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Mobility Factors in Antitrust Cases: Assessing Market Power in Light of Conditions Affecting Entry and Fringe Expansion

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MOBILITY FACTORS IN ANTITRUST CASES: ASSESSING MARKET POWER IN LIGHT OF CONDITIONS AFFECTING ENTRY AND FRINGE EXPANSION

*William H. Wentz**

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Antitrust analysis in merger and monopolization cases is fundamentally a quest to determine whether a firm or a group of firms¹ has or may gain market power.² One important, indeed indispensable, aspect of that quest is assessing the competitive significance of fringe competitors and potential entrants in limiting the ability of the major incumbents to maintain prices above a competitive level. Conditions affecting entry have been a subject of great debate in the economic community. Virtually all economists agree, however, that a firm will have no meaningful degree of market power if fringe competitors can expand capacity promptly or new firms can enter the market quickly with no disadvantage.³ Conversely, even with a market share much smaller than that traditionally viewed as "monopolistic," a firm or group of firms may be able to maintain prices far above a competitive level if small incumbents and potential entrants face significant disadvantages.⁴

1. A group of firms engaged in explicit coordination or acting in an interdependent (oligopolistic) manner may have market power analogous to that of a single firm with their combined share of the market.

2. The term "market power" refers to the ability of a firm (or group of firms, acting jointly) to maintain price above a competitive level by restricting output. See R. POSNER, ANTITRUST LAW 8-10 (1976). In a perfectly competitive market, all firms will be compelled to sell at a price equal to the long-run marginal cost of production including a return on capital sufficient to attract the necessary capital investment. The greater the extent to which a firm can hold price above cost without losing most of its sales and the longer it can do so, the more substantial its market power. 2 P. AREEDA & D. TURNER, ANTITRUST LAW ¶ 501 (1978).

3. See, e.g., F. SCHERER, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 11, 252 (2d ed. 1980) ("sellers have little or no enduring power over price when entry barriers are nonexistent"); Landes & Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937, 948-50 (1981).

4. Landes & Posner, *supra* note 3, at 950-51. For a firm to have substantial market power, purchasers must also be unlikely to switch to substitutes except at prices significantly above cost.

These observations have extremely important implications for antitrust policy and litigation. Without a coherent framework for assessing the conditions that affect the ability of fringe competitors and potential entrants to limit the pricing or output flexibility of major incumbent firms — conditions that I will call “mobility factors”⁵ — there is a substantial risk of distorting the development and application of the antitrust laws. By placing undue reliance on market shares alone, the law may prohibit transactions and practices having virtually no prospect of enhancing market power while transactions and practices that have substantial anticompetitive effects are ignored. Indeed, in many instances, the failure of the courts and antitrust enforcement agencies to comprehend the competitive significance of “mobility factors” may already have produced just such a result.⁶

Even where significant market power is clearly present, consideration of the pertinent “mobility factors” is essential to determine

5. The term “mobility factors” encompasses all conditions that may affect the ability of actual or potential competitors to keep the dominant incumbents from maintaining price above a competitive level for some period of time. Such “factors” would include conditions that have traditionally been referred to as “entry barriers” in the economic and legal literature.

I use the term “mobility factors” instead because “entry barriers” has two unfortunate connotations. First, it implies that only conditions faced by new entrants are important when, in fact, those faced by fringe competitors or firms in other segments of an industry may often be more important in assessing the major incumbents’ market power. *See* Caves & Porter, *From Entry Barriers to Mobility Barriers: Conjectural Decisions and Contrived Deterrence to New Competition*, 91 Q.J. ECON. 241 (1977).

Second, the term “entry barriers” has often been used by courts and commentators to indicate conditions that should be targets of antitrust enforcement. Many conditions that confer market power on dominant incumbents, however, create or result from efficiencies. Attempting to eliminate those conditions would therefore be harmful to consumer welfare. *See* Part I-C *infra*.

6. The past failure of the courts and the Federal Trade Commission (FTC) to understand the competitive significance of “mobility factors” is exemplified by their drastically different approaches to market power in different types of merger cases. Repeatedly through the years the courts and the FTC have prohibited horizontal and vertical mergers involving small (sometimes tiny) increases in concentration or foreclosure in markets where the rapidity and ease of entry (or fringe expansion) precluded any meaningful degree of market power. *See, e.g.*, *United States v. Von’s Grocery Co.*, 384 U.S. 270, 281 (1966) (pre-merger market shares of 4.7% and 4.2% and four-firm concentration 24.4% in retail grocery market); *Brown Shoe v. United States*, 370 U.S. 294 (1962) (foreclosure of 2% or less in shoe manufacturing and retailing); *Stanley Works v. FTC*, 469 F.2d 498 (2d Cir. 1972), *cert. denied*, 412 U.S. 928 (1973) (pre-merger shares of 23% and 1% and four-firm concentration of about 50% in cabinet hardware market).

However, in potential competition cases, especially since *United States v. Marine Bancorporation, Inc.*, 418 U.S. 602 (1974), the courts have permitted mergers that portend an increase in the incumbent firms’ market power. Removal of one of the very few firms capable of entry into a highly concentrated market will tend to have the same effect as raising barriers to entry. *See* text at notes 77-78, *infra*. Unfortunately, the courts have failed to recognize that the more difficult entry would be for the firm most capable of entry, the more important that firm’s continued presence on the edge of the concentrated market is in limiting the incumbent firms’ market power. *See, e.g.*, *United States v. Siemens Corp.*, 621 F.2d 499 (2d Cir. 1980); *Raybestos-Manhattan, Inc. v. Hi-Shear Industries, Inc.*, 503 F. Supp. 1122 (E.D.N.Y. 1980).

what, if any, government intervention or judicial action is appropriate. That the market power arises because the dominant firm has efficiency advantages over fringe firms and potential entrants — such as lower costs, better quality, or a wider product line — may indicate that any attempt to reduce its market power will be detrimental to consumers. Whether such is the case or not depends on whether the actions by the dominant firm (or firms) that created or heightened the disadvantage were necessary to achieve or maintain efficiencies.⁷ (Of course, one should be particularly vigilant in such situations to assure that, whatever the source of their market power, the dominant firms do not take actions or establish mechanisms that facilitate collusion.) Likewise, the law should not stand in the way of mergers between disadvantaged competitors that enable them to achieve significant economies necessary to compete effectively with the dominant incumbents.⁸ Rational consideration of “mobility factors” is thus essential to assure that advantages resulting from efficiencies are not eliminated by government intervention, on the one hand, and that the advantaged firms have competitive incentives to pass on the benefits of such efficiencies to the consuming public, on the other.

While analysis of mobility factors is often critical in ascertaining the degree of market power and in determining the appropriate course for judicial action in structural cases,⁹ meaningful assessment

7. According to Bork, actions that disadvantage competitors should not be prohibited “unless deliberate predation can be proved.” R. BORK, *THE ANTITRUST PARADOX* 160 (1978). He argues that all other “exclusionary” actions relate to superior efficiency. *Id.* The fundamental problem with Bork’s formulation is not only that it appears to require proof of the alleged predator’s state of mind but it also assumes that he would recognize (or even consider) whether actions designed to obtain an advantage over competitors would or would not increase efficiency. A much more direct and realistic approach is to determine whether the conduct was *necessary* to achieve or maintain efficiencies. At one point, Bork appears to recognize this in noting that predatory intent could be demonstrated through “evidence that the conduct was not related to any apparent efficiency.” *Id.* at 157.

8. The increasing scholarly support for an “economies defense” in merger cases has tended to obscure the fact that many (perhaps most) mergers which enable the merging firms to achieve significantly greater efficiency are likely to increase competition, not reduce it. Merging firms that individually have a material disadvantage *vis-a-vis* the dominant incumbents are likely to be “price-followers.” Permitting them to overcome their disadvantage by merger promotes competition by increasing the number of firms that determine the market price. 4 P. AREEDA & D. TURNER, *supra* note 2, at ¶ 940; Edwards, Joffe, Kolasky, McGowan, Mendez-Penate, Ardover, Proger, Solomon & Toepke, *Proposed Revisions of the Justice Department’s Merger Guidelines*, 81 COLUM. L. REV. 1543, 1560-64 (1981) (hereinafter cited as “Edwards”).

9. With the exception of some horizontal merger cases, the determinative issues in all types of structural antitrust cases likely to be litigated relate primarily to mobility factors. *See* notes 68-92 *infra* and accompanying text.

The recently promulgated Merger Guidelines of the Department of Justice highlight the importance of entry conditions. Barriers to entry are the principal focus of inquiry under the Guidelines’ standards for potential competition and most vertical mergers. While understandably the threshold consideration regarding horizontal mergers is still market shares and concentration, both the Department and the Federal Trade Commission now indicate that “the

of mobility factors has historically been neglected in antitrust litigation. To be sure, much trial time is usually devoted to the development of evidence indicating how "difficult" it is to enter or compete and listing all the steps a new entrant must take to enter. But seldom is the evidence presented or analyzed in a manner that permits any assessment of the degree of pricing flexibility major incumbents enjoy or the extent of any efficiencies that may be involved.¹⁰ As a consequence, the courts and the Federal Trade Commission have generally considered entry conditions (or other mobility factors) only in the most superficial and confused manner, usually to buttress decisions made primarily on the basis of market share data.¹¹ This experience — as well as the ongoing debate in the economic community over entry barriers — has led distinguished commentators of very different persuasions to advocate that mobility factors be largely ignored in antitrust litigation.¹² While they all recognize that such factors are important,¹³ these commentators fear that judicial consideration of conditions affecting entry or expansion may lead either to the reduction of efficiencies or to the further complication of already complex litigation.

That proposals to disregard mobility factors in litigation are being advanced now — when there is increased recognition that mobil-

issue of entry barriers is perhaps the most important" non-quantitative factor. U.S. Department of Justice Merger Guidelines 21-22 (June 14, 1982)(copy on file with the *Michigan Law Review*); Statement of Federal Trade Commission Concerning Horizontal Mergers 5 (June 14, 1982)(copy on file with the *Michigan Law Review*).

10. That many firms would have to devote considerable time, effort, and capital to enter a market on an efficient scale (and that some firms may face great difficulties) does not necessarily mean that incumbents can raise prices above a competitive level. As explained in Part II-B, *infra*, incumbent firms will only be able to maintain price above lowest attainable cost — that is, have pricing flexibility — where the firms most capable of entry would have higher unit costs than the dominant incumbents and considerable time would be required to enter and erode that cost disadvantage. See R. POSNER, *supra* note 2, at 59.

11. 4 P. AREEDA & D. TURNER, *supra* note 2, at ¶ 917c. See Part I-B-1, *infra*.

12. Areeda and Turner contend that entry barriers should not be directly considered in horizontal and vertical merger cases. The sole evidence they would allow concerning the ease (or difficulty) of entry would be that showing the extent of recent entry — an extremely unreliable indicator of the degree of market power (see text at note 73 *infra*). *Id.* at ¶¶ 907c, 917, 1015.

Bork and Posner would also severely limit judicial consideration of mobility factors both because they consider them "an intractable subject of litigation" and because the courts have often viewed efficiency-related mobility factors as anticompetitive entry barriers. See R. BORK, *supra* note 7, at 195-96, 310-29; R. POSNER, *supra* note 2, at 112, 122-23.

13. "Substantial market power can persist only if there are significant and continuing barriers to entry." 2 P. AREEDA & D. TURNER, *supra* note 2, at ¶ 505. And, while Posner views examination of mobility factors as impractical, his recent article (co-authored with Landes) demonstrates that ascertaining the ability of new firms to enter a market is critical in assessing market power. Landes & Posner, *supra* note 3, at 950. He and Bork also criticize merger decisions that ignore ease of entry. See R. POSNER, *supra* note 2, at 106; R. BORK, *supra* note 7, at 212.

ity factors must be analyzed to assess the extent of market power and to evaluate efficiency considerations in antitrust cases — indicates the substantial conflict inherent in current approaches to antitrust analysis. As discussed in Part I of this Article, that conflict results from the basic misconceptions courts and antitrust enforcement agencies have had about “entry barriers” and the absence of a logical, economically-sound framework for evaluating mobility factors in antitrust litigation. The problem is compounded by the common perception that the information necessary to assess the competitive significance of any purported mobility factor is usually difficult, if not impossible, to obtain. The fact is that a mobility factor which causes a significant disadvantage or delay is not an economic abstraction of little importance to businessmen. Indeed, it is usually something that firms in the market and those considering entry, as well as businesses in related industries, have had to examine closely in making major investment decisions. If anything, then, the competitive effects of mobility factors should be at least as ascertainable as the bounds of the market and the potential for coordination,¹⁴ the issues which are usually determinative in structural cases.

To assist courts and litigants in developing and utilizing information on mobility factors in a meaningful manner, I have attempted in this Article to outline a basic approach for analyzing the competitive and efficiency significance of mobility factors in a litigative context. In Part I, I lay the necessary foundation: discussing the importance of mobility factors in accepted economic theory, explaining the sources of the current confusion and controversy about “entry barriers” and deriving from the debate areas of fundamental agreement among economists. Building on this common ground, I develop in

14. The bounds of a market are often elusive because they are rarely capable of any clear demarcation. Almost inevitably some firms outside the market will be able to compete for some customers. Firms within the market will seldom be equally competitive with each other and different firms (within and without the market) will usually have different competitive ranks, advantages, and disadvantages. Markovits, *Predicting the Competitive Impact of Horizontal Mergers in a Monopolistically Competitive World: A Non-Market-Oriented Proposal and Critique of the Market Definition-Market Share-Market Concentration Approach*, 56 TEXAS L. REV. 587, 727 (1978). Indeed, some have suggested use of two or three alternative market definitions to limit the arbitrariness inherent in assessing competition from the perspective of a single market. L. SULLIVAN, HANDBOOK OF THE LAW OF ANTITRUST § 12 at 42-43 (1977).

Similarly, the potential for a given level of concentration to facilitate overt or tacit collusion is extremely unclear. “While there is some support [in the economic community] for the proposition that mergers involving firms with very large market shares harm competition and mergers involving firms with very small market shares do not, there is a vast sea of ambiguity in between.” Edwards, *supra* note 8, at 1551. Indeed, it is likely that a number of factors in addition to market concentration affect the potential for inter-firm coordination, including the ability of fringe competitors to expand and of potential entrants to enter rapidly. See R. POSNER, *supra* note 2, at 55-61 (“[N]o responsible economist would claim today that concentration was the *only* factor predisposing a market to collusion.” *Id.* at 56).

Part II a basic approach to consideration of mobility factors in structural cases. Examining current legal standards applicable to monopolization and merger cases, I demonstrate that, in most types of structural cases, the issues that should be determinative relate primarily, if not exclusively, to mobility factors. Then, bringing together the basic insights of the two major schools of economic thought,¹⁵ I construct a simplified framework for ascertaining the competitive significance of individual mobility factors. By focusing attention on determining which of three possible effects a mobility factor may have, the analytical framework should assist courts and litigants in addressing the crucial issues: *how* a particular mobility factor enables major incumbents to maintain prices above a competitive level and to *what extent* it enables them to do so. Part III explains how mobility factor analysis can be used in litigation to develop rough estimates of the degree and duration of market power as well as estimates of the increased efficiencies that may result from a merger. Part III also demonstrates that, by using a disciplined approach to mobility factor analysis from the pre-trial stage, courts can better manage and streamline litigation.

I. PERSPECTIVES ON THE ROLE OF MOBILITY FACTORS IN ANTITRUST ANALYSIS

A. *Economic Theory: Mobility Factors Essential in Assessing Market Power*

Broadly accepted tenets of mainstream microeconomic theory establish the importance of mobility factors in assessing market power. A firm or a group of firms acting jointly can maintain a significant and persistent deviation of price from cost only where three conditions exist together: (1) purchasers cannot readily switch to substitutes as prices rise; (2) actual competitors are unlikely to respond promptly to higher prices by increasing their output; and (3) the firms best situated to enter the market are not likely to enter until incumbents raise price substantially above cost. None of these preconditions for market power, of course, is absolute. Given a sufficiently high price and an adequate period of time, purchasers will switch to substitutes,¹⁶ potential entrants will enter the market and

15. The foundations of the so-called "Chicago" and "Harvard" schools of economic and antitrust thought — as well as their basic differences — are described in Posner, *The Chicago School of Antitrust Analysis*, 127 U. PA. L. REV. 925 (1979).

16. The responsiveness of quantity demanded to a change in price is termed "elasticity of demand." *Firm* elasticity of demand refers to the impact of a price change on an individual firm's demand. *Market* elasticity of demand refers to the impact of a price change on the total quantity demanded from all firms in the market. Landes & Posner, *supra* note 3, at 940 n.8.

actual competitors (even those previously colluding with the dominant incumbents) will find it profitable to increase output.¹⁷ Consequently, in assessing the incumbent firms' freedom to restrict output and thereby raise price, one must consider the temporal and quantitative dimensions of each condition: what price will prompt, and how long it will take for, purchasers to shift, new sellers to enter, or rivals to expand production.¹⁸

Although the restraint on the major incumbents' market power resulting from the ability of others to increase output is often discussed in terms of "entry barriers,"¹⁹ the distinction between actual competitors on the fringe of the market and potential entrants may often be immaterial in evaluating the market power of the dominant incumbents.²⁰ As Posner and Scherer have observed, it is the actual or threatened increase in market supply that compels the established firms to price competitively. Whether the increased output results from expansion by a firm already producing the commodity or from a new entrant's commencement of production makes virtually no difference.²¹ Moreover, where fringe firms cannot expand production promptly or face significant disadvantages vis-a-vis the major incumbents, these difficulties usually result from the very factors that inhibit the ability of firms outside the market to enter and compete on a profitable basis.²² Consequently, as Scherer observed,

17. The responsiveness of the quantity supplied to a change in price is termed "elasticity of supply." *Id.* at 944 n.17.

18. The most immediate check on a firm attempting to raise price by restricting supply is usually the ability of existing competitors to increase output using productive facilities already in place. Consequently, measuring market shares in terms of capacity (at least that which can be used without increasing per unit cost) may often provide a better indicator of a firm's ability to charge supracompetitive prices than computing market shares in terms of sales. *Id.* at 949-50.

19. See, e.g., 2 P. AREEDA & D. TURNER, *supra* note 2, at ¶ 409; J. BAIN, *INDUSTRIAL ORGANIZATION* 27, 251-301 (2d ed. 1968).

20. Traditional entry theory assumes that all incumbent firms in an industry are identical in all economically important respects except for size. As Caves and Porter have recognized, however, that may often not be the case. Within an industry there may be various groups of firms, each group having somewhat different structural characteristics. Firms in each group may face "barriers" to mobility into other groups; different groups may have varying degrees of protection from totally new entry. Caves & Porter, *supra* note 5, at 249-57.

The importance of considering factors that limit mobility or expansion of non-dominant firms in a market ("fringe competitors") is indicated by the studies showing persistent differences in profit rates between firms with large market shares and those having small market shares in the same industry. *Id.* at 252; Demsetz, *Two Systems of Belief About Monopoly in INDUSTRIAL CONCENTRATION: THE NEW LEARNING* 164, 177-80 (H. Goldschmid, H. Mann & J. Weston, eds., 1974); Demsetz, *Industry Structure, Market Rivalry, and Public Policy*, 16 J.L. & ECON. 1 (1973).

