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## *Antitrust Policy in an Evolving Global Marketplace*

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That competition policy has acquired a prominent place in discussions on international economic policy is in large part due to the growing interdependence among national economies during the closing decades of the twentieth century. This interdependence blurs the long-standing distinctions between “domestic” and “international” policies, in which competition policy has been the purview solely of the former. A nation’s antitrust policies are no longer concerned exclusively with corporate practices within its borders, nor are these policies any longer seen as the sole preserve of national government. The “globalization” of antitrust therefore raises questions about the erosion of national sovereignty, about the potential for intergovernmental disagreements to lead to trade wars, and about the effects of antitrust actions that “spill over” borders.

The merits and practicalities of reconciling national antitrust law and enforcement with an increasingly global marketplace have been discussed in several arenas: regional forums, the World Trade Organization (WTO), the Organization for Economic Cooperation and Development (OECD), and with increasing frequency over the last ten years, in meetings between the United States and

the European Union. The chapters in the book analyze the considerable progress made by the United States and the European Union in cooperating, while enforcing their respective antitrust and competition laws. Our analysis focuses on two areas: the economic and legal questions that will arise if the United States and the European Union decide to move beyond the status quo; and the merits of the various outstanding proposals for reform.

Our focus on the intensification of cooperation on antitrust matters by the United States and the European Union in no way denies the importance of the changes in law and enforcement practices that have occurred for other reasons.<sup>1</sup> Nor should our focus on antitrust policy give the impression that EU and U.S. cooperation on economic matters is confined to this important policy area. Indeed the mid-1990s saw considerable momentum grow behind proposals to establish a transatlantic marketplace, including the launching of formal negotiations between the European Union and United States.<sup>2</sup> The failure of this wide-ranging initiative does not appear to have prevented sustained cooperation in a large number of policy arenas, including antitrust, but it does appear to have taken efforts to harmonize laws or to adopt common standards off the negotiating agenda.<sup>3</sup>

The rest of this introductory chapter is organized into seven sections. The next two sections draw the implications for antitrust enforcement of the changes in business strategies that have occurred during the latest phase of international market integration. The third section outlines the issues facing policymakers as they craft an effective strategy of transatlantic cooperation on antitrust policy. The fourth section briefly describes the last decade's cooperation between the European Union and the United States. The fifth section assesses potential future transatlantic initiatives on antitrust policy. The sixth section discusses whether such initiatives could evolve into a blue-

1. A number of recent studies document and examine the consequences of these changes. Goyder (1998) provides a comprehensive legal overview of EU competition law and its enforcement, and Bishop and Walker (1999) and Martin (1998) provide recent economic analyses of EU competition policy. Cini and McGowan (1998) is a general introduction to EU competition policy, and Gerber (1998) and Sauter (1997) provide important historical accounts of the evolution of European competition laws. Kovacic and Shapiro (2000) examine the evolution of legal and economic thinking in the United States during the twentieth century. Baker (1999) outlines how new theoretical and empirical insights have been incorporated into the enforcement of U.S. antitrust laws during the last fifteen years. Viscusi, Vernon, and Harrington (1995) provide detailed theoretical treatments of the economic issues raised by market structures that distort resource allocation, and of the antitrust policies that attempt to prevent, and in some cases reverse, those distortions.

2. Reineke (1996) and Frost (1997) provide analyses of the proposals to establish what was known at the time as the TransAtlantic Business Dialogue.

3. See Eichengreen (1998).

print for a global competition policy agreement. The final section provides an overview of the volume.

## **Antitrust Enforcement and the Evolving Transatlantic Marketplace**

Falling trade barriers, a revolution in communications technology, declining restrictions on foreign investment, ongoing deregulation, and the embrace of market-friendly policies by many governments have wrought significant changes in business strategies on both sides of the Atlantic.<sup>4</sup> The following corporate developments have taken center stage in this new environment:

- A cross-border merger wave of unprecedented scale
- A reevaluation of the benefits of vertical integration, resulting in increased outsourcing and the fragmentation of stages of production across national borders
- The spread of network-based industries.

These developments are in turn altering the context in which antitrust policy is enforced. We describe each of these responses with an eye to the questions raised for antitrust policy, questions that are elaborated upon and taken up in the sections and chapters that follow.

### *The Current Global Merger Wave*

One of the principal differences between the current merger wave and its predecessors is the scale of cross-border mergers and acquisitions (see table 1-1). In just five years the value of completed mergers and acquisitions rose from a worldwide total of \$200 billion in 1995 to more than \$500 billion by the end of 1999. Measured by their value, American and European firms were parties to more than 80 percent of these transactions. And unlike the merger wave of the late 1980s, which was dominated by British and American firms, during the recent wave numerous French, German, Dutch, and Spanish firms also made substantial cross-border acquisitions (see table 1-1).

One might have anticipated that falling tariff barriers, constraints on the use of nontariff barriers, and improvements in transportation technologies would have shifted firms' strategies for entering foreign markets toward ex-

4. The contributors to Garten (2000) describe how business strategies have evolved and how they are likely to change in the future with greater integration of national markets.

**Table 1-1. Cross-Border Mergers and Acquisitions, Valued by Sales of Parties, 1995–99**

	1995	1996	1997	1998		January–September 1999	
				Sales	Share (percent)	Sales	Share (percent)
World	199,116	242,965	334,435	586,773	100.0	498,203	100.0
United States	61,796	64,604	89,467	145,861	24.9	93,068	18.7
European Union							
Belgium	4,644	3,500	2,137	2,707	0.5	7,206	1.4
Denmark	160	730	1,565	1,259	0.2	2,880	0.6
France	10,200	15,866	22,363	38,705	6.6	52,241	10.5
Germany	18,548	19,875	13,539	69,998	11.9	45,457	9.1
Ireland	1,157	2,245	1,875	3,335	0.6	1,984	0.4
Italy	4,895	1,668	4,547	14,155	2.4	7,000	1.4
Netherlands	7,456	13,268	19,085	25,543	4.4	34,029	6.8
Spain	1,089	3,506	9,360	17,474	3.0	25,681	5.2
Sweden	5,531	2,342	8,093	16,685	2.8	4,160	0.8
United Kingdom	32,045	37,713	62,746	108,648	18.5	139,930	28.1
Other EU	1,019	2,946	6,027	18,453	3.1	6,491	1.3
Australia	6,368	11,123	13,657	8,144	1.4	4,448	0.9
Canada	12,812	9,066	18,929	36,031	6.1	14,236	2.9
Japan	4,190	6,256	3,578	3,403	0.6	9,905	2.0
Switzerland	10,420	9,731	11,423	41,808	7.1	10,665	2.1
Rest of world	16,786	38,526	46,044	34,564	5.9	38,822	7.8

Source: Thomson Financial Securities Data. Data refers to completed deals only.

porting and away from acquiring local partners. However, in those sectors in which it is costly to establish distribution networks or reputations for supplying high-quality products, firms still find that acquiring or merging with a local partner is often the most profitable mode of entry into overseas markets.<sup>5</sup> The attractiveness of this mode of entry has been further strengthened by the ongoing liberalization of foreign investment regimes and, in some nations, a more relaxed attitude toward foreign takeovers of domestic firms.

5. Gaugan (1999) provides a comprehensive overview of the rationales for corporate mergers and acquisitions as well as a brief history of several merger waves.

