The Merger Guidelines and the Integration of Efficiencies into Antitrust Review of Horizontal Mergers[1]

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There is a widening consensus among jurisdictions with competition laws that "the basic objective of competition policy is to protect competition as the most appropriate means of ensuring the efficient allocation of resources — and thus efficient market outcomes — in free market economies."[3] As this statement from the OECD reflects, it is efficiency, not competition, that is the ultimate goal of the antitrust laws. One of the Division's senior economists put it very well recently:

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[1]Efficiencies are equally important to antitrust review of vertical and other nonhorizontal mergers, but those mergers are beyond the scope of this article. It has been understood since 1951 that vertical integration, whether by merger or internal growth, can enhance allocative efficiency by solving the double mark-up problem. *See* Lionel W. McKenzie, *Ideal Output and the Interdependence of Firms,* 61 ECON. J. 785-803 (1951). It has also been understood since 1937 that bringing more functions within a single firm can enhance efficiency when it is less costly to organize the transactions involved within the firm than through open market exchanges. *See* Ronald Coase, *The Nature of the Firm*, 4 ECONOMICA 386 (1937), reprinted in RONALD H. COASE, THE FIRM, THE MARKET, AND THE LAW (1988). ("A firm will tend to expand until the cost of organizing an extra transaction within the firm becomes equal to the cost of carrying out the same transaction by means of an exchange on the open market or the costs of organizing another firm."). *See generally* OLIVER WILLIAMSON, MARKETS & HIERARCHIES (1975). This is what we would now refer to as transactional efficiency. *See* appendix. The courts have taken note of these efficiencies in holding that a plaintiff must allege more than a de minimis foreclosure of rivals in order to survive a motion to dismiss a challenge to a vertical merger. *See, e.g.,* Alberta Gas Chem. Ltd. v. E.I. du Pont de Nemours & Co., 826 F.2d 1235 (3d Cir. 1987). *See generally* 4A P. AREEDA, H. HOVENKAMP & J.SOLOW, ANTITRUST LAW, 137-234 (Rev. ed. 1998).

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[3]Organization for Economic Co-operation and Development. Competition Policy and Efficiency Claims in Horizontal Agreements, OECD/GD (96) 65, Paris 1996.

"efficiency is the goal, competition is the process."[4] When the competitive process is allowed to runs its course — unfettered by exclusionary practices or anticompetitive agreements among firms — the incentive of firms to lure away rivals' customers by offering them lower prices, superior quality, or new product features will necessarily lead these firms to seek ever more efficient ways to do business. Only by devising more efficient means to produce and distribute their goods, or finding ways to offer superior or additional features for the same cost, can firms displace sales by their competitors. Antitrust enforcement therefore assumes as its mandate the deterrence of business conduct that threatens to distort the competitive process in product and innovation markets.

The fundamental reason we favor competition over monopoly is that competition tends to drive markets to a more efficient use of scarce resources. Competition promotes allocative efficiency by leading firms to produce output up to the point where the marginal cost of each unit just equals the value of that unit to consumers. Competition promotes productive efficiency by forcing firms to cut their costs in order not to lose sales to more efficient rivals. Competition promotes dynamic efficiency by stimulating investment and innovation. And competition promotes transactional efficiency because, faced with competition, firms will also seek out the least expensive means of carrying out transactions.[5]

Over the last fifty years, the U.S. courts have increasingly recognized that efficiencies are an essential part of rule of reason analysis under section 1 of the Sherman Act. The original formulation of the rule of reason in *Standard Oil* spoke vaguely of condemning agreements that "had not been entered into or performed with the legitimate purpose of reasonably forwarding personal interest and developing trade" but instead for the purpose of "restraining the free flow of commerce and tending

[4]Kenneth Heyer, Address before the Merger Task Force of the European Commission's Directorate General for Competition, (Apr. 9, 2002). *See also* Lawrence Summers, *Competition Policy in the New Economy*, 69 ANTITRUST L.J. 353, 358 (2001), ("...it needs to be remembered that the goal is efficiency, not competition. The ultimate goal is that there be efficiency").

[5]Because lawyers tend to think of efficiencies only in terms of production cost savings, often neglecting allocative, transactional and dynamic efficiencies, we have appended to this article an economic taxonomy of the four distinct types of efficiencies.

to bring about the evils, such as enhancement of prices, that were considered to be against the public interest."[6] Over time, this formulation was replaced by a structured balancing test, under which the courts weigh the likely anticompetitive effects of a restraint in terms of creating or enhancing market power against its procompetitive efficiency-enhancing benefits.[7] Curiously, acceptance that efficiencies should also be an integral review of the competitive effects analysis of mergers has come more slowly. This was largely because, until William Baxter began to change how we thought about mergers with the 1982 Merger Guidelines, our analysis of mergers was heavily driven by structural presumptions based on market shares and market concentration. The strength of these presumptions led the Court in *Brown Shoe*[8] to regard protection of competition and the pursuit of efficiencies as directly conflicting objectives. Even the Chicago School during the 1960s and 1970s took a highly structural approach to merger law. While Chicagoans objected to the merger decisions of the Warren Court era (and the enforcement policy of the federal antitrust agencies during that era) as setting the market share/concentration thresholds for mergers too low, and while they warned that concentration could well reflect underlying efficiencies of large-scale enterprises that would be sacrificed by overly aggressive antitrust enforcement, they supported the Court's structural approach but advocated higher thresholds for illegality.[9]

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[6]U.S. v. Standard Oil Co., 221 U.S. 1, 58 (1911). An even earlier decision in the Ninth Circuit anticipated the Court's approach in *Standard Oil*. *See* Hoffman v. McMullen, 83 F. 372, 376-77 (1897)(noting that the common law allows "cooperation between two or more persons to accomplish an object which neither could gain ... alone ... although, in a certain sense and to a limited degree, such co-operation might have a tendency to lessen competition").

[7]*See, e.g.,* Broadcast Music, Inc. v. Columbia Broadcasting System, Inc., 441 U.S. 1, 20 (1979). (holding that the inquiry under section one should focus on whether the practice is one that would "tend to restrict competition and decrease output" or one "designed to increase economic efficiency and render markets more rather than less competitive"). *See generally* ABA SECTION OF ANTITRUST LAW, ANTITRUST LAW DEVELOPMENTS (4TH ed. 1997).

[8]Brown Shoe Co. v. U.S., 370 U.S. 294 (1962).

[9]*See, e.g.,* RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE 111-13 (2nd ed. 2001); ROBERT BORK, ANTITRUST PARADOX, 126-27 (1978). An influential member of the Chicago School, Harold Demsetz, identified the heart of Chicago's critique on the "concentration-structure-performance" paradigm that had influenced merger policy up until that period. Demsetz noted that high

It may surprise many that the leading proponents for considering efficiencies in evaluating individual mergers came, not from Chicago, but from Harvard. Donald Turner, when he was Assistant Attorney General, put a young economist by the name of Oliver Williamson to work on this issue. The result was an article showing the economic irrationality of a merger policy that did not take efficiencies into account.[10] Stimulated by Williamson's work, Turner included a very narrow efficiencies defense in the very first Merger Guidelines, released on the last day of his tenure in 1968. Little use was made of this defense, however, until the 1980s, when merger law, stimulated by the Baxter guidelines, began to shift decisively toward incorporating non-market share factors in merger analysis. The first major widening of the defense occurred in 1984 when the Department, under the leadership of J. Paul McGrath, completely rewrote the efficiency section of the Merger Guidelines in a way that transformed efficiencies from a defense, like the failing company doctrine, into an integral part of the competitive effects analysis. McGrath's work endured largely unchanged until 1997 when the Division and the FTC revised their joint Horizontal Merger Guidelines to detail the tools they had developed to evaluate efficiency claims based on 13 years of experience applying the McGrath framework.

This paper is a history of this progression. It shows, as Oliver Williamson predicted in 1968, that "once economies are admitted as a defense, the tools for assessing these effects can be expected progressively to be refined."[11] That is exactly what has happened, and as their tools have been refined, the agencies' confidence in those tools has likewise grown, making them more comfortable weighing potential efficiency gains against potential market power losses. This paper also shows the

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market concentration (and an associated high rate of return earned by firms) could reflect the superior efficiency of large enterprises equally as well as it could signal that some firms collectively enjoy market power. Demsetz argued strongly that a naive antitrust policy that blocked mergers (or sought to break up merged entities) without regard to considering the likelihood that industry concentration stemmed from underlying efficiencies risked doing far more harm than good. *See* Harold Demsetz, *Industry Structure, Market Rivalry, and Public Policy*, 16 J. LAW & ECON. 1 (1973).

[10]Oliver E. Williamson, *Economies as an Antitrust Defense: The Welfare Tradeoffs*, 58 AM. ECON. REV. 18 (1969).

[11]*Id.* at 34.

influence the Guidelines have had winning judicial acceptance of the importance of efficiencies in determining whether a merger is likely substantially to lessen competition. And, finally, it shows the influence of the guidelines in causing other jurisdictions to recognize that efficiencies should play a central role in merger review.

The Early Case Law

Modern merger law in the United States began with the passage of the Celler-Kefauver Act in 1950, which amended section 7 of the Clayton Act to substantially broaden its reach. The first cases under the amended section 7 reached the Supreme Court during the peak of the Warren Court era of structural antitrust jurisprudence in the early 1960s. During this period the Court showed a strong bias toward developing per se rules whenever possible, thus obviating the need for a case-by-case balancing of the anticompetitive and procompetitive effects of the kind required under the rule of reason.[12]

This bias permeated Warren Court section 7 jurisprudence and shaped its initial approach to efficiencies in merger cases. *Brown Shoe*,[13] the first merger case to reach the Supreme Court under the amended section 7, came very close to rejecting even the possibility of an efficiencies defense. After acknowledging that the House committee report had explicitly stated that the statute was not intended to block a merger between two small companies that would enable them to compete more effectively against larger firms (thus seeming to invite an efficiencies defense), the Court went on conclude that Congress had nevertheless struck the balance in favor of competition over efficiency:

> But we cannot fail to recognize Congress' desire to promote competition, through the protection of viable, small, locally-owned business. Congress appreciated that occasional higher costs and prices might result from the maintenance of fragmented

[12]*See, e.g.*, Continental T.V. v. GTE Sylvania, 433 U.S. 35 (1977); U.S. v. Topco Associates, 405 U.S. 596 (1972).

[13]Brown Shoe Co. v. U.S., 370 U.S. 294 (1962).

industries and markets. It resolved these competing considerations in favor of decentralization" (emphasis added).[14]

In its next decision applying section 7, *Philadelphia National Bank*,[15] the Court again used language that reflected a hostility toward efficiency arguments: "a merger the effect of which 'may be substantially to lessen competition' is not saved because, on some ultimate reckoning of social or economic debits and credits, it may be deemed beneficial."[16]

The Warren Court's antipathy toward efficiencies rose to new levels in its 1967 decision finding unlawful Procter & Gamble's acquisition of Clorox.[17] There, the Court in dicta again seemed to dismiss the idea of an efficiencies defense, stating that, "Possible economies cannot be used as a defense to illegality. Congress was aware that some mergers which lessen competition may also result in economies, but it struck the balance in favor of protecting competition."[18] Far from accepting efficiencies as a defense, the *Procter & Gamble* decision treated efficiencies more as an offense.[19] In finding Procter & Gamble's acquisition of Clorox unlawful, the Court relied in part on the FTC's finding that the merger would "entrench" Clorox's dominant position in the bleach market because P&G would be able to advertise Clorox jointly with its other products, thus reducing its advertising costs, which we would today view as an efficiency.[20]

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[14]*Id.* at 344.

[15]U.S. v. Philadelphia National Bank, 374 U.S. 321 (1963).

[16]*Id. at 371.*

[17]FTC v. Procter & Gamble Co., 386 U.S. 568 (1967).

[18]*Id.* at 580.

[19]In his concurring decision, Justice Harlan disagreed with the Court's treatment of efficiencies. He wrote: AThe Court says Congress chose competition over economies, but didn't consider 'whether certain economies are inherent in the idea of competition.' If the effect of a merger on market-structure seems anticompetitive, the agency should A<u>weigh possible efficiencies arising from the merger ... to determine whether, on balance, competition has been substantially lessened</u>.@ *Id.* at 597 (emphasis added).

[20]*Id.* at 574.

The 1968 Guidelines

Although they are now almost forgotten in the mists of history, the 1968 Merger Guidelines, which were released on the last day of Donald Turner's tenure of Assistant Attorney General for Antitrust, began the transformation of our view of the role of efficiencies in merger analysis.[21] Turner is still the only Ph.D.-trained economist to serve as head of the Antitrust Division. He was widely recognized as one of the preeminent antitrust scholars of his generation, having taught antitrust at the Harvard Law School for over ten years before being appointed head of the Antitrust Division by Lyndon Johnson. When he became AAG, one of Turner's early acts was to initiate the practice of bringing to the agency a distinguished academic economist as a senior advisor. Turner selected Oliver Williamson, then a relatively young economist teaching at the University of Pennsylvania, to be his Special Economic Assistant.

One of the projects Turner assigned Williamson was to study the role of efficiencies in merger review.[22] The paper Williamson drafted for Turner became the basis for his seminal 1968 article, *Economies as an Antitrust Defense: The Welfare Tradeoffs*.[23]

In that article, Williamson used what he termed his "naive trade off model" to show that a merger that yields nontrivial real economies will only have a net negative allocative effect if it produces substantial market power resulting in relatively large price increases.[24] He also showed that

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[21]U.S. Dep't. Of Justice, Merger Guidelines (1968) § 10, reprinted in 2 TRADE REG. REP. (CCH) ¶ 4510, (hereinafter 1968 Guidelines). Turner's deputy for policy planning, Robert A. Hammond, led the Guidelines project. His team included future Supreme Court Justice Stephen Breyer and future Assistant Attorney General for Antitrust Donald Baker.