21. F. SCHERER, *supra* note 3, at 252; R. POSNER, *supra* note 2, at 92.

22. "[B]arriers to mobility between groups [of incumbent firms] rest on the same structural features as barriers to entry into any group from outside the industry." Caves & Porter, *supra* note 5, at 250 (emphasis in original).^v

"[s]erious and persistent monopolistic deviations of price from cost are likely only when there are substantial barriers to the entry of new competition and the expansion of fringe rivals."²³

While most antitrust treatises recognize that market power depends on some inhibition to new entry, few acknowledge the functional relationship between mobility factors and the market share of the dominant firms. In this respect, the recent article by Landes and Posner is especially informative.²⁴ It demonstrates — on the basis of well-accepted economic theory — that ascertaining both the presence and the degree of market power enjoyed by the dominant firms requires not only a consideration of their market share but also the market elasticity of demand and the supply elasticity of fringe competitors and potential entrants. In part, the Landes-Posner discussion reinforces the notion that the prerequisites for market power include low market elasticities of demand and supply. For example, a firm with even 80% of the market will have little or no market power in situations where either many fringe competitors can rapidly and substantially increase output without a significant unit cost disadvantage *or* customers will switch to other products at prices slightly above a competitive level.²⁵

Posner and Landes also show, using the following example, that a firm need not have a very large market share to possess market power. Assume a market includes a firm having 40% of the sales, that the market demand is highly inelastic (0.5 elasticity factor), that other firms in the market are price-takers and that elasticity of supply is low (0.5). In that situation, the inability of fringe competitors or potential entrants to check the major incumbent's pricing flexibility would enable it to charge a price double the competitive level — *despite having only a 40% share of the market*.²⁶ With a comparable market share, a group of smaller firms acting in a tight cartel or oligopolistic manner theoretically could attain the same level of supracompetitive pricing. Their ability to approach such a price

23. F. SCHERER, *supra* note 3, at 252.

24. Landes & Posner, *supra* note 3.

25. *Id.* at 947-50. This is not to imply that the firm's market share does not affect its ability to raise and maintain price above cost. The larger the firm's market share, the greater the percentage increase in market price for any given percentage reduction in its output. Similarly, the smaller the market share of fringe competitors, the greater the percentage increase in output by fringe firms necessary to counteract the dominant firm's reduction in production. Consequently, it is easier and less costly for a firm with a large market share to command a supracompetitive price than for a firm with a small market share. *Id.* at 946-47.

26. *Id.* at 951. One should recognize that, while such a price level may be possible, buyers would have such a strong incentive to switch and potential entrants such a great incentive to enter that market elasticities of demand and supply would probably increase rapidly.

level depends on the degree to which they can effectively enforce their agreement or understanding.²⁷

The functional relationship between market share, market elasticity of demand and supply elasticity of fringe competitors, and potential entrants has enormously important implications for antitrust analysis and policy. Unless market elasticities of demand and supply become a key focus of analysis in antitrust litigation, the courts will run a substantial risk of seriously misapprehending the competitive significance of the transaction or practices under review. Unfortunately, as Landes and Posner readily acknowledge, direct estimates of either market demand or supply elasticity are seldom obtainable in a form capable of use in litigation.²⁸ Consequently, analysts must devise indirect means of estimating these two elasticities.

Generally speaking, consideration of the extent to which consumers view different products as substitutes should provide a reasonable, although approximate, indication of the market elasticity of demand. In fact, the courts traditionally employ this basic approach in defining the relevant product market. They essentially seek to determine what other products are "reasonably interchangeable" for consumers and whether consumers will switch to or from such substitutes with modest relative changes in price.²⁹

What may be more difficult to estimate — and certainly provokes considerably greater controversy — is elasticity of supply of fringe competitors and potential entrants. Except in peculiar situations and special markets,³⁰ it would appear that any attempt to estimate elasticity of supply must consider factors that Bain and others have categorized as "barriers to entry." Indeed, if anything, the concept of supply elasticity may extend even further, theoretically encompassing all factors that may affect the ability of fringe competitors to ex-

27. *Id.* at 951-52.

28. *Id.* at 956, 979, 983.

29. "The outer bounds of a product market are determined by the reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it." *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962).

At least in monopolization cases, cross-elasticity of demand cannot be rationally determined without some examination of the relationship between price and cost. That cross-elasticity of demand may be high at the current market price would indicate that the alleged monopolist actually is exercising substantial market power if the price is materially above cost. On the other hand, the monopolist would have little market power if demand cross-elasticity were high at prices close to cost. L. SULLIVAN, *supra* note 14, ¶ 16 at 55-58; Turner, *Antitrust Policy and the Cellophane Case*, 70 HARV. L. REV. 281, 302, 309 (1956).

30. Direct measurement of supply elasticity may be possible, for example, where a government price freeze is lifted or in agricultural markets with fluctuating price levels. In those situations, the amount of increased output could be directly correlated with the rise in price.

pand and potential entrants to enter promptly if the dominant firms reduce output in order to raise prices above a competitive level. Developing even approximate estimates of supply elasticity requires consideration of the unit cost disadvantages faced by the fringe competitors and potential entrants best situated to expand or enter, as well as the time required for them to do so.³¹ This inquiry constitutes the essence of entry barrier analysis, or, in a slightly expanded form, the evaluation of mobility factors.

B. *Mobility Factors: Sources of Confusion and Controversy*

That Posner and Landes, who are so closely aligned with the Chicago school of economics, should be emphasizing the importance of assessing "entry barriers" in structural antitrust cases serves to highlight the controversy and confusion that surround the role of mobility factors in antitrust analysis today. Posner, Bork, and their fellow Chicagoans have been the strongest advocates of limiting consideration of "entry barriers" in antitrust analysis and litigation. And, to compound the irony, such distinguished representatives of the Harvard school as Areeda and Turner are espousing a similar view.

If consideration of the conditions affecting entry and fringe expansion is so widely regarded as essential in assessing market power, why are such respected scholars now urging that the courts largely avoid inquiry into those conditions in antitrust litigation? To understand why antitrust law is in this paradoxical situation, one must appreciate the traditional legal view of entry barriers developed by the courts as well as the confusion engendered by the debate in the economic community about what factors should be deemed "entry barriers." In effect, the failure of the courts to understand the significance of mobility factors, compounded by the lack of a universally accepted economic framework for analyzing entry conditions, has resulted in a situation where, many believe, examination of mobility factors in structural cases will only serve to confuse and complicate already complex litigation.

1. *The Traditional Perspective of the Courts*

Despite the fact that economic theory accords great significance to elasticity of supply in assessing market power, the courts and the antitrust enforcement agencies have been slow to recognize its importance. In the 1960's, the Supreme Court's major decisions in hor-

31. See text at notes 95-113 *infra*.

horizontal and vertical merger cases often completely ignored entry conditions, placing almost total reliance on market shares and concentration ratios even when ease of entry clearly limited the incumbent firms' market power.³² Likewise, the merger guidelines developed by the Justice Department³³ and the decisions of the Federal Trade Commission³⁴ reflected the view that entry conditions were largely immaterial.

Through the 1970's this perspective changed somewhat as the courts and enforcement agencies at least discussed, and evaluated evidence on, entry conditions. The courts and the FTC began to consider cross-elasticity of supply as well as cross-elasticity of demand in determining the relevant market.³⁵ Vertical and horizontal merger cases that previously had been decided strictly on market shares began to take on potential competition dimensions. And, at least until 1974, the popularity of the potential competition theory itself prompted courts to consider more fully the ease or difficulty of entry.

Despite some change in perspective, conditions affecting entry and fringe expansion have continued to be clearly subordinate factors in most structural cases. In all but a very few merger cases, entry barriers, if considered at all, have been discussed to buttress conclusions reached on the basis of other factors, primarily market shares and concentration ratios.³⁶ The superficial and result-ori-

32. Obvious examples include the Supreme Court's landmark decisions in *United States v. Von's Grocery Co.*, 384 U.S. 270 (1966), and *Brown Shoe Co. v. United States*, 370 U.S. 294 (1962). The majority's opinion in *Von's* lacked even a word about entry barriers despite Mr. Justice Stewart's remarks in the dissent chiding his brethren for ignoring the ease of entry into grocery retailing and the large number of prospective entrants. 384 U.S. at 300. Similarly, in *Brown Shoe*, Mr. Chief Justice Warren acknowledged the importance of entry conditions in merger analysis, 370 U.S. at 322, but then failed to examine the conditions affecting entry into shoe retailing.

33. The Merger Guidelines promulgated by the Department of Justice in 1968 at least mentioned entry barriers but, except for vertical mergers, the actual standards proposed relied heavily on market share and concentration data to the virtual exclusion of entry barriers. Indeed, barriers to entry were not reflected at all in the standards applicable to horizontal mergers. Department of Justice Merger Guidelines, 1 TRADE REG. REP. (CCH) ¶ 4510.

34. See, e.g., *American Brake Shoe Co.*, 73 F.T.C. 610, 684 (1968), *enforced*, 420 F.2d 928 (6th Cir.), *cert. denied*, 400 U.S. 865 (1970); *Ekco Products Co.*, 65 F.T.C. 1163, 1206-09 (1964), *aff'd.*, 347 F.2d 745 (7th Cir. 1965) ("where the merger's effects on competition are those proscribed by Section 7, its illegality cannot be overcome by a showing of ease of entry.").

35. Beginning in the mid-1970's, both the courts and the FTC "focused upon production flexibility as an important factor, generally finding products to be in the same market or sub-market where companies can readily switch their production capabilities from one product to another." ANTITRUST DEVELOPMENTS 68 n.22a (3d Supp. 1981); see, e.g., *Twin City Sportservice, Inc. v. Charles O. Finley & Co.*, 512 F.2d 1264 (9th Cir. 1975); *Budd Co.*, 86 F.T.C. 518 (1975).

36. 4 P. AREEDA & D. TURNER, *supra* note 2, ¶ 917c at 88-89; Disner, *Barrier Analysis in Antitrust Law*, 58 CORNELL L. REV. 862, 889 (1973) (barrier analysis has been used "almost

ented nature of much of this barrier analysis is indicated by the virtual unanimity among the decisions in finding the barriers to be "high."³⁷ Until recently,³⁸ the few notable exceptions were generally cases which did not require meaningful analysis because entry was clearly easy.³⁹ Some potential competition merger decisions purport

exclusively to buttress proof of violation."'). Some of the more obvious examples where the courts and the FTC have stretched the available evidence concerning entry conditions to support a decision made on market shares include: *United States v. Mrs. Smith's Pie Co.*, 440 F. Supp. 220 (E.D. Pa. 1976)(frozen dessert pie market); *United States v. Blue Bell, Inc.*, 395 F. Supp. 538 (M.D. Tenn. 1975)(supply of industrial garments to unaffiliated rental laundries); *Reichhold Chemicals, Inc.*, 91 F.T.C. 246, 274-75, 288-89 (1980)(although only small capital or promotional expenditures required and technology readily obtainable, lack of much recent entry combined with the large market shares and vertical integration of dominant firms indicated that entry is not easy). See also *Fruehauf Corp.*, 91 F.T.C. 132, 221 (1978), *enforcement denied on other grounds*, 603 F.2d 345 (2d Cir. 1979)("no matter what the extent of barriers to entry into a highly concentrated industry, a merger between a major customer and a major supplier may restrain competition").

37. "Most of the cases mentioning entry barriers have characterized them as 'high' and then used that fact to buttress their condemnation of a merger." 4 P. AREEDA & D. TURNER, *supra* note 2, ¶ 917c at 88-89, citing review of cases in *id.* at ¶ 909 a-b.

38. A few recent decisions indicate an increased awareness of the importance of mobility factors in assessing the degree of market power and the competitive implications of a merger. In affirming the district court's preliminary injunction in *Marathon Oil Co. v. Mobil Corp.*, the Sixth Circuit, in fact, examined all the principal indicia of market power. It cited evidence indicating that market elasticity of demand was low (demand for gasoline had declined only moderately with ten-fold increase in price), that barriers to entry into petroleum refining were "high" (\$1 billion required to build refinery with substantial additional investment and risk involved in exploration), and that major firms in a geographical region often had some apparent power over price (persistent variations in price among various regions of the country). Most notable is the fact that the court gave much less apparent weight to concentration ratios than is typical, emphasizing the great market power attributable to low elasticities of market demand and supply as well as the opportunity for collusion arising from the many joint arrangements and operations in the oil industry. *Marathon Oil Co. v. Mobil Corp.*, 669 F.2d 378 (6th Cir. 1981), *cert. denied*, 50 U.S.L.W. 3670 (1982).

Six months previously, a federal district court had denied the FTC's request to enjoin a horizontal merger, resting the denial principally on an analysis of mobility factors. *FTC v. Great Lakes Chemical Corp.*, 528 F. Supp. 84 (N.D. Ill. 1981). The FTC had claimed that the merger would lessen competition in two markets: brominated flame retardant and elemental bromine. In the flame retardant market, the court found that outside firms could enter easily with no cost disadvantage. Indeed, one had entered with a \$50,000 capital investment, several other firms had entered in the previous 5 years and, with the added capacity, prices had dropped substantially. In the elemental bromine market, the court found that the incumbent firms had no power to raise price above cost even though there were only five domestic producers (reduced to four by the merger). Having lost two of the principal markets for bromine, the industry had tremendous excess capacity which was projected to continue until the year 2000. Moreover, several other identified firms had access to the natural resources and technology required to enter and had not done so because of the low return on investment. See also *The Pillsbury Co.*, 93 F.T.C. 966, 1039-40 (1979)(where market shares fell "in the gray area at the edge of potential illegality under the Department of Justice guidelines," merger was permitted because barriers to entry were "moderate to low").

39. See *United States v. Healthco, Inc.*, 387 F. Supp. 258, 272-73 (S.D.N.Y.), *affd. mem.*, 535 F.2d 1243 (2d Cir. 1975)(dental sundries market where mail order firms could enter easily); *United States v. Crowell, Collier and MacMillan, Inc.*, 361 F. Supp. 983 (S.D.N.Y. 1973)(band uniforms); *Beatrice Foods Co. (Sexton)*, 81 F.T.C. 517 (1972)(institutional grocery distributor market); *United States v. Tidewater Marine Service*, 284 F. Supp. 324, 339 (E.D. La. 1968) (supply and utility boat chartering). Cf. *United States v. Tracinda Inv. Corp.*, 477 F.

to conduct an extensive barrier analysis. But, even in those cases, the assessment of entry conditions has tended to reflect less an appreciation of the real competitive significance of entry barriers than an attempt to satisfy the Supreme Court's ill-conceived standards which themselves are based on fundamental misconceptions about the competitive significance of supply elasticity.⁴⁰

Hopefully, the increased emphasis on entry conditions in some recent cases⁴¹ and, particularly, in the new Justice Department and FTC Merger Guidelines⁴² heralds a shift in the importance accorded entry barriers in structural antitrust cases. Meaningful analysis of entry conditions in litigation, however, will not occur unless the courts and antitrust enforcement agencies recognize the basic reason for considering entry barriers and attempt to develop an economically sound approach for evaluating their competitive significance.

Past decisions reflect a fundamental misunderstanding of the real objective of barrier analysis: to determine the degree to which dominant incumbents can restrict output and thereby raise prices without inducing new entry. The mistaken notion that every step a new entrant must take to enter a market amounts to a substantial entry barrier pervades many court and FTC opinions.⁴³ As a consequence, the decisions — while often purporting to apply Bain's basic methodology for assessing entry barriers — actually have distorted it into

Supp. 1093 (C.D. Cal. 1979) (motion picture production); *United States v. Consolidated Foods Corp.*, 455 F. Supp. 108 (E.D. Pa. 1978) (frozen dessert pies).

40. Any competitive injury resulting from the removal of a potential entrant is due simply to a reduction in elasticity of supply. Landes & Posner, *supra* note 3, at 972. That is, incumbents have greater freedom to raise price above cost without prompting entry. Unfortunately, what should be a relatively limited and straightforward analysis of entry barriers has become increasingly complicated since the Supreme Court's enunciation of a series of arbitrary standards in *United States v. Marine Bancorporation, Inc.*, 418 U.S. 602 (1974). See notes 77-86 *infra* and accompanying text.

41. See note 38 *supra*.

42. In contrast to the 1968 Merger Guidelines, the new Merger Guidelines of the Department of Justice and the FTC evidence a recognition of the importance of entry conditions in assessing market power. Both agencies indicate that, where entry into a market is easy, they are "unlikely to challenge mergers in that market" but "where entry is unusually difficult" they are "more likely" to bring suit. U.S. Department of Justice Merger Guidelines 21-22 (June 14, 1982) (copy on file with the *Michigan Law Review*); Statement of Federal Trade Commission Concerning Horizontal Mergers 5 (June 15, 1982) (copy on file with the *Michigan Law Review*).

43. For example, in *United States v. Phillipsburg Natl. Bank & Trust Co.*, 399 U.S. 350, 368 (1970), the Supreme Court cited New Jersey banking regulations as a significant entry barrier when, as the lower court found, a small group of businessmen could raise sufficient capital and readily obtain regulatory approval to start a bank. See *United States v. Phillipsburg Natl. Bank & Trust Co.*, 306 F. Supp. 645, 659 (D.N.J. 1969), *rev'd*, 399 U.S. 350 (1970).

Similarly, in *Stanley Works*, the FTC found a significant entry barrier because \$600,000 would be necessary for suppliers of other hardware products to expand into the cabinet hardware market. The fact that \$50-60,000 was required to promote a new product line and \$70,000 was spent annually by Stanley on hardware promotions was also considered a meaningful impediment to entry. *The Stanley Works*, 78 F.T.C. 1023, 1065-66 (1971), *aff'd*, 469 F.2d 498 (2d Cir. 1972), *cert. denied*, 412 U.S. 928 (1973).

a "laundry list" approach to barrier analysis. The number of hurdles a new entrant must overcome and the amount of money it must spend have become important in the abstract, even though the alleged impediments and costs may have little impact on the incumbents' pricing flexibility and, indeed, may have no effect at all on the firms best situated to enter.⁴⁴

The courts and the FTC have repeatedly found barriers to be "high" when entry for a totally new business entity would require the investment of a few million (sometimes a few hundred thousand) dollars in plant and equipment, where some economies of scale existed or some modest advertising was necessary.⁴⁵ In many cases, the barrier — even if substantial for a new business entity — would probably be inconsequential for the most obvious potential entrants.⁴⁶ Notably, except for potential competition cases, most decisions totally fail to determine whether the capital requirements or other factors identified as barriers would have any effect at all on the potential entrants in the best position to enter, as opposed to a newly created firm.⁴⁷ Virtually nowhere have the courts or the FTC endeavored to estimate — even roughly — the extent to which such barriers permit dominant incumbents to hold price above a competitive level.⁴⁸

Yet, the very objective of Bain's analytical approach is to determine the degree of the major incumbents' pricing flexibility.⁴⁹ Absent some indication of *how* a particular entry barrier affects the most advantaged potential entrants and fringe competitors, and *how much* it enables major incumbents to deviate from competitive behavior, examination of entry barriers is of very limited value.