Deregulation and privatization, especially in Europe, have played a significant role in stimulating cross-border mergers and acquisitions. As governments have opened public utilities (the electricity, water, gas, and telecommunications sectors, for example) to competition, cross-border transactions have surged, putting these industries among the top ten in terms of total mergers and acquisitions during 1995–99 (measured by the value of sales). Furthermore, the liberalization of the highly regulated financial services industry has resulted in considerable consolidation within this traditionally sensitive sector. Typically, deregulation does not mean the end of regulation, and industry regulators, in addition to antitrust authorities, increasingly review cross-border acquisitions. Gary Doernhoefer (this volume), in his case study on the American Airlines and British Airways alliance, argues forcefully that satisfying multiple regulatory authorities adds substantially to the costs and uncertainty involved in cross-border transactions. This problem extends well beyond the airline industry.

Antitrust enforcement, if not antitrust law, has responded to this surge in cross-border mergers and acquisitions.<sup>6</sup> An increasing number of transactions are reviewed in multiple jurisdictions, and officials regularly discuss their concerns and possible remedies. Most of those concerns appear to be international analogues to the concerns raised by domestic transactions. For example, in the Federal-Mogul and T&N merger, U.S., British, French, Italian, and German antitrust officials were concerned that the merged firm would have an 80 percent market share in the worldwide market for thin wall bearings used in car, truck, and heavy equipment engines.<sup>7</sup> To allay fears about the *current* anticompetitive effects of this horizontal aspect of their merger, the parties were forced to divest T&N's thin wall business, including the intellectual property needed for the divested firm to compete effectively in the future.<sup>8</sup>

The possibility that an international merger or acquisition could result in a reduction in *future* competition, possibly by retarding the development of new products, is another concern of antitrust officials. Mergers and acquisi-

6. Pitofsky (1999) argues that "overall, there has been less adjustment in basic American antitrust law in response to the increase in global trade than one might expect. Enforcement goals, measurement of market power, and theories of anti-competitive effect are about the same. If there have been changes...the changes are probably more appropriately traced to new scholarship than changes in trade patterns."

7. This transaction fell below the thresholds for review by the European Commission, so national antitrust authorities undertook their own reviews.

8. See Parker (1999) for a discussion of this and other recent international merger cases involving U.S. antitrust authorities.

tions of firms that are about to launch competing products, or that are assisting other firms in developing potential substitute products, were mentioned in authorities' reviews of ABB's acquisition of Elsag Bailey Process Automation, the Zeneca and Astra merger, and the acquisition of COBE Cardiovascular by Sorin Biomedica.<sup>9</sup>

Increased cross-border transactions give additional prominence to two other antitrust issues. The first is the extent to which import competition can discipline the market power of the entities that result from such transactions. Economists have traditionally argued that vigorous competition from firms, no matter their location, can constrain the exercise of market power by large domestic firms. A number of recent empirical studies have shed further light on the extent of this constraint (the implications of these studies for antitrust enforcement are outlined in the next section).

The second issue concerns the proper antitrust response to a proposed merger, acquisition, or joint venture that creates cross-border efficiencies—that is, that lowers the cost of supplying foreign markets but not the domestic market. Unlike Canadian Merger Guidelines, which can take into account the effect on export performance, U.S. case history and the public statements of senior officials suggest that a merger that claims to balance anticompetitive effects in the United States with procompetitive effects abroad would be poorly received. The chairman of the U.S. Federal Trade Commission, Robert Pitofsky, could not be more explicit on this point:

If that argument were advanced, we would consider it but our approach would be skeptical. This is not a strictly chauvinistic interpretation of American merger law. First, it is consistent with the basic premise . . . that domestic firms are best able to succeed in international markets if required to compete vigorously at home. . . . Second, balancing anti-competitive effects in a domestic market against efficiencies in a foreign market is unusually difficult. Finally, it is an unattractive prospect to “tax” United States consumers (as a result of the domestic anti-competitive effect) in order to confer benefits on U.S. exporters and non-U.S. consumers.<sup>10</sup>

This remark raises a fundamental issue that recurs throughout this book and more generally in discussions of international antitrust enforcement. How efficient can national antitrust enforcement be, focusing almost exclusively on effects within a nation's borders, in a world in which more and more corporate transactions and practices have effects that are not confined to one nation's jurisdiction?

9. See Parker (1999).

10. Pitofsky (1999).

### *The International Fragmentation of Production and Vertical Disintegration*

The last fifteen years have seen far-reaching changes in the internal organization of businesses and in business-to-business contracting and relationships. Two distinct and not mutually exclusive changes have been at the fore: the fragmentation of multistep production processes across national borders and the sale of corporate subsidiaries peripheral to the firm's principal activities (often replacing intrafirm transactions with transactions between firms). One significant consequence of these changes is that production components often cross many international borders before reaching the purchaser of the finished product.<sup>11</sup> The total value of imported components embodied in exports accounts for approximately 30 percent of current world trade; during 1970–95 the growth of this type of trade accounted for one-third of the growth of world trade.<sup>12</sup>

Liberalization of foreign investment regimes, reductions in tariffs on intermediate products, and improvements in communications have spurred firms to relocate (typically labor-intensive) stages of production abroad.<sup>13</sup> It is no longer uncommon to have a product designed in one country, materials purchased (and even refined) in another country, and assembly undertaken in third countries. This multiple crossing of borders implies that even small reductions in international transportation costs and tariffs can have significant effects on trade volumes.<sup>14</sup> Furthermore, multinational sourcing decisions respond vigorously to exchange rate changes.<sup>15</sup>

The effects of international market integration on the vertical structure of firms is more subtle. When suppliers produce specialized inputs, they can be “held up” by buyers who may try to renegotiate the terms of their contract after the inputs have been produced.<sup>16</sup> Such ex post renegotiation is more likely to occur when the seller cannot find other potential buyers for its product, either because there are none or because the inputs are so spe-

11. See Feenstra (1998); Hummels, Rapaport, and Yi (1998); and Hummels, Ishii, and Yi (forthcoming) for specific examples of industries engaged in these practices.

12. See Yi (1999). Yeats (1998) provides additional evidence on this phenomenon.

13. This phenomenon is not confined to manufacturing as many service industries have established customer service centers in lower-wage English-speaking countries, such as Ireland.

14. A theoretical demonstration of this claim, with supporting evidence, can be found in Yi (1999).

15. Rangan and Lawrence (1999) found this to be the case for the sourcing decisions of U.S. multinational corporations.

16. Williamson (1971, 1989). An overview of the incentive to engage in vertical integration, and the economic consequences of such integration, can be found in Carlton and Perloff (1994).

cialized that there are only a small number of potential buyers. To cover the losses associated with reduced payments on some of their sales, this hold-up problem causes suppliers of inputs to raise prices, which in turn raises the costs of production of input buyers. These higher input prices lie at the heart of the incentive to vertically integrate: by owning the producers of inputs, the downstream buyer of inputs pays only the marginal cost of producing the inputs and so avoids the premium charged by independent input suppliers to cover expected losses created by the hold-up problem. It should be noted that the incentive to vertically integrate is reduced if there are larger governance costs associated with running a vertically integrated firm. Finally, once vertical integration begins in an industry it creates a dynamic that reinforces the incentive for further vertical integration: as more and more input suppliers and buyers vertically integrate, the set of available input buyers whom the remaining independent input suppliers can sell to shrinks, exacerbating the hold-up problem and reinforcing the incentive to vertically integrate.