[22]Insight into Williamson's role at the Division was provided by James S. Campbell, who served as an assistant to Turner.

[23]Oliver E. Williamson, *Economies as an Antitrust Defense: The Welfare Tradeoffs*, 58 AM. ECON. REV. 18 (1969).

[24]*Id*. at 21. Williamson then introduced a number of qualifications to his model showing that complicating the model did not detract from the conclusions drawn from it.

cost savings almost always benefit consumers because even a monopolist would pass some portion of any cost savings on to its customers, unless its demand function was perfectly inelastic. Williamson argued, therefore, that "a rational treatment of the merger question requires that an effort be made to establish the allocative implications of the scale economies and market power effects of the merger" in determining whether it should be found unlawful.[25]

Williamson's work prompted Turner to incorporate into the 1968 Guidelines a limited efficiencies defense notwithstanding the Supreme Court's seeming hostility to it. Departing sharply from the Court's dicta, the Guidelines recognized that in some "exceptional circumstances" efficiencies might justify a merger that would otherwise be subject to challenge:

> 10. <u>Economies</u>. Unless there are exceptional circumstances, the Department will not accept as a justification for an acquisition normally subject to challenge under its horizontal merger standards the claim that the merger will produce economies.[26]

Given the antipathy toward efficiencies found in the Warren Court decisions of that era, it is remarkable that the 1968 Guidelines recognized that efficiencies might, in some limited circumstances, justify merger that would otherwise be challenged. Those decisions treated efficiencies more as an offense than as a defense and were widely viewed as at the time foreclosing the possibility of an efficiencies defense. For the Justice Department to break ranks with the Court and to say, no, efficiencies are good, not bad, and we will take them into consideration in appropriate cases was an important step toward introducing greater economic rationality into merger law.

The 1968 guidelines gave three reasons for limiting the consideration of efficiencies to exceptional circumstances:

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[25] *Id*. at 18-19.

[26] 1968 Guidelines, at § 10.

(i) the Department's adherence to the standards will usually result in no challenge being made to mergers of the kind most likely to involve companies operating significantly below the size necessary to achieve significant economies of scale; (ii) where substantial economies are potentially available to a firm, they can normally be realized through internal expansion; and (iii) there usually are severe difficulties in accurately establishing the existence and magnitude of economies claims for a merger.[27]

The Chicago School objected strongly to even this narrow an efficiencies defense. They argued that, rather than considering efficiencies on a case-by-case basis, the guideline thresholds for challenging mergers should be set significantly higher and no merger-specific efficiencies defense should be allowed.[28] Their principal argument against such an efficiency defense was that it would be " an intractable subject for litigation."[29]

Practice under the 1968 Guidelines

The 1968 Guidelines were issued at the very height of the Warren Court's structural approach to antitrust, during which, as Justice Potter Stewart famously wrote, "the only consistency is that the government always wins."[30] Not surprisingly, there was little effort made during the first few years after the guidelines were issued to try to justify mergers through claimed efficiencies.

This began to change with the Supreme Court's *General Dynamics* decision in 1974.[31] *General Dynamics* was the first time parties to a merger successfully rebutted the government's prima

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[27]1968 Guidelines, at § 10.

[28]*See, E.g.,* RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE 111-13 (2nd ed. 2001). Posner proposed that a merger should not be challenged unless it produced a market in which the top four firms had a 60 percent or greater share.

[29]*Id.* at 112.

[30]U.S. v. Von's Grocery Co., 384 U.S. 270, 301 (1966) (Stewart, J., dissenting).

[31]U.S. v. General Dynamics Co., 415 U.S. 486 (1974).

facie market share case by showing that other factors affecting the industry established that the merger would not substantially lessen competition. In this instance, the evidence on which the parties relied showed that uncommitted reserves were a better indicator of a firm's future ability to compete in the coal industry than its historic share of sales and that the acquired firm had nearly no uncommitted reserves, so that its disappearance from the market would not materially lessen competition.

That decision gave rise to what came to be known (somewhat loosely) as the "*General Dynamics* defense." The Court's recognition that market shares were not the sole indicator of the competitive effects of mergers provided greater encouragement to parties to begin using efficiency arguments to try to show that their mergers would not harm competition. The best example was the *International Harvester* case, which accepted what some called a "flailing company" defense.[32] In finding the merger lawful, the Seventh Circuit held that the acquired firm's financial condition forced it to pay more for capital, placing it at a competitive disadvantage to its larger rivals, and that the merger would be efficiency-enhancing because it would reduce the acquired firm's cost of capital and would give the acquiring firm the ability to market tractors incorporating the acquired firm's superior technology.

The narrow opening to an efficiencies defense offered by *General Dynamics* was widened by a series of non-merger Supreme Court decisions over the next five years, which expanded the role of efficiencies in antitrust analysis generally. In the first of these decisions, *GTE Sylvania*,[33] the Court overruled its decision in *Schwinn*[34] just eight years earlier and held that nonprice vertical restraints should be evaluated under the rule of reason precisely for the reason that they "promote interbrand competition by allowing the manufacturer to achieve certain efficiencies in the distribution

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[32]U.S. v. International Harvester Co., 564 F.2d 769 (7th Cir. 1977).

[33]Continental T.V. v. GTE Sylvania, 433 U.S. 35 (1977).

[34]U.S. v. Arnold, Schwinn & Co., 388 U.S. 365 (1967)..

of his products."[35] In the second, *BMI*,[36] the Court held that even a horizontal agreement among competitors should not be characterized as per se unlawful unless "the practice facially appears to be one that would always or almost always tend to restrict competition and decrease output" and is not "designed to 'increase economic efficiency and render markets more rather than less competitive.'"[37]

Significantly, neither of these cases involved production cost savings; rather, both involved transactions cost savings. In *GTE Sylvania*, the nonprice restraints were a more efficient way to solve the free rider problem than elaborate contracts would have been. And in *BMI*, the blanket license reduced the transactions costs associated with negotiating and monitoring individual licenses.

Armed with these precedents, parties began increasingly in the late 70s and early 80s to include efficiencies arguments in presentations to the agencies in merger investigations. Let us give two examples from the private practice experience of one of the authors during those years.

The first involved Ford's proposed acquisition of a 35% equity interest in Toyo Kogyo, the Japanese company that makes Mazda automobiles. At the time, Ford was the second largest U.S. automaker with roughly 20% of the U.S. market and Mazda had a small, but growing, share of roughly one percent. These shares were high enough to have justified a challenge under the 1968 guidelines. In persuading the FTC not to challenge the transaction, Ford hired Oliver Williamson to help explain that the equity interest was part of a broader strategic alliance between Ford and Mazda pursuant to which Mazda would be supplying a critical component (the transaxle) for a new platform Ford was developing. This platform, which was ultimately sold in the United States under the Escort nameplate, was designed as the first "world car" — that is, it would be manufactured by Ford at its plants all over the world and not just in North America. Using transactions cost economics, Williamson showed that the equity interest was necessary to align Ford's and Mazda's interests and

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[35]Continental T.V. at 54.

[36]Broadcast Music, Inc. v. Columbia Broadcasting System, Inc., 441 U.S. 1 (1979)..

[37]*Id.* at 20.

to reduce the risk to Ford that Mazda might engage in opportunistic behavior in the form of a hold-up once Ford became dependent on it for this critical component. Ford also showed that it expected to realize substantial efficiencies from outsourcing this component to Mazda rather than producing it itself. Based in part on these arguments, the FTC allowed the transaction to proceed without a challenge, although it did insist initially that Ford put some firewalls in place to limit its ability to influence Mazda's competitive decisionmaking with respect to the sale of automobiles in the United States.

The second example involved an acquisition of the nickel cadmium battery business of an American company, Gould, Inc., by the U.S. subsidiary of a major French nickel cadmium battery manufacturer, SAFT America. The parties first attempted the transaction in 1980, but the Justice Department challenged it and the parties abandoned the transaction on the eve of the preliminary injunction hearing. After William Baxter became Assistant Attorney General, the parties renewed their efforts to secure clearance for the transaction. The task appeared daunting, as the U.S. market had only four players, with Gould the second largest with a 22% share. The largest firm, GE, had over a 60% share and the third firm, Union Carbide, had slightly over 10%, but was rapidly losing ground. SAFT was a new entrant in the United States, where its share was small but growing, but it was one of the largest producers worldwide. The parties hired George Stigler, a future Nobel prize winner, as their economic expert. With the help of a short but elegant white paper by Stigler, the parties were able to persuade the Department not to challenge the transaction a second time, arguing that the economies of scale were very large relative to the small size of the market and that a combined Gould/SAFT would be a more formidable competitor to the dominant firm, GE, than they were separately.

Donald Turner worked with Williamson on the Ford/Toyo Kogyo investigation. He was also, at the time, writing volume IV of the enormously influential normative treatise on antitrust law he co-authored with Phillip Areeda. That volume dealt with mergers and was published in 1980. In it, Areeda and Turner became the first widely respected antitrust legal scholars to argue in favor of incorporating efficiencies into the merger review process on a broader scale than the 1968 Guidelines contemplated.[38]

In their treatise, Areeda and Turner picked up the Williamsonian theme that "one cannot formulate rational antitrust rules without considering how they help or hinder more efficient production and more efficient resource allocation."[39] With this premise, they argued that "Putting practical difficulties aside, the case for an economies defense is a strong one" for three reasons.[40] First, mergers of inefficiently small firms are unlikely to impair competition and may even intensify it. Second, even if price competition were lessened as a result of an efficiency-enhancing merger, the detrimental effect may be more than offset by the beneficial welfare effect of greater efficiency. Third, preventing an efficiency-enhancing merger is likely to be futile because the inefficient firms will likely disappear from the market through attrition, leaving the market just as concentrated as the merger would have made it.

Areeda and Turner also showed that there was nothing in the statutory language, the legislative history, or the prior court decisions that would foreclose an efficiencies defense.[41] In this regard, Areeda and Turner also explained that it was something of a misnomer to refer to the role of efficiencies as a "defense:"

> Although we have, to be sure, spoken of an economies "defense," it is not as a defense to a final conclusion that a merger "lessens competition" or is "illegal." Rather, the 'defense' terminology refers to the rebuttal of a first order inference from

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[38]PHILLIP A. AREEDA & DONALD F. TURNER, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION 146-199 (1980). The same year a then-unknown young academic also published an article in an obscure law review arguing in favor of a broader efficiencies defense. *See* Timothy J. Muris, *The Efficiency Defense Under Section 7 of the Clayton Act*, 30 CASE W. RES. L. REV. 381 (1980).

[39]Areeda and Turner, at 146.

[40]*Id.* at 146.

[41]*Id*. at 153.

a portion of the evidence (such as market shares) that a merger presumptively lessens competition and violates the statute. That is, it is a defense to a prima facie case."[42]

In the remainder of their 33-page section on efficiencies (which subsequent editions have expanded) Areeda and Turner provided what remains to this day the most complete guidebook available on how to apply an efficiencies defense in practice. In it, they show that the practical difficulties on which the Chicago School critics of an efficiencies defense relied were badly overstated.

In contrast to Areeda and Turner, Chicago School adherents continued to argue that these practical difficulties made it inadvisable to create an efficiencies defense. In his influential *Antitrust Paradox*, published in 1978, Professor Bork simply recycled his earlier articles that argued that the measurement of efficiencies was "beyond the capacities of the law."[43] Bork maintained that, even if the claimed efficiencies could be quantified, the problem of then having to balance them against any potential increase in market power resulting from a merger in order to determine the likely net effect on price and output would be "utterly insoluable."[44]

1982 Guidelines

In 1981, shortly after becoming AAG, William Baxter announced that he planned to issue new merger guidelines to replace the 1968 Guidelines, just as had been contemplated when those guidelines were issued but had never been done. The ABA Section of Antitrust Law formed a task force to develop proposed guidelines to submit to the Division, on which one of the authors served as a member.[45] Following Areeda and Turner's lead, the task force recommended that the new

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[42]*Id.* at 153-54.

[43]ROBERT BORK, ANTITRUST PARADOX 126-27 (1978).

[44]*Id*. at 126.

[45]Edwards, Steven M., William J. Kolasky, Robert D. Joffe, John J. McGowan, Carlos E. Mendez-Penate, Janusz A. Ordover, Phillip A. Proger, Louis M. Solomon, and Utz P. Toepke, *Proposed Revisions of the Justice Department's Merger Guidelines,* 81 COLUM. L. REV. 1543 (1981).

guidelines include efficiencies in their competitive effects analysis. The Task Force was careful not to argue that potential efficiencies should be traded off against a substantial lessening of competition, but only that they should be used to rebut the presumption of illegality based on market concentration and shares. The Task Force also argued that efficiencies should influence the outcome only when the inference of anticompetitive effect that could be drawn from market concentration and shares was relatively weak (which it argued should be the case if the combined shares were less than 30 percent).

The Department declined to follow this recommendation. Instead, the 1982 Guidelines retained the efficiencies section of the 1968 guidelines largely unchanged, taking efficiencies into account, if at all, by raising the market share and concentration thresholds at which the Department was likely to challenge a merger.[46] Just as the 1968 Guidelines had limited the consideration of efficiencies to "exceptional circumstances," the 1982 version provided that the Department would consider efficiencies only in "extraordinary cases,"arguably an even more restrictive standard.[47] The 1982 Guidelines gave basically the same reasons for not considering claims of "specific efficiencies" more broadly as the 1968 Guidelines had. First, they argued that the numerical market share thresholds for challenging mergers were sufficiently high that, "In the overwhelming majority of cases, the Guidelines will allow firms to achieve available efficiencies through mergers without interference from the Department."[48] Second, they argued that efficiencies "are far easier to allege than to prove," and that, even where they exist, "their magnitudes would be extremely difficult to determine."[49] Significantly, the 1982 Guidelines tilted the playing field even further against efficiencies by treating efficiencies as an affirmative defense, like the failing company doctrine, and not as part of the agency's competitive effects analysis.