44. The "laundry list" approach creates obvious incentives for litigants to devote a substantial amount of the trial to developing a superficial evidentiary record concerning a broad range of possible "entry barriers" rather than building the record necessary for the court to evaluate the competitive significance of the barriers that really may be important.

45. See Disner, *supra* note 36, at 884-900.

46. See, e.g., *Fruehauf Corp. v. FTC*, 603 F.2d 345, 357, 361 (2d Cir. 1979) (although the court found \$10-20 million to be a substantial entry barrier, it recognized that the major purchasers of heavy wheels would enter themselves or finance entry by others were they all dissatisfied with existing competition); cases cited in note 36 *supra*.

47. The competitive significance of disadvantages facing fringe competitors — as opposed to new entrants — has almost never been considered by the courts or the FTC although fringe incumbents may be more important in limiting the dominant firms' market power. Two potential competition merger cases, however, have analyzed a small incumbent as a potential entrant. *Heublein, Inc.*, 96 F.T.C. 385, 583-92 (1980); *The Bendix Corp.*, 77 F.T.C. 731, 809 (1970), *rev'd. and remanded on other grounds*, 450 F.2d 534 (6th Cir. 1971).

48. *But see* *E.I. DuPont de Nemours & Co.*, 96 F.T.C. 653, 707 (1980) (duPont's ilemnite chloride process enabled it to produce titanium dioxide at 16 cents/lb. compared to its competitors' cost of 21 cents/lb.).

49. J. BAIN, *BARRIERS TO NEW COMPETITION* 3, 170-71 (1956).

2. *The Economic Debate*

The confusion about the concept of "entry barriers" arising from the courts' misconceptions was compounded further as the result of the vigorous debate in the late 1960's and 1970's over proposals to break large corporations in concentrated markets into smaller units.⁵⁰ Those associating themselves with the Harvard school of economics contended that the numerous studies finding a high correlation between concentration and profitability demonstrated that the leading firms in very concentrated markets were engaging in conscious parallelism which enabled them to earn supracompetitive profits. To remedy the perceived welfare loss, many aligned with the Harvard school advocated a policy of deconcentration. Those opposing deconcentration, however, asked how high rates of return could persist without attracting new entrants who would increase output and thereby force prices and profits downward.

The answer of the Harvard school — that "barriers to entry" such as those identified by Bain inhibited the erosion of dominant incumbents' market power in a large number of highly concentrated markets — provoked a vigorous and often polemical response by leading Chicagoans. Most of the alleged "entry barriers" relied on by those advocating deconcentration, they argued, reflected either the nature of the task to be performed or the greater efficiency of the dominant firms. For example, while economies of scale and large capital requirements — two categories of entry barriers cited by Bain — impeded new entry, interfering with the market structure to reduce those "barriers" would merely sacrifice economic performance to gain ease of entry.⁵¹ Similarly, the Chicago school contended that physical product differentiation and advertising lead to market power only when sellers successfully respond to consumer demand. Since offering products that people want more is as much a form of efficiency as cutting costs (even if the products demanded are more expensive than others), supracompetitive profits based on product differentiation and advertising likewise do not warrant government intervention or divestiture.⁵²

50. See Posner, *supra* note 15, at 944-48 (capsulizing the debate) and INDUSTRIAL CONCENTRATION: THE NEW LEARNING (H. Goldschmid, H. Mann & J. Weston eds. 1974) (for an expanded view) (hereinafter cited as INDUSTRIAL CONCENTRATION).

51. See R. BORK, *supra* note 7, at 195-96, 311, 320-24; R. POSNER, *supra* note 2 at 92; McGee, *Efficiency and Economies of Scale* in INDUSTRIAL CONCENTRATION, *supra* note 50 at 55; Demsetz, *Two Systems of Belief About Monopoly*, in INDUSTRIAL CONCENTRATION, *supra* note 50 at 173.

52. R. BORK, *supra* note 7, at 312-20; Brozen, *Entry Barriers: Advertising and Product Differentiation* in INDUSTRIAL CONCENTRATION, *supra* note 50.

The controversy over "entry barriers" has certainly been beneficial in exposing certain weaknesses in Bain's approach and in highlighting many of the misconceptions of the courts.⁵³ Indeed, while the Harvard school still continues to defend a more expansive view of entry barriers than do most Chicagoans, some scholars who formerly subscribed to Bain's views such as Areeda and Turner have modified their approaches to scale economies, product differentiation and capital requirements.⁵⁴ Unfortunately, the debate has magnified the degree of actual difference among economists about the concept of "entry barriers" and has probably thereby served to confuse courts and litigants in antitrust cases even more. Consequently, there is an understandable appeal for the proposals advanced by prominent Chicagoans and now Areeda and Turner that courts should avoid inquiry into "entry barriers" or mobility factors since such analyses would mire litigation in a factual and theoretical morass⁵⁵ and might lead to attacks on efficiencies in the name of competition.⁵⁶

Such proposals, however, would have perverse effects, which the very commentators who champion them implicitly recognize. The Chicagoans who suggest that the courts should not consider entry barriers also criticize the courts for failing to take entry conditions into account.⁵⁷ Likewise, Areeda and Turner propose to preclude consideration of entry conditions in horizontal merger cases but are forced to acknowledge that some examination of them is indispensable to the rational application of the antitrust laws in structural cases.⁵⁸ Indeed, both schools agree that mobility factors are an ana-

53. In particular, the Chicagoans attacked the common misconception that "barriers to entry" should be interpreted literally to apply to anything a new entrant must overcome to gain a foothold in a market. See R. BORK, *supra* note 7 at 310-11; R. POSNER, *supra* note 2, at 59. They have also emphasized the need for courts to recognize that some "entry barriers" are forms of efficiency. See R. BORK, *supra* note 7, at 195-96, 311.

54. See Posner, *supra* note 15, at 946-48, in which Posner compares the discussion of entry barriers in C. KAYSER & D. TURNER, *ANTITRUST POLICY* (1959) with the discussion in 2 P. AREEDA & D. TURNER, *supra* note 2, ¶¶ 408-09.

55. See 4 P. AREEDA & D. TURNER, *supra* note 2, ¶ 1015c, at 271.

56. See R. BORK, *supra* note 7, at 311 (if care is not taken to "distinguish between forms of efficiency and artificial barriers . . . the law will find itself — indeed, it has found itself — attacking efficiency in the name of market freedom.").

57. R. BORK, *supra* note 7, at 212 (*Brown Shoe* decision erroneous because vertical integration could have no anticompetitive effect "given the ease and rapidity of entry into shoe retailing"); R. POSNER, *supra* note 2, at 106 ("most glaring deficiency in the government's case [in *Von's*] was the fact that it ignored the ease and rapidity of entry into the retail grocery business").

58. See 4 P. AREEDA & D. TURNER, *supra* note 2, ¶ 1015c, at 271 (entry conditions relevant to horizontal mergers and a "critical" consideration in vertical merger cases).

lytical key to the evaluation of market power.⁵⁹ Some agreement also now seems to exist that the courts should ignore this key. This paradox suggests the urgent need to develop a new framework for mobility factor analysis, an approach sophisticated enough to define the contours of market power yet practical enough for use in actual litigation.

C. *Common Ground: The Foundation of a New Approach*

The rhetoric in the debate between representatives of the Chicago and Harvard schools has tended to obscure the many points of fundamental agreement concerning mobility factors. To begin to dispel some of the clouds of confusion that surround the entire topic, it is important to recognize several basic points about which little, if any, disagreement seems to exist.

First, the fact that a new entrant must invest some time and money to develop the product, enter into production, and distribute its product does not necessarily mean that incumbents (even a monopolist) in the market have any power to maintain price above a competitive level for any meaningful period of time.⁶⁰ Both the Chicago and Harvard schools of thought recognize that incumbents will have no flexibility to charge supracompetitive prices unless fringe competitors and potential entrants have a significant unit cost or risk disadvantage or cannot expand or enter quickly.

Second, stressing the importance of conditions that disadvantage fringe competitors and new entrants — whether termed “mobility factors,” “conditions of entry,” “barriers to entry,” or “conditions affecting supply elasticity” — should not imply that such conditions themselves are necessarily bad or anticompetitive. Economies of scale, for example, may impose a substantial unit cost disadvantage on a new entrant or small rival but such economies are not undesirable.⁶¹ Indeed, by enabling goods to be produced at lower costs, they increase economic efficiency and generally lower prices for

59. The entire Chicago approach to analysis focuses on ascertaining why fringe expansion and new entry do not quickly erode any market power that may arise. *See, e.g.,* R. BORK, *supra* note 7, at 195; Demsetz, *Two Systems of Belief About Monopoly*, *supra* note 20, at 166; Posner, *supra* note 15, at 945. The Harvard approach likewise considers conditions limiting entry and fringe expansion to be a basic determinant of market power. *See, e.g.,* F. SCHERER, *supra* note 3, at 232-52; L. SULLIVAN, *supra* note 14, at § 23.

60. These steps are required of any new entrant into a manufacturing industry. Yet, there is no indication that major firms in all (or even most) manufacturing industries have any material degree of market power.

61. As Stigler has observed, one could equally say that the real problem is inadequate demand, which clearly is not anticompetitive. G. STIGLER, *THE ORGANIZATION OF INDUSTRY* 67 (1968).

consumers.⁶²

Third, the fact that many "mobility factors" arise from or create efficiencies — in the form of lower production costs, greater consumer choice, better quality, or improved product development, for example — does not mean they may not be an important consideration in antitrust analysis. To the extent any mobility factor permits only a few dominant incumbents to have meaningful output and pricing flexibility, courts and analysts should consider it in assessing any transaction or practice that increases concentration or precludes other firms from realizing efficiencies. To do otherwise runs a substantial risk that the dominant firms will not pass on the benefits of greater efficiency to consumers because of overt or tacit collusion.

Fourth, courts and enforcement agencies must carefully guard against reducing the consumer welfare benefits of efficiencies by their actions and remedies. Certainly, if a court views all "entry barriers" as evil, the logical next step for the unsophisticated tribunal is to attempt to eliminate the perceived "barriers" — notwithstanding any undesirable effects on consumer welfare. Attempting to prevent such an occurrence by removing assessment of mobility factors as an essential part of antitrust analysis as Bork suggests, however, offers at best a perverse solution to this problem. The better approach would be to assist the courts and antitrust agencies in understanding mobility factors, their competitive significance, and their efficiency implications. Two examples may illustrate the importance and implications of these basic points. Consider a market with low elasticity of demand and high concentration. Assume that very few firms in the market have the market share (or access to the equipment or other necessary input) required to realize economies of scale. Assume also that a firm unable to attain minimum efficient size operates at a substantial unit cost disadvantage. In this situation, a merger between two of the firms that have achieved efficient scale (the "advantaged" firms) is likely to increase the potential for supracompetitive pricing with little prospect of any efficiency gain. For similar reasons, one would also be concerned about a merger between one of the dominant firms and the only "disadvantaged" competitor capable of promptly achieving an efficient level of opera-

62. Admittedly, economies of scale may greatly compound the effects of exclusionary actions. For example, limitations on the number of gates an airline can obtain at an airport may keep it from achieving network economies, *see* note 164 *infra*, or actions precluding a competitor from obtaining high-volume machinery may deny it the opportunity of producing at lowest attainable costs. *Cf.* *Grand Caillou Packing Co.*, 65 F.T.C. 799 (1964), *aff'd. sub nom. LaPeyre v. FTC*, 366 F.2d 117 (5th Cir. 1966). But the anticompetitive problem stems from the denial of access, not from economies of scale itself.

tions.⁶³ On the other hand, a merger between two disadvantaged competitors in order to realize economies of scale should both increase consumer welfare (by lowering their costs) and reduce the potential for collusion (by increasing the number of firms operating at minimum attainable costs).

In monopolization cases also, these four basic points are important to keep in mind even when the monopolist clearly enjoys market power. In determining what, if any, intervention is appropriate, the key issues should be (1) whether the alleged monopolist's actions have impaired other firms' ability to overcome any significant cost or other disadvantage, and (2) whether such actions were *necessary* to achieve or maintain efficiencies such as obtaining low costs, meeting current or anticipated demand or providing better quality.⁶⁴ If the firm has done no more than that reasonably required to realize efficiencies and consumer benefits, it has done nothing detrimental to consumer welfare, and a finding of liability would have perverse results. If, in contrast, the firm has taken actions beyond those necessary to realize efficiencies, the fact that the alleged monopolist's market power rests in part on factors that create or result from efficiencies should not automatically end the inquiry. Rather, the enforcement agencies and the courts should examine the firm's actions that were not reasonably necessary to maintain efficiencies to deter-

63. The merger would reduce the "elasticity of supply of fringe firms," permitting the dominant firms to maintain price above cost for a longer period without inducing expansion by fringe competitors. It would also remove the prospect that, with the addition of another competitor in a position to determine market price, the potential for collusion would decrease.

64. The standards developed by the courts for determining whether a firm's conduct justifies a finding of monopolization are fraught with verbal formulations which provide little guidance to courts, litigants, or businessmen. See, e.g., *United States v. Grinnell Corp.*, 384 U.S. 563, 570-71 (1966)(market power illegal only when there is a "willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident."); *United States v. United Shoe Machinery Corp.*, 110 F. Supp. 295 at 341 (D. Mass. 1953), *affid. per curiam*, 347 U.S. 521 (1954)(Judge Wyzanski found that monopolization can occur "where the causes of an enterprise's success were neither common law restraints of trade, nor the skill with which the business was conducted, but rather some practice which without being predatory, abusive or coercive was in economic effect exclusionary."); *United States v. Aluminum Co. of Am.*, 148 F.2d 415, 431 (2d Cir. 1945)(monopolistic exclusion not limited to "maneuvers not honestly industrial" or "activated solely by a desire to prevent competition."); L. SULLIVAN, *supra* note 14, §§ 33-39.

Most of these formulations attempt to distinguish conduct that is harmful in an economic sense from aggressive competitive actions which are not. Both types of conduct can disadvantage competitors and thereby lead to substantial market power. By phrasing the issue in terms of whether the allegedly monopolistic actions were *necessary* to achieve efficiencies, the real objective of the inquiry becomes clearer (even though the term "efficiencies" is necessarily somewhat vague). Where apparent efficiencies are involved, determining whether less anticompetitive means were reasonably available to obtain those efficiencies dispenses with the need to determine the state of mind of the alleged monopolist's management as Bork apparently would require. See note 7 *supra*.

mine the extent to which they hinder other firms in eroding the monopolist's market power.

Thus, in the monopoly as in the merger example, neither the fact that the firm or firms have (or would gain) market power nor the fact that some efficiencies are involved should be determinative. Either extreme approach would risk substantial sacrifices of consumer welfare. Instead, the courts should scrutinize the exclusionary practices (or mergers) to ascertain whether they have restrained, or will likely lessen, competition and, if so, whether they are necessary to achieve or maintain *significant* efficiencies.⁶⁵

The determination of whether judicial action may impair efficiency almost invariably requires identification and examination of the significant mobility factors involved.⁶⁶ So does ascertaining the degree of market power and designing an appropriate remedy in monopolization cases. Liberalized market share standards for mergers and the use of reasonable presumptions may obviate the need to examine mobility factors directly in certain merger cases. They cannot remove the need for such examination in all situations, however, without substantial risk of harming consumer welfare either because of governmental and judicial action or inaction.⁶⁷ Consequently, an

65. Efficiencies that are material almost surely have been recognized by the firms in an industry either in the manner in which they organize or conduct their operations or, in the case of disadvantaged competitors, as a cause of their disadvantage. Thus, claims may be made that many things create efficiencies. But, if the existing competitors have not concentrated their efforts on achieving or maintaining a purported efficiency, it almost certainly can be disregarded as insignificant without attempting to quantify the efficiency effect. *Cf.* R. BORK, *supra* note 7, at 126-29 (arguing that no adequate method exists to quantify many important elements of efficiency).

66. Landes and Posner suggest a test for distinguishing between mergers that predominantly increase efficiencies and those that primarily increase market power. When efficiencies dominate, the market share of the merged firm will become larger than the aggregate shares of the acquiring and acquired firms. When the merger principally increases market power, the merged entity's market share will be smaller. Landes & Posner, *supra* note 3, at 973. Such a measure is of doubtful utility because of the obvious incentive for the merging parties to attempt in any way possible to increase market share during the litigation such as by deliberately maintaining low prices until the merger case is decided. *Id.*

67. As noted by Landes and Posner, market share and concentration are not always reliable indicia of market power. Likewise, even firms with significant market shares may face an efficiency disadvantage *vis-a-vis* dominant firms in the market. 4 P. AREEDA & D. TURNER, *supra* note 2, ¶ 940, at 148 n.1. Thus, merely liberalizing market share standards for mergers does not automatically avoid the need to examine mobility factors.

This is not to imply, however, that mobility factors must be directly assessed in all merger cases. An inquiry into mobility factors would be unnecessary where the merging firms' market shares (and, in potential competition cases, the market concentration) were so low that competition is unlikely to be lessened even if major incumbents had a considerable cost advantage. Moreover, data on profitability and recent entry may sometimes provide a sufficiently clear indication of market power that evidence pertaining to specific mobility factors would be unnecessary to establish (or rebut) a *prima facie* case. For example, evidence of persistently high profits with no significant entry for several years would be a strong indication of substantial market power while modest profits and considerable recent entry would show the opposite. See text at notes 73-74 *infra*.

economically sound approach to determining the competitive significance of mobility factors must be developed to assist the courts in this undertaking.

This Article advances the thesis that, by focusing on the principal determinants of market power in structural cases and on the basic objectives of mobility factor analysis, meaningful examination of mobility factors can be integrated into antitrust cases without increasing their complexity. As described in the second Part of the Article, the proposed approach requires that courts and litigants, first, recognize the issues likely to be determinative in various types of structural cases and, second, concentrate their examination of mobility factors on determining *how*, *how much*, and *how long* they permit supracompetitive pricing. Not only does the proposal provide an economically sound approach to assessing the competitive implications of mobility factors but, as discussed in the final Part of the Article, it can actually assist courts in simplifying and managing complex litigation.

II. A PROPOSED APPROACH FOR ANALYZING MOBILITY FACTORS IN STRUCTURAL CASES

The misconceptions and confusion embodied in the traditional approach to “entry barriers” in antitrust law have distorted both the legal standards applicable to structural cases and the analysis of entry barriers itself. Consequently, developing a practical approach for integrating sound mobility factor analysis into antitrust litigation necessitates a re-examination of the prevailing legal principles as well as the construction of a framework for assisting courts in evaluating the competitive significance of mobility factors. In this Part, I discuss first the basic legal standards in structural antitrust cases from an economic perspective. Such an examination demonstrates that, at least in those cases likely to be litigated, the determinative issues — those concerning market power and efficiency — often relate primarily, if not exclusively, to mobility factors. Therefore, identifying those cases where issues involving mobility factors are likely to be dispositive and focusing the litigation on the important mobility factor or factors from the outset should facilitate more rational decision-making and more streamlined litigation.

