the ability to target price reductions will enhance the credibility of incumbent threats to meet entry with an aggressive response.

As a result of this more recent work, it would seem that firms will sometimes be willing to adopt predatory strategies, and it is reasonable for entrants to fear this kind of response.

EXCESS CAPACITY. One way to make credible claims that a firm will maintain high levels of output after entry is to carry excess capacity that can be operated at low marginal costs. That way, a competitive postentry market could lead to prices so low that they do not allow the recovery of fixed costs. If some of those fixed costs are sunk, both firms can suffer losses. If it anticipates this result, the potential entrant will not enter.

The elasticity of demand plays a role, too. If lower prices greatly increase the quantity demanded, the extra capacity might be needed before prices fall too far. Once capacity is fully utilized, the downward pressure on prices is reduced. The kinds of markets in which entrants can generally expect the strongest (nonpredatory) response to entry are therefore homogeneous product markets with substantial postentry excess capacity and relatively inelastic demands.[34]

Product differentiation and advertising

Product differentiation is sometimes thought of as a structural characteristic of a market, derived from consumer tastes for variety. It is also occasionally seen as an endogenous strategic characteristic of a model, in which differentiation is created, usually through advertising, but also through other conduct such as reputation building.

The relationship between product differentiation and barriers to entry is complex and permits little generalization. In some cases differentiation seems to make entry more difficult; in others, it may make it easier.

That firms' products will not be seen as identical suggests that the incumbent might

have some first-mover advantages. For example, while the first firm in a market must convince buyers to try its new product, the second must convince those buyers that its product is even better. Whether the entrant's task is easier or harder will vary from case to case.

Some first-mover advantages can be thought of as related to sunk costs. If customers must bear some cost in switching from one brand to another, they may need to be convinced by a substantial discount on price. The losses incurred to break through brand loyalty this way can be interpreted as sunk investments in brand-name capital; if they are larger than the early investments the pioneering brand had to make to win its first customers, the incumbent might also enjoy an absolute cost advantage. A similar argument applies to the building of reputations for producing a high-quality product (or service) and to reaching lower costs through learning by doing.

When differentiation is seen as a structural characteristic of the market, it makes entry less threatening to the incumbent. The added variety brought by the entrant expands market demand. Moreover, because the products are not identical, postentry competition will likely be less intense. Threats by the incumbent to indulge in predatory pricing will be even less credible; since the rival is selling a different product that some customers strictly prefer (at identical prices), predatory pricing will require even deeper price cuts: The other side of the coin, however, is that entry is less likely to push prices down to competitive levels in differentiated-product markets. So while the barrier may be less important, the discipline brought to the market by the threat of entry is less powerful.

Schmalensee (1978) and others have argued that, with product differentiation, incumbent firms can have an incentive to fill the product space with their own brands so that there is insufficient room for a new entrant. This is just a differentiated-products version of limit pricing, and it can be challenged the same way. Here the threat to maintain output with limit pricing is replaced by a commitment not to abandon unprofitable brands. Others have pointed out that this may also be a threat that is not credible (see Judd 1985). Again, to the extent that brand proliferation can deter entry, its effectiveness may be due to the presence of sunk costs.

Some economists have suggested that differentiation can be created by advertising and that this creates a barrier to entry (see Sutton 1991). It is difficult to assess this argument without knowing what advertising does to promote differentiation. If it simply builds brand-name identity by disseminating information about the product or contributing to the building of a reputation for quality, advertising can be treated like a sunk cost. Again, if later advertising is less effective than earlier, the entrant will also suffer from an absolute cost disadvantage.

Advertising is sometimes also viewed as an important competitive tool. For example, entry might be more difficult without the ability to use advertising to inform customers of the new product and, say, its low price. An expensive advertising campaign, however, can raise significantly capital requirements for entry, which could deter entry. In this case the real entry barrier is the lack of information about the new product in the marketplace and advertising expenses measure the height of this barrier. Thus advertising is still part of a solution to the problem, but its existence is a marker and measure of the barrier's importance.

No general rule emerges about whether it is easier or harder to enter a differentiated-products industry. Although there are reasons to expect differentiation to affect the way firms attempt entry and others respond to entry, the evaluation of whether the differentiation raises extra barriers will have to be determined case by case.

Vertical restraints

In some markets vertical relationships between firms can complicate entry. An extreme exam-

ple is industries that are fully vertically integrated. For example, suppose all manufacturers have integrated downstream into distribution. A new entrant with strong manufacturing skills may find that it has to enter distribution as well since rivals may not be willing to distribute its product. This can deter entry if it raises the level of required sunk costs or if it increases the capital requirements for entry. It might also force the entrant into areas where it is not competent, leading to an absolute cost disadvantage. Consider some other examples.

FORECLOSURE AND EXCLUSION. If the entrant needs inputs available only from a supplier vertically related (by contract or integration) to one of its competitors, it might fear that it will not be able to buy these supplies. Such exclusionary behavior might violate competition laws, but let's examine the role it can play in deterring entry.

Recent theoretical work has demonstrated that some rational firms will refuse access or exclude competitors, even when they could sell to them at a high price. In other cases the input will be provided, but at prices so high that entry is unlikely to be successful.[35]

For this to be a serious problem, the incumbent needs to have a virtual monopoly on the supply of the input. This is not much of a problem in well-developed market economies. Where it does arise, however, is in many partially regulated network industries. This suggests that these problems might be more common in economies emerging from state control with many large firms still dominating important industries.

TACTICS TO RAISE RIVALS' COSTS. Closely related to foreclosure behaviors are the strategies available to some incumbent firms to increase entrants' costs. This theory is controversial since the actions a firm takes to raise its rival's costs will often raise its own costs, and it is not clear how this can be profitable (see Salop and Scheffman 1986; Krattenmaker and Salop 1986; and Brennan 1988). The key to a successful strategy, then, is finding some way to raise rivals' costs. Tactics that might work include buying up a scarce resource to raise its price to rivals, agreeing on new union contracts that will hurt entrants who employ more labor-intensive technologies, and adopting product standards that favor the incumbent's product.

It is not clear that this theory says much that is helpful in analyzing barriers to entry in competition cases. If raising rivals' costs has already been employed, there are simply higher costs for potential entrants than there would have been otherwise. In a sense it matters little how the entrant's costs came to be. In evaluating the likelihood of entry, the important point is what those costs are.

Conditions are more interesting if the strategy has not yet been applied but there is concern that it might be adopted postentry to try to encourage exit. If potential entrants worry about this, it can make a difference. But with the concept defined rather broadly, there is no good understanding of when it can be effectively used.

CONTRACTS AS BARRIERS TO ENTRY. As with vertical integration, some vertical contractual relations could disadvantage new entrants. In many cases the creation of a barrier to entry might not have been the specific intent behind the use of the contracts. Indeed, each contract can be an efficient response to market conditions.

Exclusive dealing contracts that require a customer to get all of its supply from a single seller, however, can effectively lock up a market. To block entry, exclusive dealing contracts will typically have to be relatively long term and cover a large chunk of the market. Otherwise, the entrant can build its market using unsigned customers and those able to extricate themselves from contracts.

Without necessarily being exclusive, many contracts are long term and make it more difficult for entrants to pick up business. For example,

when a firm signs a contract for the supply of an input and second-sourcing is impractical, it has effectively granted exclusivity. Some simple examples are auditing services, cleaning services, and the production of some specialized parts.[36] These arrangements will deter entry by slowing the rate at which the entrant can pick up market share. This is important in the presence of economies of scale and sunk costs: it raises the sunk-cost investment of early losses without increasing in any way the gains from successful entry.

Not all exclusive contracts will create important barriers to entry. Those that are longer in duration, that include automatic-renewal clauses (sometimes called evergreen clauses) or that carry substantial penalties for cancellation (with evidence of strong enforcement by the incumbent) will pose greater problems for the entrant.

Tying contracts may also impede entry. Tying involves the requirement by a seller that to purchase one tying product, the buyer must agree to buy a second (tied) product from the same seller. The entrant can try to sell to customers who do not want the tying product or it can attempt to enter both markets. As with vertical integration, this can raise the sunk cost for entry, it will raise the capital requirement for entry, and it might put the entrant at an absolute cost disadvantage if it is not as efficient at producing the other product.

WHAT ARE THE SOURCES OF INFORMATION ON BARRIERS?

If there is evidence that an incumbent has been very profitable over an extended period without losing a market share to entrants, it suggests that entry is not easy. However, if many firms have entered and some survived, barriers are not insurmountable.

If there are unsuccessful attempts at entry, it shows that there are investors willing to assume the risks associated with entry. They must believe barriers can be overcome. Their failure, however, suggests that there is something preventing success. Perhaps there is something about the industry that makes it attractive to unsophisticated potential entrants who will underestimate the costs of entry or overestimate the probability of success.

A market in which there has been relatively little entry and exit over an extended period of time is not necessarily protected by barriers to entry, however. An absence of entry and exit is consistent with a competitive industry in which firms keep prices close to costs. In such industries there may be no room for entry, particularly if the market is stable or declining.

Market participants

The principal participants in the market are frequently the most important source of information about barriers to entry.[37] No one understands a market better than those in it—the sellers, buyers, and input suppliers. The danger, however, is that most will have some interest in how a competition case turns out, so their information must be filtered. Since their opinions might be influenced by self-interest, they should be encouraged to provide as much hard data as possible on:

- Market shares.
- The most likely entrants.
- General demand conditions.
- Entry and exit history of the market.
- Profitability of the incumbents over the past several years.
- Start-up costs and the fraction that is sunk.
- Economies of scale.
- Capital costs of entry and sources of financing.
- Time needed to build an efficient facility and acquire equipment.
- Importance of product differentiation and advertising.
- The depth of the incumbents' pockets.
- Vertical restraints.

Some data might be available from independent sources, such as trade associations, trade publications, or statistical agencies. In many developing and transition economies, however, such information may not be available, and barriers to entry have to be evaluated informally. In these cases some guidance might come from a study of the same industry in other, similar economies in which better data are available.

As entry will be much easier with the support of the market, customers should be asked if they would be prepared to move their business to a new firm—and on what terms. They can also be asked about the extent to which they would actively seek to assist a new entrant by, for example, offering guaranteed contracts long enough to help the entrant cover most (or all) sunk costs. Again, customers might have an interest in the outcome of the competition action, so they should be asked for any hard evidence to support their answer. Evidence that buyers had supported entry in the past in this or other related markets would be useful.

Potential entrants

Potential entrants can come from many sources:

- Current customers or suppliers who vertically integrate.
- Firms active in the industry but in a different geographic location (even a foreign country).
- Firms active in closely related markets.
- New firms created to take advantage of market opportunities, possibly involving personnel with experience in the market.
- Firms with no close connection to the market.

Once the most likely potential entrants have been identified, they can be asked about their intentions to enter the market. Even if a firm is considering entry, it might be reluctant to share this information publicly. Hence, a lack of stated interest in entry should not necessarily be taken at face value. These firms can, however, provide a lot of information about what it would take to enter a market with some chance of success. If discussions with several potential entrants produces similar answers, the information is likely to be reliable. These firms should be asked not just about costs that constitute barriers to entry but about impediments that slow the speed with which they can enter (construction times, delays due to the need to get permits, and so on). Even when it turns out that there are no serious barriers to entry, if it will take any entrant at least, say, two years to have a product in the market, there may be a case for intervention by competition authorities.

The potential entrants should be asked about how they think the incumbents would respond to their entry. Do they anticipate a price war, accommodation, or something in between? This information can be hard to verify, but occasionally potential entrants can support their claim by reference to the behavior of the incumbents (or firms like them) in this or other related markets. That is, they might be able to provide hard evidence to support their view that the incumbent has a reputation for toughness.

Experts

There are various industry experts who can be useful to the understanding of barriers to entry:

- A consultant who works regularly in the industry.
- An academic who studies the industry.
- A senior employee from a company in the industry but not in this market.
- An official of a trade association.
- A former market participant who is now retired or who has moved on to other activities.[38]

If the industry is sizable and regularly goes to financial markets for support, there may be banks or investment houses that have good information about the industry's inner workings. The purpose of talking to such experts is to get unbiased information.

Another type of expert who might prove useful is one who can provide an engineering

study of the costs an entrant would incur building a new facility. The expert could be someone who has consulted or built in the industry before. This would obviously be preferable since the cost of commissioning a new engineering study to assess the costs of entry is likely to be large relative to the potential benefits.