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[46]U.S. Dep't. of Justice, Merger Guidelines (1982) § 10.A., reprinted in 4 TRADE REG. REP. (CCH) ¶ 13, 102, (hereinafter 1982 Guidelines).

[47]*Id.*

[48]*Id.*

[49]*Id.*

In a footnote, the 1982 Guidelines established four prerequisites to any efficiencies claim. First, the Department required "clear and convincing evidence."[50] Second, the efficiencies had to be in the form of "substantial cost savings resulting from the realization of scale economies, integration of production facilities, or multi-plant operations."[51] Third, the efficiencies had to be ones that "are already enjoyed by one or more firms in the industry."[52] Fourth, the parties had to show that "equivalent results could not be achieved within a comparable period of time through internal expansion or a merger that threatened less competitive harm." Even where these prerequisites were met, the Guidelines provided that efficiencies would only be considered in "otherwise close cases."[53]

The 1982 Guidelines, therefore, essentially followed the Chicago School approach to efficiencies rather than the Areeda-Turner Harvard School approach. As the Chicago School adherents had urged, the Guidelines considered efficiencies in setting what then were viewed as relatively high market share thresholds for challenges,[54] but showed a disinclination to consider specific efficiency claims in individual cases. Tyler Baker, one of the principal authors of the Guidelines, later wrote that at the time "there was no constituency among the lawyers or the economists at the Division for any materially different statement of policy."[55]

On the same day the Baxter guidelines were issued, the FTC issued a Statement on Horizontal Mergers.[56] The FTC Statement took a slightly more favorable view of efficiencies. It provided that

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[50]*Id.*

[51]*Id.*

[52]*Id.*

[53]*Id.*

[54]Thomas E.Kauper, *The 1982 Horizontal Merger Guidelines: Of Collusion, Efficiency, and Failure,* 71 CALIF. L. REV. 497 (1983).

[55]Tyler Baker, *The 1984 Justice Department Guidelines*, 53 ANTITRUST L.J. 327, 333 (1984).

[56]James E. McCarty, 467 PLI/CORP 213, 225 (1984).

the Commission would consider "measurable operating efficiencies" in exercising its prosecutorial discretion, but that they would not be treated as a legally cognizable defense. The FTC stated that in considering efficiencies in the exercise of its prosecutorial discretion it would require "substantial evidence" showing cost savings that "clearly outweigh" any increase in market power.

1984 Guidelines

The efficiencies section of the 1982 guidelines was one of two sections of the guidelines that were substantially revised just two years later in 1984, the other being the section dealing with the treatment of imports.[57] Both changes were a direct result of the Department's experience in reviewing the LTV-Republic steel merger, which may have been the most politically charged merger review the Reagan Administration faced.

The Department initially challenged the merger in its entirety, alleging that it was likely substantially to lessen competition in three markets: (i) carbon and alloy hot rolled sheet and strip steel, (ii) carbon and alloy cold rolled sheet and strip steel, and (iii) stainless cold roll sheet and strip steel. The Department found that while imports could have important competitive effects in the domestic market, trade restrictions limited such import competition. The Department also found that the efficiencies the parties claimed were not sufficient to overcome the serious potential anticompetitive effects from a merger that would produce postmerger HHIs in two relevant markets of 1,100 and 1,000. The Department's action was criticized within the Administration by the Secretary of Commerce, Malcolm Baldridge.

After the complaint was filed, the parties entered into settlement negotiations, resulting in a consent decree requiring them to divest two of Republic's steel mills. In explaining his decision to accept this settlement, J. Paul McGrath, the AAG at the time, said that the parties had provided "very persuasive evidence that the combined operation of several plants could have, and indeed should

[57]U.S. Dep't. Of Justice Merger Guidelines (1984) § 3.5, reprinted in 4 TRADE REG. REP (CCH) ¶ 13, 103, (hereinafter 1984 Guidelines). There were other, minor changes. McGrath credits his deputy, Charles F. Rule, for leading the team responsible for the revisions.

have, and probably would have resulted in substantial cost savings" and that this "was a factor that led to the Department's approval of a restructured transaction."[58] The Department received a number of objections to the proposed settlement. In approving the settlement over these objections, the court noted the "weakened and deteriorating condition" of the U.S. steel industry and found that approving the settlement would be in the public interest because it would allow to proceed a merger that was designed "to achieve savings in cost through efficiencies which will enable the surviving company to compete more effectively both here and in export markets."[59]

In announcing changes to the efficiencies section of the Guidelines, the Division picked up the same theme, noting that "the efficiency-enhancing potential of mergers can increase the competitiveness of firms and can result in lower prices to consumers."[60] The Division justified the changes it was making on the ground that the language of the 1982 Guidelines "has a restrictive, somewhat misleading tone" because it suggested that the Department "would explicitly consider efficiency claims only in 'extraordinary cases,'" whereas "[i]n practice, the Department never ignores efficiency claims."[61] The revisions, it said, were intended to correct this misimpression and to provide further guidance as to how efficiencies would be evaluated.

The first change, and perhaps the most significant one, although it was underappreciated at the time, was to move the efficiencies section of the Guidelines from the "defenses" section to the "competitive effects" section. Paul McGrath himself emphasized the importance of this shift:

> In looking at a given proposed merger, particularly one that is someplace near those thresholds, we look a good deal harder at other surrounding circumstances to come up with an overall assessment as to whether the proposed merger . . . is likely to

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[58] *60 Minutes with J. Paul McGrath- Interview*, 54 ANTITRUST L.J. 131, 141 (1985).

[59] U.S. v. LTV Corp., 1984 WL 21973, *14 (D.D.C. 1984).

[60] 1984 Guidelines, at § 3.5.

[61] Department of Justice, *1984 Merger Guidelines*, press release June 14, 1984.

> lessen competition. One of those factors we consider is efficiencies, and I remind you that in the 1984 Guidelines efficiencies are listed as another factor, rather than as a defense.[62]

McGrath added that under this approach the Division would not "balance expected efficiencies against expected anticompetitive consequences."[63] Instead, borrowing from Areeda-Turner, he said the Division would look at efficiencies in determining whether the merger was anticompetitive at all:

> [T]here is no economic literature that points to some bright line threshold below which merger are competitive — or, at least, not anticompetitive — and above which they are. Instead, there are general ranges in which we begin to be concerned about the anticompetitive consequences of mergers. . . . Our feeling is that, if it can be indeed demonstrated that the combined company, for instance, will have a lower cost base because of the merger . . . then that ought to be taken into account, because if the resulting transaction will permit the company to charge lower prices to compete more effectively, that is a net price.[64]

McGrath added that he expected this to be the exception rather than the rule: "It does not happen very often that a firm comes in with very good proof that such efficiencies will result."[65]

The second change was to add an introductory paragraph that explicitly acknowledged that "the primary benefit of mergers to the economy is their efficiency-enhancing potential, which can

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[62] *60 Minutes With J. Paul McGrath--Interview, supra* note 35, at 131, 141.

[63] *Id*. at 141.

[64] *Id*.

[65] *Id*.

increase the competitiveness of firms and result in lower prices to consumers."[66] This paragraph went on to recite, however, just as the earlier guidelines had, that because the Guidelines proscribed only mergers that present a significant danger to competition, they would "in the majority of cases . . . allow firms to achieve available efficiencies through mergers without interference from the Department."[67]

The third change was to state more fully the criteria the Department would use in evaluating claimed efficiencies. Specifically,

- While eliminating the language that said the Department would consider efficiencies only in "extraordinary" cases, the revisions retained the 1982 Guidelines requirement that the efficiencies be established by "clear and convincing evidence."[68]

- In place of the requirement that the parties prove that "equivalent results could not be achieved within a comparable period of time through internal expansion or through a merger that threatened less competitive harm," the revisions substituted a somewhat looser requirement that the merger be "reasonably necessary" to achieve the efficiencies.[69]

- Whereas the 1982 Guidelines had required that the efficiencies be "substantial" the 1984 Guidelines required that the efficiencies be "significant," a somewhat more flexible word.[70]

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[66] 1984 Guidelines, at § 3.5.

[67] *Id.*

[68] *Id.*

[69] *Id.*

[70] *Id.*

- Instead of providing that efficiencies would be considered "only in resolving otherwise close cases," the 1984 Guidelines indicated that the Department would use a sliding scale to evaluate efficiencies: "The parties must establish a greater level of expected net efficiencies the more significant are the competitive risks."

- The revisions eliminated the language from the 1982 guidelines that required the parties to show that the efficiencies were "already enjoyed by one or more firms in the industry."[71]

The fourth, and final, change, was to provide a more comprehensive list of the types of efficiencies the Department would consider. The 1982 Guidelines had limited consideration to "substantial cost savings resulting from the realization of scale economies, integration of production facilities, or multi-plant operation."[72] The 1984 Guidelines adopted the less restrictive formulation that "[c]ognizable efficiencies include, but are not limited to," these particular efficiencies, and stated that the Department would also consider "similar efficiencies relating to specific manufacturing, servicing, or distribution operations of the merged firm," as well as those "resulting from reductions in general selling, administrative, and overhead expenses."[73]

At the time of these changes, many characterized the shift to a "qualifiedly hospitable"[74] approach to efficiencies as "dramatic,"[75] claiming the agency had "virtually reversed course."[76] They

[71] 1982 Guidelines, at § 5.A.

[72] *Id*.

[73] 1984 Guidelines, at § 5.A.

[74] Ronald W. Davis, *Antitrust Analysis of Mergers, Acquisitions and Joint Ventures In the 1980s: A Pragmatic Guide to Evaluation of Legal Risks*, 11 DEL. J. CORP. L. 25, 87 (1986).

[75] David A. Clanton, *Recent Merger Developments: Coming of Age Under the Guidelines*, 53 ANTITRUST L.J. 345, 351 (1984).

[76] *Id*. at 351.

attributed the change to "the political and public relations beating taken by the DOJ over its initial handling of the Jones and Loughlin-Republic merger."[77] The authors of the 1982 Guidelines, including both Bill Baxter and Tyler Baker, "question[ed] the wisdom of the change,"[78] fearing that it would "lead to undue political influence in the enforcement process."[79]

Looking back nearly twenty years later, we can see that the change from 1982 to 1984 was indeed significant. It moved the Department from the Chicago camp, which opposed consideration of merger-specific efficiencies as unmanageable, to the Harvard camp, represented by Areeda-Turner, which (inspired by Williamson) argued that rational antitrust policy required doing no less. Whether the changes were driven by political considerations or not is unimportant. What is more important is that they contributed importantly toward fully integrating efficiencies into modern merger analysis.

Federal Trade Commission Practice

While the FTC did not follow the DOJ's lead and revise its 1982 Merger Policy Statement, the FTC during these years also began to assign greater weight to efficiencies in its decision-making. In its decision in *American Medical International* in 1984, involving a merger of two hospitals, the Commission went out of its way to show that prior judicial decisions did not foreclose consideration of efficiencies in evaluating the competitive effects of mergers, relying largely on arguments developed by a 1980 law review article by Tim Muris, who had recently become Director of the Bureau of Competition.[80] The Commission, however, affirmed the Administrative Law Judge's determination that AMI had failed to establish that any substantial efficiencies would flow from its merger or that they would inure to the benefit of consumers.

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[77]Ronald W. Davis, *supra* n. 73, 11 DEL. J. CORP. Law at 87.

[78]Tyler A. Baker, *The 1984 Justice Department Guidelines*, 53 ANTITRUST L.J. 327, 333 (1984).

[79]Davis, *supra* note 73, at 87.

[80]*See* American Medical International, Inc., 104 FTC 1, 71-81 (1984). *See also* Timothy J. Muris, *supra* note 30.

A year earlier, the Commission relied on efficiencies as one of its reasons for approving a production joint venture between General Motors and Toyota to produce small cars in North America subject to a consent order imposing restrictions on the output of the joint venture and safeguards on information sharing between the parties.[81] The Commission found that the venture, which it said it might otherwise not have allowed to proceed, would produce three procompetitive benefits: (1) it would increase the number of small cars available in America; (2) the joint venture would be able to produce these cars at a lower cost than GM could through any alternative available to it; and (3) the venture would offer GM an opportunity to learn more about efficient Japanese manufacturing and management techniques that could help it lower its costs generally. Although not a merger case, the *GM/Toyota* decision illustrated that the FTC, like the Department, was becoming more receptive to efficiency arguments. This naturally led parties to make such arguments more frequently.

Again let us use an example drawn from the private practice experience of one of the authors. In 1990, efficiency arguments played a key role in securing FTC clearance, over serious staff objections, for a merger of the two leading worldwide producers of turbo expanders, which are used to liquify gases. The merger created a firm with market shares, both in the U.S. and globally, well in excess of 60%. The parties argued that despite these high market shares, the merger would not be anticompetitive because (i) some of the buyers were vertically integrated and the others could enter or sponsor entry into the turboexpander market; (ii) the acquired firm was in serious financial jeopardy and might otherwise have to exit the market; and (iii) if it did so, its technology, most of which was in the head of its 84-year founder, might be lost, whereas the merger would allow that technology to be transferred to younger engineers at the acquiring firm (this was dubbed the "Yoda defense").[82]

[81] *See* General Motors Corp., 103 FTC 374 (1984).