To assist the courts and litigants in assessing the significant competitive effects of individual mobility factors, I also propose in this Part an analytical framework which concentrates on determining the

extent to which a particular mobility factor allows dominant incumbents to maintain price above a competitive level. Under this framework, the initial analytical step is to determine *how*, if at all, a purported mobility factor enables dominant incumbents to maintain price above cost without prompting fringe competitors to expand or new firms to enter. Current economic commentary suggests that mobility factors are only competitively significant where they place fringe rivals or potential entrants at a disadvantage vis-a-vis major incumbents in terms of unit cost, risk, or time lag. Where a mobility factor has one or more of these three effects, the degree of pricing flexibility attributable to it can then be evaluated by roughly estimating *how much* the dominant firms can maintain price above cost and for *how long*. Since this largely depends on how the mobility factor affects the potential entrants most capable of entry and the small competitors best situated to expand, the extent of the disadvantage (if any) those firms face determines the major incumbents' degree of market power.

A. *Re-examining the Role of Mobility Factors in Structural Cases*

Considering the legal standards applicable to the principal types of structural antitrust cases in light of the objectives of antitrust enforcement and economic theory demonstrates that meaningful consideration of mobility factors is often essential to rational application of the antitrust laws. Certainly, in monopolization and vertical and potential competition merger cases, the determinative issues pertain almost totally to the competitive and efficiency implications of mobility factors. Even in horizontal merger cases, consideration of the significant factors affecting fringe expansion and new entry would add an important new dimension and, in many cases, would promote better understanding of the potential for oligopolistic coordination and of the impact of government intervention on efficiency.

1. *Monopolization Cases*

A monopolization case presents two basic issues. First, the defendant firm must be found to have monopoly power, "the power to control price or to exclude competition."⁶⁸ Second, it must usually be shown that the monopolist has obtained or maintained monopoly power through exclusionary actions that, while possibly "honestly industrial" were not "economically inevitable."⁶⁹

68. *United States v. Grinnell Corp.*, 384 U.S. 563, 570-71 (1966), citing *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 381 (1956).

69. *United States v. United Shoe Machinery Corp.*, 110 F. Supp. 295, 341 (D. Mass. 1953),

Whatever the alleged monopolist's market share, significant power over price cannot exist unless purchasers will not switch to substitutes until prices rise substantially above a competitive level and competitors (actual and potential) have a substantial cost or other disadvantage vis-a-vis the monopolist. Likewise, the power to exclude requires that the alleged monopolist either have effective control over a factor necessary for others to overcome their disadvantage or can engage in practices that limit their ability to do so. Whether the defendant firm has obtained or maintained its monopoly power other than by greater efficiency requires a determination of whether the exclusionary practices the defendant has engaged in really create or heighten competitors' disadvantage and, if so, whether they were necessary to achieve or maintain its efficiency.⁷⁰

Assuming a relatively low market elasticity of demand at a competitive price level, the entire focus of monopolization cases will necessarily relate to conditions affecting entry and expansion. What are the primary mobility factors? How do they affect firms in the best position to expand or enter? To what extent do they enable the monopolist to maintain price above cost? What actions has the alleged monopolist taken to increase the disadvantage or time lag that smaller competitors and potential entrants face? And, were its actions necessary to maintain or improve the efficiency of its operation?

2. *Vertical Merger Cases*

Mobility factors are also the essential determinant of the prospect that a vertical merger may lessen competition substantially. A vertical merger cannot reduce competition in any market significantly unless actual and potential competitors in either the buyer's or seller's market face substantial disadvantages.⁷¹ To be sure, a

aff'd. per curiam, 347 U.S. 521 (1954); *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 431 (2d Cir. 1945).

70. See text accompanying note 64 *supra*. A number of recent decisions recognize the importance of ascertaining the efficiency implications of allegedly exclusionary practices and of considering less restrictive means of attaining these efficiencies. The FTC found du Pont's capacity expansion and related actions to be reasonable, although they effectively precluded expansion by competitors, because du Pont's increased capacity was no more than that necessary to achieve economies of scale and to meet predicted demand. *E.I. DuPont de Nemours & Co.*, 96 F.T.C. 653, 746-51 (1980). In denying AT&T's motion to dismiss, Judge Greene stressed the need to determine whether its exclusionary actions were required to maintain the efficiency of AT&T's telephone network. *United States v. American Tel. & Tel. Co.*, 524 F. Supp. 1336, 1350-51 (D.D.C. 1980). See also *Greyhound Computer Corp. v. IBM Corp.*, 559 F.2d 488, 498 (9th Cir. 1977) (whether practices "unnecessarily excluded competition"); *Transamerica Computer Co. v. IBM Corp.*, 481 F. Supp. 965 (N.D. Cal. 1979).

71. "Without substantial market power at any one production or distribution stage, vertical integration lacks antitrust significance." 3 P. AREEDA & D. TURNER, *supra* note 2, ¶ 724, at

merger will run only a remote risk of significantly lessening competition unless market concentration is high and both firms have a significant share of their respective markets — Areeda and Turner suggest 15 percent.⁷² Above those thresholds, however, courts and enforcement agencies cannot responsibly decide vertical merger cases without at least considering mobility factors in a meaningful way.

To avoid actual analysis of entry conditions, Areeda and Turner suggest that decision-makers assume the existence of high entry barriers when no substantial successful new entry has occurred for a period of time, unless the market was declining. They would not permit either party to demonstrate that barriers were, in fact, high despite new entry or that they were actually low despite the absence of entry. This raises a serious problem, as they reluctantly concede. Absence of entry may be “due simply to the fact that existing firms have been highly efficient and have priced competitively” while entry may be from “a relatively high-cost firm attracted by monopoly pricing.”⁷³ Thus, at least without consideration of the incumbents’ profitability to determine their price-cost margins, the extent of past entry is an extremely unreliable indicator of the height of entry barriers.⁷⁴

The Areeda and Turner effort to avoid considering mobility factors becomes totally nonsensical in situations where some market power may appear to exist, as indicated by lack of entry alone or, more rationally, in conjunction with data showing high profits. Without examining mobility factors, it is difficult for the decision-maker to determine whether the merger may increase that market power. He cannot ascertain if entry and expansion will probably be

195. Indeed, Areeda and Turner suggest a vertical merger should be deemed presumptively illegal only where *both* buyer and seller markets are highly concentrated and have substantial barriers to entry. 4 P. AREEDA & D. TURNER, *supra* note 2, ¶ 1015a.

72. 4 P. AREEDA & D. TURNER, *supra* note 2, ¶ 1015a, d.

73. *Id.*, ¶ 1015c, at 272.

74. Economic theory indicates that, depending on how the dominant firms discount future profits, the magnitude of their cost advantage, and the number of potential entrants capable of entry with comparable unit costs, the major incumbents may pursue one of a number of different pricing strategies. These range from pricing at a level that will prompt substantial immediate entry to pricing at a level that will deter all entry, with numerous possible variations in between. See F. SCHERER, *supra* note 3, at 232-52; Gaskins, *Dynamic Limit Pricing: Optimal Pricing Under Threat of Entry*, 3 J. ECON. THEORY 306 (1971).

Other than by examining mobility factors, the only way of ascertaining the price level vis-à-vis the dominant firms’ costs is to examine their profitability. Compare *FTC v. Great Lakes Chemical Corp.*, 528 F. Supp. 84, 94 (N.D. Ill. 1981)(absence of entry explained by incumbents’ low return on investment) with *FTC v. Rhinechem Corp.*, 459 F. Supp. 785, 789-80 (N.D. Ill. 1978)(no successful de novo entry in 20 years considered strong evidence of high barriers to entry without examining profitability).

more difficult, particularly for the most advantaged potential entrants and fringe competitors. He likewise cannot judge whether concentration is likely to increase, or whether buyers and sellers in the market will simply realign relationships.⁷⁵ Moreover, if the defendant claims that the vertical merger will increase efficiencies, Areeda and Turner would have the court assess the pertinent mobility factors in any event.⁷⁶

3. *Potential Competition Cases*

From any rational economic perspective, the inquiry in potential competition cases should focus almost exclusively on mobility factors. The elimination of a potential entrant will permit greater pricing and output flexibility (*i.e.*, market power) for the firms in the market only if the potential entrant removed by merger is one of a very few firms⁷⁷ with a material advantage over other potential entrants. An "advantaged" potential entrant may, for example, be able to enter with lower unit costs or at less risk than most other possible entrants or it may be able to establish itself in the market sooner. In such situations, the removal of an "advantaged" potential entrant would enable incumbents in the market to raise prices further above a competitive level for a longer period of time without prompting

75. In fact, the Second Circuit's decision in *Fruehauf*, which Areeda and Turner praise, would have been decided the other way under their suggested approach to vertical mergers. See 4 P. AREEDA & D. TURNER, *supra* note 2, ¶ 1022c discussing *Fruehauf Corp. v. FTC.*, 603 F.2d 345 (2d Cir. 1979).

In *Fruehauf*, the Second Circuit found concentration to be high and entry barriers significant. But, it held that the merger was not likely to lessen competition because there was no evidence that the merger would increase existing barriers to entry or levels of concentration. 603 F.2d at 359. Specifically, the court found no reason to believe that the merger would adversely affect economies of scale or compel new entrants to enter on a vertically integrated basis. Moreover, the merger was not likely to affect concentration because major producers and purchasers could simply realign their sales and purchasing patterns. 603 F.2d at 359.

The new Department of Justice Merger Guidelines support the view that the pertinent mobility factors must be analyzed at least in situations where the vertical merger allegedly increases barriers to entry. The Guidelines note that difficulties of entry may be increased considerably, thereby lessening competition, in situations where a new entrant into one market must, as a result of the merger, enter the other market simultaneously. Material increases to entry barriers can occur in such situations as a result of the extent of the capital investment that must be put at risk (and the degree of risk) or the economies of scale in the two markets. U.S. Department of Justice Merger Guidelines 34-47 (June 14, 1982)(copy on file with the *Michigan Law Review*).

76. 4 P. AREEDA & D. TURNER, *supra* note 2, ¶ 1016.

77. The fewer potential entrants with a material advantage over other potential entrants, the more important it is to retain each of them. Relying on a single "advantaged" potential entrant to discipline competition in the market runs the risk that the firm will be devoting its resources to other profit opportunities at the very time that incumbents in the target market attempt to raise prices above a competitive level. Indeed, the incumbents may perceive the opportunity for greater pricing flexibility if the obvious potential entrant is focusing its efforts elsewhere. For this reason, one should be concerned when there are three or fewer potential entrants. See 5 P. AREEDA & D. TURNER, *supra* note 2, ¶ 1123.

entry. The removal of a potential entrant — to the extent it has any competitive significance at all — therefore amounts to raising the “barriers to entry” (or as Landes and Posner say, altering the elasticity of supply⁷⁸) in the market.

Logically, then, analysis in potential competition cases should focus on the conditions affecting entry, how those conditions differentially affect the firms most capable of entry and, perhaps, the conditions affecting the ability of fringe incumbents to expand output.⁷⁹ The only relevant issue that does not relate to mobility factors is the degree of concentration in the market, an essential consideration because actual rather than potential competition should impose the principal disciplining force in an unconcentrated market. Unfortunately, the Supreme Court has grafted onto an inquiry that should be almost exclusively structural in nature a required analysis of behavioral considerations.⁸⁰ By doing so, the Court has diverted the focus of litigation from the essential issues.⁸¹

78. Landes & Posner, *supra* note 3, at 972.

79. It is likely that the ability of fringe competitors to expand will often provide a greater and more immediate check on the dominant incumbents' pricing flexibility than will the ability of potential entrants to enter.

80. In *United States v. Marine Bancorporation*, 418 U.S. 602, 624-25, 633, 639 (1974), the Supreme Court identified the following elements as necessary to establish a Section 7 violation in a potential competition case: (1) the target market exhibits oligopolistic behavior (presumptively established by high concentration but subject to rebuttal by evidence of “competitive” market behavior or performance); (2) the merging firm is likely to enter the market and has a feasible means of entry other than through merger; (3) entry by the firm would “offer a reasonable prospect of long-term structural improvement or other benefits in the target market”; and (4) the “firm’s premerger presence on the fringe of the target market in fact tempered oligopolistic behavior on the part of existing participants in that market.”

In the *Marine Bancorporation* decision, the Court also clearly distinguished between the situation where a merger eliminates a potential entrant exerting a disciplining effect on the market incumbents (perceived potential entry) and the situation where the firm removed by merger, while perhaps not perceived as a potential entrant, was likely to enter and reduce market concentration (future entry). The first three elements identified by the Court are necessary to establish a Section 7 violation under a future entry theory and all four elements are required for a perceived potential entry theory.

81. *Marine Bancorporation* requires courts and litigants to focus on the incumbents' present and future strategies and the intentions of the potential entrant to be eliminated by merger. Thus, the courts have sought to determine whether the incumbents were engaging in “limit pricing” to forestall entry by the potential entrant, whether entry was feasible or likely for the potential entrant at current price levels, and whether the new entrant would rapidly achieve a substantial market share were it to enter. These are all essentially questions relating to strategy, behavior, and intentions which can change quickly. But, the effect of the “advantaged” potential entrants in limiting the extent of the incumbents' market power will not.

Whether or not incumbents now take the “advantaged” potential entrants into account, the possibility of entry limits the incumbents' freedom to elevate price above cost. Whether or not entry would currently be attractive or even economically feasible for the “advantaged” potential entrants, it will become so as the market price escalates. And, actual entry will almost invariably increase competition by forcing the incumbents to lower the market price or, if they fail to decrease their prices to protect their market shares, by reducing concentration. Thus, whatever the incumbents' current strategy and however it changes — and however feasible entry now is for the “advantaged” potential entrants and whatever their plans — the presence

Indeed, the Supreme Court's "essential preconditions" not only are often incapable of proof,⁸² but the fact that some of the "preconditions" are absent in a situation may actually indicate that the merger would cause a severe competitive problem and the presence of some "preconditions" may tend to show that the merger will probably not reduce competition. The absence of oligopolistic behavior may reflect the fact that the potential entrant indeed exerts a disciplining effect on the market.⁸³ That entry is not easy for the potential entrant could well indicate that its removal by merger would seriously lessen competition, if the potential entrant is materially more capable of entry than others.⁸⁴ And, however incumbent firms may

of one or more "advantaged" potential entrants (or fringe competitors) will limit the incumbents' ability to maintain prices substantially above cost.

If one misses this fundamental point, it is easy to transform an essentially structural inquiry into a behavioral one. This is the trap into which the courts and the antitrust enforcement agencies have fallen. Thus, parties in potential competition cases have developed massive evidentiary records on a broad range of issues: pricing, innovation, and competitive performance in the target market; the merging firm's capabilities, plans, and intentions to enter in the immediate or near future; the likely effect the firm's entry would have on competition in the market; and the incumbents' perceptions of the merging firm and whether that perception influenced their pricing decisions. Brodley, *Potential Competition Mergers: A Structural Synthesis*, 87 YALE L.J. 1, 19-25 (1977).

It is doubtful that the insights gained from this often voluminous evidence provide any better basis for determining whether the merger would increase the incumbent firm's market power than an inquiry into whether the potential entrant that would be removed by merger has a material advantage over virtually all other potential entrants.

82. The government has prevailed in only two potential competition cases since *Marine Bancorporation* was decided. *Yamaha Motor Co. v. FTC*, 657 F.2d 97 (8th Cir. 1981) (a joint venture case that could have been decided on straight Sherman § 1 grounds); *Tenneco, Inc.*, [1981] 3 TRADE REG. REP. (CCH) (FTC Complaints and Orders) ¶ 21,873.

83. While high concentration should certainly be a precondition for the application of the potential competition doctrine, evidence of oligopolistic behavior should not be. Where the acquiring firm is actually exerting a disciplining effect on the behavior of a major firm (or firms) in the market — the very situation that appears to be of greatest concern to the Supreme Court — pricing in the target market may closely approximate that occurring in a perfectly competitive market. Apparently, the Court believed that oligopolistic coordination was necessary to keep prices down as well as to hold them above competitive levels. That, however, is simply not true. If *any* established firm in a market keeps prices low for whatever reason, its competitors must either follow or face the prospect of losing market share. J. BAIN, *supra* note 19, at 272. Permitting a merger to remove the potential entrant may actually increase the likelihood of coordination by permitting incumbent firms to raise prices higher than before, thereby making coordination more rewarding.

Moreover, the absence of parallel pricing behavior does not necessarily mean that the firms in a concentrated market are in fact charging competitive prices, optimizing output, or competing aggressively in innovation, service, or quality. It may only reflect the fact that coordination is not complete.

84. In *Marine Bancorporation* the Court observed:

The conceptual difficulty with the Government's approach . . . is that it fails to accord full weight to the extensive federal and state regulatory barriers to entry into commercial banking. This is of great importance, because *ease of entry on the part of the acquiring firm is a central premise of the potential-competition doctrine.*

418 U.S. at 627-28 (emphasis added). The Court's conclusion is consistent with economic theory only in the situation where the price necessary to induce *any* entry exceeds the maximum price the existing firms could charge without prompting most purchasers to switch to

react to the potential entrant's presence or any future attempt to enter, the potential entrant may have a procompetitive effect by limiting the incumbents' market power.⁸⁵ Certainly, eliminating the "excess baggage" relating to behavioral and strategic considerations and focusing the entire inquiry on mobility factors would lead to much more rational antitrust enforcement and significant simplification of potential competition cases.⁸⁶

alternative products or services. Brodley, *supra* note 81, at 30 n.119. Otherwise, the *higher* the entry barriers (in *Marine Bancorporation*, the governmental restrictions on branch banking), the greater the pricing power of the incumbent firms and therefore the *more* important preservation of potential entrants is. Thus, economic theory indicates that the capability of the proposed merger partner to enter the market as compared to other potential entrants should be the relevant inquiry. If the merging firm is significantly more advantaged in terms of successful entry, it should not matter whether entry for the acquiring firm would be "easy" or "difficult" in the abstract.

85. Any lessening of competition that may result from the removal of a potential entrant occurs, if at all, because the pricing and output flexibility of the incumbent firms is increased either in degree or in duration. If the existing firms in the market limit prices to forestall entry, they sacrifice maximization of present profits for pricing flexibility over the longer term. If they fail to take potential entrants into account or choose to raise prices anyway, they achieve supracompetitive profits for only a limited period of time. Whatever strategy the incumbents pursue, their market power is limited by the conditions of entry.

Consequently, the determination of the competitive significance of the merger should not turn on whether evidence suggests that firms in the market temper their behavior because of the threat of entry by one of the merging firms. This is not to imply that such evidence is not relevant, but simply that it is not necessary. The evidence is certainly relevant to the crucial aspect of the inquiry — how the conditions of entry affect different potential entrants. It may indicate what firms are considered by those in the market to be the most capable of entry and it may provide a rough indication of the degree of pricing flexibility firms in the market have.