A third type of expert, the economist, can also be helpful.[39] The economist's role is to try to understand the structure and conduct of the market well enough to point investigators in the directions they need to go to find any barriers. The economist is not likely to be qualified to act as an industry expert, unless he or she has been studying the industry for some time. The economist combines data about the existence of some costs or behaviors with the theory that explains why some factors matter to provide a more complete description of the market. In this way, predictions can be more accurately made about the likelihood of entry.[40]

HOW HIGH ARE BARRIERS TO ENTRY?

A competition agency will always face the problem of combining information to answer the question: Is effective, timely entry likely enough that it will provide competitive discipline in the market? There is no precise way to answer this question—it will depend on what the agency views as effective, how quickly entry must be to be timely, and what level of certainty it is willing to accept as likely enough.

The American and Canadian approaches have largely viewed effective entry as that which would restore prices to competitive levels (or premerger levels) and see entry as timely if it happens within two years. Moreover, U.S. guidelines indicate that entry will be viewed as likely if it would be profitable at premerger prices and if the scale of entry is such that premerger prices could be sustained postentry.

Other agencies might choose to define these terms differently. For example, given the inherent problems in projecting the profitability of entry, an agency might decide to err on the side of nonintervention by deciding that it will view entry as sufficiently likely if there is some reasonable probability that entry could be profitable. Also, given the need for restructuring in many transition economies and the difficulty entrants face organizing resources quickly, their competition agencies might choose to go with a longer horizon for timeliness; for example, they might elect to require only that effective entry take place within three years.

These are not to be interpreted as specific suggestions to transition economies. They are meant only as examples of the different paths that enforcement might take. Each agency will have to decide how to define these terms, and the best approach here will depend on other aspects of competition law. If, however, the competition law of the country includes an efficiency defense that protects restructuring efforts, there may be no need for a different approach to measuring the height of barriers to entry.

A slightly different approach to measuring the height of barriers to entry recognizes that entrants (and antitrust officials) seldom know how profitable entry will be.[41] The entrant will try to estimate preentry and postentry costs and to predict what share of the market can be earned at what prices, but this is difficult. If we do know how profitable entry would be if it succeeded, and how much would be lost if the entry did not succeed, one question can be answered: How likely must success be before the expected profits from entry are positive?

Consider a simple example. Suppose that an entrant knows that if it can capture a certain share of the market it will earn profits of $1 million. The entrant also knows that there is a chance its attempt to enter would fail because of high costs or consumer reluctance to switch brands, and that entry followed by a quick exit would leave it with losses of $500,000. Then, if the probability of success were equal to 33 per-

cent, entry would just break even, in an expected value sense.[42] If the agency thought success more likely than 33 percent, it could interpret this as saying that the barriers to entry are not substantial. If entry was viewed as less likely, then the barriers would be significant. In this way, the break-even probability of success can be interpreted as a measure of the height of the entry barriers.[43]

Of course, once the break-even probability of success is known, there is still the imprecise task of determining whether this is above or below what potential entrants see as the actual probability they face. The advantages of this approach are that it does not assume that potential entrants know with precision how profitable entry will be and it reminds us that the height of barriers to entry must always be measured relative to the prospective gains from successful entry.

SUMMARY: A CHECKLIST

What steps must be taken to evaluate barriers to entry in a typical competition case?

Step 1: Market definition

Buyers and sellers in the market are determined. This process will typically reveal other sellers who are just outside the market and who may well be the best-placed to enter should an opportunity arise. In some approaches to market definition, firms are included in the market if they can easily move into production. In such cases some consideration might have to be given to the costs of this adjustment, so the agency is considering impediments to entry even for firms within the market.

Step 2: Market conditions and history

It is important to determine whether the market is growing, stable, or declining. Entry will always be easier if market demand is growing. In fact, new production capacity can be expected to be added in such cases. However, industries in long-run decline are not attractive locations for new investment. They are likely already suffering from excess capacity.

The history of the market can be a good indirect source of information on barriers:

- Have incumbent firms been profitable in recent years?
- Have there been recent entry attempts, and with what success? Consistently high profits with no successful entry is a strong sign that important barriers exist.
- If there has been entry, from where did these entrants come? From the same industry in different geographic areas, closely related industries, large customers, or suppliers vertically integrating?
- How did incumbents respond to new entry—aggressively or passively? Have established firms been forced out of business by successful newcomers?

Of course, an industry's history will be less relevant if there have been important changes recently, for example, significant trade liberalizations, deregulation, or privatizations.

Step 3: Structural barriers

There are various structural barriers to consider:

- A good place to start is with regulatory barriers because they can be so conclusive that further study is not needed. Regulatory barriers to investigate include explicit barriers represented by required permits or licenses (or both) and by tariff and nontariff barriers to trade. These are usually obvious. Harder to measure are the many indirect regulatory barriers that deter entry only as a by-product of some other regulatory activity. Most often these regulations have the effect of conferring an absolute cost advantage on incumbents, such as when environmental regulations are tougher on new plants, or when safety regulations force firms to make larger sunk investments in safety equipment or training.

- If entrants do not have access to the same inputs and technology at the same prices as incumbents, they will suffer an absolute cost disadvantage, which will hurt their ability to compete and reduce their incentive to enter. Absolute cost differences are more likely to be found in economies without relatively competitive input markets. Industry sources should be able to reveal what disadvantages entrants will have in any particular market. There are many possible sources of absolute cost advantages including ownership of unusually productive natural resources by incumbents (for example, the richest mines, the most fertile farmlands) and the possession of specialized human capital and intellectual property that is not easily duplicated.
- Sunk costs may be the most frequently important barrier to entry, at least in industrial economies. Sunk costs can come in the form of specialized machinery, buildings, intellectual property, and human capital, and of expected start-up losses. Sunk costs, like all barriers, must be measured relative to the prospective gains from successful entry.
- When capital markets are not perfect, the level of capital investment required to enter at a minimum viable scale or larger can be a barrier to entry. Therefore, the level of capital required and the ease with which the most likely entrants can get this capital should be studied.
- Because they can point to large capital requirements or substantial sunk costs (or both), it is always useful to study the economies of scale associated with producing for the relevant market. Large economies of scale, which necessitate large-scale entry, will also be important in predicting the reaction of incumbents to entry. Although they might be inclined to accommodate small-scale entry, they might be more threatened by large-scale entry, particularly if the market is not growing. In such a case the incumbents might be expected to respond more aggressively.

Step 4: Behavioral barriers

Again, there are a number of behavioral barriers to consider:

- How will the incumbent respond to entry? Is there any reason to believe it will be particularly aggressive, even predatory? Does it have a reputation for toughness? Does it have reason to build such a reputation—that is, does it want to use this market to send a signal to other markets? Has it been making threats to potential entrants? Does the incumbent have substantially deeper pockets than the leading potential entrants? Can the incumbent target price reductions to hurt the entrant at a lower cost to itself? Is the incumbent contractually committed to maintain its output through meeting-competition clauses? And, importantly, does the incumbent have the excess capacity necessary to meet market demand at lower prices?
- Is advertising important in this market? If so, is there any reason to believe that the entrant will have a more difficult time advertising effectively than the incumbent?
- Are there vertical restraints in the market that will make entry more difficult? For example, are all the customers tied up in exclusive contracts with existing sellers, and how long are these contracts? Do incumbents tie the purchase of this good to the purchase of some other that they control and for which there is no competition? Similarly, are suppliers of some critical input committed to the incumbents and not free to supply an entrant?
- Are there strategies, such as raising rivals' costs, available to the incumbents that they could use to encourage an early exit?

Step 5: Other impediments to entry

Are there other factors that will slow the speed of entry? Put another way, if entry is going to be

successful, how long will it take? It could take six months, one year, three years, or more to build a plant, train a workforce, and establish a distribution network—all of which must be done before any new competition is provided by the entrant. Some review of these other impediments is important to understanding the problem. It could well be that, even in the absence of any of the traditional entry barriers, entry is viewed as an insufficient check on market power simply because it takes so long to organize.

NOTES

1. A longer survey with more details of the theoretical literature and some review of empirical work on the topic is Geroski, Gilbert, and Jacquemin (1990).

2. This can be the case under the Canadian merger enforcement guidelines, for example, though supply-side substitution does not play as great a role in market definition under the current U.S. merger guidelines.

3. Of course, it is possible that firms will choose to lower service or quality levels at the same time or in place of raising price. All of these involve increases in the quality-adjusted price faced by buyers.

4. Canada, Bureau of Competition Policy (1992). The idea of using a structural screen for predation cases was suggested by Joskow and Klevorick (1979).

5. That said, in many cases the important barriers are specific to the industry and relate to structural or production conditions such as sunk costs. Large capital requirements in imperfect capital markets might be an example of a barrier that will affect some potential entrants (for example, small firms) more than others (for example, large firms).

6. From Viscusi, Vernon, and Harrington (1992, p. 163):

> The concept of barriers to entry lacks clarity, and one is never sure what to do with it.... The most unfortunate part is that some economists and antitrust lawyers throw the term 'entry barriers' around like there is one accepted and meaningful definition when there is not.

7. This corresponds to what Geroski, Gilbert, and Jacquemin (1990) call "mobility barriers," a term they prefer because of the lack of consensus on the definition of "barriers to entry."

8. This is not to say that entry by acquisition cannot have important competitive effects in certain cases.

9. In his related concept of "mobility barriers" Gilbert (1989) suggested that a barrier existed if a firm earned rents as a consequence of incumbency.

10. Part of the problem of agreeing on a definition stems from the fact that the term "barrier to entry" has always had a negative connotation. Some barriers, however, might be socially desirable. For example, patents are necessary to create incentives for invention and innovation. If we were evaluating the social cost or value of barriers to entry for the purpose of recommending policies to raise or lower them, a normative approach would clearly be warranted. For the analysis of competition cases, however, we typically take barriers as given and care only about the extent to which they influence the likelihood of entry. Put another way, it is not the conditions of entry that we are typically trying to change; rather, the focus is on controlling anticompetitive behavior with the potential for entry as one of our environmental considerations.

11. Typically, the entry regulation is combined with price regulation, and the industry may not even be subject to antitrust scrutiny.

12. Of course, the delay itself might be very costly for an entrant anxious to seize an important, but short-lived opportunity. If so, the delay is not just an impediment to entry since it could effectively prevent entry.

13. Though, to be clear, in most competition cases such costs will not constitute important barriers to entry. If entrants can pay the same extra costs as incumbent firms (and there are no other barriers) then merging or conspiring firms cannot raise price without inviting entry.

14. In some cases the restraints on foreign competition can even help the foreign firms, leaving

domestic consumers as the only losers. There is good evidence now that the voluntary export restraints imposed by the Japanese automobile makers under pressure from the United States and Canada actually raised the profits that Japanese firms made in North America by causing a shortage of Japanese automobiles and forcing prices substantially higher.

15. While this approach usually treats new plants the same whether built by an incumbent or an entrant, it can clearly have a disproportionate affect on an entrant with no older plants.

16. von Weizsacker (1980) points out that with product differentiation we may actually have too many brands from a social welfare perspective, so it is difficult to categorically label differentiation as a barrier to entry. Demsetz (1982) stresses that the investment to create a brand name is not just burning money. In general this activity has a social value to the extent that it provides consumers with more information, more choice, and perhaps greater assurance of product quality. As such, the expenditures on creating a brand name are no different that expenditures to buy other inputs.

17. We owe much to Baumol and Willig (1981) and Baumol, Panzar, and Willig (1982) for their work defining sunk costs and describing the important implications of the differences between sunk and fixed costs. Economists have sometimes been careless about these distinctions. For example, generations of microeconomics students have been told that the firm in perfect competition facing a price less than average total cost will continue to operate in the short run as long as price exceeds its average variable cost, for it is then making as least some contribution to fixed costs. But this only holds true if the fixed costs are sunk. If not sunk, they can be avoided by shutting down. By their definitions, sunk costs need not be fixed and fixed costs need not be sunk.

18. In the short run, of course, many more costs are fixed. For example, in the short run producers might be stuck with existing plants and workers even if they are not appropriate for current production. Again, these fixed costs need not be sunk if they can be avoided by exit.

19. There are some other assumptions needed to create truly contestable markets, among them that the entrant can enter, undercutting the incumbent's price slightly, before the incumbent can react by lowering its own price. Together with an assumption of no sunk costs, this means that hit-and-run entry can be a profitable means for entrants to keep prices down to competitive levels.