[82] This efficiency argument focuses on a transactional efficiency stemming from the transfer of technological know-how between two producers. Information-based assets present challenging monitoring and pricing problems for would-be transactors, and sometimes no arrangement short of outright transferal of ownership over the asset — in this case, a merger — can satisfactorily solve these problems. For further discussion of transactional efficiencies, and their contrast with other categories of efficiencies, see the

1992 Guidelines

In 1992, the Department undertook an extensive revision of the merger guidelines, which the Federal Trade Commission joined for the first time.[83] The principal change in the guidelines was to shift decision making more fully away from structural presumptions based on market shares and concentration ratios and to place greater emphasis on qualitative competitive effects analysis, or what one of the revised guidelines' principal authors, Bobby Willig, called "story telling."[84]

The 1992 Guidelines left the language of the efficiencies section of the Guidelines unchanged from the 1984 version, with one exception. The one change was to eliminate the sentence that provided that efficiencies would not be considered unless they were "established by clear and convincing evidence." In explaining the reason for this change, Kevin Arquit, who served as Director of the FTC's Bureau of Competition when the 1992 Guidelines were being drafted, argued that "no substantive change was intended" by this change.[85] Eliminating the "clear and convincing evidence" standard, he said, was simply part of the effort to move away from structural presumptions and not to assign burdens of proof.

Despite Arquit's protestations, the change was obviously a significant one. Eliminating the heightened evidentiary standard signaled a greater openness to considering efficiency arguments and was so viewed by many in the bar at the time. Given the uncertainties inherent in trying to predict the likely effect of a merger, how high a standard of proof is required will often be determinative.

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appendix.

[83]U.S. Department of Justice & Federal Trade Commission, Horizontal Merger Guidelines § 4, reprinted in 4 TRADE REG. REP. (CCH) ¶ 13,104 (1992, rev'd 1997), (hereinafter 1997 Revisions).

[84]*See* Charles A. James, *Overview of the 1992 Horizontal Merger Guidelines*, 61 ANTITRUST L.J. 447, 448, 452 (1993).

[85]Kevin J. Arquit, *Perspectives on the 1992 U.S. Government Horizontal Merger Guidelines*, 795 PLI/CORP 33 (1992).

1997 Revisions

After the 1992 Guidelines, the agencies continued to gain experience reviewing efficiencies, as merging parties continued making efficiencies claims in merger investigations.[86] Scholars and practitioners also continued to offer critical commentary about the treatment of efficiencies in the Guidelines.[87]

In 1992, the future FTC Chair, Robert Pitofsky,[88] who was then teaching at the Gerogetown University School of Law, published a widely noted article advocating broader use of efficiencies in merger reviews. Tying efficiencies to the competitiveness of U.S. firms in an increasingly global economy, Pitofsky argued that, "in some market situations, consideration of [efficiency] factors . . . could make a significant difference in the ability of firms to compete in international trade."[89] He argued further that "efficiencies do not lessen--indeed they often improve--competition" and that consideration of efficiencies could be consistent with section 7's "substantial lessening of competition" analysis.[90] He proposed an efficiencies defense "where the likelihood of realizing efficiencies is maximized and the likelihood of consumer injury as a result of an increase in market power is

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[86]*See, e.g.*, Federal Trade Comm'n, ANTICIPATING THE 21ST CENTURY: COMPETITION POLICY IN THE NEW HIGH-TECH, GLOBAL MARKETPLACE: A REPORT BY FEDERAL TRADE COMMISSION STAFF (1996) Vol. I. (hereinafter, FTC STAFF REPORT) ch. 2 at 14, 21.

[87]*E.g.,* Gary L. Roberts & Steven C. Salop, *Efficiencies in Dynamic Merger Analysis,* 19 WORLD COMPETITION L. & ECON. REV. 5 (1996); Joseph Kattan, *Efficiencies and Merger Analysis*, 62 ANTITRUST L.J. 513, 522-27 (1994); Steve Stockum, *The Efficiencies Defense for Horizontal Mergers: What Is the Government's Standard?,* 61 ANTITRUST L.J. 829 (1993).

[88]Robert Pitofsky, *Proposals for Revised United States Merger Enforcement in a Global Economy*, 81 GEO. L.J. 195 (1992).

[89]*Id*. at 198.

[90]*Id*. at 211.

minimized."[91] Key features of his proposal were a focus on (1) production efficiencies that reduce unit costs and (2) the inability to achieve the efficiencies through less restrictive alternatives.

When Professor Pitofsky became FTC Chairman Pitofsky in 1995, one of his early initiatives was to revive the FTC's prior practice of conducting hearings on important issues of antitrust policy. Pursuing the concerns addressed in his 1992 article, Chairman Pitofsky directed that the first hearings, which were held in 1995 and 1996, focus on the changing nature of competition in an increasingly global and innovation-based economy.[92] The role of efficiencies became one of the main subjects addressed at these hearings and in the ensuing FTC staff report, "Anticipating the 21st Century: Competition Policy in the New High-Tech, Global Marketplace Competition."[93] The report endorsed further integrating efficiencies into the competitive effects analysis,[94] arguing that efficiencies should "constitute a rebuttal [to a market-share-based prima facie case], not an affirmative defense."[95]

The FTC report led to the formation of a joint FTC-DOJ task force to consider the efficiencies issue and prepare new language for the Guidelines, which was issued in April 1997.[96] The revision

[91]*Id.* at 218. His proposal was: "In any market where postmerger concentration is moderate, and the combined company after the merger would hold less than thirty-five percent of the market, a horizontal merger should be legal if the defendants can clearly support the claim that production efficiencies leading to a substantial reduction in unit costs will result and these efficiencies could not be achieved through a much less restrictive alternative." *Id.* at 218. He rejected any pass-through requirement. *Id.* at 219.

[92]Federal Trade Comm'n, Hearings on FTC Policy in Relation to the Changing Nature of Competition; Notice of Public Hearing and Opportunity for Comment, 60 Fed. Reg. 37449 (1995) (issues included "treatment of efficiencies in merger and nonmerger areas").

[93]Federal Trade Comm'n, ANTICIPATING THE 21ST CENTURY: COMPETITION POLICY IN THE NEW HIGH-TECH, GLOBAL MARKETPLACE: A REPORT BY FEDERAL TRADE COMMISSION STAFF (1996) Vol. I ("FTC STAFF REPORT").

[94]FTC STAFF REPORT Exec. Summ. 2.

[95]FTC STAFF REPORT ch. 2 at 25.

[96]Department of Justice, *Justice Department and Federal Trade Commission Announce Revisions to Merger Guidelines*, press release Apr. 8, 1997.

added a new section 4 to the Guidelines, replacing the prior version in its entirety. This revised section was presented not as reflecting any major change in policy but rather as a more thorough explanation of existing practice.[97]

The 1997 revision retained the introductory language from the 1984 and 1992 guidelines declaring that "the primary benefit of mergers to the economy is their potential to generate . . . efficiencies." The revision explained in greater detail than the earlier guidelines had that the mechanism by which efficiencies could increase the competitiveness of firms was by "increasing their incentive and ability to compete." It also expanded the list of benefits to include "improved quality, enhanced service, or new products" in addition to lower prices.

The first major change was in providing a more systematic explanation of when efficiencies would be viewed "cognizable" and therefore entitled to consideration. Cognizable efficiencies were defined by three characteristics: "*Cognizable efficiencies* are [1] merger-specific efficiencies that [2] have been verified and [3] do not arise from anticompetitive reductions in output or service." [98]

Merger-specific. The revision defined "merger-specific" efficiencies as "efficiencies likely to be accomplished with the proposed merger and unlikely to be accomplished in the absence of either the proposed merger or another means having comparable anticompetitive effects."[99] This formulation is subtly different from the "reasonably necessary" standard of the earlier guidelines in

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[97]"The revisions better reflect existing practices at the agencies, and provide better guidance to merging parties," said Larry Fullerton, Deputy Assistant Attorney General for Merger Enforcement in the Department's Antitrust Division. Department of Justice, *Justice Department and Federal Trade Commission Announce Revisions to Merger Guidelines*, press release Apr. 8, 1997.

[98]1997 Revisions § 4.

[99]1997 Revisions § 4. The Guidelines elaborated this principle in two sentences. First, "[t]he Agency will not deem efficiencies to be merger-specific if they could be preserved by practical alternatives that mitigate competitive concerns, such as divestiture or licensing." *Id*. § 4, n.35. Second, "[o]nly alternatives that are practical in the business situation faced by the merging firms will be considered in making this determination; the Agency will not insist upon a less restrictive alternative that is merely theoretical." *Id*. at § 4.

refocusing attention away from whether the efficiencies "could" be accomplished without the merger to whether they would be "likely" absent the merger. This shift brought the analysis of efficiencies into line with the treatment of entry, expansion, and repositioning in the 1992 Guidelines, as to all of which the guidelines made the likelihood, not merely the feasibility, of those changes occurring the relevant criterion.

This change is much more significant than may at first appear. There are any number of reasons why a firm may not pursue efficiencies through internal means even if it would technically be feasible to do so.[100] For example, to the extent the efficiencies are a function of economies of scale, a firm may not wish to add capacity to achieve those greater efficiencies where the effect may be to further depress existing market prices. Second, achieving the efficiencies through internal means may be substantially more costly than by merger, reducing the return on investment below necessary hurdle rates. Third, and perhaps most important, to the extent the efficiencies result from combining the complementary assets of the two merging firms, which could theoretically also be done by contract, transactions costs may form an obstacle to achieving these efficiencies other than through merger.[101] In addition, to the extent joint ventures or other competitor collaborations are viewed as a potentially lesser restrictive alternative to merger, the 1997 revision properly focuses attention on the incentive and cooperation problems inherent in such collaborations.[102]

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[100]*See* William J. Kolasky, *Lessons from Baby Food: The Role of Efficiencies in Merger Review*, ANTITRUST, Fall 2001, at 82.

[101]Contrary to the sometimes offered view that, because they fall short of a full merger, joint ventures necessarily are less anticompetitive than mergers, transaction cost obstacles to achieving efficiencies could well lead to a situation in which a joint venture would raise competitive concerns whereas a merger among the very same participants would not be problematic because the merger was thought to lead to greater efficiency-enhancing integration. *See* William Nye, *Can a Joint Venture Lessen Competition More Than a Merger*?, 40 ECONOMIC LETTERS 487 (1992).

[102]We thank Gregory J. Werden for contributing this insight.

Not anticompetitive. The revision does not elaborate on the statement that merger efficiencies are not cognizable if they "arise from anticompetitive reductions in output or service."[103] It is true that reductions of output, for example, will normally be accompanied by reductions in (total) costs, but this cost reduction is not an efficiency. Similarly, elimination of rivalry between the merging firms may mean that the merged firm may be able to cut its cost of acquiring customers or to spend less in providing service to its customers. To the merging firms, such changes certainly represent cost savings and merging firms sometimes mistakenly try to treat these savings as efficiencies. This provision reminds the reader that the focus in analyzing efficiencies is on changes that improve, not degrade, allocative efficiency.

Verifiable. The revision requires that efficiencies be verified to be cognizable. It explained this requirement on the grounds that "[e]fficiencies are difficult to verify and quantify, in part because much of the information relating to efficiencies is uniquely in the possession of the merging firms."[104] Consequently, the Guidelines provide, "the merging firms must substantiate efficiency claims so that the Agency can verify by reasonable means the likelihood and magnitude of each asserted efficiency, how and when each would be achieved (and any costs of doing so), how each would enhance the merged firm's ability and incentive to compete, and why each would be merger-specific. Efficiency claims will not be considered if they are vague or speculative or otherwise cannot be verified by reasonable means."[105] Significantly, this language does not necessarily require that the efficiencies be quantified in every case. Just as the market power effects of a merger often cannot be measured precisely, so, too, some important efficiencies, especially those relating to allocative, dynamic, and transactional efficiencies, do not always lend themselves to precise estimation.

Having defined cognizable efficiencies, the revisions next address the issue of how these cognizable efficiencies will be taken into account in the competitive effects analysis. They state that

[103] 1997 Revisions, at § 4.

[104] 1997 Revisions, at § 4.

[105] *Id.*

the agencies "will not challenge a merger if cognizable efficiencies are of a character and magnitude such that the merger is not likely to be anticompetitive in any relevant market."[106] They go on to explain that the agencies will consider "whether cognizable efficiencies likely would be sufficient to *reverse the merger's potential to harm consumers in the relevant market*, e.g., by preventing price increases in that market."[107] As in the 1984 and 1992 guidelines, the 1997 revisions provide that a sliding scale will be used for this purpose:

> The greater the potential adverse competitive effect of a merger . . . the greater must be cognizable efficiencies in order for the Agency to conclude that the merger will not have an anticompetitive effect in the relevant market. When the potential adverse competitive effect of a merger is likely to be particularly large, extraordinarily great cognizable efficiencies would be necessary to prevent the merger from being anticompetitive.[108]

The revisions sounds an additonal cautionary note in this regard: "In the Agency's experience, efficiencies are most likely to make a difference in merger analysis when the likely adverse competitive effects, absent the efficiencies, are not great. Efficiencies almost never justify a merger to monopoly or near-monopoly."[109]

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[106]*Id.*

[107]*Id.* (Emphasis added).

[108]*Id.*

[109]*Id.* The agencies applied the foregoing analysis to comment on particular types of efficiencies. Experience showed that "certain types of efficiencies are more likely to be cognizable and substantial than others," singling out "efficiencies resulting from shifting production among facilities formerly owned separately, which enable the merging firms to reduce the marginal cost of production." By contrast, "those relating to research and development[] are potentially substantial but are generally less susceptible to verification and may be the result of anticompetitive output reductions." Others, such as "those relating to procurement, management, or capital cost are less likely to be merger-specific or substantial, or may not be cognizable for other reasons."