Although perhaps less obvious, the Court's concern that the entry by the acquiring firm would tend to deconcentrate the industry or have other significant competitive benefits also invites an unnecessary inquiry into the responses of the incumbent firms — in that case, their probable response to entry sometime in the future. The Court seems to base its concern on the belief that small scale entry is unlikely to have significant procompetitive effects, apparently because it feels that a firm with a small market share would not lessen the potential for oligopolistic behavior significantly. Yet, even small scale entry may prompt incumbents to lower the price level in the market to keep the new entrant from gaining market share. Of course, should the incumbents fail to do so, the new firm's market share should grow, probably decreasing concentration in the market. Whatever the reaction of the market incumbents, some procompetitive benefit is likely either in terms of keeping the price level in the market lower than it would otherwise be or in making tacit coordination more difficult.

86. The quagmire into which the potential competition doctrine has fallen can only be avoided if the courts and antitrust enforcement agencies abjure the temptation to rely primarily on behavioral rather than structural considerations. With respect to mergers that are alleged to be anticompetitive because they remove a potential entrant, only three structural characteristics of the market should be of concern:

- (1) the degree of concentration,
- (2) the mobility factors affecting entry and fringe expansion, and
- (3) how these mobility factors affect the firms most capable of expanding or entering the market.

Where the potential entrant eliminated by merger has no better capability to enter than a number of other firms, its removal should have a negligible effect on competition. But, where three or four firms have a material advantage over other potential entrants and fringe competitors, the loss of one of the most advantaged firms is likely to grant the market incumbents substantially greater pricing and output flexibility.

The approach to potential competition mergers espoused in this Article is almost precisely

4. *Horizontal Merger Cases*

Ordinarily, horizontal merger cases, unlike other types of structural cases, principally concern the risk that the merger may increase the potential for coordinated pricing among the dominant firms in the market. For this reason, courts and enforcement agencies justifiably give the degree of concentration and the merged entity's market share great weight. They have generally considered conditions of entry and other mobility factors, if at all, from a very narrow perspective. In determining the relevant market, courts have examined the ability of firms outside of the market to enter quickly, usually in terms of a few weeks or months at most and using facilities already in being.⁸⁷ In some cases, extreme ease of rapid entry into the relevant market has also led to a conclusion that the merged firm could exercise no market power.⁸⁸

This great reliance on market share and concentration data, with little consideration of mobility factors, rests on assumptions about the nature of the commercial world, the determinativeness of market definitions and the predictability of tacit collusion that are simply unrealistic. Whatever the definition of the relevant market, firms exist both within and without it that have varying degrees of advantage or disadvantage vis-a-vis the dominant incumbents.⁸⁹ Whether the dominant incumbents can restrict output below or raise price above a competitive level often is primarily a function of the degree of advantage they have over actual or potential competitors.⁹⁰ For exam-

that contained in the new Merger Guidelines. U.S. Department of Justice Merger Guidelines 31-34 (June 14, 1982).

87. 2 P. AREEDA & D. TURNER, *supra* note 2, ¶ 519b, at 349-50. See, e.g., *Twin City Sportservice, Inc. v. Charles O. Finley & Co.*, 512 F.2d 1264, 1271 (9th Cir. 1975); *The Budd Co.*, 86 F.T.C. 518, 572 (1975).

Considering only the ability of firms to shift production quickly — without significant new investment in plant, equipment, and worker training — to define the relevant market has a logical economic foundation. See F. SCHERER, *supra* note 3, at 60-61. But, one must recognize that the distinction between such short-run "production substitution" and "new entry" is invariably "somewhat arbitrary." *Id.*

88. See cases cited in note 39 *supra*.

89. Markovits, *supra* note 14, at 727.

90. R. POSNER, *supra* note 2, at 56-59 (collusion is more likely where actual and potential competitors have a unit cost disadvantage and where they cannot quickly expand or enter); Landes & Posner, *supra* note 3, at 948-50 (extent to which major incumbents can maintain price above cost determined by elasticity of supply where market elasticity of demand is low). Indeed, the FTC has noted that:

Current statistical information helps to provide a good snapshot of an industry, but consideration of additional market characteristics, entry barriers being the major example, may provide a clearer and more accurate picture of the competitive dynamics of that industry. Such an inquiry may reveal whether any market power conferred by the merger is likely to persist over time and whether market conditions are conducive either to the exercise of individual firm market power or to collusive-type behavior.

Statement of Federal Trade Commission Concerning Horizontal Mergers, *supra* note 9, at 3-4.

ple, there may be 100 firms in a market but three firms with modest (10%) market shares may have a substantial advantage over the others or be the only firms capable of expansion in a short period of time. When such a situation exists and two of the advantaged firms merge, the potential for coordinated pricing resulting in substantial overcharges would exceed considerably what market concentration ratios and other market share indices alone would indicate. Conversely, if smaller competitors or potential entrants faced no significant disadvantage and could initiate or increase production substantially in a year, the merger raises only a remote risk of supracompetitive pricing.

Indeed, once one appreciates that competitors in the market may have different degrees of cost advantage or disadvantage, it becomes apparent that in certain situations, a horizontal merger can increase the dominant firms' pricing flexibility in much the same way as the elimination of a potential entrant can. Such an effect could occur where most competitors had a significant disadvantage relative to the major firms in the market. If one of the advantaged firms acquired the sole fringe competitor capable of overcoming that disadvantage, the dominant firms would have greater pricing and output flexibility.⁹¹

Furthermore, the growing scholarly support for an "economies defense"⁹² to mergers which may substantially lessen competition virtually assures that in the near future courts and antitrust enforcement agencies will be asked to evaluate the extent of purported efficiency gains likely to result from a merger. Indeed, because increases in efficiency (such as lower costs) that are significant — *e.g.*, 3-5% or more of the price — would in virtually all situations override any

See also U.S. Department of Justice Merger Guidelines, *supra* note 9, at 16-29 (where Justice Department finds market shares and concentration figures above threshold levels of concern, it will examine entry conditions as well as other factors relating to the "ease and profitability of collusion").

91. The potential for a lessening of competition in those circumstances has been acknowledged by the FTC. *Heublein, Inc.*, 96 F.T.C. 385, 583-92 (1981).

92. *See* 4 P. AREEDA & D. TURNER, *supra* note 2, at ¶ 940; Edwards, *supra* note 8; Muris, *The Efficiency Defense Under Section 7 of the Clayton Act*, 30 CASE W. RES. L. REV. 381 (1980); Williamson, *Economies as an Antitrust Defense Revisited*, 125 U. PA. L. REV. 699 (1977).

Ironically, while the new Justice Department Merger Guidelines and FTC Statement on Horizontal Mergers both refuse to recognize increased efficiencies as a defense in a merger case, they both describe the type of evidence their respective agencies would consider persuasive proof of the increased efficiencies likely to result from the merger. U.S. Department of Justice Merger Guidelines, *supra* note 9, at 42-43; Statement of Federal Trade Commission Concerning Horizontal Mergers, *supra* note 9, at 9.

adverse competitive effects of a merger,⁹³ the magnitude of the probable efficiency gain may well be the principal issue in the case. As explained more fully in Part III B,⁹⁴ estimating the likely increase in efficiency (*i.e.*, the extent to which the merger partners can overcome a competitive disadvantage) involves almost solely an analysis of the mobility factor or factors that create the disadvantage.

In sum, issues pertaining to mobility factors are usually determinative in the structural antitrust cases likely to be litigated. In monopolization as well as vertical and potential competition merger cases, virtually the entire focus of the inquiry should relate to conditions affecting entry and expansion. By doing so, much of the time and effort devoted to line-drawing quibbles over market definition, concentration and shares can be redirected to the analysis of mobility factors essential to make this market share information meaningful. Likewise, rational analysis of the competitive significance of many horizontal merger cases would also be greatly facilitated by considering mobility factors instead of relying almost exclusively on often indeterminant market definitions and the usually unclear implications of market share and concentration data.

B. *An Analytical Framework for Evaluating Mobility Factors*

The key to economically sound analysis of mobility factors in antitrust cases is the development of a coherent analytical approach that both reflects the current state of economic knowledge and can be readily employed in a litigative context. In this Part, I propose such a framework building on the areas of fundamental agreement among the leading economists who have written extensively about entry conditions. By focusing the analysis on determining how a mobility factor permits major incumbent firms to maintain price above cost and by emphasizing that some factors have important efficiency implications, the proposed approach should assist the courts and litigants to evaluate mobility factors in a manner more compatible with accepted economic theory.

1. *Constructing the Analytical Framework*

A comparison of Bain's observations at the beginning of his classic study of entry barriers with Posner's critique of the undisciplined evaluation of entry barriers in antitrust cases reveals both the funda-

93. See 4 P. AREEDA & D. TURNER, *supra* note 2, ¶ 946d, e; Muris, *supra* note 92; Williamson, *supra* note 92.

94. See text at notes 174-81 *infra*.

mental agreement which exists among economists about the effects of mobility factors that are competitively significant and, concomitantly, the proper objectives of mobility factor analysis. Bain observed that the condition of entry into a market could be "evaluated roughly by the advantages of established sellers in an industry over potential entrant sellers, those advantages being reflected in the extent to which established sellers can persistently raise their prices above a competitive level without attracting new firms to enter the industry."⁹⁵ Bain further noted that the degree of pricing flexibility enjoyed by the dominant incumbents would tend to vary with the time required for a new competitor to enter and establish itself.⁹⁶

Posner adopts a strikingly similar approach. For Posner, an entry barrier "is a condition that imposes higher long-run costs of production on a new entrant than are borne by the firms already in the market."⁹⁷ Posner adds that such barriers have "important policy implications," because they imply "the existence of a range within which the firms in the market can increase the market price above the competitive level without having to worry at all about losing sales to a new entrant."⁹⁸ Posner contends that permanent entry barriers of this sort occur only rarely, but notes the importance of "factors that do not create a barrier to entry but increase the length of time required for new entry to take place"⁹⁹

Stigler, Posner, and their adherents take issue with Bain and his followers not with respect to Bain's objectives in assessing the conditions of entry but rather in regard to his identification of certain factors as "entry barriers." They argue, for example, that labeling economies of scale as an "entry barrier" is misleading because economies of scale dictate the level of cost-minimizing output for *all* firms, including those in the market.¹⁰⁰ Stigler and Posner also criticize the notion (which many attribute to Bain with only limited justification) that capital costs and product differentiation deserve classification as "entry barriers" in any situation where entry on an efficient scale requires sizeable amounts of capital or where highly advertised products command a substantial price premium. Stigler

95. J. BAIN, *supra* note 49, at 3 (italics omitted). Bain defined the "competitive level of price" as "the minimum attainable average cost of production, distribution, and selling for the good in question, such cost being measured to include a normal interest return on investment in the enterprise." *Id.* at 6.

96. *Id.* at 11.

97. R. POSNER, *supra* note 2, at 59, citing G. STIGLER, *supra* note 61, at 67.

98. *Id.*

99. *Id.*

100. G. STIGLER, *supra* note 61, at 67-70.

contends that these factors only permit incumbent firms pricing flexibility — and thus qualify as “entry barriers” — where the costs of obtaining the required capital or of differentiating the product for the new entrant exceed the costs for the incumbent firms.¹⁰¹

Against the backdrop of the agreed upon objective of mobility factor analysis, to determine the degree and duration of the major incumbents' pricing flexibility, the economic debate illuminates the important considerations involved in assessing mobility factors. Given the objective of defining market power, it logically follows that all factors, including scale economies, that permit dominant incumbents to attain lower cost than new entrants merit consideration. Even where the incumbents' pricing flexibility derives from efficiency advantages, the benefits of those efficiencies may accrue to consumers only to the extent that the threat of expanded production by new entrants or fringe rivals constrains the incumbents' market power, particularly in a concentrated market. Efficiencies that impede mobility deserve solicitude not when estimating the market power of the incumbents, but rather when deciding what remedy, if any, will most efficiently diminish whatever market power the mobility factor analysis reveals. But, in determining the extent of market power, cost differentials flowing from economies of scale cannot rationally be ignored.

The Chicago contention that large capital requirements or brand loyalty for incumbents' products do not necessarily denote market power likewise raises an extremely important point. Such factors sometimes can permit great pricing flexibility. They will allow meaningful pricing flexibility, however, only where they impose higher unit costs on new entrants than on the major incumbents or, specifically in the case of brand loyalty, new entrants must incur higher selling costs for a substantial period of time to erode consumer preferences for established brands.

The proposed approach, then, should focus on what possible effects mobility factors may have that enable major incumbents to maintain price above cost for some period of time. The economic literature on entry barriers repeatedly recognizes two such effects. The first is the imposition of costs on new entrants and fringe competitors which are higher on a per unit basis than those of the dominant incumbents.¹⁰² The second is prolonging the time necessary for new entrants and fringe competitors to establish themselves in a

101. *Id.* at 70.

102. See note 97 *supra* and accompanying text; J. BAIN, *supra* note 19, at 260-63. Note that the costs to which Posner, Stigler and Bain refer are *unit* costs.

market.¹⁰³ Entrenched consumer preferences for established brands may also allow incumbents to charge prices exceeding costs¹⁰⁴ but, as later explained in detail,¹⁰⁵ the key issue in that situation is the cost and time necessary for new entrants to erode such preferences.

Differences in the risk that new entrants or fringe competitors face compared to the established incumbents may also affect the degree and duration of the major incumbents' pricing flexibility.¹⁰⁶ While the effect of mobility factors that create greater risks for new entrants may sometimes lead to higher unit costs (such as in the cost of capital), recent economic literature indicates that assessing the competitive significance of entry risks often involves considerations somewhat different from those pertaining to the cost disadvantage effects of mobility factors. Most notably, the degree of risk and the consequential extent of the major incumbents' pricing flexibility may be high or low depending on the amount of the capital invested that the entrant could not recover if the entry (or expansion) attempt does not succeed.¹⁰⁷ Mobility factors, then, can create cost disadvantages, risk disadvantages, or time lags.

Determining which of these three possible effects a purported

103. Scherer, Posner, and Bain view factors that extend the time that the dominant incumbents can enjoy substantial pricing flexibility as material in assessing market power. F. SCHERER, *supra* note 2, at 236; POSNER, *supra* note 2, at 59; J. BAIN, *supra* note 49, at 10-11 (1956).

104. J. BAIN, *supra* note 49, at 114-115.

105. See Section C-3 of this Part, *infra*.

106. The greater the risks involved in entry or expansion — that substantial losses will be incurred or that a competitive return will not be realized — the less likely that new firms will enter or fringe competitors expand. In this sense, the greater risk faced by potential entrants and fringe incumbents acts like a cost disadvantage, permitting major incumbents to maintain price above cost without attracting entry. Entry and expansion will not occur until the price-cost margin is sufficiently high to compensate for the risks involved.

Analyzing mobility factors in terms of risk is important for two reasons. First, in many situations, it is not the effect of a mobility factor in creating a cost disadvantage *per se* that is important. Once a new entrant achieves a particular scale of operation or amount of consumer acceptance, most, if not all, of its cost disadvantages will usually be eliminated. As Stonebraker notes, "[t]he crucial question is whether or not entrants have a reasonable chance to attain the stature necessary for success." Stonebraker, *Corporate Profits and the Risk of Entry*, 58 REV. ECON. & STATISTICS 33, 35 (1976).

Second, the potential for successful retaliation by the major incumbents should also be considered in assessing their market power. *Id.* Retaliation is more likely to be successful the greater the new entrant's initial cost disadvantage, the less certain its prospects for quickly overcoming it, and the more funds that must be committed to do so.

107. See Bailey, *Contestability and the Design of Regulatory and Antitrust Policy*, 71 AM. ECON. REV. 178, 178-79 (1981); Baumol & Willig, *Fixed Costs, Sunk Costs, Entry Barriers, and Sustainability of Monopoly*, 96 Q.J. ECON. 405, 418-20 (1981).

Notably, the new Department of Justice Merger Guidelines recognize that "risk" in the sense used in this Article may be a "barrier to entry" where a new entrant stands a good chance of not establishing itself in a market and, to enter, it must invest substantial capital that it cannot recover in the event of failure. U.S. Department of Justice Merger Guidelines, *supra* note 9, at 37.

mobility factor has (if any) is fundamental to sound mobility factor analysis. If an alleged mobility factor has none of these effects, it has no competitive significance and thus can be ignored. Where a mobility factor does in fact create a cost disadvantage, a risk disadvantage and/or time lag, determining which effect or effects it has is crucial in evaluating the extent to which it permits pricing flexibility. Therefore, I propose a framework for mobility factor analysis that asks three basis questions:

- (1) *How*, if at all, does the purported mobility factor permit pricing flexibility (*i.e.*, cost disadvantage, risk disadvantage or time lag)?
- (2) *How much* pricing flexibility does the mobility factor allow (*i.e.*, the extent of the disadvantage of the best situated fringe competitors or potential entrants vis-a-vis the dominant incumbents)?¹⁰⁸
- (3) *How long* can the dominant firms maintain that degree of pricing flexibility (*i.e.*, how long will it take the best situated fringe rivals or potential entrants to expand or enter and erode most of their disadvantage)?

I briefly discuss below each type of effect and the approach for evaluating its competitive significance.

Cost Disadvantages. A mobility factor has a cost disadvantage effect when new entrants or fringe competitors must incur higher costs per unit of output than the dominant firms in the market. Such mobility factors would fall under the Posner-Stigler definition of "barriers to entry"¹⁰⁹ and are typified by those conditions that Bain characterizes as "absolute cost advantages"¹¹⁰ (although, as we shall see, factors of this type may also fall in other of Bain's categories). Mobility factors creating a cost disadvantage permit the major firms in a market to elevate prices above cost to the extent of their unit cost advantage over new entrants or fringe firms. For example, a firm that had a patented process enabling it to produce widgets at \$1.00 a piece would have substantial pricing flexibility (about 10%) if the most efficient process available to all other firms permitted them to produce widgets at a cost no lower than \$1.10 a widget.

Risk Disadvantages. A new entrant or fringe incumbent faces a risk disadvantage when a distinct possibility exists that it will not achieve unit costs or consumer acceptance comparable to the major

108. The degree and duration of the dominant incumbents' pricing freedom is determined by the extent of the disadvantage and time lag faced by those fringe competitors and potential entrants in the best position to expand or enter. See J. BAIN, *supra* note 19, at 254, 269-70.

109. See text accompanying note 97 *supra*.

110. Bain's "absolute cost advantages" are factors that "place the costs of potential entrant firms on a higher level and permit established firms to elevate selling prices somewhat above their own minimal average costs without making operations profitable for entrants and thus without inducing entry." J. BAIN, *supra* note 19, at 261.

incumbents' *and* it must invest substantial funds that cannot be recovered if it fails ("sunk costs").¹¹¹ The risk differential exists because, unlike the new entrant, the major incumbents have, for example, already obtained the market share necessary to realize scale economies, developed an efficient production process or established a reputation among consumers. Where the prospect that new entrants will be able to avoid or overcome a material initial disadvantage is very uncertain, entry will be unlikely until price levels become sufficiently high that new entrants either can expect to recover a premium return on the investment put at risk if they succeed¹¹² or can operate profitably despite the disadvantage. For that reason, the extent of pricing flexibility permitted by a risk disadvantage can often be assessed adequately by examining (1) the amount of capital that would be irretrievably lost if the entry attempt failed, and (2) the unit cost differential that would exist, if entrants could not avoid or overcome the cost disadvantage.