20. In the usual jargon, average (or unit) costs are the sum of average fixed costs and average variable costs. With constant variable costs per unit, full average costs will fall as fixed costs are spread among a larger number of units.

21. A related problem can arise if the resale market is thin, that is if there are relatively few buyers and sellers at any point in time. Under these conditions, prices can fluctuate considerably depending on the extent to which current buyers outnumber current sellers or vice versa. This variability is another risk the entrant must bear.

22. If the conditions are not socially beneficial, the fact that they raise the costs of entry suggests a role for the competition authority to argue for the removal of the conditions.

23. In economies in which public authorities demand bribes to process applications for regulatory clearance to enter certain markets, bribes represent examples of such sunk costs.

24. If I spend one year planning and developing a new entrant when I could have been earning a salary of $100,000, then my forgone income can be viewed largely as a sunk investment in the new enterprise.

25. There are at least two reasons for this. One is that it is a safe strategy: if you advertise where your rivals advertise your advertising can be no less effective than theirs (abstracting from the content of the advertising). Even though you might be better off advertising elsewhere, moving your business involves some risk. The second is that consumers come to look for advertising in certain places, so if you move your business they might not find you. This encourages competing advertisers to cluster their advertising together. The same forces encourage antique shops,

jewellery stores, and automobile dealerships (among other types of retailers) to cluster.

26. Evidence was heard that these start-up losses were large relative to the possible profits from successful entry.

27. Because people employed in and around an industry can have a vested interest in the outcome of a competition case, one must always view the information provided through a lens of self-interest. I shall return to this point below.

28. While most of the previous discussion treated sunk costs as a category of fixed costs, sunk costs can in fact be variable up to the point at which entry takes place. That is, small scale entry can involve lower levels of sunk investment than large-scale entry.

29. Entrants need only be new to the market in question. They can be very large firms, perhaps even with similar operations in other locations.

30. In some countries inefficient bankruptcy laws give too little protection to lenders, making them reluctant to loan large sums. Without a high priority in bankruptcy, a lender's contribution can effectively look more like a sunk cost, even if it is used to finance entry into an industry without sunk costs.

31. We should be careful not to exaggerate the problem, however. At one time, not that long ago economists believed that economically, there could be only one long distance telephone network in any geographic area. Now many countries have very competitive long distance markets and competition is coming to local service as well.

32. As the purpose here is to review how to identify barriers to entry and not how to eliminate them, solutions to the network access problem are beyond the scope of this paper. But, in cases in which the denial is viewed to be inefficient there are at least two approaches that have been taken. The first is simply a regulatory instruction to provide access on reasonable terms. Since some network industries like telecommunications are regulated in most countries, this option is available in some cases. The second approach is to view the denial as an abuse of a dominant position (or a jointly dominant position if there are multiple incumbents) and to try to order the provision of access through competition law actions.

33. See the famous exposition of this model by Modigliani (1958).

34. If the products sold are homogeneous, the arrival of the entrant does not lead to an expansion of market demand.

35. One of the insights from this literature is that if a more efficient entrant comes along, there are efficiency gains to be made by supplying it with the critical input. The question is, can the incumbent capture enough of these gains to make it profitable to supply, or will the gains flow to the entrant? It is profitable to foreclose or to refuse to deal if the incumbent cannot capture enough of that new surplus.

36. In these cases buyers typically would look to one firm to supply all its needs of the product or service. Thus even if a contract is not formally exclusive, it may well be exclusive in effect.

37. And about many relevant issues in most competition cases. A much more detailed discussion of information gathering is provided elsewhere in this volume.

38. Even industry experts can have an interest in the outcome (for example, consultants can work for firms under investigation), however, so they should be selected and their information used carefully.

39. Here I am referring to an economist with general expertise in competition matters, not one who, based on past research, is an industry expert. That kind of expert I discuss above.

40. I am not suggesting that economists need to appear before courts or tribunals as expert witnesses. Depending on the legal system and the kind of case, they might simply be employed to help put the case together.

41. This is suggested only to stimulate thinking on alternative approaches. No competition agency is known formally to use an approach like this, which is proposed in Ross (1993) as a way to measure the height of the sunk cost barrier.

42. That is, the expected profits from entry would be given by:

$$EP = (\$1 \text{ million} \times 1/3) + (-\$500{,}000 \times 2/3) = 0.$$

43. In more general terms, if S represents the profits from successful entry and F the losses from unsuccessful entry, the critical break even probability of success (p^*) will be given by the expression: $p^*S + (1-p^*)(-F) = 0$. We can solve this for p^*: $p^* = F/(F + S)$. Thus to make entry attractive, success will have to be more likely the higher are the losses from unsuccessful entry and the lower are the profits from successful entry.

44. This checklist, although somewhat different in organization, draws inspiration from that offered in the United Kingdom (1994).

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Annex 2

Efficiency Defenses

The fundamental purpose of competition laws is to ensure efficient resource use through vigorous competition. There may, however, be instances in which apparent restrictions of competition can mean more efficient resource use. Broadly, these fall into two categories. The first is procompetitive restrictions. Examples include:

- An agreement or a merger between two small competitors that may make them more effective competitors to larger rivals.
- An agreement among competitors on product standards that may increase the size of the market, thus attracting more competitors and helping the development of new markets for complementary products.
- An agreement between manufacturers and distributors of a branded product that may restrict intrabrand competition (for example, by giving each distributor an exclusive territory) but also build up the brand and further interbrand competition.
- A joint venture between two potential competitors to develop a new product. Although either one could develop the product, neither would if there were competition from the other. Without the agreement, the product would not be introduced.

The second category is a merger or agreement that restricts competition but results in more efficient resource use. Examples include:

- Two competitors or potential competitors merge to take advantage of the economies of scale in production. Costs are lower but markups, profits, and (possibly) prices are higher.
- Two potential competitors enter a joint venture to develop a new product to eliminate duplicate research and development (R&D) and avoid the costs of racing to be first into the market. But this delays the introduction of the product and reduces choices available to potential purchasers.
- Two multiproduct competitors agree to specialize production with each supplying the needs of the other. Both save by reducing change-over and inventory costs, and by using more specialized equipment and personnel. The agreement also eliminates product quality competition between the two firms. Moreover, because they know each other's costs, they compete less aggressively on price so that margins and, maybe, prices rise.

The issue with the first category is recognizing that practices that appear to restrict choice may actually increase it when viewed from a broader or longer-term perspective. In the second category, competition is in fact restricted. The issue is one of balancing or trading off gains from more efficient production against losses from the restriction of competition.

This annex was prepared by Donald McFetridge, with input and comments from other team members.

EFFICIENCIES IN COMPETITION LAW

Competition policy is fundamentally (but not exclusively) about the pursuit of efficiency. Consequently, efficiency considerations enter into the enforcement of national competition laws in various ways. These considerations are incorporated in the assessment of mergers, horizontal and vertical agreements, and abuse of dominance cases.

Mergers

Some countries (Australia, Canada, New Zealand, the United Kingdom, and the United States) have either a statutory or an administrative provision for an efficiency exception or defense. Efficiency evidence can be used along with other evidence to determine whether a merger is anticompetitive or it can be used to defend an anticompetitive merger. In other jurisdictions such considerations enter merger evaluation less directly.

Horizontal restraints

Many countries provide for some efficiency defense or exception for horizontal restraints falling short of merger. Australia and New Zealand provide essentially the same defense in merger cases. Italy allows a limited defense for horizontal agreements but not for mergers.

The European Union (EU) allows for the exemption of anticompetitive agreements that also bring about economic benefits, such as improving production or distribution of goods or promoting technical or economic progress. The benefits must outweigh the reduction in competition to qualify for exemption, which is not available for agreements that eliminate effective competition. This is defined to have occurred when market dominance is achieved. Price- or quota-fixing or market sharing are regarded as especially restrictive of competition and unlikely to be outweighed by efficiency gains.

In Canada, for example, the Competition Act provides the same efficiency defense for registered specialization agreements as it does for mergers. The act also provides a defense for R&D joint ventures involving a specific program of research that would not otherwise take place. Arrangements among competitors regarding exchange of statistics, definition of product standards, exchange of credit information, definition of terminology, cooperation in R&D, restriction of advertising, package sizes and shapes, and use of metric measures and environmental protection measures are not criminal offenses—unless they lessen competition unduly with respect to prices, output, markets, customers, or distribution. For that, there is no defense in Canada.

In the United States efficiencies play an important role in determining whether a horizontal agreement will be accorded per se or rule-of-reason treatment. When an agreement does not result in efficiency-enhancing integration of economic activity and involves restraints, such as market allocation, price-fixing, and boycotts by firms with market power, the per se rule is applied. Otherwise, the rule-of-reason approach is used. When the rule of reason is appropriate, an evaluation of efficiencies is important in determining whether an agreement is, on balance, procompetitive or anticompetitive and therefore illegal. Judicial decisions in the United States have recognized two broad categories of efficiency-enhancing agreements: those that reduce the cost of providing a product or raise its quality and those that are necessary for the product to be provided at all.

Any efficiency-enhancing restraint will involve some economic integration (such as a partnership agreement) among the participants that goes beyond the mere coordination of price or output and that facilitates the realization of efficiencies. Horizontal restraints, such as specialization agreements and production joint ventures, involve integration of economic activity and are evaluated on a rule-of-reason basis. These

restraints can be as reasonably necessary to achieve an objective that is ultimately procompetitive. For example, an agreement that resulted in the development of new products or new markets could be regarded as procompetitive.

Vertical restraints

Efficiencies also play a role in the evaluation of nonprice vertical restraints in some countries. Nonprice vertical restraints include exclusive franchising, exclusive dealing or requirements contracts, and tying or bundling. In the United States, for example, territorial restraints on downstream intrabrand competition by an upstream supplier can be defended on the grounds that they are an efficient way of promoting interbrand competition and will more than offset the detrimental effects of reduced intrabrand competition. The same principle can be applied to exclusive dealing. Tying or bundling is also assessed on a rule-of-reason basis unless the tying good is shown to have significant power in the market. Even when that is shown, the defense of a legitimate business justification is available to defendants. Tying arrangements that ensure or enhance product quality, respond to consumer preferences, or help to introduce a new product have been held to be legitimate.

Abuse of dominance

Efficiencies may play a role in abuse of dominance provisions in competition statutes. In Canada the Competition Act specifically requires consideration of whether the exclusion of competitors from a market is a consequence of the superior competitive performance of the dominant firm. Dominant firms are not obliged to hold a pricing umbrella over less efficient rivals.

Whether exclusionary practices by dominant firms can be defended because they are procompetitive on balance or because they increase total surplus (that is, increase profits by more than they reduce consumer surplus) is another question. In some jurisdictions there is no defense of any kind. The European Union has no defense for exclusionary acts committed by a dominant firm (that is, one with a market share of 40–45 percent or more). It would probably not be a defense in any jurisdiction for a dominant firm to claim that its exclusionary practices allowed it to realize economies of scale.

Even so, efficiency considerations are likely to become more prominent in the adjudication of abuse of dominance cases in future. In the United States a business justification defense for tying arrangements may be available to defendants with market shares of 30 percent. Concerns have also been raised regarding the efficiency consequences of mandating access to dominant networks or standards.

DEFINITION OF EFFICIENCY GAINS

An efficiency gain is the same as a productivity gain. It also results in a unit-cost saving. It may involve using:

- Fewer resources to produce the same output of goods or services.
- Lower quality resources to produce the same output.
- The same resources to produce more.
- The same resources to produce higher-quality goods or services.
- The same resources to produce a greater variety of goods or services.

An efficiency gain occurs when the ratio of quality-adjusted output to quality-adjusted input rises. Resource savings or cost reductions do not, by themselves, imply an increase in efficiency. Resources saved by reducing output, variety, and quality or by increasing customer search, transportation, and inventory costs or waiting times are not efficiency gains. Resources saved by worsening working conditions or hurting the environment are not efficiency gains. Unit-cost savings achieved by forcing suppliers to reduce profit margins are also excluded.

A static efficiency gain can be thought of as a one-time increase in productivity or a one-time reduction in unit cost. A dynamic efficiency gain is an improvement in annual productivity growth or the rate of unit-cost reduction. A dynamic efficiency gain may involve:

- Using fewer or lower-quality resources while maintaining the same growth of output and the same rate of quality improvement and new product introduction.
- Increasing annual growth of output and quality improvement and new product introduction while using the same resources.