Falling impediments to international commerce reduce the incentive to vertically integrate by increasing the number of potential overseas buyers for an input, diminishing the severity of the hold-up problem. Furthermore, as suppliers of inputs are less susceptible to the hold-up problem they charge a lower premium over marginal costs, which in turn reduces the cost savings from vertical integration. Indeed some integrated firms may now find the cost savings (which induced them to vertically integrate in the first place) no longer compensate for the higher governance costs of running both the input producer and its downstream purchaser and so may sell off one of these two activities. Such vertical disintegration further increases the number of potential buyers for any one input seller's output, further ameliorating the hold-up problem and reinforcing the incentive for other firms to vertically disintegrate. It is through this mechanism that falling impediments to international trade are reshaping the vertical structure of firms.<sup>17</sup>

Vertical disintegration has several implications for antitrust enforcement. First, to the extent that arm's-length agreements between firms have been subject to more antitrust investigations than supply management within firms, vertical disintegration can be expected to increase the enforcement activity of antitrust officials. Second, antitrust officials should examine the availability of overseas inputs when assessing claims that a firm is being deliberately denied inputs by a domestic rival. Such claims should be treated with considerable suspicion if the relevant firms are in an industry that is

17. These arguments are developed at length in McLaren (forthcoming).

experiencing considerable vertical disintegration. Finally, although falling trade impediments may mitigate the hold-up problem and reduce the incentive to vertically integrate, other rationales for vertical integration remain—some of which distort market outcomes—and so globalization does not imply that antitrust enforcement in the area of vertical restraints should be abandoned.

### *The Spread of Network-Based Industries*

Although it is fashionable to argue that recent developments in information technology are creating a “new economy,” in fact many of the characteristics of today’s network industries have historical precedents, such as the spread of the Bell telephone system in the United States during the late nineteenth century. Whether a network is physical (for example, railroads) or “virtual” (for example, compatible software), it has the same principal characteristic: the value any one consumer derives from connecting to a network depends in large part upon the number of consumers already using the network.<sup>18</sup> The antitrust issues raised by the tremendous recent growth of network industries probably merits a chapter of its own, but we focus briefly on a few central issues below.

First, in common with some “old economy” industries, network industries tend to have high fixed costs—reflecting research and development costs and the costs of building a network infrastructure—and very low marginal costs. Firms in these industries thus have an incentive to price-discriminate across consumers, charging higher prices to consumers with price-inelastic demand. Here the critical question is whether this market power is transitory. The fast pace of innovation in these industries suggests that antitrust enforcers should examine not only whether corporate practices and inter-firm agreements inhibit the entry of new products but also the effects of these practices and agreements on the rate of innovation and the ability to sustain market power. Another concern, at the center of the recent U.S. federal case against Microsoft, is whether monopoly power in one product market can be used to leverage market power in another product market.

The second characteristic of these industries is the presence of positive network externalities, which complicate antitrust analysis. The source of these externalities is the following: one of the factors that determine how much a consumer values a product is the number of other consumers who are cur-

18. For an extensive review of the economics of networks, with its implications for business strategy, see Shapiro and Varian (1999, chap. 7).

rently purchasing or have purchased the product. Firms that sell such products often have an incentive to set prices below marginal cost, expanding sales and so further increasing the demand for their products through network externalities. The likely consequence of this pricing strategy is increasing industry concentration.

In the presence of network externalities, therefore, it is *as if* consumers value concentration, which implies that the traditional techniques for quantifying the effects of horizontal mergers and alleged abuses of dominance need to be modified to take into account the benefits that consumers derive from firms having a large clientele. Furthermore, the magnitude of this benefit to any one consumer may well depend on the worldwide total number of purchasers of the same good. Thus even a national antitrust authority concerned solely with the effects of a firm's actions within its borders ought to consider the effects of company practices on worldwide sales. Network externalities can create international spillovers distinct from those discussed in our earlier section on mergers and acquisitions.

Extensive cooperation on standard setting, product compatibility, and licensing is the third distinctive characteristic of network industries. Whereas any alleged consumer benefits from cooperation between the producers of substitute goods should rightly be viewed with skepticism by antitrust authorities, such skepticism is less warranted for the producers of complements, of which computer software is a leading example. Consumers value compatibility across software programs: being able to convert documents or data supplied by one program into a form manipulable by another program. Cooperation to improve product compatibility, which often involves setting common standards in software design, benefits consumers and ought not to be discouraged by antitrust authorities. This argument extends to patent pooling, in which two or more companies own patents that could block the introduction of each other's products.

An essential precondition for maximizing consumer gains from standard setting is that the adherence to these standards be open to new competitors, irrespective of their nationality. This requires that standards be well publicized and that compatibility with an existing standard can be readily demonstrated. This encourages research and the development of new varieties of products—such as video games, compact discs, and computer applications—that benefit consumers.

Looking forward, there is the potential for intergovernmental disagreement over standard setting by private entities. A critical test will be whether industrial policy considerations trump concerns of allocative and productive efficiency when a national antitrust authority examines foreign com-

plaints of discriminatory standard setting by domestic firms. The merits of this application of industrial policy were examined at length in the 1980s and the early 1990s, and it is worth recalling Paul Krugman's conclusion that, although there are some theoretical circumstances under which government intervention of this sort can raise the national welfare, the preconditions for successful intervention—in particular the information requirements—are so stringent that resisting the temptation to intervene is the best rule of thumb.<sup>19</sup>

### **Does International Competition Tame Domestic Market Power?**

Since antitrust investigations often turn on how much market power a firm (or group of firms) possesses, the extent to which international competition diminishes that power is of considerable interest. In recent years our understanding of exporter behavior and its effects on the pricing behavior of domestic competitors has been enhanced by empirical studies whose methodologies can readily be applied by the antitrust community.

The first research program examines the sensitivity of domestic firms' pricing decisions (specifically the markup of price over marginal cost) to lower trade barriers. Although these studies examine firm behavior in developing countries, the techniques can be applied to firms in industrial countries, such as the United States and the members of the European Union.<sup>20</sup> The principal finding of this research is that, holding other factors constant, the larger the reduction in an industry's protection from imports, the greater the contraction in markups of prices over marginal costs. Furthermore, in response to trade reform domestic firms have increased their productivity levels, reducing costs, which then have in part been passed on to consumers in the form of lower prices. This evidence supports the view that integration into the market economy attenuates domestic market power. However the evidence does not imply that integration eliminates domestic market power, suggesting that a liberal trade policy is not a perfect substitute for national competition policy.

Even though imports from existing overseas suppliers tend to rise in response to a rise in the prices of domestic firms, other empirical studies show

19. See Krugman (1987); for a carefully couched alternative view, see Tyson (1992).

20. Feenstra (1995) surveys these techniques, drawing upon the initial contributions of Levinsohn (1993) and Harrison (1994).

that such price rises are unlikely to induce new foreign firms to start supplying the domestic market. Entering new markets requires considerable start-up costs (establishing distribution networks, tailoring products to the new market, and marketing), and so the assertion of greater market power by domestic firms is unlikely to induce new foreign entrants unless the domestic price increases are so large as to enable those potential entrants to recover these costs over a plausible time horizon.<sup>21</sup> This implies that the short-term constraint on domestic market power is actual, rather than potential, foreign competition.