Time Lags. Mobility factors may also affect the time necessary to enter or expand *and* to achieve unit costs comparable to those of the dominant firms in the market ("time lag" factors).¹¹³ Examples of such factors might include those conditions determining the time necessary to design, finance and build a manufacturing plant and to develop sufficient demand for a new product to permit economical production. Obviously, the length of time necessary to enter a market, to achieve an efficient level of production, and to obtain widespread consumer acceptance is important in determining the duration of the major incumbents' pricing flexibility. A lead time to build a facility and to establish a significant presence in the market of a year or two may not prove of consequence unless incumbents

111. Both elements are necessary since, if new entrants can quickly establish themselves in a market with no cost disadvantage, incumbents will not be able to raise price above cost. And, if new entrants can exit a market with little loss if they fail, there is so little risk involved in entry that incumbents dare not offer profit-making opportunities. For this reason, most domestic airline city-pair markets perform competitively despite the fact that very few have more than one or two carriers. Should the carriers serving a city-pair attempt to raise price, airlines serving other markets will simply enter, gather the available profits and depart if the "going gets rough" or profits appear higher elsewhere. See Bailey & Panzar, *The Contestability of Airline Markets During the Transition to Deregulation*, 44 LAW & CONTEMP. PROBS. 125 (1981); Baumol & Willig, *supra* note 107, at 419-20.

112. The profit premium necessary to induce entry will depend on the chances that the firm can overcome its disadvantage and the amount of money it stands to lose if it is unsuccessful.

113. While the time required for entry to occur is usually emphasized in the economic literature, the duration of the major incumbents' pricing flexibility really depends on how long it takes for a new entrant or fringe competitor to overcome any disadvantage it may face. If ten years is necessary to achieve consumer acceptance after entry occurs, dominant incumbents will have some pricing flexibility long after the new firm has initiated production.

could charge prices far above costs in the interim. But time lags of five years or more may be significant, and time lags of ten years or longer may have a substantial impact on competition. The major incumbents would enjoy especially great pricing flexibility if new entrants and fringe competitors would face a substantial unit cost or risk disadvantage over most of the period.

2. *The Analytical Framework Avoids Common Pitfalls*

While the proposed approach comports with Bain's stated objectives in analyzing entry barriers, he appears to deviate from this framework in his efforts to determine the competitive significance of various conditions of entry in particular industries. In large part, this apparent deviation reflects an understandable need in a study of entry conditions in twenty different industries to rely on easily discernible attributes (amount of capital required, extent of advertising) as proxies for the more detailed inquiry that, Bain acknowledges,¹¹⁴ is required to make any reliable determination of the extent to which conditions of entry confer some degree of pricing freedom on incumbent firms. Bain's examination of various alleged "barriers to entry" in the twenty industries, for example, fails to consider how the alleged entry barriers affect the most advantaged potential entrants and assumes that those firms — which Bain recognizes determine the extent of the incumbents' pricing flexibility¹¹⁵ — are affected in much the same way as most other commercial enterprises.

Unfortunately, many lawyers, economists and judges have tended to interpret the various observations that Bain makes about the possible impediments to entry into particular industries as gospel, without recognizing that he intended his observations to stimulate further inquiry, not end it. In antitrust litigation, this has led to the "laundry list" approach mentioned earlier, in which litigants detail as many factors as possible which Bain and others have suggested might indicate that barriers to entry exist. But the fact that an efficient plant costs \$100 million means nothing in and of itself nor does the fact that advertising expenditures amount to 10% of sales, that scale efficiencies require a new entrant to obtain 10% of the market or that essential know-how can be obtained only at a cost of \$1 million. All of these factors may justify further inquiry, but they do

114. J. BAIN, *supra* note 49, at 165; J. BAIN, *supra* note 19, at 282-84 (acknowledging that the relationship between the size of the capital investment required for entry and the ability of incumbent firms to elevate price without attracting entry is very uncertain). See J. BAIN, *supra* note 49, at 121 (Bain was also uncertain about the relationship between advertising expenditures and incumbents' pricing flexibility).

115. J. BAIN, *supra* note 49, at 7-10.

not indicate how, if at all, a particular situation affects the extent or duration of the incumbents' pricing flexibility.

Moreover, Bain's classification scheme segments possible entry barriers into three or four categories: economies of scale, product differentiation advantages and absolute cost advantages (capital requirements are often considered as a fourth category apart from absolute cost advantages).¹¹⁶ However, "barriers" caused by factors usually classified under one category may, in fact, have vastly different effects on pricing flexibility in the market. For example, the fact that building a manufacturing facility of minimum efficient scale requires \$100 million could conceivably have one of three different effects, or none at all. Traditionally, courts have cited such an amount of required capital to imply that new entrants would have an absolute cost disadvantage, meaning that they must incur a higher unit cost (such as a higher interest rate) for the required capital than those in the market. If significant new entrants really encounter a significant unit cost disadvantage compared with the major firms in the market (which is not necessarily true based solely on the amount of capital required), incumbent firms would have pricing flexibility due to this cost differential.

It is conceivable, however, that the amount of capital required affects pricing flexibility in the market not so much by raising the unit costs directly as by causing a risk disadvantage or a significant delay in entry, either because the new entrant faces greater risks than firms in the market or because financing, designing, and building the plant require a long period of time. If the new entrant, for example, faces a significant risk that its product will not receive sufficient consumer acceptance to operate an efficiently-sized plant at an economical rate of output, its decision of what profit premium will induce it to enter may depend on the amount of capital at risk. The new entrant may require a significant profit premium — thereby permitting greater pricing flexibility in the market — if the \$100 million plant can only produce a single product. The new entrant may require no premium at all if it can readily use the plant to produce other goods, if, as it fears, its attempts to develop broad demand for its product are unsuccessful. Likewise, a sizeable amount of capital may suggest that building the plant requires considerable time but it need not, particularly if the construction is not complex and equipment and tooling are readily available.

For many of those same reasons, Bain's classification system

116. *Id.* at 12, 15-16.

often proves less than helpful in determining how particular factors affect the firms most capable of entry. All potential entrants may need to invest \$100 million to build a plant in order to enter on an efficient scale but some may be less affected by any cost or risk differentials or time lag related to the capital cost of the plant. For example, one or more potential entrants may be able (1) to obtain the capital at costs comparable to the incumbents, (2) to minimize risks, by building a plant easily convertible to their existing product lines or (3) to use their existing production facilities to initiate economical production of the new product before the new plant is completed.

C. *Applying the Analytical Framework to Traditional "Barriers to Entry"*

Focusing on "how" various factors affect major incumbents' pricing flexibility — either due to cost differentials, risk disadvantages or time lags — avoids the often confusing classification system established by Bain and produces a more disciplined framework for meaningfully evaluating the real competitive significance of all possible conditions of entry in a litigative context. The importance of focusing on the *effects* of mobility factors becomes particularly evident if we now review the types of "entry barriers" identified by Bain (absolute cost advantages, economies of scale, product differentiation advantages and capital requirements) in light of more recent economic comment and criticism. Such a review will illustrate various applications of the proposed approach, indicating how it can be used both to determine what mobility factors may be significant and to estimate the extent of any pricing flexibility they may create.

1. *Absolute Cost Advantages*

The category of Bain's "entry barriers" that has probably prompted the least comment and criticism is "absolute cost advantages." Such factors enable the major incumbent firms to have the advantage of lower costs of production or distribution than potential entrants (or fringe rivals) at any comparable scale of operation.¹¹⁷ As a result, dominant incumbent firms have some freedom to raise prices above long-run average cost without attracting new entry because, even at a supracompetitive price level, new entrants could not cover their own costs.

Bain listed possible causes of such an advantage to include: (1) control of superior production techniques by incumbent firms,

117. J. BAIN, *supra* note 19, at 260-61.

maintained by patents or secrecy; (2) exclusive ownership by established firms of essential or superior resources, such as high-grade ore deposits; and (3) the inability of new entrants to obtain necessary or superior factors of production (management services, labor, materials, unique location) on terms as favorable as those enjoyed by incumbent firms.¹¹⁸ Bain also included as an absolute cost advantage "less favored access of entrant firms to liquid funds for investment, reflected in higher effective interest costs or in simple unavailability of funds in the required amounts."¹¹⁹ This will be discussed under capital requirements.

Having listed the principal situations where, according to Bain, absolute cost advantages are likely to occur, two observations become important. First, the mere fact that potential entrants face (or may face) a cost disadvantage does not necessarily mean that incumbent firms have any substantial market power. Even a firm possessing the patent on the most economical production process will have only marginal ability to raise price above cost if other competitors or potential entrants can produce almost as efficiently using other methods. Consequently, meaningful analysis requires some appreciation of the *magnitude* of the cost differential (in terms of the cost per unit of output) as well as factors that may enable other firms to compete effectively by reducing their costs (lower labor or transportation costs, for example).¹²⁰ Second, as demonstrated in the following discussion, the various factors that lead to significant absolute cost advantages may also have temporal and risk aspects of importance in assessing their impact on competition in the particular market.

A production process protected by patents or secrecy is a classic example of a "cost disadvantage" factor. It creates a cost differential either by denying new entrants (or "disadvantaged" incumbents) access to the technology necessary to achieve production costs comparable to the "advantaged" firm in the market or by permitting it to exact royalties from others thereby raising their unit costs. The difference in unit costs in the first situation or the amount of the royalty on a per unit basis in the second determines the extent of the cost disadvantage. Ascertaining the competitive effect of the patented or secret process also requires examining factors that affect the time

118. *Id.*

119. *Id.* at 261.

120. It is entirely possible that some potential entrants may actually have a cost advantage *over* the established firms in the market. This may be due to any number of reasons: development of a lower-cost process, discovery of a new mineral deposit, lower costs of labor, or simply greater efficiency in management and organization.

necessary to overcome (or substantially reduce) the cost disadvantage and that determine the risks involved in attempting to do so. A patented or secret process may present little potential for the "advantaged" incumbent to exercise any market power if other firms can develop equally cost-effective production techniques in a short period of time. But the protected process may well lead to substantial market power if the time required to develop and perfect a new process is likely to be lengthy, especially if, in the interim, the cost differential is significant.

Moreover, where it appears somewhat uncertain whether the research will yield an equally cost-effective process, "disadvantaged" competitors may also encounter a risk disadvantage which will affect the duration of their cost disadvantage. Whether a firm undertakes the research to overcome the cost disadvantage will depend on several factors relating to risk: the amount of the capital that would be irretrievably lost if its research is unsuccessful, the likelihood that that particular firm will make the new breakthrough (as opposed to others), and the prospect that, if its research is successful, the firm can obtain a significant premium for the risk assumed.¹²¹ Therefore, in my example, risk factors may limit the amount of research undertaken and, consequently, the likelihood that a technological breakthrough will soon overcome the "advantaged" firm's cost advantage. No matter how great the risk, however, the maximum extent to which the "advantaged" firm can raise the price above cost will always be determined by the cost differential between the patented process and the next most efficient process (or the unit cost of the royalty, if the process is licensed to others). But the likely duration of the cost disadvantage will largely depend on the extent of the risk.

Governmental controls over entry are also frequently discussed in relation to "absolute cost advantages" although their effect is usually to block entry entirely rather than to create a cost differential when the new firm is ultimately allowed to enter. Where entry is prohibited — or requires years of regulatory proceedings — elasticity of demand (or rate regulation) rather than potential competition limits the incumbents' pricing flexibility. Consequently, in most such situations, the crucial focus of an analysis of entry conditions is the extent to which various factors delay entry.

Aside from patents and governmental licenses, the most frequently cited examples of Bain's "absolute cost advantages" involve

121. Areeda and Turner also recognize that the significance of a patented or secret process is primarily a function of the risk involved in developing a comparable alternative. 2 P. AREEDA & D. TURNER, *supra* note 2, ¶ 409, at 300-01.

situations where dominant incumbents control essential or superior inputs or can obtain necessary factors of production (management, labor, equipment or materials) on better terms than new entrants or fringe competitors. Control over an essential or superior input, such as iron ore in steel manufacturing, enables the major incumbent or incumbents to block entry into the market or to dictate the other competitors' costs.¹²² The same also applies when a firm controls access to purchasers in a market, such as the Bell System's monopoly of many local telephone systems. But, while the firm that controls the indispensable input may have the power, Posner has noted that it should have little incentive to restrict entry into the market. Its control over the essential input enables it "to extract all of the economic rents obtainable in the widget market without selling any widgets, let alone trying to control the widget market."¹²³ Of course, this observation may not apply where the major incumbent enjoys only a limited ability to exact monopoly profits from its control of a scarce resource due to, say, regulation. Moreover, the dominant incumbent may view the new successful competitor as a long-term threat to its ability to exact monopoly profits from the essential resource. A firm dependent on a competitor for an indispensable input is likely to have a strong incentive to seek means of producing the final product with substitute inputs and to encourage entry by new suppliers or the exploration for new sources.

Posner's comments correctly suggest that control of an essential input permits pricing flexibility not so much because of a cost differential as because of a risk disadvantage vis-a-vis the dominant incumbent. In most situations, the incumbent controlling the essential or superior input will maximize profits by selling to all possible purchasers, charging both its own operation and others the full monopoly price. But the dominant incumbent's control over the input inevitably places a new entrant or fringe competitor at its mercy. For that reason, potential entrants and fringe competitors may well forego entry or expansion until they can project some premium return on the capital invested that could not be retrieved in the event of failure. If such "sunk costs" are substantial, major incumbents may have considerable pricing freedom, especially if potential entrants perceive retaliation as a likely prospect. If, on the other hand, new entrants can easily exit with only minor losses, the dominant firms will have little pricing flexibility. Whatever the "sunk costs,"

122. The materiality of competitors' control of an essential or superior input, of course, depends on the magnitude of the cost penalty involved in using the next best alternative.

123. Posner, *supra* note 15, at 947 n.65.

however, the degree of pricing flexibility will never exceed the difference between the cost of using the superior input and the cost of using the best substitute.

Cost disadvantages can also arise from the inability of new entrants to obtain management services, materials, superior locations or other factors of production on terms as favorable as the dominant incumbents. An established incumbent may, for example, have a long-term contract to obtain certain raw materials at a price that is now below the prevailing market level. The cost disadvantage, of course, then is the difference between the price a new entrant or fringe competitor has to pay and that which the major incumbent pays. A new entrant may also face a nominal disadvantage in acquiring trained management personnel and in obtaining the requisite production know-how. Bain found, however, that the effect of such cost disadvantages was "negligible or slight" in virtually all industries he studied. It ordinarily appeared in "shake-down" losses for a very limited time, or in slightly higher over-all costs for a few years."¹²⁴

Labor and transportation costs can also give rise to cost disadvantages (and sometimes cost advantages) for a new entrant or fringe competitor. A new entrant into the industry can usually avoid such cost differences, however, through careful planning. For example, it can locate its plant where labor and transportation costs are comparable to (or lower than) those of incumbent firms. Of course, significant per unit transportation costs — and, for foreign producers, tariffs and trade barriers — may impose a major cost disadvantage on a firm seeking to enter a geographic market remote from its production facility.

Aside from transportation costs, tariffs and trade barriers that may permit considerable pricing flexibility in geographic markets, substantial cost disadvantages arising from Bain's "absolute cost advantage" category of barriers are relatively rare, as Bain's study appears to confirm. Bain found "absolute cost advantages" to have more than a "slight" effect on pricing flexibility only where dominant incumbents had important patents or know-how, or controlled most known ore deposits.¹²⁵

124. J. BAIN, *supra* note 49, at 149.

125. In his study of twenty industries, Bain found that absolute cost advantages were no more than "slight" in sixteen. Of the remaining four, in two industries — copper and steel — the cost disadvantage was significant due to the close control of known deposits of copper and iron ore by the incumbent firms. Two other industries had significant absolute cost advantages due mainly to patents or know-how protected by secrecy. *Id.* at 155.

2. *Economies of Scale*

Perhaps no aspect of entry conditions has engendered greater controversy than economies of scale. Bain classified economies of scale as an entry barrier where (a) "an entrant of minimum optimal scale (smallest scale at which lowest unit costs are attained) would supply a significant fraction of industry output" and (b) "at appreciably smaller scales, the entrant would have appreciably higher than the lowest attainable cost."¹²⁶ Consequently, a potential entrant would face the prospect that, if it entered at minimum optimal scale (and incumbent firms did not significantly reduce their output), the additional output would cause a substantial decline in the price level in the market. On the other hand, if it entered at a scale that would not significantly affect the market price, its unit costs would be substantially higher than the costs of the major incumbents in the market. Such economies of scale can result from a number of factors — the output required to operate the most cost-effective production equipment at an efficient level, the minimum size of an efficient distribution network, the minimum amount of advertising required to utilize a particular communications medium effectively, etc.¹²⁷

The controversy over economies of scale has arisen — not because such economies are unimportant in assessing dominant firms' pricing flexibility — but because they reflect efficiency factors that apply to both incumbents and potential entrants.¹²⁸ To use the most efficient technology on an economical basis requires that any firm

126. J. BAIN, *supra* note 19, at 263.

127. Economies of scale can exist at the specific product, plant, or firm level. Per unit production costs may be lower for a product if high-volume machinery can be effectively utilized, set-up cost can be spread over a larger production run, and workers can concentrate on specific tasks. Larger plants (making one or more products) may have lower unit costs because the size of the required labor force, the amount of necessary equipment, or the number of reserve machines does not increase proportionally with capacity. (This is particularly true in process industries.) F. SCHERER, *supra* note 3, at 81-84.

At the firm or multi-plant level, a larger firm may have lower per unit costs for research and development, sales promotion, product distribution, or servicing because large fixed costs can be spread over a greater sales volume. See F. SCHERER, *supra* note 3, at 100-04, 108-16; 2 P. AREEDA & D. TURNER, *supra* note 2, at ¶ 408c. Smaller firms may also not have the sales volume or sell in a sufficiently broad geographic area to justify use of particular advertising media (e.g., network television) which permits larger firms to achieve lower advertising costs per unit of sales. F. SCHERER, *supra* note 3, at 111.

Cost of raising capital may also be somewhat lower for larger firms. *Id.* at 104. However, the cost differential appears small. Scherer and his associates found a 1% higher effective interest rate for firms with \$5 million in assets compared with those having assets of \$1 billion or more. F. SCHERER, A. BECKENSTEIN, E. KAUFER & R. MURPHY, *THE ECONOMICS OF MULTI-PLANT OPERATION* 287 (1975). Notably, profit and interest expense normally represent only a small portion (approximately 10%) of a product's selling price. See text at note 148 *infra*.

128. G. STIGLER, *supra* note 61, at 67.

achieve a minimum level of sales. Therefore, many economists today no longer classify economies of scale under the negative label of "entry barrier"¹²⁹ although all recognize that scale economies may create substantial cost disadvantages for a new entrant or fringe competitor.

Assessing the effects of scale economies requires that three issues be examined: (1) the share of the market necessary to support an operation of minimum optimal scale, (2) the size of the unit cost disadvantage at substantially smaller scales, and (3) the extent of the risk involved in attempting to obtain the market share necessary to overcome all or most of the cost disadvantage.