As with static efficiencies, productivity growth should be defined broadly, encompassing quality, variety, customer search, waiting time, and transportation costs, as well as working and environmental conditions. But dynamic efficiency gains are generally more difficult to prove than static efficiency gains.

EFFICIENCY GAINS AND THE PUBLIC INTEREST

Some national competition statutes or merger guidelines suggest that the public interest should be taken into account when assessing mergers. The public interest includes more than the preservation and enhancement of competition and static and dynamic efficiency gains. For example, New Zealand's Commerce Act of 1975 included explicit public benefits that should be taken into account, such as increases in export activity, employment, value added, and foreign exchange. This list was omitted from the 1986 act, however. Although the list is thought by some to continue as a sort of precedent, Commerce Commission guidelines say that increases in employment and exports and in economic activity in depressed regions are generally not public benefits.

Other countries, including Australia, Germany, and the United Kingdom, have public-interest provisions in competition statutes. In Australia anticompetitive conduct (including mergers) can be exempted from the Trade Practices Act of 1974 if the Trade Practices Commission finds that there are countervailing public benefits. In Germany the Act against Restraints of Competition permits the exemption of a merger based on its economic advantages or an overriding public interest. Between 1973 and 1991 there were six exemptions granted for energy, employment, technology, and competitiveness reasons (Crampton 1992).

In the United Kingdom restrictive agreements and mergers can be referred to the Restrictive Practices Court and then to the Monopolies and Mergers Commission to evaluate whether they are contrary to the public interest. The Monopolies and Mergers Commission is directed by the Fair Trading Act of 1973 to look at effects on the distribution of industry and employment and on domestic imports and exports, as well as on both competition and static and dynamic efficiency gains. A ministerial statement in 1984 directed that competition concerns should be paramount. Even so, balance of payments, international competitiveness, and employment arguments continue to be entertained. Of 40 merger decisions by the Monopolies Commission between 1984 and 1990, balance of payments improvements and employment increases were each given as benefits in five cases (Weir 1993, 951).

International competitiveness considerations can be found in several other decisions. In 1987 the commission said that one of the benefits of the merger of British Airways and British Caledonian was a strengthening of the competitive position of British Airways against the U.S. "megacarriers" (Finbow and Parr 1995, 252). Similarly, one of the commission's reasons for approving the acquisition of submarine cable producer STC by Alcatel in 1994 was that the merger would preserve STC's presence in the United Kingdom as a significant exporter and employer at the leading edge of telecommunications technology (Finbow and Parr, 253).

The Monopolies Commission appears to have taken public-interest considerations well beyond employment and export promotion. In a 1991 case on the merger of two British rendering firms, the commission defined the public interest as requiring, first, that rendering services be effective and reliable; second, that rendering not unduly pollute the environment; and third, that the industry be economically efficient. The commission concluded that, despite its dominance of the market, the merged group satisfied these criteria (Monopolies and Mergers Commission 1985, 88–92).

In Canada the Competition Act directs that the effects of a merger on the real value of exports and on import substitution be considered when deciding whether the efficiencies resulting from the merger are likely to offset the effects of lessening competition. This does not imply that exporting and import substitution are efficiency gains or benefits of the merger in themselves (Canada, Director of Investigation and Research, Competition Act. 1991. 5.6). Rather, increases in exports and import substitution are regarded as relevant only in that they provide better evidence of an increase in the efficiency of domestic production.

WEIGHING EFFICIENCY AND WELFARE GAINS

To qualify for an efficiency defense or exception, the gains must outweigh potential anticompetitive effects of a merger or an agreement. But how large must efficiencies be to outweigh anticompetitive effects? The answer depends on the definitions of outweigh and anticompetitive effects.

There are two approaches. The first accepts less competition provided that it is accompanied by a net increase in total surplus (profits plus consumer surplus)—or in the simplest terms provided shareholders gain more surplus than customers lose. This is variously called the Williamson approach, the total surplus approach, the aggregate economic welfare approach, or tradeoff analysis. It ignores the redistributive consequences of the exercise of market power.[1] It would allow a price-increasing merger or horizontal or vertical arrangement to proceed provided the surplus forgone by customers rationed out of the market by higher prices (deadweight loss) is less than the efficiency gains realized by the parties in the merger or agreement. This approach is consistent with the principles of cost-benefit analysis, which generally ignore distributional issues. Whether it is consistent with the legislative intent underlying national competition statutes is hotly disputed, at least in the United States.

The second approach accepts mergers that increase market concentration and some restrictive agreements among competitors provided they are accompanied by offsetting efficiencies so that the net effect is to enhance or at least not to impair competition. This comparison of the pro- and anticompetitive effects is called a competitive effects test.

This approach requires that the net effect increases or at least does not reduce consumer surplus. It is called the consumer surplus or pure consumer surplus standard because it prevents any redistribution of surplus from customers (consumers) to the parties in a merger or agreement. It is also called the price standard because it does not allow a merger or agreement to increase prices materially. It requires that the efficiencies flowing from the merger or agreement be large enough to prevent the quality-adjusted price in the relevant market from increasing.[2] Under a pure consumer surplus standard a merger or agreement that made the economy as a whole better off (that is, increased the sum of producer and consumer surplus) but increased prices significantly in the relevant market would be prohibited.

Neither judicial nor administrative decisions provide much in the way of guidance as to how large efficiency gains must be in practice if they

are to offset anticompetitive effects. In the United Kingdom the parties in the Elders IXL–Grand Metropolitan merger argued that their merger would yield cost savings of up to 15 percent. The Mergers and Monopolies Commission concluded that these cost savings would be insufficient to "compensate" for the identified adverse effects of the merger (Finbow and Parr 1995, 250). In Canada the Director of Investigation and Research (the official responsible for enforcing the Competition Act) stated in 1991, after four years of experience with the statute, that he had not seen a case in which efficiency gains were sufficient to offset the effect of a substantial lessening of competition.

THE DESIGN OF EFFICIENCY DEFENSES

There are many issues to be considered when establishing an efficiencies defense. These include the form the defense should take, its operational characteristics, and the forum within which efficiencies claims are adjudicated. These issues are discussed below.

Affirmative defense or competitive effects tests

Efficiencies may be used as an affirmative defense once it has been established that a merger or agreement lessens competition substantially. This is the approach taken in merger evaluation in Canada. Likewise, New Zealand takes this approach in its assessment of mergers and restrictive agreements. This is illustrated in the decision of the New Zealand Commerce Commission in *Health Waikato LTD/Midland Health* (Decision No. 275, August 1995).

Efficiency evidence may also be taken into account in determining whether a merger or agreement is likely to lessen competition, that is, to raise prices or reduce quality. This competitive effects approach is employed by courts in the United States when assessing horizontal restraints. (The same is true in Italy, where a restrictive agreement may escape prohibition only if it can be shown to improve supply conditions and substantially benefit consumers.) It has also been suggested for use in merger evaluation in U.S. Federal Trade Commission (1996).[3]

Qualitative versus quantitative evaluation

An efficiency defense involves balancing the positive and negative effects of a merger or other arrangement to determine its net effect on consumers or on aggregate economic welfare. This balancing can be qualitative or quantitative, or a mixture of the two.

A purely quantitative balancing would involve measuring both the anticompetitive effects and the resulting efficiencies. Potentially quantifiable anticompetitive effects include deadweight losses and wealth transfers from the exercise of market power. Most efficiency gains are quantifiable in principle, although precise estimation of dynamic gains such as increased R&D effectiveness is virtually impossible. A purely quantitative efficiency defense would succeed if the present value of efficiencies exceeded the present value of anticompetitive effects. (For an illustrative example of a purely quantitative trade-off analysis, see Pittman 1988.)

The balancing of positive and negative effects may be partly quantitative and partly qualitative, which appears to be the norm among countries with efficiency defenses. There are, however, many ways in which quantitative and qualitative comparisons can be combined. In a few cases (merger cases in Canada, for example) there is a significant and well-established role for the quantitative comparison of efficiencies and anticompetitive effects.[4] Frequently, however, quantification is limited to the estimation of the magnitude of near-term, static efficiencies.[5] Longer-term or dynamic efficiencies and anticompetitive effects remain in qualitative terms. Under these circumstances the comparison of efficiencies with anticompetitive effects must be at least partly qualitative.[6]

Safe harbors versus case-by-case analysis

One way of taking efficiency gains into account is to define the market situations under which the gains are likely to outweigh anticompetitive effects and designate these as safe harbors. There would then be a presumption that any anticompetitive effects in market situations defined to be outside the safe harbors would not be outweighed by any accompanying efficiency gains. This would simplify the enforcement process, but it would also result in more error.

It may be that safe harbors in current merger enforcement practice constitute appropriate recognition of the likelihood that efficiencies will outweigh anticompetitive effects in some market situations. In the European Union, for example, efficiencies are assumed to outweigh anticompetitive effects for all mergers that do not result in market dominance. Once the threshold of market dominance is reached, however, there is no efficiency defense.

In the United States the Horizontal Merger Guidelines state that the enforcement threshold is such that in most cases firms will be able to realize available efficiencies through a merger without interference from the antitrust authorities. Efficiencies arguments are also considered, however, for mergers that would otherwise be challenged by the authorities. Thus there is also some possibility for case-by-case efficiency analysis.

The question of whether existing safe harbors delineate market conditions under which efficiencies are likely to outweigh anticompetitive effects turns, in part, on whether an aggregate economic welfare or a pure consumers surplus approach is adopted. The first approach argues for a more generous safe harbor than the second.

Administrative discretion versus judicial enforcement

It has been suggested that a formal quantitative balancing of efficiencies against anticompetitive effects may be too complex for the courts or even specialized tribunals so that it may be appropriate to confine consideration of efficiencies and balancing or trade-off analyses to antitrust agencies.[7] If efficiencies are found to outweigh anticompetitive effects, authorities offer no challenge.

The complexity of assessment depends on how efficiency considerations are incorporated into the process. Although a quantitative comparison of deadweight losses and cost savings may be beyond the capability of either courts or specialized tribunals, the courts in the United States and other jurisdictions routinely incorporate efficiency considerations into rule-of-reason analyses of horizontal and vertical agreements. It has been suggested that a similar competitive effects test could be applied by the courts in merger cases (U.S. Federal Trade Commission 1996, chapter 2, 111c).

Limited versus absolute defenses

Efficiency defenses may be limited in various ways. The first is in terms of the market circumstances in which they are allowed. For example, an efficiency defense in merger cases may be allowed only in declining or overbuilt markets, in which mergers credibly rationalize excess capacity. Rationalization arguments have been given considerable weight, for example, in recent U.S. defense industry mergers.[8] It has also been argued that U.S. antitrust authorities will seriously consider a capacity rationalization defense for hospital mergers because of the extent of hospital overbuilding in the United States.

The efficiency defense may also be limited in the types of efficiencies accepted. These may be confined, for example, to those involving scale economies or economies of product line or capacity rationalization. Similarly, managerial economies might be ineligible either because they are difficult to verify or because a merger or a restrictive agreement is usually seen as unnecessary to achieve them. It has been argued that savings in fixed or overhead costs should be

ineligible. Although the sources of efficiencies affect their plausibility, it may be preferable to weigh them accordingly rather than to rule out the consideration of some.

The defense might also be limited in the magnitude of the efficiencies required. Efficiencies might be considered, for example, only if they are abnormally large or if they are clearly driving a proposed merger or agreement.

EVALUATING EFFICIENCY EVIDENCE

There are many factors to consider when determining which of the cost savings experienced by participants in a merger or agreement are relevant for the purposes of an efficiencies defense. The nature and quality of the efficiencies evidence required must also be determined. These issues are discussed below.

Burden of proof

Efficiency defenses or exceptions place the onus on the parties involved to prove that their merger or agreement will yield the requisite efficiency gains. This is appropriate, given that the firms are better informed than the antitrust authorities about efficiencies flowing from the transaction.

Evidentiary standard

There is a heightened evidentiary standard for efficiency claims in some countries. In the United Kingdom, for example, the Monopolies and Mergers Commission is said to view efficiency claims with skepticism. The same is true in the United States. Although it is not explicitly stated in the 1992 Department of Justice/Federal Trade Commission "Merger Guidelines," the requirement that evidence in support of efficiency claims be "clear and convincing" continues to hold.