However, the same studies show that once a foreign firm enters the domestic market (perhaps owing to a favorable exchange rate movement or to falling impediments to trade), then it takes especially unfavorable domestic market conditions for the foreign firm to exit the market. The unwillingness of foreign firms to leave the market in anything other than severe downturns is related to firms' desires to avoid having to reestablish their presence in the market once favorable conditions return. This finding implies that, as global integration unfolds, the extent of foreign competition faced by domestic firms ratchets up over time, posing an ever more serious threat to domestic market power. Finally, one hypothesis that receives little support in recent studies is that foreign exporters learn how to reduce costs by exporting, enabling them to lower prices and so to grind away continuously at what remains of domestic firms' market power.<sup>22</sup>

Taken together these findings imply that, while it is existing foreign rivals that provide the bulk of the restraint on domestic market power, there is a pronounced tendency for the number of these foreign rivals to increase over time. Should these patterns continue into the future—and there is little evidence to suggest that they will not—further development and application of techniques that better account for the discipline that foreign competition exerts on domestic market power is called for.<sup>23</sup>

21. For recent empirical evidence of the importance of start-up (and more generally sunk and fixed costs) for exporters' behavior, see Roberts and Tybout (1997); Clerides, Lach, and Tybout (1998); Bernard and Jensen (1999); and Evenett and Venables (2000).

22. See the references in note 21 for evidence (from several countries' exporters) against the prevalence of this learning-by-doing dynamic.

23. In addition to Feenstra (1995), Goldberg and Knetter (1997) review some of the latest techniques to estimate both the monopoly power of exporters and the extent of international market integration.

## Multijurisdictional Antitrust: The Principal Issues

Four important areas require investigation:

- Defining the proper boundaries of “markets”
- The relationship between trade and antitrust intervention
- The “new economy” features of cross-border markets
- The interaction between antitrust and other forms of regulatory intervention.

### *Defining Markets in an Integrating Global Economy*

As markets integrate across national borders, the logic of purely national antitrust policy breaks down. The most immediate problem—and frequently the most critical aspect of antitrust cases, particularly those dealing with monopolization and mergers—is how to define the relevant “market.” The market share of the merged parties is scrutinized by competition authorities to gauge potential market power and harm to consumers. The sensitivity of case outcomes to definition of the relevant market is compellingly illustrated in the 1997 case brought by the U.S. Federal Trade Commission against the proposed merger of Staples and Office Depot, two office supply retailers. The combined entity would have accounted for a small percentage of the aggregate sales of office supply products, but the FTC successfully argued for restricting the definition of the product market to “the sale of competitive office supplies through *office superstores*” (italics added). Having been persuaded of the appropriateness of this definition, the judge then granted the FTC’s request for a preliminary injunction on the grounds that the combined company would have a dominant 45–100 percent market share in many parts of the country.<sup>24</sup>

The proper geographic scope of a market must include all sellers to whom buyers can turn in order to counteract the effect of a significant and nontransitory price increase by local incumbents. Where imports can play that price disciplining role, then the market should be defined so as to include foreign producers. Thus the proper market definition is itself determined not only by the level of imports but also by trade policy itself, as a measure of the potential for new imports to discipline domestic market incumbents.

24. See Dalkir and Warren-Boulton (1999).

### *Growing International Trade and Antitrust Intervention*

To the extent that antitrust is supposed to promote competition, antitrust enforcement and trade liberalization can logically be seen as substitutes. On this view the 1890 Sherman Antitrust Act represents the political price American big business had to pay in return for protective tariffs.<sup>25</sup> If competition were to be restricted, government intervention would need to increase to offset the loss of market discipline.

If this logic is compelling, the converse should also hold. As import penetration increases, all else being equal, one would expect less need for antitrust activism on the part of a nation's competition authorities. Increased foreign competition can substitute for domestic legal proceedings as a means of keeping prices close to marginal costs. Increased transatlantic trade liberalization should, by such thinking, serve to reduce the scope for antitrust intervention and hence transatlantic antitrust conflict. In fact, the U.S. Justice Department's merger guidelines do require consideration of actual and potential entry by foreign producers in determining the definition of antitrust markets.

Will further trade liberalization therefore mitigate the need for cross-border antitrust cooperation? The answer is almost certainly no, for two reasons. First, as noted, trade liberalization has reduced but not eliminated domestic market power. Second, an alternative logic, backed too by empirical evidence, suggests that cross-border antitrust conflict is actually *more* likely as trade increases.

Antitrust is a political phenomenon and is therefore subject to all the normal interest group pressures that affect policy across the spectrum. As import penetration tends to have a disproportionate negative effect on the profits and market share of smaller domestic enterprises,<sup>26</sup> trade liberalization is likely to be accompanied by increased small-firm lobbying for domestic antitrust intervention. Prima facie supporting evidence would be the resulting rise in domestic market concentration ratios and declining prices, the latter of which may trigger specific charges of predatory pricing. Domestic mergers, motivated by productive efficiency concerns brought on by foreign competition, are also more likely to be challenged by smaller and less viable enterprises. To the extent that trade protectionism is hindered by treaty obligations, antitrust may therefore be used to offset the adverse distributional effects of imports. By this logic, trade stimulates antitrust activity. The latter is a by-product of mercantilism.

25. This view has been advanced by DiLorenzo (1985), among others.

26. For example, see Caves (1988); and Chappell and Yandle (1992).

As trade and particularly foreign direct investment increases, the larger firms that will be the actual targets of antitrust intervention are far more likely to be foreign than domestic, as the former will have considerably less domestic lobbying power. Without necessarily impugning the economic case of the European Commission against the Boeing–McDonnell Douglas merger, it is easy to see how compelling the political pressures for antitrust intervention must be in such a case.<sup>27</sup>

Finally, holding constant factors such as the general level of economic activity and agency caseloads, there is a positive relationship between foreign competition and funding for the Federal Trade Commission and the Antitrust Division of the Justice Department.<sup>28</sup> This would appear to indicate that antitrust, rather than being solely driven by consumer welfare considerations, is at the service of domestic firms adversely affected by imports. If trade stimulates antitrust, particularly targeted at foreign firms, the potential for direct conflict of laws and lobbying interests across borders can only grow as economic globalization progresses.

### *Antitrust in the “New Economy”*

Economic efficiency has two components. Allocative efficiency concerns the relation between price and marginal cost and is a function of market power. More competition, or potential competition, reduces market power and increases allocative efficiency. Productive efficiency concerns the unit costs associated with the production of goods and services and is a function of factors such as economies of scale and network externalities. Mergers may reduce the long-run average cost of firms and thereby increase productive efficiency. They may also increase market power and thereby reduce allocative efficiency. It is the task of antitrust analysis to determine which effect is predominant in any given case.

New industries, and new manifestations of old ones, seem particularly likely to exhibit a sharp contrast between the two types of efficiency and thereby pose difficult analytical challenges for antitrust authorities. Computer-based products such as operating systems and trading architectures exhibit enormous network externalities, such that the more users that coalesce around a given product, the more benefit that is conferred on each user. The potential customer reach of such products is frequently global,

27. Fox (1997) analyzes the contentious Boeing–McDonnell Douglas merger and makes several proposals to keep politics out of antitrust enforcement.