The scale of entry necessary to obtain minimum costs will determine whether or not economies of scale are even a relevant consideration. If all, or most, scale economies can be realized with a plant or operation designed¹³⁰ to produce no more than 1 or 2% of the total output in the market, new entrants or fringe competitors will face little prospect that their entry or expansion will materially reduce the prevailing price level. On the other hand, where realizing economies of scale requires an operation designed to supply 5% or more of the market, it is at least possible that the major incumbents enjoy some pricing flexibility.¹³¹

The extent of the pricing flexibility, however, will depend not on the market share needed to achieve optimum scale but, as the courts and FTC often appear to forget,¹³² on the size of the unit cost disadvantage a firm would suffer by entering at a smaller scale. That 20% of the market is required to achieve lowest attainable costs is probably meaningless if a firm with a plant capacity equal to 2% of the sales in the market has less than a 3% cost disadvantage.¹³³ In contrast, the degree of pricing flexibility could be substantial — even

129. See Posner, *supra* note 15, at 947.

130. The relevant consideration is the *minimum* size of the plant (or operation) required to achieve lowest attainable costs, not the rate of output necessary to operate existing plants (or operations) economically. The size of existing plants may be well in excess of minimum optimal scale and therefore may have to be operated at high levels of production simply to utilize those *particular* production facilities efficiently.

131. Bain suggests that the price-depressing effect of entry (or expansion) may begin to become significant when the scale of entry represents 4-5 percent or more of the market. J. BAIN, *supra* note 49, at 102-04.

132. See, e.g., *Tenneco, Inc.* [1981] 3 TRADE REG. REP. (CCH) (FTC Complaints and Orders) ¶ 21,873 at 22, 138 (minimum efficient scale plant's capacity about 10% of market; no mention of unit cost disadvantage at smaller scales); *Fruehauf Corp.*, 91 F.T.C. 132, at 186-87, 233 (1978), *enforcement denied on other grounds*, 603 F.2d 345 (2d Cir. 1979) (economies of scale attained with 9% of market; Commission and court ignored degree of cost disadvantage at smaller scales).

133. Indeed, in that situation, a new entrant would tend to depress the market price so substantially by entering at minimum optimal scale (20% of the market) that its best strategy

though optimal scale corresponded to only 5% of the market — if unit costs rose dramatically at slightly smaller scales. This would be particularly true if new entrants would have considerable difficulty obtaining a sufficient share of the market to support an operation of the scale necessary to minimize any cost disadvantage. But where new entrants can be relatively confident of securing the requisite market share, they face little risk in entering at a scale that would enable them to achieve unit production costs comparable to the major incumbents. Thus, the extent to which dominant incumbents can raise price above costs may be indicated roughly by the extent of the cost disadvantage a firm would face with an operation of a scale corresponding to the share of the market a new entrant could readily expect to obtain.

Even where economies of scale severely limit the number of firms that can profitably operate in a market, the incumbents will have no meaningful market power if “sunk costs” involved in entering and attempting to gain a large market share are low. Should incumbents raise price above a competitive level, new competitors are likely to enter — assuming they can recover most of their capital investment should they fail or encounter retaliation — because their risk is small. Thus, domestic city-pair markets in the airline industry, as noted previously, generally reflect competitive performance although, because of scale economies arising from airplane size, most are very highly concentrated. Since airlines’ principal fixed assets (airplanes) are mobile, airlines usually do not need to place substantial capital at risk in entering a new city-pair on an efficient scale.¹³⁴ Indeed, economies of scale may not create cost or risk disadvantages for new entrants into geographic markets in other transportation industries where the principal fixed assets are mobile, trucking and barge shipping, for example. In manufacturing also, the amount of sunk costs and therefore risk can sometimes be held to a minimum. This would be the case, for example, where entrants could readily convert production facilities to the manufacture of other products

would be to enter at a very small scale (2% or slightly more). See J. BAIN, *supra* note 49, at 102-04.

134. See Bailey, *supra* note 107, at 178; Bailey & Panzar, *supra* note 111; Brodley, *Antitrust Policy Under Deregulation: Airline Mergers and the Theory of Contestable Markets*, 61 B.U. L. REV. 823, 832-35 (1981).

While “sunk costs” into specific city-pair markets tend to be relatively low, there are notable exceptions. Those include situations where airport terminal space cannot be obtained, where airports impose noise or environmental constraints, and where network scale economies (or “hubbing”) have enabled the major incumbents to realize lower perpassenger costs. Bailey & Panzar, *supra* note 111, at 132-34; note 164 *infra*. In those situations, a new entrant may need to build its own terminal, re-engine its aircraft, or develop an extensive route system around the “hub” airport to enter on a competitive basis.

(particularly product lines in which the new entrant is already an established competitor) or where they could use distribution networks for a number of their other products.

Thus, the extent to which major incumbents can raise price above cost due to scale economies depends on: the difficulty a new entrant or fringe competitor has in obtaining the market share necessary to avoid most or all of the cost disadvantage, the size of the cost disadvantage it would face at smaller scales of entry, and the amount of capital it must place at risk. Of those three factors, the cost disadvantage associated with a small scale operation — *i.e.*, corresponding to a readily obtainable share of the market — will always indicate the *maximum* degree of pricing flexibility the dominant firms may have. If entrants or fringe rivals realistically can obtain the share of the market necessary to achieve minimum optimal scale in a few years — particularly if this requires only modest “sunk costs” — the major incumbents will have correspondingly less market power both in terms of degree and duration.¹³⁵ Where “sunk costs” are small, market power will generally be insignificant.

3. *Product Differentiation*

The extent to which the dominant firms in a market can maintain prices significantly above their costs depends not only on the ability of new entrants and fringe firms to achieve production costs comparable to those of the major incumbents but also on their ability to gain buyer acceptance for their product or service. If new entrants are precluded from developing products that perform as well as those of the dominant incumbents or if substantial time and higher per unit selling costs are required to obtain widespread consumer acceptance of the new entrant's product, the major firms in the market will have pricing flexibility. Indeed, the incumbents' market power may be particularly great if new entrants face not only the prospect of incurring higher per unit selling costs than the firms established in the market but, in addition, would suffer a significant cost disadvantage in production because of a suboptimal scale of operation.

Discussions of the factors that affect new entrants' ability to obtain a significant share of the market (if incumbent firms hold price above cost) are usually couched in terms of how established firms have “differentiated” their products from similar competing prod-

135. That is, the dominant incumbents' cost advantage will be at its highest level upon the new competitor's entry and will decline as its market share increases. The crucial factor is the length of time the new entrant will suffer a material cost disadvantage.

ucts.¹³⁶ However, in assessing the major incumbents' market power, it is probably more accurate — and certainly more helpful — to think in terms of the costs, risks and time required for a new entrant to obtain "widespread consumer acceptance" of its product.¹³⁷ While the reasons that buyers prefer incumbent firms' products are a relevant consideration, the crucial issue is the difficulty new entrants or fringe competitors would have in overcoming buyers' preference for established products.¹³⁸ Of course, even if no one can erode that preference, the degree of the dominant firms' market power cannot

136. See, e.g., F. SCHERER, *supra* note 3, at 375-405; J. BAIN, *supra* note 49, at 114-43. That established sellers have a "product differentiation advantage" means simply that consumers prefer their products or services over those of other competitors, including new entrants. J. BAIN, *supra* note 49, at 116. Such preferences can exist for a number of reasons. Buyers may simply be more familiar with established brands and have more experience in using them. Buyers may also feel that certain incumbent firms offer higher quality, have a wider selection, provide superior service, have more convenient locations, or have other attributes that consumers desire. See F. SCHERER, *supra* note 3, at 375.

The difficulty with the term "product differentiation" stems from its association in the minds of many with only one source of consumer preference: advertising, especially "image" advertising. Advertising designed to create a positive subjective image in the consumer's mind — rather than to provide information about the product — is believed by some to impose social costs by causing buyers to perceive artificial distinctions between similar, if not identical, products. See, e.g., Mann, *Advertising, Concentration, and Profitability: The State of Knowledge and Directions for Public Policy*, in *INDUSTRIAL CONCENTRATION: THE NEW LEARNING*, *supra* note 20, at 137, 152-55. But see R. BORK, *supra* note 7, at 314-20 (arguing that such consumer preferences are simply the return on a firm's capital investment in advertising.)

The debate over the social and competitive implications of "image" advertising may focus on an important public policy issue. It should not, however, obscure the fact that products and services are "differentiated" in a number of other ways, most of which represent merely a natural and healthy response to legitimate consumer demand.

137. Examining how the dominant firm (or firms) obtained strong and widespread buyer loyalty is not necessarily indicative of the time and expense required for a current new entrant to build a consumer following. For example, buyer loyalty for premium-priced, heavily advertised national brands of frozen orange juice was rapidly eroded by wide distribution of low-priced brands. Demsetz, *The Effect of Consumer Experience on Brand Loyalty and the Structure of Market Demand*, 30 *ECONOMETRICA* 22 (1962).

On the other hand, instances abound where a firm — often the first one to exploit a technological advance or to capture consumers' imagination — has promptly achieved greater buyer loyalty for a product, enabling it to command a substantial price premium and market share for years in the face of much greater promotional outlays by competitors. See, e.g., F. SCHERER, *supra* note 3, at 381, 393 n.68 (Clorox had 10% price premium over extensively advertised Purex in liquid bleach market; Hershey chocolate held a large market share without any media advertising for decades; IBM commanded premium prices for computers without extensive promotion); R. Bond & D. Lean, *Sales, Promotion, and Product Differentiation in Two Prescription Drug Markets* (FTC Staff Report, 1977) (Merck retained a third of the oral diuretic market for more than a decade although charging prices four times that of chemically identical alternatives and despite larger advertising expenditures per sales dollar by competitors. Warner-Lambert's experience with Peritrate for angina pectoris was similar); Buzzell & Farris, *Marketing Costs in Consumer Goods Industries*, in *STRATEGY + STRUCTURE = PERFORMANCE* 122, 128-29 (Thorelli ed. 1977) (study of consumers' goods markets showed that market pioneers' advertising and promotion costs were 1.45% lower as a percent of sales than early entrants that were not pioneers; late entrants spent 2.12% of sales more on advertising and promotion than established but non-pioneer incumbents.)

138. Schmalensee, *On the Use of Economic Models in Antitrust: The ReaLemon Case*, 127 U. PA. L. REV. 994, 1034-35, 1040 (1979).

exceed the magnitude of any differential in price between their products and comparable products of fringe competitors.

The ability of a new entrant to offer a product that is in fact comparable to those preferred by consumers depends, in the first instance, on its ability to develop such a product. Where the product design, formula or its unique features, is protected by patents, copyrights or trade secrets controlled by an incumbent firm, new entrants (or fringe rivals) may either be denied the opportunity of offering comparable products or have to incur royalty fees that increase their unit cost disadvantage vis-a-vis the established incumbents. Consequently, the degree of the major incumbents' pricing flexibility will depend on the size of any unit cost differential (if the patented superior design is licensed to competitors) or the size of the price premium buyers will pay for the superior product over the most preferred alternative. The duration of the incumbents' pricing flexibility will, as discussed previously, depend on the time required to "design around the patent" and, if this requires substantial investment in research and development, the risks involved.¹³⁹

Where new entrants or small incumbents can offer products comparable or superior to those of the dominant incumbents, any residual pricing flexibility major incumbents may have is attributable to factors that make it costly or difficult for a new entrant to obtain widespread buyer acceptance of its product. Any product or service unfamiliar to most prospective purchasers almost invariably has some disadvantage vis-a-vis competing products that are used by a large number of consumers. This means that a new entrant (or fringe incumbent with only a small market share) has an initial burden of informing a broad spectrum of possible purchasers about the product and of finding ways of inducing potential purchasers to sample it.¹⁴⁰ Even if consumers believe that the product itself is compa-

139. See text at note 121 *supra*.

140. The ability of a new entrant to erode brand loyalty for established products appears to relate primarily to two factors: the risk consumers perceive in trying a new product and the ability of consumers to compare it with established brands.

Nagle observes that brand loyalty is attributable not to the brand name itself but to the consumer's knowledge that a brand is superior to most others for his taste. If, after sampling a new brand, a consumer considers it as good as the established brands he normally purchases, he will not pay a premium for them over the new brand. Nagle, *Do Advertising-Profitability Studies Really Show that Advertising Creates a Barrier to Entry?* 24 J. LAW & ECON. 333, 343-44 (1981). Consequently, the fundamental problem for new entrant is enticing consumers to purchase its product and to convince them that the new product is comparable or superior to the leading brands.

Consumer and economic studies indicate that consumers are less willing to sample an unknown product where there are greater perceived consequences if the product does not perform as well as products the consumer normally purchases. Schmalensee, *supra* note 138, at 1037-38. This probably explains why large price differentials exist among therapeutically simi-

rable in quality to those of established firms, purchasers may be reluctant to buy it from sales outlets that have a poorer reputation for reliability and service than those of the established producers.¹⁴¹

To overcome the lack of widespread consumer acceptance, a new entrant may have to incur significantly higher selling costs per unit of sales than incumbent firms for a period of time (thereby incurring a cost disadvantage), offer a lower price than its competitors to induce prospective customers to try its product, or do both.¹⁴² How long a new entrant must incur higher per unit selling costs or charge a lower price in order to obtain widespread consumer acceptance will determine the degree as well as the duration of the incumbent firms' pricing flexibility.¹⁴³ Where potential entrants reasonably can project the duration of any significant preference for established firms' products, they can estimate the extent of the major incumbent firms' pricing flexibility on the basis of the average cost disadvantage and the average price differential over the period required to gain widespread consumer acceptance. While developing such estimates may appear difficult, the successful experience of former new entrants and small competitors often provides fairly reliable indications of the marketing techniques, costs, and time required to obtain

lar prescription and proprietary drugs. Notably, some studies indicate that, even for relatively inexpensive goods (such as bread and beer) where any unfavorable consumption experience is likely to be trivial, consumers will remain attached to familiar brands until the price differential becomes significant. *Id.* at 1039. Thus, where there is greater risk associated with trying an unknown brand, the lower the price necessary to induce consumers to do so and the more extensively the attributes of the product must be disseminated through advertising.

The time and cost necessary to erode buyer loyalty also depends on how easily consumers can evaluate the new product. If a single sampling is sufficient, buyer loyalties for established brands may be short-lived. *Id.* at 1041. On the other hand, where several samplings are necessary to evaluate a product (or "acquire a taste for it") or consumers cannot meaningfully compare competing brands (as is often the case with drugs), a new entrant may have to promote its product extensively and charge a low price for an extended period of time to establish its product in the market.

141. See J. BAIN, *supra* note 49, at 131.

142. *Id.* at 116-17.

143. Bain provides the following example:

Suppose that all established sellers of electric shavers have equal advantage, and that an entrant to the market would either have to incur, on the average for a period of ten years, one dollar per shaver more in advertising costs or receive a price of one dollar less per shaver than established sellers, regardless of the scale which the entrant aims to attain. Suppose also that after ten years in the market, no disadvantage is anticipated. The entrant, averaging his first ten-year disadvantage over the anticipated outputs of as many years as he takes into account, and with appropriately increasing discount for interest and risk of successively more remote years, will presumably consider himself at a net disadvantage for his total future operation of something less than one dollar per shaver. Then established firms should presumably be able to set price up to a similar amount above minimal costs without attracting entry, since at lower prices the entrant would anticipate a net loss on his total further operation.

Id. at 117.

buyer acceptance in a particular industry.¹⁴⁴

Sometimes, however, one may be uncertain of the size and duration of any cost or price differential that a new entrant would have to incur to obtain widespread consumer acceptance. The uncertainty will probably reflect the absence of many situations where former new entrants or fringe competitors successfully eroded consumer preference for established brands in the particular industry or related industries. It may also reflect the fact that apparently well-conceived and expensive marketing campaigns in the industry often have failed. It is important to recognize, however, that this very uncertainty probably indicates that any new entrant would consider any effort to obtain widespread buyer acceptance to be risky. Whether the risk is sufficiently great to deter new entrants from mounting a major campaign to erode consumer preference for established brands depends on the amount of "sunk costs" involved. If the "sunk costs" are small,¹⁴⁵ new entrants and fringe competitors are likely to launch major promotional programs and some will probably succeed. In this situation, the dominant incumbents' pricing flexibility will depend on the cost disadvantage the new entrant faces during the course of the promotional campaign and the time required to eliminate the disadvantage. On the other hand, if "sunk costs" are substantial, major promotional efforts will probably be infrequent and it will be far less likely that new entrants will erode the consumer preference for established brands in the short or medium term.

The cost and risk disadvantages associated with the difficulties involved in obtaining consumer acceptance will be compounded where unit costs of production or distribution are significantly higher for firms operating at suboptimal scale. Under such circumstances, a new entrant faces a cost differential equal to the sum of its cost disadvantage in marketing and its cost disadvantage in production or distribution for the time necessary to obtain a sufficient share of the market to operate at optimal scale.¹⁴⁶ If several years are required to obtain such a segment of the market, incumbents can maintain prices above costs by an amount comparable to the new entrant's

144. See text at note 166 *infra*.

145. The materiality of the "sunk costs" — and therefore the risk — is primarily a function of the likelihood that the expenses of the promotional campaign can be recovered. Thus, sunk cost will tend to be slight if such expenses represent a very small percentage (*e.g.*, 1 or 2%) of a fringe competitor's anticipated sales over five to ten years. Sunk costs and risk will be high where recovery of most or all of the sunk costs depends on the promotional campaign being a complete success.

146. J. BAIN, *supra* note 49, at 117.

total cost disadvantage. Moreover, where a new entrant faces the risk of never obtaining a sufficient market share to support operations at a minimum optimal scale level, it may either require a substantial risk premium on its total sunk costs to induce it to enter or enter only if production at a suboptimal scale appears profitable.

4. *Large Capital Requirements*

Bain and others have considered the need to expend substantial funds to enter into production on an efficient scale as an entry barrier. Bain was concerned about two particular consequences that might flow from the need for a substantial capital investment. The first was that the new entrant might have to pay more to attract the requisite funds (*i.e.*, have higher interest costs) than the incumbent firms. The second was that funds of the required magnitude simply may not be available to many firms.¹⁴⁷

While conceivably either of these effects could confer greater pricing flexibility on major incumbents in the market, it is questionable whether the traditional analysis of capital requirements as an entry barrier — relying exclusively on the size of the required investment — is helpful in determining the degree, if any, that dominant firms in the market can raise price above cost. In the first place, while most new entrants may incur a higher cost of capital because they have less certain prospects, this will usually translate into only a slight unit cost penalty. As Posner has observed, interest and profit rarely exceed 1% of a manufacturing firm's sales price and often represent a much smaller percentage.¹⁴⁸ Consequently, even if the new entrant had to pay an interest rate (or promise shareholders a return) of 30%, its unit costs would usually be only two percent higher than those of firms paying a 10% interest or return rate. Notably, to Bain, unit cost differentials of 1 or 2% indicated low entry barriers.¹⁴⁹

In the second place, the mere fact that many firms cannot raise a substantial amount of capital for a particular venture is meaningless as long as a significant number of firms can. While Bain attempted to provide some benchmarks for determining what amount of capital might confer pricing flexibility on market incumbents, he readily acknowledged that a number of industrial giants could raise capital far in excess of what he classified as "very large."¹⁵⁰ Indeed, for most industries, a substantial number of firms exist for which raising the

147. J. BAIN, *supra* note 19, at 261, 283; J. BAIN, *supra* note 49, at 146.

148. Posner, *supra* note 15, at 945.

149. J. BAIN, *supra* note 49, at 170.

150. J. BAIN, *supra* note 19, at 283-84; J. BAIN, *supra* note 49, at 158-59.

necessary capital to build a plant of minimum optimal scale should not pose a problem assuming a sufficiently high projected return on investment.¹⁵¹

These two observations suggest that large capital requirements rarely will confer significant pricing flexibility on firms in a market unless the most advantaged potential entrants face risks well in excess of those inherent in the uncertain prospects of any new undertaking. Risks of such a magnitude would appear almost inevitably to involve other mobility factors (*e.g.*, patents, economies of scale, entrenched buyer preferences) that a new entrant may find difficult to overcome.