A higher evidentiary standard may be appropriate when the relevant evidence is in the hands of the parties to the proposed merger or agreement and is difficult to verify. It has also been suggested, however, that a higher evidentiary standard may not be required if efficiency evidence is considered in determining competitive effects of a merger or agreement (that is, whether it lessens competition) rather than being the basis of an affirmative defense that has been found to lessen competition substantially (Federal Trade Commission 1996, chapter III H).

Realization by less anticompetitive means

Jurisdictions that allow for efficiency defenses in merger cases limit eligibility for consideration to efficiencies contingent on the proposed merger. Efficiencies that could likely be realized by alternate, less anticompetitive means are ineligible.[10] Alternatives to one merger may include another merger, internal growth, contracting-out, or a joint venture or cooperative agreement. The key issue is how practical the alternative must be.

In Canada efficiencies are considered to be contingent on the proposed merger if it is unlikely that they will be realized by less anticompetitive means. Alternatives to the merger are likely only if they are or have been in use or seriously contemplated in the industries involved. Alternative mergers or acquisitions are limited to those that have been proposed. The mere existence of practical alternatives to the merger, however, does not necessarily nullify efficiency claims. Rather, it limits the efficiencies attributable to the merger to the excess of those gains realized by the merger over gains realized under the best alternative.

In the United States the *Horizontal Merger Guidelines* state that efficiency gains will be considered if the merger is "reasonably necessary" to achieve them. Most have interpreted this as requiring that efficiencies be unique or specific to the merger (Yao and Dahdouh 1993). In turn, "unique" has been variously interpreted to mean that there are no logically plausible or technically feasible alternatives for realizing the

efficiencies (Muris 1995, 9). Recent commentary by the enforcement agency appears more generous. It suggests that efficiencies should be considered unique or specific if the alternate means are neither practicable nor feasible as a business matter and are significantly less anticompetitive.

Other countries vary in what they regard as practical alternatives to merger. In the United Kingdom the Monopolies and Mergers Commission is usually highly skeptical that the benefits attributed to mergers could not be achieved by less anticompetitive means. In one case (AAH-Medicopharma) the commission rejected an argument that the merger was necessary for rationalization because one of the parties had already planned rationalization that would proceed without the merger (Finbow and Parr 1995, 249). In New Zealand the Commerce Commission says that realization of economies of scope and scale by means of internal growth is not as good an alternative to merger in a small country as it would be in a larger country. In general, there are likely to be better alternatives to merger as a way of realizing efficiency gains in large and highly developed countries.[11]

The rule-of-reason assessment of restrictive agreements generally focuses on the terms of the agreement rather than on alternatives to the agreement. In this case the question is whether the restrictions are necessary to realize the efficiencies. Jurisdictions vary as to whether restrictions must be strictly or only reasonably necessary.

The United States requires that restrictions be reasonably necessary. Restraints need not be the least restrictive imaginable or practicable, but they must result in an integration of economic activity. An example would be a partnership agreement that restricts competition among the partners but facilitates the joint provision of services, thereby increasing competition with other suppliers of the service.

Balancing involves comparing the efficiencies achieved with the anticompetitive effects of restrictions. Efficiencies that are not contingent on the restrictions in the agreement are not included in this balancing process. In some cases there may be scope for negotiation of the type applied in Australia and the United Kingdom, under which some overly inclusive or restrictive provisions might be removed from an agreement while preserving efficiency gains.

Real resource savings

To be eligible for the efficiency defense, cost savings must reflect real resource savings. Cost savings at the expense of other savings in the economy are transfers, not resource savings. For example, savings resulting from the use of greater bargaining strength to force suppliers to accept lower profit margins are transfers. Corporate income tax savings are transfers (from the government), but savings in excise and real estate taxes are not.[12]

New products

A merger, joint venture, or cooperative agreement may release resources for use elsewhere in the economy, or it may draw resources from one use to a higher valued use. The second situation occurs when a merger or agreement is necessary to create a new or improved product. Then, the benefit to consumers is their surplus from the new product. The benefit to the economy is the sum of the consumer surplus plus any profits earned on the new product.

Net resource savings

Any transition or adjustment costs should be deducted from cost savings eligible for the efficiency defense. These include any investment spending that would not have occurred if it were not for the merger or agreement. They might also include severance payments.[13]

Realization within the relevant market

Enforcement agencies in the United States require that efficiencies be realized within the relevant product market. This demand is con-

sistent with a competitive effects test under which efficiencies are relevant only to the extent that they increase competition in the relevant market and help to prevent prices from rising in that market. However, if efficiencies can be used as an affirmative defense, it does not matter where these efficiencies are realized as long as they are contingent on the merger or agreement. The Canadian Merger Enforcement Guidelines takes this approach (Canada, Director of Investigation and Research, Competition Act 1991, 47).

Realization within the domestic economy

Recognized efficiencies are generally limited to those realized within the jurisdiction involved. Both efficiencies and anticompetitive effects in other countries are ignored.[14] Domestic efficiency gains must be sufficient to offset domestic anticompetitive effects.

This approach can lead to decisions that are inconsistent from an international perspective. Witness the 1992 proposal by the European aircraft producer Alénia to acquire the Canadian aircraft manufacturer de Havilland. Efficiency gains resulting from the transaction would have been realized largely in Canada, while anticompetitive effects would have been felt mainly in Europe. The Canadian authorities did not challenge the transaction but the European authorities blocked it.

Nationality of ownership

National distribution of ownership of the parties to a proposed merger or restrictive agreement generally plays no direct part in balancing efficiency gains against anticompetitive effects.[15] Although a transfer from the domestic customers of the parties to their foreign shareholders is a cost to the domestic economy, it is generally ignored. There are several reasons for this. First, in some countries (such as the United States) employing a competitive effects test (the pure consumer surplus approach), an efficiency defense can prevail only if gains are sufficient to keep prices from rising. This precludes any transfer from domestic customers to foreign shareholders, so the issue does not arise.

Second, although the nationality issue would arise under an aggregate economic welfare approach, there are several practical reasons for ignoring it. First, it may be difficult to determine the respective national distributions of ownership of the parties involved and their customers. Second, in mergers involving both foreign- and domestically owned firms, it may be difficult to determine the foreign share of the redistributive effects. Third, there may be residual host-country benefits in taxes and positive externalities on the unrepatriated profits of foreign-owned firms. Fourth, it may violate international obligations to require that foreign-owned firms attain greater efficiency gains from a merger than domestically owned firms to avail themselves of an efficiency defense.

POTENTIAL SOURCES OF EFFICIENCY GAINS

Economies of scale

Discussions of efficiency defenses have traditionally emphasized efficiencies in production, especially those from the realization of plant scale economies or from plant specialization by multiproduct firms. Others have disputed the emphasis on production scale economies, which it is argued may be difficult to realize over the near term given the configuration of plants in place.

Economies of scale can be realized in other areas including purchasing, marketing, advertising, and R&D, as well as by the standardization of package sizes, technical standards, behavioral codes, and by information sharing. Depending on the circumstances, the realization of these economies may require either mergers or horizontal restraints.

Economies of scale in nonproduction activities may be realized more readily in the short run. In the United States the courts have rec-

ognized the economies of joint purchasing and warehousing in the rule-of-reason analysis of buying cooperatives.

Economies of rationalization and specialization

These are also called economies of batch size or run length. Rationalization may involve either product line or functional specialization. It saves set-up or change-over costs and also allows for the use of more specialized and thus more productive personnel and equipment. It can also reduce inventory costs, the cost of holding spare parts, and back-up equipment costs. These savings may be offset by increased transportation costs since specialized facilities must ship products a greater distance. If transportation costs dominate, rationalization may involve decentralized production in small batches for local use.

Economies of scope

These can be realized when the cost of joint production of two or more goods or services is less than the costs of producing the same separately. Examples might include such financial services as deposit taking, insurance and brokerage services by a single financial intermediary, or the delivery of mail, parcels, and flyers by a single delivery service.

Economies of capacity utilization and capacity expansion

A merger, joint venture, or cooperative agreement may facilitate the realization of economies of capacity utilization in declining or overbuilt markets. For example, activities in two underutilized facilities may be consolidated in one. The realization of economies of density through pooling agreements in air passenger transportation are a good example of this.[16] In growing industries a merger, joint venture, or cooperative arrangement may postpone the need to expand capacity or make it possible to expand in more efficiently scaled increments—or both.

Synergies

Synergies occur when two firms have excess capacity in different activities or functions, and each can make productive use of the other's excess capacity. The potential extends beyond the use of idle plant and equipment to more intensive use of intangible assets, such as knowledge and reputation. A merger may, for example, facilitate the transfer of both technological and managerial know-how from one party to the other or allow the extension of one firm's reputation for reliability to the products of another.

Consider the acquisition of the Canadian laser producer Lumonics by the Sumitomo Group. This acquisition promised economies of scope resulting from the joint marketing of Lumonics lasers with Sumitomo industrial equipment and from the extension of Sumitomo's reputation to Lumonics' products. There may also have been an R&D synergy in that each firm could benefit from the know-how of the other. In the simplest terms each firm had either public or quasi-public inputs (inputs not being fully utilized) that the other could put to use.

Some commentators regard efficiencies derived from the exploitation of synergies as the most compelling merger-related efficiency gain. Synergistic effects are potentially powerful in efficiencies defenses because they are less likely to be realized by alternative means than are savings from other sources. The same capacity shortage and capacity availability are unlikely to be available in other mergers. Contracting to share the services of specialized inputs is likely to be hazardous, and synergies are not necessarily realized with internal growth.

Transaction cost economies

These considerations enter into the rule-of-reason assessment of both vertical and horizontal agreements and mergers. Transaction costs include the costs of negotiating contracts, monitoring and enforcing performance, and responding to unforeseen contingencies. The

essence of efficient contracting is the alignment of incentives of contracting parties, which require restrictions on the activities that either party may undertake. This is most readily seen with nonprice vertical restrictions, such as tying, exclusive territories, and exclusive dealing. The tying of replacement parts may be the most efficient way to ensure the continuing quality and reputation of a durable good. Exclusive dealing may be the most efficient way to ensure that a distributor devotes the appropriate sales effort to a particular brand. Territorial restrictions may be the best means of giving a distributor an incentive to build up a particular market.

Horizontal restrictions may also reduce transaction costs. In a leading U.S. case the Supreme Court recognized that collective licensing by copyright holders resulted in transaction, monitoring, and enforcement cost savings that made the market more rather than less competitive (*Broadcast Music v. Columbia Broadcasting Sys., Inc.*, 441 U.S. 1,1979).

Vertical mergers, that is, mergers between firms at successive stages of production, may reduce the cost of transactions between them. As a result, firms spanning two or more stages of production may be more efficient than a number of independent single-stage firms. Vertical integration may facilitate information flows and coordination between successive stages of production. This may, in turn, reduce inventory and peak-load capacity requirements. Vertical integration may mitigate principal-agent problems between manufacturers and distributors.

Transaction cost savings may also be realized in horizontal mergers. The merged entity may have sufficient volume to provide some services for itself so it avoids the transaction costs associated with the use of outside suppliers or distributors.

R&D, technology, and dynamic efficiencies

There are several possible sources of economies in R&D. The first is economies of scale. A larger-scale R&D operation may be able to make use of more specialized personnel and equipment. Economies of scale could be realized by merger, joint venture, a cooperative arrangement, or by a specialized independent (third-party) R&D contractor. In most cases, third-party procurement of R&D services involves considerable transaction costs, and some horizontal arrangement will have to be considered.

There may also be economies of scope in R&D. Research findings may have more applications within a larger firm. Again, licensing is an alternative means of extending the range of applications of research. Licensing may or may not involve competitors or potential competitors.

R&D offers great potential for synergies in that two firms in the same "technology market" may each have knowledge the other requires. Technology transfer agreements often involve swaps or cross-licensing arrangements. These arrangements between competing firms can also be anticompetitive if firms raise prices by charging each other higher royalty rates. A careful balancing of R&D synergies against these potential anticompetitive effects may be required.

In recognition of the dynamic efficiencies that result from measures facilitating R&D and technology transfer, some national competition laws have special provisions with respect to agreements involving R&D and technology transfer. In Canada, for example, the Competition Act provides a specific defense for R&D joint ventures involving a program of research that would not otherwise take place. Agreements among competitors with respect to cooperation in R&D are exempt from the criminal conspiracy provisions of the act unless they lessen competition unduly with respect to prices, output, markets, customers, or channels of distribution, in which case no defense of any kind is available.