28. See the study by Shughart, Silverman, and Tollison (1995), covering the years 1932–81.

even when the owner does not intend it to be: Internet-based applications are the clearest example. Defining the relevant market for both geographic and product identification purposes (What exactly is an “operating system”?) is frequently difficult. Different national competition authorities applying identical principles in identical cases are likely to reach different conclusions or specify different remedies. Where nonefficiency concerns, such as the effects on employment, are allowed to come into play, the potential for cross-border antitrust conflict can only increase as the “new economy” expands. And it is large firms rather than monopolists as such to which political concern is generally directed.<sup>29</sup> Many of the new economy enterprises boast enormous market capitalizations without clearly exhibiting market power, yet they are likely to receive antitrust attention, particularly outside their legal home jurisdiction, merely because of their size of equity base.

### *Antitrust and Sectoral Regulation*

Certain major and growing industries are frequently placed outside the scope of a nation’s primary antitrust authority, in particular banks and securities exchanges. Other industries, such as public utilities, fall under the purview of industry regulators as well as national antitrust authorities.<sup>30</sup>

In the euro zone, government agencies not directly concerned with antitrust (that is, central banks and finance ministries) have intervened to inhibit or block cross-border banking mergers that do not appear to raise antitrust concerns, while national bank megamergers have proceeded with little or no formal consideration of domestic competition effects. The promotion of “national champions,” which take on a too-big-to-fail status, is likely to lead to transatlantic disagreements, which may or may not take the form of antitrust cases. But at root it is the inconsistent application of antitrust principles across *domestic* industries that sows the seeds for future conflict abroad.

With the rise of cross-border securities trading, U.S. financial market regulators have been subtly transforming themselves into trade negotiators and may themselves be at the center of future transatlantic trade conflicts. The Commodity Futures Trading Commission under former chairman Brooksley Born conditioned direct U.S. electronic access for European derivatives exchanges on reciprocal treatment for U.S. exchanges, notwithstanding the

29. See Posner (1999).

30. In their conclusions Laffont and Tirole (2000) discuss the difficulty of differentiating between antitrust policy and regulatory policy in the telecommunications sector.

fact that Chicago derivatives markets were predominantly floor based and already had functioning after-hours electronic joint ventures in Europe (such as Globex). The Securities and Exchange Commission has steadfastly denied direct electronic U.S. access for European stock exchanges largely on the grounds that their listed stocks frequently did not meet the reporting standards of U.S. GAAP (generally accepted accounting principles). European exchanges offering to limit U.S. trader access to GAAP-compliant stocks have nonetheless been rebuffed. Such apparent protectionism raises costs for U.S. investors without offering them any measure of protection, as they have long traded on foreign exchanges by phone and direct computer link via brokers' terminals (such as Instinet, owned by Reuters). Applying efficiency-based antitrust criteria would logically result in quick regulatory approval for such intermarket access.

### *Resource Allocation and Multijurisdictional Antitrust*

Drawing the foregoing discussion together, we have a clearer idea of the challenges posed by globalization for effective antitrust enforcement. International commercial transactions are altering the allocation of resources—by adjusting investments, outputs, and prices—within and across national borders and are doing so at an unprecedented rate. Markets defined economically are not the same as those defined politically: that is, by national borders. Increased international trade should mitigate the need for antitrust intervention as a matter of economics but is likely to have the reverse effect as a matter of politics. And new computer-based industries feature network externalities that are bound to transcend national borders but are equally bound to face local antitrust scrutiny on the basis of local effects.

These considerations suggest that the following four questions are at the heart of developing an effective transatlantic strategy for antitrust enforcement:

—Are resources allocated away from their most efficient uses when commercial transactions that generate cross-border spillovers are subject to antitrust investigations that only consider the effects within national borders?<sup>31</sup> Alternatively put, in the absence of a mechanism or agency to aggregate effects across nations, to what extent do multiple national vetoes on international transactions affect the allocation of resources?

—What are the consequences for the reallocation of resources, brought about by international commercial transactions, of national antitrust en-

31. The notion of efficiency is discussed at length in Richardson (1999).

forcement that is influenced by considerations other than maximizing economic efficiency (such as preservation of competition, employment objectives, and the like)?<sup>32</sup>

—Are there cooperative mechanisms, or common action guidelines, that can minimize the potential for interjurisdictional conflict and improve prospects for welfare-enhancing antitrust intervention across the entire scope of the market, economically defined?

—What are the prerequisites—in terms of shared objectives, information flows, and procedures—for effective antitrust cooperation?

It is tempting for outside observers to call for a broad-based program of harmonized rules and procedures in response to greater cross-border market integration. Of course, substantive and procedural antitrust harmonization is unambiguously beneficial to the extent that harmonized standards are better than the alternatives. But the fact that this criterion is so simply stated merely indicates how difficult it is to satisfy in practice.

## **Recent Antitrust Cooperation between the European Union and the United States**

The increased integration of national markets has led competition agencies on both sides of the Atlantic to review corporate activities that involve foreign firms or firms located outside their national borders. In 1999, 849 mergers notified to the Justice Department and the FTC involved foreign parties, more than a third higher than in the previous three years. In the fiscal year ending in September 1999, the Antitrust Division imposed a record \$1.1 billion in fines on cartels, almost all of which had an international dimension.<sup>33</sup>

The much-cited Van Miert report of 1995 provided the foundation for the EU's response to the growing challenge posed by international cases for competition policy enforcement.<sup>34</sup> Based on this report, the European Commission has taken a two-pronged approach: attempting to advance proposals on competition policy within the WTO and enhancing bilateral cooperation. Unlike progress at the WTO, bilateral cooperation has rapidly expanded and deepened. A 1991 agreement with the United States, together with a 1998 agreement on the application of the positive comity principle,

32. See for example Sauter (1997), who documents the relationship between the EU's competition law and its industrial policy.

33. Klein (1999).

34. European Commission (1995).

has facilitated cooperation with the U.S. agencies in a number of notable cases, such as the WorldCom-MCI, Guinness-Grand Met, and Dresser-Halliburton mergers (see Merit Janow, this volume).<sup>35</sup> Occasional confrontations, such as in the 1997 merger of Boeing and McDonnell Douglas, have been much publicized but, as our case studies document, they are the exception rather than the rule.<sup>36</sup>

Bilateral cooperation has therefore become the predominant element of the EU's international competition policy, in part because—unlike the United States—the EU has weaker instruments for the extraterritorial enforcement of its competition laws. In addition to the competition elements contained in the *Europe Agreements* with ten central and eastern European countries, a bilateral agreement was signed with Canada in 1999 and cooperation with Japan and Switzerland is being deepened further.

The ongoing reforms within Directorate General IV (DGIV) of the European Commission should be supportive of foreign parties' interests in European competition law enforcement. Through the block exemption of vertical restraints and the planned streamlining of the notification process, DGIV will free up more resources for the prosecution of infringements of its competition rules. The objectives set out in the recent white paper, in particular the introduction of private enforcement before national courts and the strengthening of controls on state aid, should further focus the work of DGIV's very limited staff.

On the U.S. side, in part as a response to these developments, the Justice Department in 1997 established the International Competition Policy Advisory Committee (ICPAC). This committee examined the procedures for review of multijurisdictional mergers, the potential need for closer coordination between trade and competition policies, and the means to improve enforcement cooperation. The committee's *Final Report*, released in February 2000, recommends concentrating efforts on bilateral cooperation and is cautious with regard to further initiatives at the WTO.<sup>37</sup> Therefore, on both sides of the Atlantic at present there appears to be little appetite for initiatives to harmonize competition policy standards or to adopt core minimum standards. Instead, initiatives are confined to securing closer bilateral cooperation on enforcement actions.