One of the principal debates while the 1997 revisions were being formulated related to whether efficiencies had to be passed on to consumers in order to be cognizable.[110] Most economists argued for what they called a "total welfare" approach which would view all efficiencies positively, whether or not they were passed onto consumers in the form of lower prices. They argued that all resource savings benefit society and that any wealth transfer from consumers to producers should be irrelevant because, put colloquially, producers are consumers in their time off. Chairman Pitofsky himself took this view, both in his 1992 article and in comments he made while chairman of the FTC prior to the issuance of the 1997 revisions.[111]

Most commentators have interpreted the 1997 revisions as adopting instead what they call a "consumer welfare" approach to efficiencies, which counts efficiencies only to the extent they are likely to be passed on to consumers in the form of lower prices and expanded output. Contrary to this view, a close reading of the 1997 revisions shows that the agencies preserved the possibility of weighing positively efficiencies that would not immediately be passed on to consumers. Significantly, the revisions did not include a pass-on requirement in defining cognizable efficiencies. To the contrary, in note 37, the revisions state explicitly that: "The Agency will also consider the effects of cognizable efficiencies with no short-term, direct effect on prices in the relevant market."[112] It would probably be better, therefore, to call the approach taken by the 1997 revisions more of a hybrid

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[110]*See, e.g,* Paul L. Yde & G. Michael, *Merger Efficiencies: Reconsidering the "Passing-On" Requirement*, 64 ANTITRUST L.J. (1996); Jerry A. Hausman & Gregory K. Leonard, *Efficiencies from the Consumer Viewpoint*, 7 GEO. L.J. 707 (1999); and Craig W. Conrath & Nicholas A. Widnell, *Efficiency Claims in Merger Analysis: Hostility or Humility?*, 7 GEO. L.J. 685 (1999).

[111]Robert Pitofsky, *Proposals for Revised United States Merger Enforcement in a Global Economy*, 81 Geo. L.J. 195 (1992); *Rountable Discussion with Enforcement Officials*, 63 ANTITRUST L.J. 951, 981 (1995).

[112]*Id*. at n. 37. The note cautions, however, that, these benefits "will be given less weight because they are less proximate and more difficult to predict." Again, we thank Greg Werden for bringing the significance of this footnote to our attention.

consumer welfare/total welfare model.[113] Efficiencies that benefit consumers immediately through lower prices and increased output will receive the most weight, but other efficiencies will also be considered, to the extent they can be proved and can to be shown ultimately to benefit consumers.[114]

Normally the potential procompetitive effects of a merger are assessed within a relevant market, in line with Section 7's application to a substantial lessening of competition "in any line of commerce . . . in any section of the country." In a footnote, however, the agencies address the possibility that a merger with net anticompetitive effects in one market may have more substantial efficiency-enhancing effects in another market or markets.[115] Because accepting a merger on such grounds would necessarily mean accepting anticompetitive harm to some consumers, the agencies explain that such mergers "normally" would be challenged, after a market-by-market analysis. The agencies state, however, that they might accept such a merger if the efficiencies are "inextricably linked" to the anticompetitive harm -- that is, the harm cannot be avoided in the usual manner by a divestiture or other similar relief -- and if the imbalance is substantial (i.e., the efficiencies are large and the anticompetitive effect small).

A merger of two natural gas gathering systems that the FTC cleared while it was working on the 1997 revisions illustrates how these principles apply in practice. Gathering systems transport natural gas from the wellhead to the nearest processing plant or transmission pipeline. This particular

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[113]*See* Gregory J. Werden, *An Economic Perspective on the Analysis of Merger Efficiencies*, 11-SUM ANTITRUST 12, 13-14 (1997) (suggesting that revision left open the question whether the effect of efficiencies should be evaluated against "price effects"standard, "consumer surplus" standard, or "total surplus" standard).

[114]The Division's economists have developed a simple method for determining when efficiencies are likely to prevent price increases in the two standard unilateral effects models. *See* Gregory J. Werden, *A Robust Test for Consumer Welfare Enhancing Mergers Among Sellers of Differentiated Products*, 44 J. INDUS. ECON. 409 (1996); Gregory J. Werden & Luke M. Froeb, *A Robust Test for Consumer Welfare Enhancing Mergers Among Sellers of Homogeneous Products*, 58 ECONOMICS LETTERS 367 (1998).

[115]Guidelines, n.36. The 1992 Guidelines had not directly addressed this question, noting generally that "[s]ome mergers that the Agency otherwise might challenge may be reasonably necessary to achieve significant net efficiencies," a statement that does not address whether the efficiencies must be in the same market as the anticompetitive effect.

merger involved two companies that operated gathering systems and processing plants in West Texas in the area around Midland-Odessa, an area with very mature fields and declining production. The two merging systems were the only systems serving several counties west of Odessa, making this a merger to monopoly in these counties.[116] The parties nevertheless were able to obtain clearance by showing that only a handful of producers were close enough to both systems to benefit from competition between them whereas all producers served by the two systems would benefit from the very substantial economies that could be realized by combining the two systems and their associated processing plants, both of which were badly underutilized.

Judicial Recognition of Efficiencies

As in other areas, the Merger Guidelines have been influential in shaping the judicial treatment of efficiencies. Just as the agencies have, the courts have increasingly begun to accept the idea that efficiencies may, in appropriate circumstances, be used to rebut a prima facie case of anticompetitive effect based on market concentration. In addition, the court have largely adopted the analytical framework for evaluating efficiency claims that is set out in the Guidelines.

The Supreme Court

The Supreme Court has not had an occasion to revisit the issue of whether efficiencies can be used as a defense in a merger case since its early decisions in *Brown Shoe, Philadelphia National Bank*, and *Procter & Gamble*. The only Supreme Court case since then that has explicitly considered the role of efficiencies in merger litigation is *Cargill, Inc. v. Monfort of Colorado, Inc.*[117] In *Cargill*, the Court implicitly overruled its earlier decision in *Procter & Gamble* to the extent that decision might have been understood to hold that a merger could be found to violate Section 7 because it

[116]The FTC defines the relevant geographic market for natural gas gathering in terms of the distance a gathering system will go to serve a new customer, which is typically only a few miles. *See, e.g.*, Phillips Petroleum Co., File No. 951-0037 (July 1995), 1995 WL 518739 (FTC). Because of the small size of the wells in question and the declining production in the area generally, entry was also unlikely.

[117]479 U.S. 104 (1986).

would make an already leading firm more efficient, thereby making it harder for smaller rivals to compete against it. *Cargill* arose from a private action brought by a competitor seeking to enjoin the proposed merger of two leading meat packers. The plaintiff claimed it would be injured because the merger would produce "multiplant efficiencies" that would enable the merged firm to lower prices in order to compete for market share. The Supreme Court held that "it would be inimical to the purposes of the antitrust laws" to enjoin a merger because it would lead to increased efficiency and lower prices:

> To hold that the antitrust laws protect competitors from the loss of profits due to such price competition would, in effect, render illegal any decision by a firm to cut prices in order to increase market share. The antitrust laws require no such perverse result, for "[i]t is in the interest of competition to permit dominant firms to engage in vigorous price competition, including price competition."[118]

The Courts of Appeals

Since the publication of the 1982 Merger Guidelines four circuits (the 11th, 8th, 6th, and D.C. Circuits) have had occasion to consider the availability of an efficiency defense in merger cases. All four have shown a willingness to treat efficiencies as serving to rebut a prima facie showing of anticompetitive effect based on market share and concentration and have generally applied the same analytical framework as the Merger Guidelines in evaluating efficiency claims.

FTC v. University Health, Inc.[119] The 11th Circuit was the first to hold squarely that efficiencies may be used to rebut a prima facie showing of anticompetitive effect: "We conclude that in certain circumstances, a defendant may rebut the government's prima facie case with evidence

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[118] *Id.* at 492, *quoting* Arthur S. Langenderfer, Inc. v. S. E. Johnson Co., 729 F.2d 1050, 1057 (6th Cir. 1984).

[119] 938 F.2d 1206 (11th Cir. 1991).

showing that the intended merger would create significant efficiencies in the relevant market."[120] The court did not cite the guidelines in reaching this conclusion, but relied instead principally on the Areeda-Turner treatise and other scholarly articles advocating an efficiencies defense.

The approach the court adopted nevertheless closely mirrored the then-extant 1984 Guidelines. The court held that efficiencies should not be a defense to a merger that was found to be anticompetitive, but should instead be integrated into the competitive effects analysis, where it could be used to rebut a prima facie case based on market share presumptions. In addition, the court held that to be considered the efficiencies would have to be "significant" and "ultimately [to] benefit competition and, hence, consumers."[121] Applying these standards, the court of appeals reversed the district court's denial of a preliminary injunction. It held, *inter alia*, that the parties had "not presented sufficient evidence to support the claim that the intended merger would produce efficiencies benefiting consumers."[122]

FTC v. Butterworth Health Corp.[123] In a 1997 per curiam decision affirming the denial of a preliminary injunction, the Sixth Circuit rejected an FTC argument that the district court had committed legal error in allowing the merging hospitals to rebut the FTC's prima facie case with evidence of efficiencies. Citing *University Health* and *Rockford Memorial Hospital*,[124] where the Seventh Circuit had held that section only "forbids mergers that are likely to hurt consumers,"[125] the court held that the district court's approach "was not legally erroneous," without further explanation.

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[120] *Id*. at 1222.

[121] *Id*. at 1223.

[122] *Id*.

[123] 121 F.3d 708 (6th Cir. 1997).

[124] U.S. v. Rockford Mem. Hosp., 898 F.2d 1278 (7th Cir. 1990).

[125] *Id*. at 1282.

FTC v. Tenet Health Care Corp.[126] In the most favorable court of appeals decision on efficiencies to date, the Eighth Circuit reversed a preliminary injunction blocking the merger of the only two general care hospitals in Poplar Bluff, Missouri. The court found two errors in the district court's decision, both relevant to its view of the claimed efficiencies. First, the court held that the FTC had produced "insufficient evidence" to prove that Poplar Bluff was a separate geographic market and not part of a broader Southeastern Missouri market.[127] Second, the court held that the district court had committed legal error in refusing to consider "evidence of enhanced efficiency in the context of the competitive effects of the merger."[128] The court described that evidence as showing that combining the two hospitals would create a larger and more efficient hospital capable of delivering better medical care and that this would "enhance competition" in the broader Southeastern Missouri area. The court noted that even if third party payors "reaped the benefit of a price war in a small corner of the health care market in southeastern Missouri," the loss of that benefit needed to be balanced against the improved quality of health care received by their subscribers.[129]

FTC v. H. J. Heinz Co.[130] In the most recent court of appeals decision on this issue, the D.C. Circuit, while not squarely holding that efficiencies could be used to rebut a prima facie case, noted that "the trend among lower courts is to recognize the defense."[131] The court held, however, that the parties had failed to produce sufficient evidence to rebut the inference of anticompetitive effect and that the district court's finding to the contrary in denying a preliminary injunction was clearly erroneous.

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[126] 186 F.3d 1045 (8th Cir. 1999).

[127] *Id*. at 1053.

[128] *Id*. at 1054.

[129] *Id*.

[130] 246 F.3d 708 (D.C. Cir. 2001).

[131] *Id*. at 720.

The court held, first, that the very high concentration levels required, on rebuttal, "proof of extraordinary efficiencies."[132] To support this proposition the court cited the 1997 Guidelines statement that "efficiencies would never justify a merger to monopoly or near-monopoly."[133] The court found the claimed efficiencies not to be sufficiently large to meet this standard when measured across the combined entity's total output and cost structure.[134]

The court held, second, that asserted efficiencies must be "merger specific" to be cognizable, again citing the 1997 Merger Guidelines.[135] The court held that the district court had committed error by failing to explain why the parties could not achieve comparable efficiencies without a merger.[136]

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[132]*Id*. at 720. In *Heinz*, the merging parties were two of only three producers of baby food in a market in which entry was found to be unlikely and were the only two rivals for placement as the second baby food brand on supermarket shelves.

[133]1997 Revision, at § 4.

[134]The Court's conclusion in this regard would not necessarily hold in the case of a merger to monopoly or near-monopoly in a small market that would allow the firm to serve a broader market more efficiently, as the court found to be the case in *Tenet*. *See* p. 47 *supra*. In the absence of price discrimination even *de minimis* efficiencies can outweigh large potential adverse competitive effects in these circumstances. For example, suppose Appalachian coal is sold only in limited amounts in Appalachia, but much more could be profitably sold in a broader geographic market in competition with coal from many other sources if distribution costs from Appalachia could be cut even slightly. Now suppose that all the coal mines in Appalachia agreed to sell only "through the larger and more economic facilities of" a common sales agency (this example is very loosely based on the 1933 *Appalachian Coals* decision (Appalacian Coals v. U.S., 288 U.S. 344 (1933)). In theory, that agency might be set up to eliminate competition and substantially raise prices on local sales, but it might also be aimed at lowering costs in order to lower prices to allow profitable sales in a broad geographic market. Assuming no price discrimination, the agency may be able to increase its profits over what they were premerger by raising its prices in its local market while offering the coal at a lower price than it could have premerger in the broader geographic market. If coal consumption is significantly greater in the broader market than in the smaller local market, there may be a net gain to consumer welfare even if the efficiencies are small and the potential adverse competitive effects in the smaller local market are large.

[135]246 F.3d at 721.