U.S. courts are required under the National Cooperative Research and Production Act to judge joint research and production arrange-

ments on a rule-of-reason basis. This recognizes that restraints necessary for a new product to be provided are efficiency enhancing and thus potentially procompetitive (for further discussion see Arquit and Kattan 1991). The act also limits relief in civil actions to actual (rather than treble) damages when the antitrust authorities have been notified of the joint research or production arrangement in question, provided the challenged conduct is within the scope of the notification. In the European Union the prohibition of anticompetitive agreements in the Treaty of Rome is subject to an exemption if the agreement also results in economic benefits, such as technical or economic progress.

In some cases explicit or implicit safe harbors are provided for technology licensing agreements. In the United States the Department of Justice/Federal Trade Commission's "Antitrust Guidelines for the Licensing of Intellectual Property" adopts a 20 percent combined market-share safe harbor for cross-licensing agreements among competing firms. In Canada there is a safe harbor of sorts in a requirement that horizontal agreements must lessen competition unduly to be illegal. Similarly, in New Zealand and Australia an agreement must lessen competition substantially in order to be illegal.

Although national competition laws do make special provisions for taking potential dynamic efficiencies into account, there has been concern, particularly in the United States, that antitrust enforcement is still insufficiently sensitive to these issues. Efficiency analysis tends to be cost oriented and cover the short run. Dynamic efficiency evidence frequently cannot be underpinned by the same cost data. It has been suggested that acceptable evidence of dynamic efficiencies flowing from cooperative R&D could include demonstrating that intellectual property and trade secrecy protection of an innovation sought by a cooperative arrangement is likely to be inadequate; that the agreement reduces duplication in the research, development, and commercialization functions; that the innovation competes or will compete in a market or markets that are characterized by rapid technological change; and that the innovation will compete with other technologies (for further discussion see Jorde 1995).

Another way of taking better account of dynamic efficiencies is to recognize that they may take longer to achieve than static efficiencies. The United States typically requires procompetitive efficiencies to dominate the anticompetitive effects of a merger or an agreement within a short time (two years in the 1992 "Horizontal Merger Guidelines"). It has been argued that other industrial countries allow a much longer period for the effects of efficiencies to manifest themselves and that this permits transactions designed to achieve long-term procompetitive benefits that could not be realized under the present U.S. approach (Rill and Victor 1995).

CONCLUSION

Provisions for some form of efficiencies or public benefits defense for mergers or agreements with potential consequences for market power are now more common. There is an increasing tendency to interpret public benefit in terms of economic efficiency and to exclude other possible policy goals, such as export promotion or employment creation.

Some jurisdictions provide an explicit defense while others deal with efficiency considerations indirectly by defining safe harbors in which efficiencies are always presumed to predominate, and "no fly zones," in which efficiency arguments will not be entertained. The trend appears to be toward an explicit defense.

Some jurisdictions deal with mergers and restrictive agreements in the same way. New Zealand and Australia both allow efficiencies to be used as an affirmative defense for mergers or agreements that lessen competition. The

United States is moving toward a common competitive effects test under which efficiencies evidence is used along with other evidence in determining whether a horizontal restraint or a merger is anticompetitive.

Balancing efficiency gains and anticompetitive effects is usually qualitative with a general requirement that efficiency gains be greater the more severe the restraint on competition. Most jurisdictions rely on the courts or specialized tribunals for this balancing rather than on prosecutorial discretion by enforcement agencies.

There are two general approaches to balancing efficiencies against anticompetitive effects. One considers efficiency evidence only in the way it bears on the ultimate competitive consequences of a proposed merger or agreement. It requires that the efficiencies be large enough to keep the quality-adjusted price of the products in the relevant market from rising and consumer surplus from falling. The efficiencies required to meet this standard are large, at least in concentrated markets, implying a limited role for efficiency considerations.

The other approach accepts an anticompetitive merger or agreement provided it is beneficial to the economy as a whole (increases aggregate economic welfare). This requires that the efficiencies exceed the deadweight loss in surplus resulting from the quality-adjusted output reductions (and price increases). Under a broad range of circumstances this standard may be met by relatively modest (though not trivial) efficiency gains, implying a prominent role for efficiency considerations. Although this standard is preferable (it is consistent with the maximization of aggregate economic welfare), it may also require a higher evidentiary standard, increased quantification, and greater judicial expertise.

NOTES

1. A variant of this test allows some weight to be given to redistributive effects. It defines the effect of the lessening of competition resulting from a merger or agreement in terms of the loss of economic surplus (deadweight plus transfer) likely to be experienced by the customers in the relevant market. At one extreme this treats a redistribution of economic surplus within the economy the same as the complete loss of surplus to the economy. This approach limits the consideration of efficiency gains to exceptional cases.

2. A variant of the pure consumer surplus standard is the "pass-on" approach, which has various interpretations. One is that all efficiency gains must be passed on to customers of the merging or agreeing firms. This has been called a "killer qualification" in that it could be met only by mergers or agreements that had no anticompetitive effects. A less extreme interpretation of the pass-on requirement is that customer must share in the benefits of the merger or agreement. That is, efficiencies resulting from the merger or agreement must be such that the quality-adjusted price in the relevant market falls and consumer surplus increases. The efficiency gains required to reduce prices are obviously greater than those required to keep them from rising.

3. The staff report argues: Efficiencies likely to be obtained through a merger may increase the competitiveness of the merged firm and improve (or not impair) the competitive performance of the market(s) in which the merged firm operates, ultimately resulting in lower prices, increased output and/or higher quality goods or services for consumers or other buyers. An efficiency justification would thus enable credible efficiencies to be evaluated for their contribution to the overall likely competitive effect of the merger in a relevant market—the central question on the merits. This is likewise the focus of the Supreme Court's inquiry under the Sherman Act when it analyzes efficiencies arguably obtained through horizontal restraints. "[T]he criterion to be used in judging the validity of a restraint is its impact on competition." Accordingly, this proposed efficiency justification would constitute a rebuttal, not an affirmative defense (chapter 2.III.C).

4. One interpretation of the requirement in Canada's Competition Act that efficiencies be

greater than and offset the anticompetitive effects of a merger is that quantifiable efficiencies must be greater than quantifiable anticompetitive effects and that qualitative efficiencies must offset qualitative anticompetitive effects.

5. In the United Kingdom one study found that firms seldom quantify efficiencies claims, that the Monopolies and Mergers Commission tends to disbelieve quantified claims in any case, and that the commission's overall analysis of the net public benefit of mergers is almost entirely qualitative.

6. In New Zealand the comparison of efficiencies and anticompetitive effects is largely qualitative, although both the Commerce Commission and the courts have encouraged quantification when possible. The commission has noted, however, this may result in the placement of excessive weighting on the quantifiable factors such as short-term productive efficiency gains at the expense of the hard-to-measure but potentially important allocative and dynamic efficiency factors, such as reduced incentives to innovate and reduced incentives to control costs.

7. In New Zealand an efficiencies defense is available only in an application to the Commerce Commission (a specialized tribunal) for authorization of a merger or proposed conduct that is or might be anticompetitive. It is not possible to argue an efficiencies defense before the courts in either a public or private action.

8. The acquisition of the missile division of General Dynamics by Hughes Aircraft is an example. The antitrust agencies' decision not to challenge the transaction was apparently influenced by the potential cost savings that could be realized by combining the two missile divisions. Since confidentiality requirements precluded detailed discussions between the two companies, the potential cost savings were not quantified.

9. The reason given is that for a profit maximizing firm, output and price depend on marginal rather than fixed costs. So a savings of fixed costs will not reduce the profit maximizing price and therefore cannot offset the effects of less competition. Others have responded that fixed costs are a short-run phenomenon. In the long-run all costs are variable. While an efficiency gain may manifest itself in a fixed-cost savings in the short run, it can result in a downward shift in marginal costs and thus a decrease in market price in the long run. Thus the time horizon over which the competitive effects are realized is important. Of course, a fixed-cost savings increases total surplus whether it results in a reduction in the market price or not. From the perspective of the total surplus standard, a fixed-cost savings is an efficiency gain in both the long run and the short run.

10. Although alternatives may be less anticompetitive, they may still have anticompetitive consequences. When choosing among alternate anticompetitive mergers or agreements, each of which entails efficiencies, the best alternative is the one with the largest excess of efficiencies over anticompetitive effects.

11. For example, arguments that a merger facilitates access to managerial talent or finance are unlikely to be persuasive in the United States but may be persuasive in countries with less well-developed markets for financial and human capital. For the U.S. perspective, see U.S. Federal Trade Commission (1996, chapter 2, section III F).

12. Any savings in property or excise taxes from more efficient use of inputs are efficiency gains. The reason is that the amount alternative users are willing to pay for land and other inputs freed up by the merger or agreement (the opportunity cost of these resources) includes any taxes levied on them.

13. To the extent that severance payments are compensation for lost work time and job search effort for employees released by the merger, there is an argument for reducing net efficiency gains by the amount of payments. It could also be argued, however, that severance is simply a component of an individual's salary package. Some may choose a package with a higher salary and less or no compensation in the event of dismissal. Viewed this way, severance should not be deducted from efficiency gains.

14. For example, for purposes of New Zealand's public benefits defense, the "public" is the population of New Zealand. Similarly, according to Canada's Merger Enforcement Guidelines, only efficiency gains

likely to be brought about in Canada may be set against the anticompetitive effects of the merger.

15. In some countries (such as Canada) there is no mention of ownership in enforcement guidelines. In others there has been an explicit statement on the issue. For example, in its Telecom decision, New Zealand's High Court explicitly rejected the argument that profits earned by foreign-owned firms are necessarily a drain on the local economy but also stated that supranormal profits accruing to foreign shareholders would be counted as a detriment to the public. This seems to imply that in all relevant cases (that is, in which there is market power) nationality would matter. In the United Kingdom the Monopolies and Mergers Commission does take account of the nationality of the merging firms to the extent that it may affect their exporting and importing behavior (Weir 1993).

16. A recent example from Australia is a request that the Trade Practices Commission authorize on public benefits grounds a price-fixing and market-sharing arrangement between Quantas and British Airways on routes between Australia and England. The commission ultimately authorized a joint service agreement subject to undertakings that are intended to maintain competitive fare setting (see Baxt and Spier 1995a).

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Annex 3

A Framework for Competition Law

The primary purpose of competition law is to improve economic efficiency so that consumers enjoy lower prices, increased choice, and improved product quality. Sustained competition is the force that drives companies to be efficient and to pass benefits on to consumers.

A more specific goal of competition law is to prevent economic agents from distorting the competitive process either through agreements with other companies or through unilateral actions designed to exclude actual or potential competitors. Thus the law should control agreements among competing enterprises—horizontal agreements—on prices or other important aspects of their competitive interaction. Agreements between firms at different levels of the manufacturing or distribution processes—vertical agreements, for example, between a manufacturer and wholesaler—are less likely to harm competition. But they may do so under certain circumstances that are more likely to be present in transition or developing economies. Therefore, they too should be addressed in a competition statute.

It is possible for a firm to grow large enough to harm competition unilaterally. Such dominant firms should be subject to carefully crafted provisions in the competition law. Enterprises that win the competitive struggle lawfully should be rewarded for their superior performance. Dominant firms should not be permitted, however, to use their advantages to block challenges from existing or potential competitors.

Enterprises might decide to merge in order to enhance efficiency, which will heighten competition and thus benefit consumers. But some mergers may be anticompetitive, intended to eliminate competition and to artificially achieve a dominant position not based on superior economic performance. Alternatively, a merger might reduce the number of competitors sufficiently, enabling the remaining firms to readily coordinate their activities. An effective competition law should therefore include a provision to prevent such mergers.

Competition laws sometimes include provisions related to consumer protection and unfair business practices. To reduce the potential for overlap with other statutes, these provisions should be as focused as possible on preserving fair competition. They should also operate to protect the competitive process rather than competitors.

This annex provides a suggested structure for a competition law, including wording for its substantive provisions. Some of the suggested provisions are accompanied by brief commentary. It must be emphasized that the statutory provisions are only suggestions. Competition laws must be drafted to fit the legal and economic contexts of each country.