35. "Positive comity" involves one agency investigating at the request of the other, with the latter subsequently refraining from conducting its own investigation. The positive comity agreement was applied during the investigation into Amadeus Global Travel Distribution; see the case study by James Rill, Christine Wilson, and Sarah Bauers (this volume).

36. See the case study on Boeing-McDonnell Douglas by Thomas Boeder (this volume).

37. International Competition Policy Advisory Committee (2000).

What has this transatlantic cooperation on competition policy enforcement yielded? James Venit and William Kolasky (this volume) document considerable substantive convergence, illustrated in particular by the European Union's adoption of the FTC's "SSNIP" approach to market definition (see also Merit Janow, this volume).<sup>38</sup> However, as Venit and Kolasky emphasize, the EU has displayed considerably less appreciation for merger defenses based on efficiency arguments, in spite of the compelling logic advanced in favor of the efficiency defense as the most direct means of addressing consumer welfare concerns.<sup>39</sup> Whereas the United States has been far from consistent in its consideration and application of the efficiency defense, and in many court cases has rejected it outright, its place in contemporary U.S. antitrust policy is more secure than in that of the European Union.

Although they document promising transatlantic convergence in substantive standards, Venit and Kolasky also document persistent procedural dissonance. In particular, review thresholds are much lower in the United States, and the timing and nature of information requirements differ. Consideration of "best practice" on procedural matters is exceptionally complex, although in principle clearly subject to rational cost-benefit analysis. However, the importance of harmonizing around "optimal" procedural standards is arguably less compelling than for substantive standards. The transaction cost reduction benefits of procedural harmonization for multinational mergers would justify moving more rapidly on this front, political barriers to achieving optimal convergence standards notwithstanding.

## What Future for Transatlantic Cooperation on Antitrust Enforcement?

The overriding goal of U.S. and EU cooperation on competition policy ought to be to lower the resource misallocation created by multijurisdictional antitrust enforcement. Achieving this goal requires taking measures to

- Reduce the transactions costs associated with cross-border corporate practices
- Reduce the likelihood of corporate transactions that will improve global resource allocation being rejected by either the European Union or the United States

38. The "SSNIP" approach defines the relevant market as the smallest product and geographic market in which a hypothetical monopolist could impose a "small but significant and nontransitory increase in price."

39. See for example Bork (1978); Posner (1999).

—Increase the likelihood that corporate transactions that would result in resource misallocation are rejected by either the European Union or the United States.

Admittedly, some practitioners may regard the avoidance of transatlantic disputes as an objective in and of itself, but from the economic perspective specific proposals for bilateral cooperation should be judged solely on their expected effects on resource allocation. The economic benefits of the current “gently-as-it-goes” approach to bilateral cooperation, however, are largely limited to reductions in transaction costs. By retaining the multiple national vetoes of antitrust and the discretion to adopt nonefficiency standards during antitrust decisionmaking, the current approach does not tackle the other two sources of resource misallocation in multijurisdictional antitrust enforcement.

Of course, proposals to reduce the costs of notifying antitrust authorities about cross-border transactions and practices are useful. Measures to reduce the costs of complying with the different information requests of antitrust agencies are also to be welcomed. Indeed, the ICPAC *Final Report* contains a whole chapter of recommendations that, if implemented, will reduce the legal costs of international transactions.<sup>40</sup> However, the case for measures that reduce the discretion of authorities is less clear-cut. It is true that such measures may reduce the uncertainty associated with international transactions, but this is cold comfort if discretion is substituted for by a rigid decision rule that worsens the allocation of resources.

In addition to transaction costs, the interaction among the following three factors accounts for the potential of national antitrust enforcement to misallocate resources in the global economy:

- International spillovers created by corporate activities and transactions,
- National antitrust authorities that take into account (at most) the effects of these activities on producer and consumer interests within their country’s borders, so generating the multiple-veto problem described earlier,
- The application of criteria by national antitrust authorities that are inconsistent with the efficiency standard.

In light of this interaction, how can one evaluate the effect on resource allocation of the current approach to U.S.-EU cooperation? One of the grounds upon which this approach has been defended is that further procedural cooperation may lead to substantive convergence in standards. Kolasky and Venit argue that some convergence in the implementation of U.S. and EU antitrust policy has already occurred. However, as long as their legal

40. International Competition Policy Advisory Committee (2000).

standards differ, convergence in implementation will not eliminate uncertainty in antitrust enforcement. The private sector cannot discount the possibility that the discretion allowed by law will be exercised in the future. Moreover, such convergence is likely to be fragile: changes in the composition or approach of the European Commission, changes in U.S. federal administrations, and changes in the interpretation of antitrust laws by the courts could upset this convergence.

Perhaps the more telling criticism is that even if the current approach led to the adoption of a common efficiency standard in the United States and the European Union, this is unlikely to eliminate the resource misallocation created by multijurisdictional antitrust enforcement. As long as U.S. and EU antitrust authorities retain a national veto—a step that the current approach does not call into question—then corporate transactions that lead to welfare losses in *either* the European Union or the United States will be blocked, even if the activities are welfare improving from the world perspective. In sum, the gains from the present approach to U.S. and EU antitrust cooperation are principally confined to the improvements in resource allocation created by reductions in transaction costs.

The foregoing discussion suggests the two key building blocks of an alternative strategy for antitrust enforcement across the Atlantic: the adoption of explicit efficiency standards and a move away from national assessments of the effects of corporate practices toward one that emphasizes their effects on total welfare in the United States and the European Union.<sup>41</sup> Asserting the primacy of an efficiency standard would involve decisionmakers' giving up any discretion permitted by existing case law, with the added benefit that the uncertainty faced by the private sector would decline. The move toward transatlantic assessment of corporate practices need not involve the creation of a supranational agency, although such an agency might be better shielded from political pressures than a national antitrust body. Instead, national antitrust agencies could undertake transatlantic investigations of cases, evaluating each case on an agreed efficiency standard that takes into account the effects of the corporate practice within the entire U.S.-EU area.<sup>42</sup> These two building blocks are not alternatives to each other; both must be in place before substantial reductions in the resource misallocation created by multijurisdictional antitrust enforcement are achieved.

41. Fox (1999) also makes a strong case for the “internationalization of competition law” (as she puts it). Fox advocates a “borderless” conception of the world in which “the treatment of a market problem [is] as if there were no national boundaries, or conceived differently, as if all harms and benefits fell within the geographical boundaries of the same polity” (17).

42. Of course, ensuring that each national antitrust authority adopts the same substantive standards and pursues the same analyses is a requirement for this approach to work effectively.

One important caveat is that corporate transactions that improve resource allocation across the United States and the European Union may actually reduce welfare in the rest of the world. Given the magnitude of these transactions, the effects on third parties may be substantial, highlighting the relevance of multilateral initiatives to competition policy

### **Transatlantic Cooperation as a Blueprint for a Global Agreement on Competition Policy**

Closer antitrust cooperation between the European Union and the United States has run parallel with efforts to launch substantive talks on competition policy at the WTO. For the foreseeable future, the nature and the scope of U.S.-EU antitrust cooperation will remain much more advanced than cooperation within the multilateral forums. Still, experience in bilateral agreements may hold important lessons for what may be achieved in the WTO.