[136]One of the authors of this article has criticized the court of appeals decision for giving too little deference to the district court's findings of fact and for applying too high a standard both with respect to the magnitude of the efficiencies and to the likelihood that they could be realized by alternative, less anticompetitive means. *See* William J. Kolasky, *Lessons from Baby Food: The Role of Efficiencies in*

District Court Decisions

There are a growing number of district court decisions, in these circuits and others, that assume the availability of an efficiencies defense, often citing the guidelines to support that assumption, and then proceed to evaluate the parties' efficiency claims. In three cases the courts accepted the defense and in four the courts rejected it. (This excludes the cases decided on appeal discussed in the last section.) In each case the court used the basic analytical framework set out in the Merger Guidelines to evaluate the claimed efficiencies. Rather than discuss all of these cases, we will focus on just five.

U.S. v. Long Island Jewish Medical Center.[137] In finding the merger of two hospitals on Long Island lawful over the Department's objections, the court adopted the guidelines' approach and held that to rebut a prima facie case of illegality the efficiencies claimed must be "significant" and must be shown "ultimately to benefit consumers."[138] The court held that to show this the parties must prove that the merger is likely to "enhance rather than hinder competition because of increased efficiency."[139] The court found that the efficiencies that were claimed, which were on the order of $25-30 million per year, met both standards, in part because the hospitals were nonprofit and would therefore be likely to pass any cost savings on to the community, which they had also committed to doing in an agreement with the New York state attorney general.

U.S. v. Country Lakes Foods, Inc.[140] This case, a Justice Department challenge to a merger of two dairies, is the only litigated non-hospital case in which an efficiencies defense has prevailed.

Merger Review, ANTITRUST, Fall 2001, at 82. For a different perspective on the case, *see* Thomas B. Leary, *An Inside Look at the Heinz Case*, ANTITRUST, Spring 2002, at 32; David Balto, *The Efficiency Defense in Merger Review: Progress or Stagnation*, ANTITRUST, Fall 2001, at 74.

[137] 983 F. Supp. 121 (E.D.N.Y. 1997).

[138] *Id*. at 137.

[139] *Id*.

[140] 754 F. Supp. 669 (D. Minn. 1990).

In finding the merger lawful, the court found that the efficiencies that would result from an increased volume of production due to the merger would enable the merged firm "to compete directly with the market leader" and thereby "enhance competition."[141] As in *Tenet*, this conclusion depended importantly on the court's related conclusion that the government had failed to prove that the geographic market was as narrow as it had alleged.

Staples,[142] *Cardinal Health*[143]*, and Swedish Match*.[144] This trilogy of FTC preliminary injunction cases in the District Court for the District of Columbia all closely followed the analytical framework of the Merger Guidelines in finding that the efficiencies claimed did not rebut the FTC's prima facie case. In *Staples*, the court expressly rejected an effort by the FTC to impose on parties a higher standard of proof in litigation than the guidelines impose for agency review of mergers. The court refused to apply the "clear and convincing evidence" standard the FTC advocated, observing that imposing such a heightened standard "would saddle section 7 defendants with the nearly impossible task of rebutting a possibility with a certainty."[145] In each case, the court nevertheless found that the claimed efficiencies were badly overstated, that they had not been shown to be merger specific, and that the parties had also exaggerated the extent to which they would be passed onto consumers.

This review of the case law shows that the Merger Guidelines have been influential in shaping the courts' approach to efficiencies, just as they have been in other areas. The courts have followed the agencies' lead in accepting that efficiencies may be used, in appropriate circumstances, to rebut a prima facie case of illegality based on presumptions drawn from market shares and concentration

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[141]*Id*. at 680.

[142]FTC v. Staples, Inc., 970 F. Supp. 1066 (D.D.C. 1997).

[143]FTC v. Cardinal Health, Inc., 12 F. Supp. 2d 34 (D.D.C. 1998).

[144]FTC v. Swedish Match, 131 F. Supp. 2d 151 (D.D.C. 2000).

[145]970 F. Supp. at 1089.

ratios. The courts have also adopted the same basic analytical framework as the guidelines, often citing the guidelines but also often relying on the Areeda-Turner treatise, on which the guidelines approach is largely modeled.

Influence on Other Jurisdictions

In his 1992 article, Robert Pitofsky argued that "[i]n resisting incorporation of an efficiencies defense into merger enforcement, the United States is remarkably out of step with the law of other industrialized countries."[146] As the foregoing history reflects, this view badly mischaracterized the state of agency policy and practice at the time the article appeared. It also understates the important role the Guidelines — and equally the intellectual debate about the ideas in the Guidelines — have played in shaping competition policy in this area outside the United States as well as within it. In recognizing an efficiencies defense, other jurisdictions were following the U.S. merger guidelines, although some, like Canada, adopted policies more receptive to efficiency arguments than they perceived the U.S. policies were because of the smaller size of their economies.[147]

In Argentina, the Guidelines for the Control of Economic Concentrations outline an analytical process that is similar to that in the U.S. Horizontal Merger Guidelines.[148] Efficiencies analysis is included; it may lead to approval of an otherwise prohibited merger if the efficiencies are great

[146]Pitofsky, *supra* n. 105, at 213.

[147]Interview with Calvin Goldman, who served as the first Director of the Canadian Competition Bureau after the Canadian Competition Act was amended in 1986 to incorporate an express efficiencies defense.

[148]Javier Petrantonio & Marcelo den Toom, *Argentina*, in INTERNATIONAL MERGERS: THE ANTITRUST PROCESS 2-1, 2-4 (J. William Rowley & Donald I. Baker, eds., 2001). The Guidelines are Resolution No. 726 of the Secretariat of Industry, Commerce and Mining, issued Aug. 25, 1999. *Id.*

enough that the net impact on the general economic interest is beneficial.[149] Only merger-specific efficiencies may be considered.[150]

In Australia, the Merger Guidelines incorporate provisions on efficiencies.[151] They note that "efficiency enhancing aspects of a merger may impact on the competitiveness of markets" and that such impact is relevant to whether there is a substantial lessening of competition.[152] The emphasis is on efficiencies that "are likely to result in lower (or not significantly higher) prices, increased output and/or higher quality goods or services."[153]

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[149]*Id.* 2-23--2-24.

[150]*Id.* 2-5.

[151]AUSTRALIAN COMPETITION AND CONSUMER COMMISSION, MERGER GUIDELINES §§ 5.171-5.174 (1999).

[152]*Id.* § 5.171. *See Id.* §§ 5.16-5.17. Separately, efficiencies that do not affect the competitiveness of the market, but that are of "public benefit," may be considered in a determination whether to authorize an otherwise prohibited merger. *Id.* § 5.16, §§ 6.39-6.49.

[153]*Id.* § 5.173.

In Brazil, there are merger guidelines that employ an analytical approach similar to that of the United States, including an explicit step for consideration of efficiencies.[154]

In Canada, the U.S. Guidelines have had an impact, as well, although Canada has deliberately chosen to adopt an approach to efficiencies that it perceived as more favorable than the U.S. approach. The Competition Tribunal approved a propane merger on grounds that the efficiencies, using what it termed a "total surplus" approach, were greater than and offset the anticompetitive effect.[155] The Federal Court of Appeals reversed, citing and discussing the United States approach to efficiencies analysis; as the Tribunal later said, "the Court has placed weight on the treatment of efficiencies under U.S. antitrust law and has used it as the benchmark to evaluate the Tribunal's assessment under the Act."[156] On remand, the Tribunal disagreed with the court's interpretation and took issue with the Court[157] for allegedly following too closely the U.S. approach to efficiencies, which the Tribunal regarded as "hostile" to efficiencies.[158] The Tribunal noted that the Canadian economy is smaller than that of the United States and thus more concentration in a market might be required before economies of scale were fully realized, and noted its perception that the Canadian economy historically was more open to trade than the United States economy among other

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[154]Francisco R. Todorov, *Advisory Agencies Issue Joint Horizontal Merger Guidelines*, BAKER & MCKENZIE BRAZIL E-ALERT, Aug. 31, 2000 (fourth step is "analysis of efficiencies of the transaction").

[155]Commissioner v. Superior Propane Inc., 2000 Comp.Trib. 16.

[156]Commissioner v. Superior Propane, Inc., Comp. Trib. (2002) (slip op. at ¶ 115). *See* discussion in the Competition Tribunal's opinion on remand, Commissioner v. Superior Propane, Inc., Comp. Trib. (2002) (slip op. at ¶ 113-131).

[157]Commissioner v. Superior Propane, Inc., Comp. Trib. (2002) (slip op. at ¶¶ 115-131).

[158]*Id.* at ¶ 115 ("In the Tribunal's view, the differences between the American and Canadian approaches to merger review and efficiencies are very significant and cannot be appreciated without some knowledge of the history of American antitrust." *Id.* at ¶¶ 128-31 ("The Tribunal concludes that in the United States, there is virtually no efficiency defense to an anticompetitive merger . . . ." *Id.* at ¶ 129.).

differences.[159] The Tribunal concluded that the intent of Parliament was that "the consideration of efficiency gains is not to be tied into the analysis of the competitive effects of the merger"[160] and determined that "[t]he explicit efficiency defence in subsection 96(1) of the [1986] Act is clear evidence that Parliament intended not to follow the American approach to efficiencies." On reconsidering, the tribunal took account of both wealth transfer effects and total surplus effects and allowed the merger.[161] In fact, as the discussion of the 1997 revisions to the U.S. merger guidelines shows, the U.S. approach does not foreclose consideration of efficiencies that are not immediately passed on to consumers to nearly the extent the Tribunal believed.[162]

In Israel, a merger is evaluated by a competitive effects standard, and efficiencies are considered in favor of approval of the merger.[163]

In Mexico, the 1998 Implementing Regulations of the competition law specify that an "assessment of efficiency gains in the relevant market" must be considered in evaluating a merger.[164] To be considered, the gains must be the result of the merger and must be proved by the merging parties.[165] Particular efficiencies are specified in the Implementing Regulations, primarily efficiencies

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[159]Commissioner v. Superior Propane, Inc., Comp. Trib. (2002) (slip op. at ¶¶ 131-49). *See* Margaret Sanderson, *Efficiency Analysis in Canadian Merger Cases*, 65 ANTITRUST L.J. 623 (1997) ("The need for an emphasis on efficiency is all the more important in a small economy, such as Canada's. Concentration levels are high in many Canadian industries, yet firms may not be operating at minimum efficient scale. In addition, regulatory constraints and/or trade barriers may have led to higher costs of production.").

[160]Commissioner v. Superior Propane, Inc., Fed. Ct. App. (2002) (slip op. at ¶ 137).

[161]*Id*. ¶ 370-77.

[162]*See supra* note 78, at § 4.

[163]Lionel Kestenbaum, *Israel*, in INTERNATIONAL MERGERS: THE ANTITRUST PROCESS 29-1, 29-4 (J. William Rowley & Donald I. Baker, eds., 2001).

[164]Gabriel Castañeda Gallardo, *Mexico*, in INTERNATIONAL MERGERS: THE ANTITRUST PROCESS 42-1, 42-3, 42-9, 42-34 to 42-35 (J. William Rowley & Donald I. Baker, eds., 2001).

[165]*Id*. 42-35.

that result in lower production costs, although also including reduction of administrative expenses.[166]

In New Zealand, an otherwise prohibited merger may be authorized, pursuant to the Commerce Act 1986, if the merger will result in a public benefit that justifies approval. "Increased efficiency is the main public interest justification."[167]

In Norway, the purpose of the competition law is "to achieve an efficient utilization of society's resources by providing the necessary conditions for effective competition."[168] Mergers may be blocked if they create or strengthen a significant restriction on competition contrary to the purpose of the competition law.[169] Under Guidelines for Intervention against Acquisition of Enterprises issued in 1996, a three-step analytical process is used. In the third step, the Competition Authority evaluates whether the acquisition would generate cost savings for society that more than offset efficiency losses due to restricted competition. The cost savings must be merger-specific; moreover, income transfers and tax savings are not considered social cost savings. The agency emphasizes that if the anticompetitive effects of an acquisition are large, then documented efficiency gains need to be considerable.[170]

In South Africa, mergers are evaluated by whether they substantially prevent or lessen competition, but a merger that is likely to do so must also be evaluated to determine "whether the merger is likely to result in any technological, efficiency or other pro-competitive gain which will be

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[166]*Id*. 42-7, 42-32/12 (Article 6 of Implementing Regulations).

[167]Bernard Matthew Hill, *New Zealand*, in INTERNATIONAL MERGERS: THE ANTITRUST PROCESS 45-1, 45-3 to 45-4, 45-7 (J. William Rowley & Donald I. Baker, eds., 2001).

[168]Jan Petter Romsaas, et al., *Norway*, in INTERNATIONAL MERGERS: THE ANTITRUST PROCESS 46-1, 46-3 to 46-4, 46-21 (J. William Rowley & Donald I. Baker, eds., 2001).

[169]*Id*. 46-3.

[170]*Id*. 46-29.

greater than and offset the effects of any prevention or lessening of competition."[171] To qualify, the efficiencies must be of a type that "would not likely be obtained if the merger is prevented."[172]

In Venezuela, the Guidelines to Evaluate Operations of Economic Concentration recognize that mergers may have effects both of creating market power and generating efficiency; the Guidelines provide for evaluation whether the efficiencies "contribut[e] to obtaining major economic efficiencies from a social point of view." The agency seeks verification of the efficiencies, determination of whether they are merger-specific, and demonstration of the extent to which they will benefit consumers.[173]

The European Union is the most recent jurisdiction to move toward integrating efficiencies as a positive factor in its review of mergers under its Merger Control Regulation (MCR). The MCR adopts what is called a dominance test for mergers, requiring the European Commission and courts to prohibit any merger that "creates or strengthens a dominant position as a result of which effective competition would be impeded in the common market or a substantial part of it."[174] The MCR appears, on its face, to require that the Commission take into account efficiencies as a positive factor in making this determination: "In making this appraisal, the Commission shall take into account . . . the development of technical and economic progress provided that it is to consumers' advantage and does not form an obstacle to competition."[175]

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[171] Ed Southey & Anthony Norton, *South Africa*, in INTERNATIONAL MERGERS: THE ANTITRUST PROCESS 54-1, 54-7, 54-26 (J. William Rowley & Donald I. Baker, eds., 2001) (*quoting* Competition Act 89 of 1998 § 16(1)(a)).