Special project of the Competition Law and Policy Division of the Directorate for Financial, Fiscal, and Enterprise Affairs, Organisation for Economic Co-operation and Development. This annex was prepared by Gary Hewitt, John Clark, and Bernard Phillips.

THE SCOPE OF COMPETITION LAW

Competition law is an essential part of the economic constitution of a free market country. It should, as much as possible, apply to all market transactions and to all entities engaged in commercial transactions irrespective of ownership or legal form. All exceptions to the application of the law should be explicitly identified in pertinent legislation.

Suggested provisions:

[Article __] Purpose

This Law is intended to maintain and enhance competition in order ultimately to enhance consumer welfare.

[Article __] Field of application

1. This Law shall be enforceable on the whole territory of the Republic of _____ and applies to all areas of commercial economic activity. The Law shall be applicable to all matters specified in [section(s) of the law containing the prohibitions of restrictive agreements, abuse of dominance, and merger review], having substantial effects in the Republic of _____, including those that result from acts done outside the Republic of _____.

2. This Law does not derogate from the direct enjoyment of the privileges and protections conferred by other laws protecting intellectual property, including inventions, industrial models, trademarks, and copyrights. It does apply to the use of such property in such a manner as to cause the anticompetitive effects prohibited herein.

3. This Law shall apply neither to the combinations or activities of workers or employees nor to agreements or arrangements between two or more employers when such combinations, activities, agreements, or arrangements are designed solely to facilitate collective bargaining in respect of conditions of employment.

DEFINITIONS

The competition law should define common terms that are used in the law and that are needed to interpret its provisions consistently.

Suggested provisions:

"Competition"—the process by which economic agents, acting independently in a market, limit each other's ability to control the conditions prevailing in that market.

"Firm"—any natural or legal person, governmental body, partnership, or association in any form engaged directly or indirectly in economic activity. Two firms, one of which is controlled by the other, shall be treated as one firm. Two or more firms that are controlled by a single firm shall be treated as one firm. The competition office shall adopt a regulation setting out what constitutes control.

"Good"—all property, tangible and intangible, and services.

"Market"—a collection of goods among which buyers are or would be willing to substitute, and a specific territory, which could extend beyond the borders of the Republic of _____, in which are located sellers among which buyers are or would be willing to substitute.

ABUSE OF A DOMINANT POSITION

Suggested provisions:

[Article __] Abuse of a Dominant Position

1. "Dominant Position"—a firm has a dominant position if, acting on its own, it can profitably and materially restrain or reduce competition in a market for a significant period of time. The position of a firm is not dominant unless its share of the relevant market exceeds 35 percent. A firm having a market share exceeding 35 percent may or may not be found to be dominant depending on the economic situation in that market, including the firm's market share, competing firms' market shares and their abilities to expand those shares, and the potential for new entry into the market.

2. Actions of a dominant firm—including creating obstacles to the entry of competing firms or to the expansion of existing competitors or eliminating competing firms from the market—that have or may probably have as their result a significant limitation of competition are prohibited.

3. Section 2 of this article does not prohibit actions by a firm that create obstacles to the entry of new firms or reduce the competitiveness of existing firms solely by increasing the efficiency of the firm taking those actions, or that pass the benefits of greater efficiency on to consumers.

[Article __] Power to break up a firm abusing its dominant position

1. When a firm has abused its dominant position and no other remedy under this law or under an applicable regulatory statute would be likely to rectify the situation or prevent recurrence of the abuse, the competition office may reorganize or divide the firm provided there is a reasonable likelihood that the resulting entity or entities would be economically viable.

2. The power to reorganize or divide contained in this article shall be exercised in a manner designed to minimize any increases in costs of providing the good.

The 35 percent safe harbor is found in the competition laws of several countries either expressly or in common law or practice. Although the 35 percent threshold is somewhat arbitrary, it is unlikely that a firm with a much smaller market share could successfully exercise market power unilaterally. There are some valid reasons for raising the threshold. In a small country that is relatively closed to international trade and investment, high concentration may be necessary so that firms can grow large enough to exhaust significant economies of scale and scope.

In some countries' law a market share of 65 or 70 percent creates a presumption of dominance that the firm must rebut. But many think that the better practice is to place the burden of proving dominance on the competition agency. A high market share is a necessary but not sufficient condition.

This provision employs a general legal standard: a "significant limitation of competition." In economic terms this standard typically refers to restrictions that would permit a price increase above what would prevail in a competitive market. It is not possible to legally define a "significant" limitation of competition, however, because the size of an anticompetitive price increase can vary across jurisdictions. It can even vary over time within the same country in response to changes in the resources available for antitrust enforcement and in the efficiency of the competition agency.

The laws of some countries also list specific types of conduct, such as predatory pricing, tying, or exclusive dealing, that can constitute abuse of dominance. Such provisions are more common in countries that employ a civil code legal system, as opposed to a common law system. It is difficult to define such conduct accurately, however, or to be sufficiently inclusive of potentially abusive conduct. Also, it must always be remembered that the specified conduct is not always abusive or anticompetitive, even if carried through by a dominant firm.

RESTRICTIVE AGREEMENTS

Certain types of horizontal agreements, collectively described as cartel agreements, are subject to stricter control than other types. In many countries this distinction is not found in the law itself but in enforcement practice or regulations. Countries that are first adopting competition laws, however, are better off making the distinction explicitly in the law. Doing so will help to ensure that enterprises learn the seriousness of violating cartel prohibitions and will help business people to understand that although some vertical agreements may hurt individual competitors, they are proscribed only if they harm competition industrywide.

Not all horizontal agreements are cartel agreements. Competitors may integrate their operations to achieve greater efficiency, and the result may be procompetitive on balance. Agreements of this type include joint ventures, joint research and development, and the setting of common standards that benefit consumers. These agreements should be subject to a more lenient legal standard and distinguished from cartel agreements in the competition law.

Finally, some horizontal and vertical agreements may be harmful to competition in some sense, but may generate efficiencies that make

them beneficial on balance. (Cartel agreements, by definition, cannot generate such efficiencies.) It is helpful if the law sets forth the standards that govern this analysis.

Suggested provisions:

[Article __] Prohibited agreements between firms

1. An agreement, concluded in any form including by concerted practice, between competing firms (including firms that could easily become competitors) is prohibited if such an agreement has or would likely have as its principal effect:

(a) Fixing or setting prices, tariffs, discounts, surcharges, or any other charges;

(b) fixing or setting the quantity of output;

(c) fixing or setting prices at auctions or in any other form of bidding, except for joint bids so identified on their face to the party soliciting bids;

(d) dividing the market, whether by territory, by volume of sales or purchases, by type of goods sold, by customers or sellers, or by other means;

(e) eliminating from the market actual or potential sellers or purchasers; or

(f) refusing to conclude contracts with actual or potential sellers or purchasers.

2. An agreement, other than those enumerated in section 1 of this article, concluded in any form including by concerted practice, is prohibited if it has or would likely have as its result a significant limitation of competition.

(a) An agreement among competing firms, including firms that could easily become competitors, other than those agreements enumerated in section 1 of this article, cannot be found to significantly limit competition unless the shares of the firms participating in the agreement collectively exceed 20 percent of a market affected by the agreement.

(b) An agreement solely among noncompeting firms cannot be found to significantly limit competition unless:

(i) At least one of the parties holds a dominant position in a market affected by the agreement; or

(ii) the limitation of competition results from the fact that similar agreements are widespread in a market affected by the agreement.

3. (a) An agreement prohibited under section 2 of this article is nonetheless legal if it has brought about or is likely to bring about gains in real as opposed to merely pecuniary efficiencies that are greater than or more than offset the effects of any limitation on competition that result or are likely to result from the agreement.

(b) The burden of proof under this section lies with the parties seeking the exemption, and includes demonstrating that if the agreement were not implemented it is not likely that the relevant efficiency gains would be realized by means that would limit competition to a lesser degree than the agreement.

Section 3(a)'s reference to "real, as opposed to merely pecuniary, gains in efficiency" is designed to exclude consideration of benefits such as reductions in income taxes or greater quantity discounts obtained solely through exercising greater purchasing leverage. Such pecuniary gains are transfers rather than increases in the economy's ability to satisfy consumer needs.

Section 3(b) does not require the parties to prove that the agreement is the only way to realize the claimed gains in efficiency, but that there are no practical, less anticompetitive means of doing so.

Section 3(a), and an identical provision in section 9 of the article on concentrations, read together with article 1 (the purpose clause) implicitly applies a total welfare standard to the efficiencies defense or exemption. It does so by giving equal weight to both consumers and producers, thus ignoring any transformation of consumer surplus into producer surplus resulting from the agreement. Section 3(a) permits agreements in which the deadweight loss—that is, the surplus lost to consumers but not transformed into higher producer profits—from the fall in consumption due to a price increase is less than the value of resources saved in more efficiently producing the goods.

Instead of a total welfare standard, some countries might prefer to focus exclusively on consumer welfare, and therefore allow an efficiency

defense or exemption only in cases where efficiency gains are expected to be so large that consumers will not be harmed despite the anticipated increase in market power. To articulate such a standard, section 3(a) could be written as follows:

3. (a) An agreement prohibited under section 2 of this article is nonetheless legal if it has brought about or is likely to bring about such large gains in real as opposed to merely pecuniary efficiencies that consumer well-being is expected to be enhanced as a result of the agreement.

MERGERS AND ACQUISITIONS

A competition statute's merger provisions should be permissive. In particular, there is no need for systematic review and approval of all mergers. Mergers should be allowed unless the competition authorities can show that they will significantly limit competition. Furthermore, requiring notification of all mergers would unduly burden the authorities and impose unreasonable costs and delays on the merging parties. Only large mergers, which are most likely to present a threat to competition, should be subject to premerger notification requirements. In countries with high inflation, it is advisable to measure the minimum-size threshold in terms that rise with inflation, for example as a multiple of a standard minimum wage.

The same competition test should be applicable to all mergers, whether or not notification is required. The competition office should thus have the power to order the dissolution of smaller, nonnotified mergers. To eliminate the uncertainty created by possible dissolution, merging firms should be permitted to make voluntary notifications.

Suggested provisions:

[Article __] Review of concentrations

Definition

1. "Concentration"—concentration shall be deemed to arise when:

(a) Two or more previously independent firms merge, amalgamate, or combine the whole or a part of their businesses; or

(b) one or more natural or legal persons already controlling at least one firm acquire, whether by purchase of securities or assets, by contract or by other means, direct or indirect control of the whole or parts of one or more other firms.

2. "Control"—for the purpose of this article, control is defined as the ability to materially influence a firm, in particular through:

(a) Ownership or the right to use all or part of the assets of an undertaking; or

(b) rights or contracts that confer decisive influence on the composition, voting, or decisions of the organs of a firm.

Notification

3. When an agreement or public bid will produce a concentration larger than the minimum size as provided in regulations issued pursuant to section 7 of this article, the parties to the agreement or bid are prohibited from consummating such concentration until __ days after providing notification to the competition office, in the form and containing the information specified in regulations issued pursuant to section 7.

4. Before the expiration of the __ day period referred to in section 3 of this article, the competition office may issue a written request for further information. The issuance of such a request has the effect of extending the period within which the concentration may not be consummated for an additional __ days, beginning on the day after substantially all of the requested information is supplied to the competition office.

5. Parties to an agreement or public bid not subject to the notification requirement in section 3 of this article may voluntarily notify and, if they do so, be subject to the same procedures, restrictions, and rights as are applied to cases of compulsory notification.

6. If, before consummation of a concentration, the competition office determines that such concentration is prohibited by section 8 of this article and does not qualify for exemption under section 9 of this article, the competition office may:

(a) Prohibit consummation of the concentration;

(b) prohibit consummation of the concentration unless and until it is modified by changes specified by the competition office;

(c) prohibit consummation of the concentration unless and until the pertinent party or parties enter into legally enforceable agreements specified by the competition office.

Regulations regarding concentrations

7. The competition office shall from time to time adopt and publish regulations stipulating:

(a) The minimum size or sizes of concentrations subject to the notification requirement in section 3 of this article;

(b) the information that must be supplied for notified concentrations;

(c) exceptions or exemptions from the notification requirement of section 3 for specified types of concentrations;

(d) other rules relating to the notification procedures in sections 3, 4, and 5 of this article.