Three broad trends explain the renewed interest in including competition issues at the WTO. First, allegations that anticompetitive practices within national markets are impeding foreign market access are being made with increasing frequency and have led to a number of high-profile trade disputes, such as the 1996 Kodak-Fuji case. Second, efforts by both the United States and the European Union to apply their national competition laws on an extraterritorial basis are regarded with increasing concern by countries that have no well-established ties with either jurisdiction. Finally, several WTO agreements negotiated during the Uruguay Round contain provisions on competition policy. There is a clear dichotomy between services industries, in which the conduct of monopolistic providers is circumscribed, and the goods sector, in which it is not. Moreover, several WTO agreements are due for a review in the next multilateral trade round, with a view to possibly including elements of competition policy.

Against this background, the 1996 WTO ministerial meeting launched a working group on trade and competition that until now has had only an “educational” mandate. To date there has been only a limited convergence of views regarding a future negotiating agenda. The European Union has perhaps been most ambitious, calling for the application of a number of “core principles” to the procedures and the substance in national competition laws. A number of Asian countries, both developing and developed, have focused on ways to mitigate the application of antidumping policies through national competition law enforcement, an idea that the United States strongly opposes. Developing countries on the whole view the inclusion of provisions on restrictive business practices as a quid pro quo for the further

liberalization of foreign direct investment, another possible item for negotiation during the next round.

Although no consensus for a negotiating agenda is in sight, the broad trend toward the adoption of competition laws in the developing and transition economies certainly helps to put the institutional prerequisites in place. More than eighty countries now have competition laws, and many developing and transition economies have benefited from technical assistance provided by the European Union or the United States. Still, the presence of an enforcement agency is by no means indicative of the stance of the national authorities with regard to competition enforcement. Several small and open economies, such as Hong Kong, view international trade as the best enforcer of competition standards.

Given national governments' skepticism about further multilateral trade liberalization following the Seattle failure, competition policy is unlikely to figure prominently in the next trade round. Should a consensus emerge on an agenda for negotiations on competition policy, it is likely to be limited to the application of long-standing principles of international trade, such as nondiscrimination and transparency, to existing competition laws.<sup>43</sup> However, as was demonstrated by the OECD ban on "hard-core" cartels, there might even be a consensus on certain substantive issues.

U.S.-EU antitrust cooperation is unique in the way enforcement procedures are coordinated between the two jurisdictions. This level of trust in, and familiarity with, the other side's practices has been built up over many years and is epitomized by the positive comity principle. This coordination may serve as a model for the emerging network of bilateral cooperation agreements. As in the fields of taxation or direct investment regulation, these bilateral competition treaties may at some point lead to negotiations on a multilateral framework for a strictly limited set of issues.

One (optimistic) scenario is that a network of bilateral competition policy agreements grows over time, covering more and more international commerce. In this manner a *de facto* global agreement on the enforcement of competition policy could emerge, organized around the principles employed by the major economic powers (which will inevitably focus on the United States and the European Union). Yet the concerns raised in the last section also apply to this evolutionary approach to forging global competition policy: cooperation may not lead to harmonization of substantive standards, and even if harmonization occurs it may not be to the efficiency standard.<sup>44</sup> Fur-

43. Should this consensus emerge it will call for agreements that fall short of those advocated by Graham and Richardson (1997); Morici (2000); and Scherer (1994).

44. Graham (1999) too evaluates the likely consequences of a growing web of international agreements on competition policy.

thermore, even though such an expanding web of agreements may eventually cover the vast bulk of all international commerce, there is a concern that those nations that are not members at a given point in time will be discriminated against. Although this gradual path to global competition policy reform has its attractions (especially to those nations that craft the initial enforcement standards), the overall effects on global resource allocation are at best unclear and at worst may be negative if inappropriate standards are adopted or if discrimination against nonmembers becomes the norm.

## Overview of This Volume

To examine the lessons from almost ten years of formal U.S.-EU antitrust cooperation, the Brookings Institution in Washington and the Royal Institute of International Affairs (Chatham House) in London launched a study that commissioned both academic papers and legal case studies. With the generous support of sponsors from both sides of the Atlantic, we convened international antitrust lawyers, academics, and officials from U.S. and EU antitrust agencies at two conferences; in December 1998 at Brookings and in January 1999 at Chatham House.<sup>45</sup> The papers and case studies discussed at these conferences are published in this volume.

The next chapter, by Merit Janow, sets the stage by reviewing the institutional framework for transatlantic cooperation with an analysis of the two U.S.-EU agreements on antitrust enforcement. Janow discusses the use of innovative intergovernmental mechanisms and the considerable potential for expanding cooperation within the current institutional and legal framework.

Mergers and acquisitions have taken center stage in the recent discussion on transatlantic antitrust cooperation. As Monty Graham (chapter 3) points out, this is in no way the first merger wave, though the current wave stands out because of the unprecedented volume of transatlantic merger and acquisition activity. Graham sets out the economic objectives pursued in national antitrust enforcement and then examines the challenges posed by cross-border cases. A review of the economic trade-offs inherent in such cases leads him to a number of projections as to where the United States and the European Union are likely to be too restrictive—and too lenient.

James Venit and William Kolasky (chapter 4) demonstrate that there has already been considerable substantive transatlantic convergence, in part stimulated by both parties learning how better to deal with cross-border

45. The sponsors are listed and their generosity acknowledged in the foreword to this volume.

mergers. These findings broaden a discussion that has tended to center on the adoption of harmonized minimum standards for national competition laws. As the authors show, disagreements are most likely to arise from the methodologies used in merger investigations and from the remedies posed by enforcement agencies, highlighting two possible areas for future procedural convergence.

The depth of U.S.-EU cooperation on merger enforcement contrasts with a surprising absence of formal contacts in the area of cross-border cartels. Spencer Weber Waller (chapter 5) argues that this comes in spite of an unprecedented history of cross-border cases. He finds that this is largely due to inadequate coordination of investigation procedures, not least because cartel behavior has very severe criminal consequences under U.S. law.

In chapter 6, on the treatment of vertical restraints, Philip Marsden finds not only procedural but, more important, substantive gaps between the enforcement practices of the two sides. Such differences have been a recurring, and in Marsden's opinion mistaken, basis for calls for international antitrust standards.

We close the volume with a series of studies of major antitrust cases, written by legal practitioners, which have involved considerable cooperation between the antitrust authorities on both sides of the Atlantic.

## References

- Baker, Jonathan B. 1999. "Policy Watch: Developments in Antitrust Economics." *Journal of Economic Perspectives* 13:181–94.
- Bernard, Andrew B., and J. Bradford Jensen. 1999. "Exceptional Exporter Performance: Cause, Effect, or Both?" *Journal of International Economics* 47:1–26.
- Bishop, Simon, and Mike Walker. 1999. *The Economics of EC Competition Law*. London: Sweet and Maxwell.
- Bork, Robert H. 1978. *The Antitrust Paradox: A Policy at War with Itself*. Free Press.
- Carlton, Dennis W., and Jeffrey M. Perloff. 1994. *Modern Industrial Organization*. 2d ed. HarperCollins.
- Caves, Richard E. 1988. "Trade Exposure and Changing Structures of U.S. Manufacturing Industries." In *International Competitiveness*, edited by A. Michael Spence and Heather A. Hazard. Ballinger.
- Chappell, William F., and Bruce Yandle 1992. "The Competitive Role of Import Penetration." *Antitrust Bulletin* 37: 957–69.
- Cini, Michelle, and Lee McGowan. 1998. *Competition Policy in the European Union*. St. Martin's Press.
- Clerides, Sofronis, Saul Lach, and James Tybout. 1998. "Is Learning-by-Exporting Important? Micro-Dynamic Evidence from Columbia, Mexico, and Morocco." *Quarterly Journal of Economics* 113: 903–47.