[172] *Id.*

[173] Omar E. Garcia-Bolivar & Ignacio De Leon, *Venezuela*, in INTERNATIONAL MERGERS: THE ANTITRUST PROCESS 67-1, 67-58 (J. William Rowley & Donald I. Baker, eds., 2001) (*quoting* Guidelines to Evaluate Operations of Economic Concentration, Section VI, Efficiencies Generated by the Operation).

[174] Council Regulation 4046/89, O.J. L 395/1 (Dec. 30, 1989), corrected version O.J. L 257/14 (Sept. 21, 1990), amended, Council Regulation 1310/97, O.J. L 180/1 (July 9, 1997, corrected version O.J. L 40/17 (Feb. 13, 1998), effective March 1, 1998, Article 2(3).

[175] *Id.* at Article 2(1)(b).

In practice, when the Commission has considered efficiencies in its decisions, it, like the U.S. Supreme Court in the 1960s, has treated them more as an offense than as a defense.[176] In its very first decision prohibiting a merger under the MCR, *Aerospatiale-Alenia/de Havilland*,[177] the Commission found that while the merger would produce some efficiencies in the form of cost savings and expanded opportunities for one-stop shopping, those efficiencies would only serve to enhance the merged firm's power to behave independently of its competitors. And as recently as last year in its decision prohibiting the GE/Honeywell merger,[178] the Commission based its conclusion that the merger would strengthen GE's dominant position in the market for aircraft engines for large commercial aircraft in part on a finding that the merger would give GE an incentive to offer customers lower prices for jet engines by causing it to internalize the externalities associated with charging high prices on complementary products. While acknowledging that these lower prices would have benefitted customers in the short term (thereby enhancing allocative efficiency), the Commission found that these benefits were outweighed by the risk that GE's rivals would be forced eventually to exit the market if they could not match GE's lower prices.

Partly in response to criticisms of its decision on *GE/Honeywell*, the Commission has indicated that it is rethinking its view of efficiencies and that it intends to view efficiencies more favorably in the future. In a speech at Merchant Taylor's Hall in London last July, Commissioner Monti gave the first sign of this shift in attitude, stating that, "We are not against mergers that create more efficient firms. Such mergers tend to benefit consumers, even if competitors might suffer from increased competition."[179] The director of the EU Merger Task Force, Goetz Drauz, built on these

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[176] CHRISTOPHER JONES & F. ENRIQUE GONZALEZ-DIAZ, THE ECC MERGER REGULATION 193-194 (Colin Overbury ed., 1992); Frederic Jenny, *EEC Merger Control: Economies as an Antitrust Defense or an Antitrust Attack?*, 1992 FORDHAM CORP. L. INST. 591 (Barry Hawk ed., 1993).

[177] Aerospatiale-Alenia/de Havilland (Case IV/M53) [1991] OJ L334/42.

[178] Commission decision of 03/07/2001 declaring concentration to be incompatible with the common market and the EEA Agreement (General Electric/Honeywell), 3 July 2001 ¶¶ 353, 360, 376.

[179] *See* Mario Monti, Address before the Future for Competition Policy in the European Union, Address at Merchant Taylor's Hall, London (July 9, 2001).

remarks at the ABA Section of Antitrust Law's Spring Meeting this April. He announced that the Commission was developing merger guidelines that would have a section on efficiencies. He invited merging parties to tell the MTF about the efficiencies they expect to realize from their transactions, assuring them that efficiencies would not be used as a reason to challenge a merger but would be viewed as a favorable factor in the Commission's competitive effects analysis. The Commission is reported to be working on merger guidelines that would include a detailed discussion of how efficiencies will be considered in merger reviews.

To the extent that the Guidelines' treatment of efficiencies, as well as the debates surrounding it, has any persuasive influence on EU law and practice, that influence will be retransmitted into transition economies that are adopting or invigorating competition law regimes for the first time, because they often follow the EU analytical framework for merger control.[180] This is particularly true in Central and Eastern Europe, where countries have closely followed EU law and practice in order to harmonize their regimes with the EU and thus ease their entry into the EU.[181]

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[180]William E. Kovacic, *Merger Enforcement in Transition: Antitrust Controls on Acquisitions In Emerging Economies*, 66 U. CIN. L. REV. 1075, 1089 (1998).

[181]*Id.* at 1087.

Conclusion

As this brief history illustrates, the U.S. courts and antitrust agencies have made substantial progress since the 1982 Baxter Guidelines in learning how to integrate efficiencies into their evaluation of potentially anticompetitive mergers. Just as Oliver Williamson predicted in 1968, the courts and agencies have been able to refine the tools they use to review efficiency claims and have become more comfortable with their ability to balance any likely efficiencies against any potential increase in market power as they have gained experience evaluating efficiencies. The success of the U.S. in integrating efficiencies into merger review has had an important influence in persuading other jurisdictions to do likewise. This trend is now extending to Europe, where the European Commission has indicated that it is developing merger guidelines which will integrate efficiencies into their competitive effects analysis. The 1982 Merger Guidelines and the subsequent revisions to them have contributed importantly to this movement toward more rational antitrust enforcement and will continue to do so.

Appendix

A Taxonomy of Efficiencies

Mergers can enable firms to secure a number of distinct types of efficiencies. The principal categories of efficiencies are: allocative, productive, dynamic, and transactional. This appendix describes and distinguishes these four efficiencies and explains why there often is a close interconnection between them in antitrust analysis. Perhaps most notably, transactional efficiency frequently serves as an essential facilitator to achieving allocative, productive, and dynamic efficiencies.

<u>Allocative Efficiency</u>

At the most general level, a market is said to achieve "allocative efficiency" when market processes lead society's resources to be allocated to their highest valued use among all competing uses. In the context of market exchanges between consumers and producers, the allocative efficiency principle can be restated somewhat more specifically to say that the value of a product in the hands of consumers is equalized "at the margin" to the value of the resources that were used to produce that product. This intuitive "equality at the margin" condition ensures that an economy maximizes the aggregate value of all of its resources by placing them in their highest valued uses. Starting from an efficient market allocation, if a firm were to produce one additional unit of the product, the resource cost to society would exceed what consumers would be willing to pay for that last unit. Total social welfare thus would fall as a result. By the same token, if the firm cut production by one unit, the loss that consumers would suffer would exceed the value of the saved resources in whatever alternative use they were deployed. Again, total welfare would fall as a result.

Antitrust policy looks to the process of market competition as its principal means for promoting an efficient allocation of society's scarce resources. Economic theory formalizes this principle in the First Theorem of Welfare Economics, which identifies a set of very general conditions under which a competitive market process will guarantee the efficient allocation of resources. In the long run competitive equilibrium, the market price is just equal to firms' incremental or marginal cost. Marginal cost reflects not only directly observable costs of production, distribution and marketing but also the relevant opportunities foregone when a resource is used for one purpose rather than for some other purpose. (Hence, the term "opportunity costs" used by economists.) From society's perspective, it represents the total cost of the resources consumed in producing, distributing, and marketing an additional unit of a particular commodity rather than employing those resources in their next best alternative use. Thus, when output is expanded to the point where price is just equal to marginal cost, the marginal value that consumers place on a good — which is the amount that they are willing to pay for the good — is just equal to the marginal value of the resources used in the good's production. In the long run equilibrium, monopoly fails to achieve this allocative efficiency criterion established by the model of perfect competition. This follows from the fact that the monopolist's price exceeds long run marginal cost. From society's point of view, the marginal value placed on the good produced by the monopolist is greater than the marginal value of the resources used in the good's production. Society therefore could be made better off if the monopolist deployed additional resources to expand output up to the point where price and marginal cost were equalized. Antitrust policy embodies this general principle by favoring competition over monopoly and (more) perfect competition over imperfect (or oligopoly) competition.

One way that merger can promote allocative efficiency arises in the context of a vertical merger to address the "double markup problem." If a manufacturer and a distributor both enjoy some degree of market power, each firm will find it profit-maximizing to add a monopoly markup to the price that it charges. As a result, consumers will face a double markup. Understanding that it has some influence over price, the manufacturer will set a wholesale price that equates its marginal revenue to its marginal cost. Because the manufacturer faces a less than perfectly elastic demand, the wholesale price that it sets will exceed its marginal cost of production, thus producing an initial allocative inefficiency. Downstream, the distributor will treat the wholesale price as its relevant marginal cost of business. Also enjoying market power, the distributor will set a retail price above its marginal cost, resulting in a second allocative inefficiency. Note, however, that the distortion caused by the second markup is compounded because it is applied to an already supra-competitive wholesale price. Contrast this with the case of an integrated manufacturer-distributor. The integrated firm will "charge itself" only the actual marginal cost of producing the good and will extract its market power only at the stage of selling to the final consumer. Consumers facing the double markup will buy less than when there is an integrated manufacturer-distributor. As a result, they are worse off.

Collectively, the manufacturer and wholesaler also earn less profit than they would if they were integrated. This foregone profit provides a strong incentive for the firms to merge to promote allocative efficiency and thereby increase their joint profits. If the integrated firm produces as efficiently as the separate firms, then integration makes both producers and consumers better off. Even if the integrated firm is somewhat less efficient than its constituent parts, the desirable effect of eliminating one of the markups may outweigh this negative effect. If a merger is impractical or barred for other reasons, a variety of vertical contracts may offer alternative means to mitigate allocative inefficiencies from the double markup. Vertical contracts can be structured by the manufacturer to induce its distributor not to restrict input further and thereby (at a fixed wholesale price) cut further into the manufacturer's own margin. Examples of vertical contracts that can promote this objective are maximum resale price maintenance, quantity forcing (placing a minimum sales quota on the distributor), and two-part pricing that sets the wholesale price equal to the manufacturer's marginal cost of production and then charges a lump sum franchise fee.

<u>Productive Efficiency</u>

A second efficiency concept is productive efficiency. Production is said to be efficient when all goods are produced at the minimum possible total cost. An equivalent way of phrasing the productive efficiency criterion is to say that there is no possible rearrangement or alternative organization of resources (such as labor, raw materials, and machinery) that could increase the output of one product without necessarily forcing a reduction in output for at least one other product. This restatement highlights the principle that firms' choices involve explicit trade-offs between competing demands for scarce resources.

Mergers (as well as joint ventures and other cooperative practices) hold the potential to increase productive efficiency in a number of ways, including by fostering economies of scale, economies of scope, and synergies. The first way that mergers can increase productive efficiency is to move firms closer to the optimal scale of production for their industry. Ascertaining the optimal scale for a firm can be done using a number of types of information, including comparisons of actual production costs for firms of different sizes, engineering estimates of probable production costs for enterprises of varying sizes, and comparisons of rates of return on investment. George Stigler pioneered a much simpler and economically more intuitive method, however, which he coined the "survivor principle."[182] Stigler's survivor principle is based on the simple intuition that active competition among firms for scare resources — both within an industry and across industries — inevitably will drive firms towards the optimal or efficient scale of operations. Under competition, inefficiently scaled firms will be driven from the market either by exit or by acquisition. Mergers play a very important role in this competitive process by reorganizing the ownership and use of economic resources among firms to achieve efficient productive scale. Combining the operations of two firms may reduce duplication, allow fixed expenditures to be spread across a larger base of output, permit firms to reorganize production lines across plant facilities to achieve longer production runs and reduce switch over costs, lower inventory holding costs, and more finely specialize the use of resources such as skilled labor. Each of these merger rationales can facilitate firms' efforts to reach an efficient scale.

Some economists and antitrust practicioners argue that antitrust agencies should, as a general practice, be skeptical of treating achievement of economies of scale as a merger-specific efficiency.[183]

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[182] George J. Stigler, *The Economies of Scale*, 1 J. LAW & ECON. 54 (1968).

[183] Joseph Farrell and Carl Shapiro, *Scale Economies and Synergies in Horizontal Merger Analysis*, 68 ANTITRUST LAW J. 685 (2001).

According to this view, firms generally can reach their efficient scale of production by purchasing additional inputs through market transactions or developing them internally (if the firm is sub-optimally small) or by shedding surplus inputs or machinery in secondary markets (if the firm is sub-optimally large). Because these unilateral changes in firm scale do not necessarily induce the exit of a direct competitor, they are sometimes thought to offer the same gains in productive efficiency without the risk of diminished competition attendant to a merger.

There are a number of practical reasons, however, why internal expansion (or contraction) sometimes may be a significantly costlier means than merger to increase a firm's productive efficiency.[184] First, mergers may hasten the speed with which firms can expand their scale to exploit economies of large scale production. Mergers may provide the acquiring firm with ready access to existing inventories or supply contracts for important inputs as well as access to additional plant capacity that can quickly be brought on-line. Second, adding new capacity in a market with static or declining demand may place sufficient downward pressure on price to make internal expansion unprofitable. In this situation, neither of the merging firms might be likely to expand its scale in the near future absent the merger. Third, the construction of new capacity may create social waste if duplicate resources at the acquired firm eventually wind up being scrapped when they are removed from competition rather than being merged into a single firm. When any of these conditions is present, mergers may be a privately or socially less costly means to reap economies of scale and enhance firms' productive efficiency.