Permitted and prohibited concentrations

8. Concentrations that will probably lead to a significant limitation of competition are prohibited.

9. Concentrations prohibited under section 8 of this article shall nonetheless be free from prohibition by the competition office if the parties establish that either:

(a) The concentration has brought about or is likely to bring about gains in real as opposed to merely pecuniary efficiencies that are greater than or more than offset the effects of any limitation on competition that result or are likely to result from the concentration; or

(b) one of the parties to the concentration is faced with actual or imminent financial failure, and the concentration represents the least anticompetitive among the known alternative uses for the failing firm's assets.

The burden of proof under this section lies with the parties seeking the exemption.

A party seeking to rely on the exemption specified in (a) must demonstrate that if the concentration were not consummated it is not likely that the relevant efficiency gains would be realized by means that would limit competition to a lesser degree than the concentration.

A party seeking to rely on the exception specified in (b) must:

(i) Demonstrate that reasonable steps have been taken within the recent past to identify alternative purchasers for the failing firm's assets;

(ii) fully describe the results of that search.

10. The competition office may determine, within three years after consummation, that either a nonnotified concentration or a notified concentration in which the provisions of sections 3–5 of this article are not fully complied with, has led or will probably lead to a significant limitation of competition and does not qualify for either of the two exemptions set out in section 9 of this article. If it so determines, the competition office may:

(a) Undo the concentration by dissolving it into its constituent elements;

(b) require other modifications of the concentration, including sale of a portion of its operations or assets;

(c) require the surviving firm or firms to enter into legally enforceable agreements specified by the competition office and designed to reduce or eliminate the competition-limiting effects of the concentration.

11. Notifiable concentrations that the competition office determines are prohibited by section 8 of this article and do not qualify for exemption under section 9 may subsequently be authorized by a published decision of the Government of _____ for overriding reasons of public policy involving a unique and significant contribution to the general welfare of the citizens of _____.

Because delaying a merger can generate high costs for the parties involved and increase the risk that confidential business plans might become public knowledge, it is important to keep the delays mandated in sections 3 and 4 as short as possible.

Although sections 6 and 10 provide for both structural and behavioral remedies, the competition office should favor structural remedies. Behavioral remedies are generally ineffective unless they are easy to monitor and the com-

petition office has effective means of ensuring compliance.

The basis for the efficiencies defense or exemption in section 9(a) is discussed in the commentary accompanying the article on restrictive agreements. If, as discussed there, it is decided that a consumer surplus standard is to be applied to this exemption, the alternative provision provided there may be used in this Article as well.

UNFAIR COMPETITION

In enforcing this rubric of the law, the competition office could end up spending an inordinate amount of time arbitrating what are really private disputes having little influence on the competitive process. To reduce that risk, the law should provide for enforcement through private actions. Every effort should also be made to ensure that the unfair competition provisions are as clear as possible. Note that countries could address this issue in their general consumer protection laws instead of in their competition statute.

Suggested provisions:

[Article __] Prohibition of unfair competition

Unfair competition is prohibited, including:

1. The distribution of false or misleading information that is capable of harming the business interests of another firm;

2. the distribution of false or misleading information to consumers, including the distribution of information lacking a reasonable basis, related to the price, character, method or place of production, properties, suitability for use, or quality of goods;

3. false or misleading comparison of goods in the process of advertising;

4. fraudulent use of another's trademark, firm name, or product labeling or packaging;

5. unauthorized receipt, use, or dissemination of confidential scientific, technical, production, business, or trade information.

ORGANIZATIONAL AND ENFORCEMENT MATTERS

This section concerns a series of diverse provisions intended to improve the general effectiveness of a competition statute. Where applicable, comments will be followed by suggested statutory wording.

Specialized courts and rights of appeal

In most countries the judiciary is involved with enforcing competition laws. The competition authority may be required to apply to the courts for orders that would implement its decisions. More commonly, the competition agency's decisions may be appealed to the courts by the parties involved. If private parties have the right to institute competition cases, these cases may be brought before the courts.

Because the judiciaries in transition and developing economies are inexperienced in dealing with free market problems, it may be advisable to set up specialized courts to hear competition cases. Such courts could hear all commercial disputes or be specialized to hear only competition cases. Concentrating these cases before specially trained judges should speed up the acquisition of expertise and produce more consistent, predictable decisions. Specialized competition courts could adopt procedures and rules of evidence specifically suited to competition cases. The composition of the court could be tailored to the requirements of competition cases. For example, at least one economist could be included in each tribunal.

Private enforcement

In some countries private actions for redress of injury resulting from violations of the competition law may be instituted before an appropriate court or tribunal by people harmed. Such private actions have at least two benefits: they supplement and reinforce public enforcement of the competition law, and they free the competition authority from having to obtain such

redress on behalf of private parties. To facilitate private rights of action, provisions could be added to the competition statute to:

- Allow private plaintiffs to bring actions in courts for damages they can prove they sustained as a result of either a violation of the competition statute or a party's failure to comply with orders made under it, plus all reasonable costs they may have incurred investigating and prosecuting the case.
- Allow private plaintiffs to bring actions for injunctive relief (for example, to prohibit mergers or to cease using certain anticompetitive contract terms).
- Require the competition office to transfer to private plaintiffs all nonconfidential information gathered in the course of the office's investigations.
- Facilitate the use of court records in cases brought by the competition authority as evidence in private damage suits.
- Allow group damage claims in competition cases.

Relationships between the competition office and other government bodies

Independence from other parts of the government is important to the proper functioning of the competition office. Decisions of the office may affect the interests of entrenched businesses, which may have strong influence in one or more government ministries. The competition office should be free from the political influence of these interests.

Suggested provisions:

[Article __] Independence of the competition office

1. The competition office is under the authority of the [President of _____], and receives its budget directly from and reports directly to the [legislature of _____].

2. The [head] of the competition office is appointed by the [President of _____], for a renewable term of [a minimum of three] years, and can only be removed by a [vote of the legislature] for patent inability to discharge his functions.

Though the competition office should be organizationally independent from other parts of the government, it should also have the power to participate in government decisions directly affecting competition. The competition office should thus have the power to make recommendations or presentations, and in some situations to intervene when government bodies are making decisions affecting competition policy.

Suggested provision:

[Article __] Representations and interventions by the competition office

1. The competition office shall have the right to make submissions to state administrative authorities engaged in designing or administering legislation or regulations that could affect competition in any market in [the Republic of _____]. When hearings are held with regard to the adoption or administration of such laws or regulations, the competition office shall have the right to intervene in such proceedings.

2. The competition office shall have the right to publish the submissions and interventions referred to in section 1 of this Article provided that confidential information is not divulged.

Prohibition and remedial orders

The appropriate remedy for many types of anticompetitive practices is to simply demand that the offending party stop engaging in the conduct or to take other actions to eliminate the effects of the unlawful practice. Punishment is also appropriate if the conduct is egregious. But some competitive harms are not readily apparent to business people, who may have engaged in the conduct initially in good faith. Such cases may include noncartel restrictive agreements, some abuses of a dominant position, and some acts of unfair competition. The competition law should empower the competition agency to prohibit the conduct or redress the harm from it.

Suggested provision:

[Article __] Prohibition and remedial orders

The competition office [or appropriate court or tribunal] may issue orders prohibiting firms from carrying on the anticompetitive or unfair practices referred to in this act and, if necessary, requiring such firms to take other specified actions to eliminate the harmful effects of such practices and to ensure against recurrence of such practices.

Fines and Penalties

The competition office should have the authority to impose fines for cartel agreements, serious or repeated abuse of dominance, noncartel agreements, and unfair competition and to ensure compliance with merger notification requirements and competition office decisions.

To deter cartel agreements, fines must be considerably larger than the extra profits that firms anticipate earning through their illegal behavior. For example, consider companies A and B that think they will be able to raise their profits by $500,000 by agreeing to increase prices. If they also believe that there is only a 10 percent probability of being punished for collusion, the anticipated fine must be approximately $5 million to effectively dissuade them. Some countries have found that the deterrent effect of penalties is enhanced considerably if the anticompetitive acts are characterized as criminal and if individuals as well as enterprises are liable.

Interim injunctions

The power to obtain interim injunctions, or temporary orders to stop a particular practice, is frequently necessary to preserve the status quo pending investigation. Interim injunctions are particularly useful in merger cases, in which it is difficult to break apart a merged entity, and in cases involving other types of conduct in which prohibition orders rather than fines are relied on to eliminate or to prevent anticompetitive practices.

Suggested provisions:

[Article __] Interim injunctions

1. The head of the competition office may apply to [appropriate court or tribunal] for an order to suspend business practices under investigation by the competition office or the consummation of concentrations. Before making the order, the [court or tribunal] shall be satisfied that the proposed measures are urgently required to avoid serious, imminent, and irreparable harm to the economic interests of the Republic of _____, as expressed in this act. When the effectiveness of the order would not thereby be prejudiced, the [court or tribunal] shall permit the firms that would be subject to the order to present their views regarding the proposed order.

2. Within three days of the issuance of an order by the [court or tribunal] pursuant to this Article, the competition office shall deliver the order to the parties subject to it, together with reasons for the order and notice of the right to appeal.

3. All orders made under this article lose effect twenty-one days after they are issued, unless renewed by express decision of the [court or tribunal].

4. Orders issued under this section may be appealed to the [pertinent appeal court], but do not lose their effect pending the outcome of the appeal.

Enforcement guidelines and advance rulings

Parties subject to the law should be helped to comply with it and to plan their activities accordingly. Much of this assistance could come through the publication of enforcement guidelines articulating how the competition office will interpret and apply the law. In addition, while protecting confidentiality, the competition office should be required to publish all prohibition orders and decisions imposing sanctions along with supporting reasons.

There is also a need for a process whereby parties can obtain advance rulings from the competition office concerning planned courses of action. This information would be particularly helpful for exemptions given to horizontal or vertical agreements.

Suggested provisions:

[Article __] Advance rulings

1. Parties may apply to the competition office for advance rulings, binding on that office, regarding eligibility for exemptions from the prohibitions of articles _____ [relating to restrictive agreements and abuse of a dominant position]. If it chooses to grant an advance ruling, the competition office may include in it specified conditions and requirements. The advance ruling shall by its terms exist for a specified period of time.

2. Advance rulings may be renewed upon application by the parties. An advance ruling may be revoked or modified if:

(a) A significant change in circumstances has occurred since the ruling;

(b) the applicant infringed on a condition or a requirement specified in the ruling;

(c) the decision to grant the ruling was materially influenced by inaccurate, fraudulent, or misleading evidence; or

(d) the applicant abused the exemption granted to it.

3. The competition office shall arrange for publication of its advance rulings, omitting any confidential information. It may arrange similar publication of all other decisions taken under this act, again omitting any confidential information.

Investigative powers

To ensure sufficient investigative capability, the competition office requires the production of information. The office should be able to require that parties under investigation and third parties produce documents (in paper or other form), written answers to questions, and oral testimony. In addition, the competition office should have the power to search the premises of subjects of an investigation and to take away evidence discovered in the search.

Such broad investigative powers should be subject to strict procedural safeguards. In most countries searches can be conducted only after authorization of a court or tribunal—and the competition agency must show probable cause. The competition office should be required to permit any party submitting evidence to have reasonable access to that evidence, and it should be required to return the evidence after the investigation and subsequent enforcement proceedings. These powers should be reinforced with severe fines for willful destruction or withholding of evidence or persistent refusal to supply requested information in a timely fashion.

Protection of confidential information and avoidance of conflicts of interest

If the competition office is to enjoy the confidence and cooperation of the business sector, it must protect the confidentiality of all nonpublic information that it acquires in the course of an investigation or proceeding. Also, it must ensure that its officials are not tempted to profit privately from knowledge acquired in the course of their duties.

Suggested provisions:

[Article __] Confidentiality and conflict of interest rules

1. Officials of the competition office, as well as their agents and consultants, shall maintain the confidentiality of all business, commercial, or official information of which they become aware during the course of their official activities, except that which is otherwise public. Disclosure of such confidential information may occur in the course of administrative or judicial proceedings arising under this act, or otherwise as permitted by [the court or tribunal].

2. All members of the competition office shall inform the head of the competition office of any position held or activity carried out in an economic field by the member, including all agents thereof. The head of the competition office shall take all necessary steps to ensure there is no conflict of interest arising from such positions or activities, including requiring that such positions be resigned or activities cease.

To strengthen these provisions, fines and possible dismissal should be imposed if government employees willfully disclose confidential data or engage in conflicts of interest.

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