- Dalkir, Serdar, and Frederick R. Warren-Boulton. 1999. "Prices, Market Definition, and the Effects of Merger: Staples–Office Depot 1997." Case 6 in *The Antitrust Revolution: Economics, Competition, and Policy*, edited by John E. Kwoka Jr. and Lawrence J. White. 3d ed. Oxford University Press.
- DiLorenzo, Thomas J. 1985. "The Origins of Antitrust: An Internet-Group Perspective." *International Review of Law and Economics* 5:73–90.
- Eichengreen, Barry, ed. 1998. *Transatlantic Economic Relations in the Post–Cold War Era*. New York: Council on Foreign Relations.
- European Commission. 1995. "Competition Policy in the New Trade Order: Strengthening International Cooperation and Rules." July. (Van Miert report).
- Evenett, Simon J., and Anthony J. Venables. 2000. "The Geographic Spread of Exports: How Argentina's Trade Has Grown since 1970." Mimeo. Department of Economics, Rutgers University.
- Feenstra, Robert C. 1995. "Estimating the Effects of Trade Policy." In *Handbook of International Economics*, edited by Gene M. Grossman and Kenneth Rogoff. Vol. 3. Amsterdam: North-Holland.
- . 1998. "Integration of Trade and Disintegration of Production in the Global Economy." *Journal of Economic Perspectives* 12:31–50.
- Fox, Eleanor M. 1997. "Lessons from Boeing: A Modest Proposal to Keep Politics out of Antitrust." *Antitrust Report* (November): 19–24.
- . 1999. "Antitrust Law on a Global Scale—Races Up, Down, and Sideways." School of Law, New York University.
- Frost, Ellen L. 1997. *Transatlantic Trade: A Strategic Agenda*. Washington: Institute for International Economics.
- Garten, Jeffrey E., ed. 2000. *World View: Global Strategies for the New Economy*. Harvard Business School Press.
- Gaugan, Patrick A. 1999. *Mergers, Acquisitions, and Corporate Restructurings*. 2d ed. John Wiley and Sons.
- Gerber, David J. 1998. *Law and Competition in Twentieth Century Europe: Protecting Prometheus*. Clarendon Press.
- Goldberg, Pinelopi Koujianou, and Michael M. Knetter. 1997. "Good Prices and Exchange Rates: What Have We Learned?" *Journal of Economic Literature* 35:1243–72.
- Goyder, D. G. 1998. *EC Competition Law*. 3d ed. Clarendon Press.
- Graham, Edward M. 1999. "Trade, Competition, and the Seattle Agenda." Mimeo. Washington: Institute for International Economics.
- Graham, Edward M., and J. David Richardson, eds. 1997. *Global Competition Policy*. Washington: Institute for International Economics.
- Harrison, Ann. 1994. "Productivity, Imperfect Competition, and Trade Reform: Theory and Evidence." *Journal of International Economics* 36:53–73.
- Hummels, David, Jun Ishii, and Kei-Mu Yi. Forthcoming. "The Nature and the Growth of Vertical Specialization in World Trade." *Journal of International Economics*.
- Hummels, David, Dana Rapaport, and Kei-Mu Yi. 1998. "Vertical Specialization and the Changing Nature of World Trade." *Federal Reserve Bank of New York Economic Policy Review*, 4:79–99.
- International Competition Policy Advisory Committee. 2000. *Final Report*. Government Printing Office.

- Klein, Joel. 1999. Speech before the International Cartel Enforcement Conference, September 30 ([www.usdoj.gov/atr/public/speeches/3727.htm](http://www.usdoj.gov/atr/public/speeches/3727.htm)).
- Kovacic, William E., and Carl Shapiro. 2000. "Antitrust Policy: A Century of Economic and Legal Thinking." *Journal of Economic Perspectives* 14:43–60.
- Krugman, Paul R. 1987. "Is Free Trade Passé?" *Journal of Economic Perspectives* 1:131–44.
- Laffont, Jean-Jacques, and Jean Tirole. 2000. *Competition in Telecommunications*. MIT Press.
- Levinsohn, James. 1993. "Testing the Imports-as-Market-Discipline Hypothesis." *Journal of International Economics* 35:1–22.
- Martin, Stephen, ed. 1998. *Competition Policies in Europe*. Amsterdam: North Holland.
- McLaren, John. Forthcoming. "'Globalization' and Vertical Structure." *American Economic Review*.
- Morici, Peter. 2000. *Antitrust in the Global Trading System: Reconciling U.S., Japanese and EU Approaches*. Washington: Economic Strategy Institute.
- Parker, Richard G. 1999. "Global Merger Enforcement." Speech. International Bar Association, Barcelona, September 28.
- Pitofsky, Robert. 1999. "The Effect of Global Trade on United States Competition Law and Enforcement Policies." Speech given at the Fordham Corporate Law Institute, October 15.
- Posner, Richard A. 1999. "Natural Monopoly and its Regulation." Cato Institute.
- Rangan, Subramanian, and Robert Z. Lawrence. 1999. *A Prism on Globalization: Corporate Responses to the Dollar*. Brookings.
- Reinicke, Wolfgang H. 1996. *Deepening the Atlantic: Toward a New Transatlantic Marketplace*. Gutersloh, Germany: Bertelsmann Foundation Publishers.
- Richardson, J. David. 1999. "What Is Competition Policy and What Should It Be?" Paper prepared for International Workshop on Current Issues in Competition Policy, Ministry of Trade and Industry, Copenhagen, November 19.
- Roberts, Mark J., and James R. Tybout. 1997. "The Decision to Export in Columbia: An Empirical Model of Entry with Sunk Costs." *American Economic Review* 87:545–64.
- Sauter, Wolf. 1997. *Competition Law and Industrial Policy in the EU*. Clarendon Press.
- Scherer, Frederic M. 1994. *Competition Policies for an Integrated World Economy*. Brookings.
- Shapiro, Carl, and Hal R. Varian. 1999. *Information Rules: A Strategic Guide to the Network Economy*. Harvard Business School Press.
- Shugert, William F., Jon D. Silverman, and Robert D. Tollison. 1995. "Antitrust Enforcement and Foreign Competition." In *The Causes and Consequences of Antitrust: The Public-Choice Perspective*, edited by Fred S. McChesney and William F. Shugert. University of Chicago Press.
- Tyson, Laura D'Andrea. 1992. *Who's Bashing Whom? Trade Conflict in High-Technology Industries*. Washington: Institute for International Economics.
- Viscusi, W. Kip, John Vernon, and Joseph E. Harrington. 1995. *Economics of Regulation and Antitrust*. 2d ed. MIT Press.
- Williamson, Oliver. 1971. "The Vertical Integration of Production: Market Failure Considerations." *American Economic Review* 61:112–23.
- . 1989. "Transaction Cost Economics." In *Handbook of Industrial Organization*, edited by Richard Schmalensee and Robert Willig. New York: North Holland.
- Yeats, Alexander J. 1998. "Just How Big Is Global Production Sharing?" Policy Research Working Paper 1871. World Bank.
- Yi, Kei-Mu. 1999. "Can Vertical Specialization Explain the Growth of World Trade?" Division of International Research, Federal Reserve Bank of New York.