A second way that mergers can increase productive efficiency is to enable firms to exploit economies of scope. Economies of scope are said to exist when it is cheaper to produce two or more products together rather than separately.[185] Economies of scope can be quite substantial. For example, one study of the economies of scope achieved by General Motors from combining its

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[184]William J. Kolasky, "*Lessons from Baby Food: The Role of Efficiencies in Merger Review*," ANTITRUST, Fall 2001, at 82-87.

[185]John C. Panzar and Robert D. Willig, *Economies of Scale in Multi-Output Production*, 91 QUARTERLY J. ECON.. 481 (1977).

production of large cars with small car and truck production estimated that the firm saves 25% in total operating costs relative to splitting the two operations.[186] There are many potential sources of economies of scope. One of the most common is the use of common raw inputs. For example, it is commonsensical that book publishers exploit economies of scope by producing both hardcover and soft-cover editions from the same manuscript, and that automobile companies exploit economies of scope by producing multiple car models that use many of the same input components. Another important factor contributing to economies of scope is technical knowledge about producing and selling related products. Information about one product may be directly relevant for other closely related products. For example, knowledge about how to market steel bars efficiently (such as knowing where customers are located and their purchase habits) could assist the firm in marketing steel sheets. Similarly, knowledge about the techniques to manufacture steel bars efficiently (such as knowing how to operate blast furnaces and where to obtain a reliable supply of pig iron) could make the manufacture of steel sheets more efficient. In these situations, it will tend to be more efficient for a single firm to produce and market both steel sheets and steel bars.

The principle of economies of scope, by itself, however, does not necessarily imply that the products should be produced by a *single* firm. In theory, economies of scope might be exploited by locating the related production lines sufficiently close to one another to facilitate exchange between separate firms. In practice, however, exploiting economies of scope frequently hinges on achieving transactional efficiencies made possible by having the related production lines brought under common management. Merger is one way to achieve this important nexus between productive and transactional efficiencies. To make this point more tangible, consider steel manufacturing as an example. Iron ore is first melted down into pig iron in a blast furnace; the molten pig iron is then processed in a steel-making furnace and turned into slabs or sheets of steel. It is conceivable that two separate firms, side by side, could specialize with one making pig iron and the other making steel, while a pipe would carry the molten pig iron between the two firms. These firms would be highly

[186] Ann F. Friedlaender, Clifford Winston, and Kung Wang, *Costs, Technology, and Productivity in the U.S. Automobile Industry*, 14 BELL JOURNAL OF ECONOMICS 1 (1983).

reliant upon one another, however, and the risk that either firm could exploit or "hold up" the other would introduce substantial transaction inefficiencies.[187] High transaction costs frequently explain why a firm typically will bring in-house all of the products for which substantial economies of scope exist.

A second illustration of how the achievement of productive efficiencies can hinge on achievement of transactional efficiencies is given by the example of economies of scope flowing from common production or marketing knowledge. In principle, knowledge could be bought and sold in the market, thus avoiding the necessity to house the production or marketing of (say) steel bars and steel sheets under the same corporate roof. In practice, however, market transactions of information can be highly costly, inefficient, and subject to opportunism. This observation may explain why a single firm often produces closely related products, and it identifies another important potential source of efficiencies from mergers.

A third way by which mergers can increase productive efficiency relates to synergies. Synergies are defined as cost savings (or quality improvements) that flow from the close or intimate integration of specific, hard-to-trade assets. Joe Farrell and Carl Shapiro have identified several examples of synergistic efficiencies.[188] One involves efforts to improve interoperability between complementary products. Suppose that one firm produces word processing software that is easy to use but has very limited graphics capabilities, while another firm produces a desktop publishing program that is powerful but difficult to use. Many consumers elect to use the word processor to quickly prepare text files which they then cut and paste into the desktop publisher for formatting. Differences in the programs' file formats and other incompatibilities, however, make this a second-best solution for consumers. By merging their operations, the two firms could synergistically improve the interoperability of their products by developing a seamless interface between the text and

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[187] The classic discussion of this problem is Benjamin Klein, Robert G. Crawford, and Armen A. Alchian, *Vertical Integration, Appropriable Rents and the Competitive Contracting Process*, 21 J. LAW & ECON 297 (1978).

[188]Farrell and Carl Shapiro, *op. cit*.

publishing software modules. A second source of synergies involves the sharing of complementary skills. One firm may have developed and perfected a superior approach to manufacturing a product while a rival may have built an extensive and well-organized distribution network. Some form of cooperation — whether a merger, joint venture, or licensing agreement — could allow the two firms to synergistically integrate their respective manufacturing and distribution skills to produce and sell their product more cheaply.

Dynamic Efficiency

A third efficiency concept is dynamic efficiency, which concerns itself with market processes that encourage innovation to lower costs and develop new and improved products. Whereas allocative and productive efficiency can be viewed as static criteria — holding society's technological know-how constant— a more dynamic view of efficiency examines the conditions under which technological know-how and the set of feasible products optimally can be expanded over time through means such as learning by doing, research and development, and entrepreneurial creativity. Static efficiency principles favor market equilibria characterized by short run cost minimization and zero profit conditions. The dynamic efficiency principle, most closely associated with Austrian economist Joseph Schumpeter,[189] instead suggests that the short run costs associated with allocative and productive inefficiencies stemming from market power can more than be offset by benefits from encouraging dynamic efficiencies through "creative destruction."

Schumpeter disputed the traditional view that perfect competition spurs invention while monopoly retards it. Schumpeter stressed the advantages enjoyed by larger firms to finance substantial research and development activities and to appropriate the benefits from their investment and learning across a larger scale of operations. At the same time, Schumpeter did not think that the comparative advantage of large firms in innovation would provide them with a secure or impregnable position in the market. Schumpeter believed that innovation was a continuous process and that no single firm would gain more than a transitory monopoly from invention in the face of a constant

[189] JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM, AND DEMOCRACY (1950).

supply of new ideas and innovations from its other large rivals. This continual competition would prevent markets from departing too far from the benchmarks of short run allocative and productive efficiency, while the pursuit of temporary monopoly positions would encourage firms to expand technological frontiers and push out new product boundaries that would allow society to achieve in the long run still greater allocative and productive efficiencies.

Embracing a Schumpeterian view of competition, economists Gary Roberts and Steve Salop have argued in favor of applying a dynamic framework for assessing claimed merger efficiencies.[190] According to Roberts and Salop,

> Efficiency improvements are not static, one-time-only events. Rather, they occur as part of a rich dynamic process in which efficiency improvements are introduced for private gain but then frequently stimulate competition that creates significant spill-over benefits for consumers. Mergers can speed the pace of technical progress and reduce prices by facilitating innovations that initiate technological diffusion and induce competitive innovations.[191]

Roberts and Salop have elaborated on the link between dynamic efficiency and competition:

> The dynamic framework provides a far more realistic account of the manner in which merger efficiencies increase competition. In particular, the dynamic framework recognizes that cost savings achieved by a newly merged entity generally will diffuse at least partially to competing firms over time. As this diffusion occurs, the aggregate cost savings multiply. The diffusion also should enhance competition and increase the likelihood that firms will improve consumer welfare by passing the cost savings on to

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[190]Gary L. Roberts and Steven C. Salop, *Efficiencies in Dynamic Merger Analysis*, 19 OFFPRINTS OF THE WORLD COMPETITION 5 (1996).

[191]*Id*. at 7-8.

consumers in the form of lower prices.[192]

Like allocative and productive efficiencies, achievement of dynamic efficiencies can be facilitated by antitrust and other public policies that permit efficient transactions in support of invention. To illustrate, dynamic efficiencies require the establishment of an incentive system to allow inventors to appropriate returns sufficient to make the inventive activity worthwhile. Establishing and protecting ownership rights to the fruits of inventive activity is thus essential. Harold Demsetz has pointed out that "the problem of defining ownership is precisely that of creating properly scaled legal barriers to entry."[193] Patent protection provides one type of scaled barrier that balances the appropriability of inventions to generate necessary returns to firms against the speed of diffusion of the benefits that consumers derive from invention. Likewise, antitrust policy seeks to determine appropriately scaled entry barriers, for example, by governing the conditions under which inventors can use non-compete provisions to restrain licensees from competing against them, or by assessing the circumstances under which research joint ventures that restrict competition among actual or potential rivals may be necessary to generate dynamic efficiencies.

<u>Transactional Efficiency</u>

The fourth and final category of efficiencies is labeled transactional efficiency. It is the broadest category of efficiencies, and as alluded to earlier, it frequently facilitates firms' efforts to achieve allocative, productive, and dynamic efficiencies. The basic insight offered by the school of thought known as "transaction cost economics" is that market participants design business practices, contracts, and organizational forms to minimize transaction costs and, in particular, to mitigate information costs and reduce their exposure to opportunistic behavior or "hold-ups."[194]

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[192] *Id.* at 7.

[193] Harold Demsetz, *Barriers to Entry*, 72 AM. ECON. REV. 47, 49 (1982).

[194] For a recent application of transaction cost principles to antitrust rules and analysis, see Paul L. Joskow, *Transaction Cost Economics, Antitrust Rules, and Remedies*, 18 J. LAW, ECON., & ORG. 95 (2002). A helpful exposition of the meanings and sources of transaction costs appears in Douglas W. Allen,

Oliver Williamson has argued that the critical dimensions of transactions are uncertainty, the frequency of recurrence, and the extent to which participants in market exchange make investments in transaction-specific assets.[195] Asset specificity creates the ability and the incentive for parties to engage in opportunistic behavior. Many business relationships require that one or both parties invest in an asset that is highly specialized to their transaction. An example of a transaction-specific investment would be the construction of a pipeline connecting an oil refinery to an isolated distribution terminal. Because the value of the asset is much higher in its intended use than in its next best alternative use, the parties are locked into their relationship to a significant degree. Neither buyers nor sellers can turn to alternative partners without incurring a substantial loss. By the same token, however, each party can take advantage of the other by attempting to obtain more favorable terms than had initially been bargained. Buyers can refuse to purchase unless the price is reduced, while sellers can refuse to deliver unless the price is increased. As a result, the value of the specialized asset over and above its next best alternative use can be appropriated by opportunistic behavior or hold-ups executed by one or both parties to the transaction.

The frequency that transactions recur also guides the selection of institutional arrangements for governing interactions between market participants. When transactions take place only infrequently, explicit contracts or close integration between companies will usually be unnecessary except in the presence of highly specialized assets. If transacting parties expect that they will maintain a continuing relationship, however, they may rely on implicit or explicit mechanisms such as long term contracts, performance bonds, and reputational sanctions to protect their returns from investments made in physical or human capital specialized to their transaction.

Finally, uncertainty or incomplete information about how the value of resources in their alternative uses may change over time affects how transactions can be efficiently structured.

What Are Transaction Costs?, 14 RES. IN LAW & ECON. 1 (1991).

[195]Oliver E. Williamson, *Transaction-Cost Economics: The Governance of Contractual Relations*, 22 J. LAW & ECON. 223 (1979).

Information is incomplete for the simple reason that it is not costless to generate and communicate. Rational consumers and producers will invest in becoming informed only up until the point where the marginal cost of information equals its marginal value. Because the marginal cost remains positive, it follows that the marginal benefit of information also is positive and hence rational economic actors remain incompletely informed. A corollary of this principle is that, in general, it will not pay market participants to fully insure themselves against risk by designing a complete set of contingent contracts. Instead, market participants will often rely on other methods such as those mentioned earlier, including reputation, repeat dealing, structured incentives, performance bonds, and third party (court) oversight in order to protect their specific investments.

Given uncertainty, the existence of transaction-specific investments, and varying frequencies of market interactions, parties will design contracts, create joint ventures, or propose mergers to minimize these transactions costs for any given level of economic activity. The pursuit of transactional efficiency explains why firms choose to consolidate some activities under common management and direction while leaving other activities to market-based transactions. Applying the concept of allocative efficiency to transactions, economic Nobel laureate Ronald Coase offered an early theory of merger activity when he wrote that "a firm will tend to expand until the costs of organizing an extra transaction within the firm become equal to the costs of carrying out the same transaction by means of an exchange on the open market or the costs of organising another firm."[196] Coase's simple yet powerful insight helps us understand why, as mentioned earlier, we frequently observe goods whose production exhibits economies of scope being produced by a merged firm rather than having firms attempt to capture scope economies through market transactions. The risk of opportunistic behavior in this setting raises the cost of market transactions relative to within-firm organization.

Transactional efficiency also helps explain a variety of other business practices and market structures. For example, firms that wish to cooperate on research projects may choose to form a joint venture — or in the limit, merger — rather than rely on arms-length transactions. Joint ventures and

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[196]Ronald H. Coase, *The Nature of the Firm*, 4 ECONOMICA 386, 395 (November 1937).

common ownership can help align firms' incentives and discourage shirking, free riding, and opportunistic behavior that can be very costly and difficult to police using arms-length transactions. The pursuit of transactional efficiency also can help explain why firms may adopt various vertical contracts such as exclusive territories and resale price maintenance to help mitigate free riding and principal-agent costs.[197] Lastly, the concept of transactional efficiency has been applied to analyze the market for corporate control in which the threat of hostile takeovers can lessen shareholders' costs of transacting with professional managers to ensure that they act in the interest of the company's shareholders.[198]

[197]See, for example, Benjamin Klein and Kevin M. Murphy, *Vertical Restraints as Contract Enforcement Mechanisms*, 31 J. LAW & ECON. 265 (1988) and G. Frank Mathewson and Ralph A. Winter, *An Economic Theory of Vertical Restraints*, 15 RAND J. ECON. 27 (1984).

[198]See, for example, Eugene F. Fama and Michael C. Jensen, *Agency Problems and Residual Claims*, 26 J. LAW & ECON. 327 (1983).