As noted in the previous discussions of other traditional "entry barriers," risks creating a significant degree of pricing flexibility for incumbent firms only exist where two conditions are present. First, the failure to overcome the particular disadvantage would create a substantial cost differential vis-à-vis the dominant incumbents for an extended period of time.¹⁵² Second, the amount of the capital placed at risk in attempting to overcome the disadvantage must be substantial.¹⁵³

It follows that capital requirements in and of themselves very seldom constitute significant "barriers to entry" or mobility factors but rather deserve consideration as aspects of risks that new entrants may encounter due to other mobility factors.¹⁵⁴ Unless they are truly enormous, capital requirements should therefore be assessed in

151. J. BAIN, *supra* note 19, at 283 (although ranks of potential entrants often "greatly thinned" by very large capital requirements, "usually there will be some potential entrants left who could, if sufficiently attracted, 'raise the money'").

152. To illustrate this point, assume that new entrants can easily obtain 5% of the market but, attempting to obtain a 10% market share would involve considerable uncertainty and require large expenditures for promotion. The dominant incumbents' pricing flexibility would be substantial if firms with less than 10% of the market had unit costs 20% higher than the major incumbents'. Their pricing flexibility would be small if the cost disadvantage for firms with small market shares (5% or less) was only 3%.

153. As noted previously, the substantiality of the amount of capital placed at risk may depend in large part on how large it is relative to the new entrant's or fringe firm's anticipated sales in the market if it cannot overcome its disadvantage. *See* note 145 *supra*.

154. The new Merger Guidelines seem to agree generally with the view espoused in this Article that capital requirements themselves are not an entry barrier but rather are important in assessing the risk disadvantage created by other factors. Unfortunately, the Guidelines' discussion of this point is not a model of clarity and seems to suggest that the risk disadvantage arises solely from potential entrants' lack of the "necessary skills and knowledge to succeed." Since skilled and knowledgeable managers and personnel can almost always be hired away from the incumbents, this fact should not often create a risk of sufficient magnitude to confer any meaningful pricing flexibility on the firms in the market. More likely causes of high risk are cost disadvantages due to patents, economies of scale, and entrenched buyer preferences which even managers experienced in the industry may not be able to overcome. *See* U.S. Department of Justice Merger Guidelines, *supra* note 9, at 37.

conjunction with the specific mobility factor involved, as has been done in the previous discussions of traditional "entry barriers."

5. *Analyzing Mobility Factors in General*

This extended review of the "entry barriers" identified by Bain illustrates the basic benefit of the proposed analytical approach. It provides a disciplined framework for determining whether a particular mobility factor is competitively significant by focusing on how much pricing flexibility major incumbents have. As the review demonstrates, all significant effects of mobility factors can be classified in terms of cost disadvantage, risk disadvantage, and time lags.

This approach avoids much of the confusion inherent in Bain's scheme and in its misinterpretation in court and FTC decisions. Although the proposed approach requires considerable discipline and logic in application, attorneys and judges having no more than a basic understanding of economics should be fully capable of using it.

III. MOBILITY FACTOR ANALYSIS IN ANTITRUST LITIGATION

The proposed approach to analyzing mobility factors has important implications for courts and litigants in structural cases and, indeed, in all antitrust cases where market power is a consideration.¹⁵⁵ By following the analytical approach in discovery and trial preparation, litigants often can develop evidentiary records from which reasonable estimates of the degree and duration of the dominant incumbents' market power can be made. Use of the approach can likewise assist in ascertaining the extent to which a merger or exclusionary practice may increase market power by reducing elasticity of supply. Similar techniques can provide an indication of the increased efficiencies that realistically may be anticipated to result from some mergers.

While the factual information from which to derive reasonable

155. Some unspecified degree of market power must be shown to establish a tie-in violation. See *United States Steel Corp. v. Fortner Enterprises, Inc.*, 429 U.S. 610, 620 (1977); *Ungar v. Dunkin' Donuts of Am., Inc.*, 531 F.2d 1211, 1223-24 (3d Cir.), *cert. denied*, 429 U.S. 823 (1976). Indeed, one provocative comment suggests that whether the tie-in increases the defendant's market power by raising entry barriers be the principal criterion for liability. Note, *A New Approach to the Legality of Franchising Tie-Ins*, 129 U. PA. L. REV. 1267, 1297-1304 (1981).

Some recent authority also suggests that in "rule of reason" cases under Section 1 of the Sherman Act, some proof of significant market power may be required. See, e.g., *Gough v. Rossmoor Corp.*, 585 F.2d 381, 388-89 (9th Cir. 1978), *cert. denied*, 440 U.S. 936 (1979); *Oreck Corp. v. Whirlpool Corp.*, 563 F.2d 54, 56 (2d Cir. 1977), *affd. on rehearing en banc*, 579 F.2d 126, 130 n.5 (2d Cir.), *cert. denied*, 439 U.S. 946 (1978). But see *Eiberger v. Sony Corp. of Am.*, 622 F.2d 1068, 1081 (2d Cir. 1980).

estimates may not always be available, in most situations such information probably exists simply because firms in the market, those in related industries, and persons who advise them have usually had to consider significant mobility factors in making major investment decisions. Given the fact that rational decision-making in structural cases necessitates consideration of mobility factors — indeed, the decisional issues in certain types of cases relate primarily to mobility factors — inquiries into the competitive implications of mobility factors would be warranted even at the cost of prolonging litigation.

Contrary to the prevailing wisdom, however, the examination of mobility factors under the proposed analytical approach should generally serve to simplify and streamline litigation. While litigants frequently engage in broad-ranging and unfocused discovery and evidentiary presentations on entry barriers today, use of the proposed approach would create incentives for counsel to concentrate on showing how the important mobility factors affect the fringe competitors and potential entrants most capable of expansion and entry. In lieu of extensive litigation on a vast range of issues in monopolization, potential competition, and vertical merger cases, the trial often could focus primarily on the significant mobility factors. Even in horizontal merger cases, litigants would be less likely to perceive that market definition alone will determine the outcome if mobility factors were seriously considered. Consequently, much of the effort now devoted to developing voluminous evidence in order to “tip the balance” on the elusive market-definition issue may be channeled to developing meaningful evidence on mobility factors and market power.

A. *A Practical Means of Assessing Elasticity of Supply and Estimating Market Power*

The use of the proposed method of mobility factor analysis to estimate the market power of a firm or group of firms follows logically from the objectives of the analytical approach. It seeks to determine the extent to which fringe expansion and new entry limit the dominant firms' ability to maintain price above cost. Thus, while it does not forecast how much new supply will be added to the market with each incremental increase in price above cost — as quantitative estimates of supply elasticity would require¹⁵⁶ — it does provide a reasonable basis for determining the bounds that market elasticity of supply places on the major incumbents' market power.

156. See Landes & Posner, *supra* note 3, at 944 n.17.

Where the product market definition includes all products to which consumers are likely to switch with a modest increase in price,¹⁵⁷ elasticity of supply and market share will be the principal determinants of the market power that a firm or group of firms has. Consequently, considering the outer bounds of the major incumbents' pricing flexibility — as derived through mobility factor analysis — together with the market share of the firm (or firms) involved in the litigation permits a reasonable assessment of its (their) market power. In horizontal merger cases, where the primary concern is the increased potential for coordination among the major incumbents, the proposed analytical approach also allows courts to assess the dimensions of the welfare loss if such coordination results from the merger. And, in situations where the alleged anticompetitive effect is to increase market power by reducing market elasticity of supply — as in monopolization and potential competition merger cases — the proposed analytical approach affords a means of estimating the extent of the likely increase in market power, if any.

While admittedly rough, this method of assessing market elasticity of supply and market power offers a practical means of evaluating in actual litigation the influence of supply elasticity. Indeed, it would appear to offer one way of using the essence of the theoretically-attractive Landes and Posner model for calculating market power,¹⁵⁸ which would otherwise rarely prove useful in actual practice because of the difficulties in quantifying market elasticities of demand and supply.

Using mobility factor analysis to estimate market power is practical in antitrust litigation for two fundamental reasons. First, basic information about the significant mobility factors and their competi-

157. As noted previously, this is the basic approach that courts have historically taken in defining the relevant product market: using the criteria of reasonable interchangeability of use and cross-elasticity of demand. See note 29 *supra*.

Where a number of reasonable market definitions are possible in a particular case, see L. SULLIVAN, *supra* note 14, at 42-43, using the market definition that includes all reasonable substitutes and then analyzing elasticity of supply through the proposed analytical approach should provide a sound basis for assessing the major incumbents' market power and the extent to which it is likely to be increased by the merger.

This, in essence, has been the approach to market definition followed by the Civil Aeronautics Board in recent merger cases. Although geographic markets could be defined on a national or regional basis because entry into routes is generally easy, the Board has focused on individual city-pairs as the relevant markets because passenger demand is city-pair specific. (A passenger wants to fly from Chicago to Dallas and generally does not consider a flight from Chicago to Denver as an alternative.) In this way, the Board's merger cases concentrate on the factors affecting entry into individual city-pairs. If potential entrants face substantial disadvantages or time lags in entry, the incumbents could exercise great market power. If entry is easy, they will have little pricing flexibility. See *Continental-Western Merger Case*, CAB No. 38733, slip op. at 2-5 (issued June 3, 1981).

158. Landes & Posner, *supra* note 3.

tive effects is generally available. Second, the inquiry can be relatively confined, focusing on how the significant mobility factors in a market (rarely more than one or two) affect a few firms (those fringe competitors and potential entrants in the best position to expand and enter).¹⁵⁹ Indeed, as discussed later, by imposing a framework for discovery and trial preparation based on the proposed approach to mobility factor analysis, a court can ensure that the examination of issues relating to mobility factors proceeds in a disciplined and manageable way.

1. *Sources of Information on Mobility Factors*

Litigants can obtain considerable information detailing the significant effects of mobility factors from a variety of sources. Firms in the industry will logically consider mobility factors in their business planning and frequently have devised means of estimating cost disadvantage effects. Obviously, firms that have considered entry probably have particularly valuable information from the perspective of a new entrant. And a host of specialized business advisors and suppliers — equipment manufacturers, advertising agencies, marketing consultants, research advisors and production and design engineering firms — will have vast experience in determining the cost, risk and time lag effects of specific types of mobility factors. While it may be necessary to obtain some cost data from firms in the industry, estimating the extent of cost disadvantages ordinarily will not require any detailed analysis of incumbent firms' accounting records or employment of cost accounting techniques.

The firm holding the patent on the most efficient process or controlling a superior input almost surely will be aware of the size of the cost advantage over using other processes or inferior inputs.¹⁶⁰ Moreover, other firms in the market and their research consultants will undoubtedly know if the patent can be "invented around" easily and have some idea of the sunk costs and risk involved in attempting to do so. Likewise, transportation costs can be obtained from the incumbent firms, transportation companies or regulatory agencies. And plant design consultants and suppliers of new and used equipment can usually provide estimates of both the original cost of an

159. Assessing the effect of mobility factors on four to six of the most advantaged fringe firms and potential entrants should usually provide a reliable indicator of supply elasticity. The number assures both that enough firms will be interested in expansion or entry into the market (as opposed to pursuing other profit opportunities) if the major incumbents attempt to exercise their market power and that sufficient output will be added to the market to keep the dominant incumbents from raising prices further.

160. See, e.g., *E.I. DuPont de Nemours & Co.*, 96 F.T.C. 653, 682-89 (1980).

efficient production facility and its disposal value so that "sunk costs" can be established.

Engineering studies can provide much information about the cost and risk effects of scale economies, at least for production facilities, equipment and processes.¹⁶¹ Through interviews of engineers in the industry and in outside machinery and plant design firms, litigants ordinarily can develop fairly reliable estimates of scale economies for a plant in a few months.¹⁶² Where litigants cannot undertake such an investigation (such as when a preliminary injunction is sought), other more immediately accessible measures could be used to indicate roughly the share of the market necessary to minimize any cost disadvantage. For example, the average share of total industry sales accounted for by plants making up the top fifty percent of the industry's plant size distribution has been shown to be significantly correlated with engineering estimates.¹⁶³

Economies of scale, of course, can be important in areas other than production. Usually firms in the market or in related industries have means of assessing the scale-cost relationship if it is significant to their business. Advertising agencies or corporate advertising departments, for example, are likely to have considered the relative effectiveness and cost of using network television advertising versus spot advertising for regionally-sold products. And in the airline industry, the major carriers have sophisticated techniques, some computerized, for evaluating the economies of scale involved in "hubbing,"¹⁶⁴ which is often of vital importance in their route

161. "[C]arefully executed engineering estimates undoubtedly provide the best single source of information on the cost-scale question." F. SCHERER, *supra* note 3, at 94. The leading studies of scale economies using the engineering approach are F. SCHERER, A. BECKENSTEIN, E. KAUFER & R. MURPHY, *supra* note 127; J. BAIN, *supra* note 49.

162. Most larger companies employ engineers who specialize in planning and designing new production units and plants. In smaller enterprises, the same job is done by generalist senior engineers or other executives. Both small companies and large also draw upon the special expertise of outside machinery and plant design firms. The persons or groups performing these functions accumulate much information on alternative equipment and plant designs and the associated investment and operating costs. This expert knowledge can be tapped through interviews and questionnaires to estimate cost-scale relationships and minimum optimal scales.

F. SCHERER, *supra* note 3, at 94.

163. F. SCHERER, A. BECKENSTEIN, E. KAUFER & R. MURPHY, *supra* note 127, at 182-83; Weiss, *Optimal Plant Size and the Extent of Suboptimal Capacity* in *ESSAYS ON INDUSTRIAL ORGANIZATION IN HONOR OF JOE S. BAIN* 126-34 (R. Masson & P. Qualls eds. 1976). The underlying data can be derived from U.S. Census reports. See F. SCHERER, *supra* note 3, at 95.

164. At airports centrally located in major regions of the country (e.g., Atlanta, Chicago, Dallas, Denver, and St. Louis), some airlines have built "hub and spoke" route systems. These route systems permit passengers commencing (or ending) their journey at smaller cities in the region to fly into the "hub" airport and transfer to flights to many different destinations. If groups of incoming and outgoing flights (so-called "banks") are well-timed, the passenger

planning.¹⁶⁵

Estimating the cost disadvantage, greater risk, and the time required for a new entrant to obtain widespread consumer acceptance for a product may sometimes prove more difficult. Of course, the experience of new entrants and fringe competitors in the past (including their per unit selling costs and the price differentials they maintained vis-a-vis the established brands) should provide a reasonable indication of the disadvantage and time lag other firms are likely to encounter. In particular, their experience would provide valuable information on the two key factors that determine the ability of a new entrant to erode brand loyalty: the risk consumers perceive in sampling a new product and the ability of consumers to compare it with established brands.¹⁶⁶ Even in situations where successful new entry in the market or in related markets has been minimal, marketing consultants and advertising experts familiar with the general category of products involved usually can outline the type of promotional campaign that would be necessary to obtain buyer acceptance, along with the estimates of its costs, its duration, and perhaps its likelihood of success.

2. *Developing an Evidentiary Record*

While extensive information about mobility factors that may be

from the small city will have a natural incentive to remain on the same carrier for the next leg of this journey. See Brodley, *supra* note 134, at 823 n.153.

As a carrier with an existing "hub and spoke" system enters new routes emanating from the hub, it attracts passengers on its *existing* segments because it can offer single-carrier service between the other end of the new route and all cities it already serves beyond the hub. The added passengers (and revenue) on the existing routes come at little additional cost because the airline is already providing service, almost invariably with many unoccupied seats. At the same time, on any particular segment, a hubbing carrier will have a higher load factor (all other things being equal) because it can attract a disproportionate percentage of the passengers traveling to destinations beyond the hub.

Because minor changes in load factors in the airline industry often mean the difference between large profits and major losses, hubbing can be a very significant scale economy where a substantial portion of the traffic in a city-pair connects at the hub. For example, airlines with developed hubs can sometimes obtain a greater profit on a route than competitors with operating costs that are 40-50% lower.

165. In the second *Continental-Western* merger case, both the CAB staff and the merging carriers utilized these techniques to develop projections of anticipated traffic, revenue, profitability, and risk for potential entrants into routes emanating from Denver. *Continental-Western Merger Case*, CAB No. 38733 (issued June 3, 1981) (copy on file with the *Michigan Law Review*). The consultants for the CAB staff developed estimates for 14 carriers with respect to 17 different Denver city-pairs and the merging parties internally developed estimates for even more carriers for 7 Denver city-pairs. While the studies were somewhat complex, both were completed in 6 to 8 weeks. Indeed, the trial was finished 2 1/2 months after the merger application was filed.

166. See Schmalensee, *supra* note 138, at 1041 (proposing a ready means of empirically determining consumers' perceived risk in trying a new product and their ability to evaluate it, based on the actual experience of a smaller competitor).

important in a market is usually obtainable, the first step for counsel seeking to develop evidence from which to estimate market power is to confine the inquiry. To do so requires that he determine the mobility factors that may create a significant disadvantage or time lag and identify the fringe competitors and potential entrants in the best position to expand and enter. These steps necessarily occur simultaneously since the reason some firms are more capable of expanding or initiating production than others is that they are less disadvantaged by mobility factors.

In cases where the geographic market is regional (or foreign producers face little or no cost disadvantage due to transportation, import duties, or trade barriers) this process will be simple. The most likely entrants will be firms in neighboring geographic areas (or foreign producers) and the cost disadvantages, if any, are probably attributable to transportation expenses and consumer preference for local brands.¹⁶⁷ Other cases will require more basic information about the industry, primarily the facilities and expertise needed to develop, produce, and market the product successfully. Litigants often can obtain such information as well as information about the general capabilities of the smaller firms in the market and the major competitors in related industries through a few interviews with businessmen in the market and others who follow it, especially stock analysts, major purchasers, and economic forecasting firms.

After a few well-placed interviews, a rough ranking of fringe competitors and potential entrants can generally be made. In this way, discovery (or informal interviews) to obtain more information about the apparently "most advantaged" fringe firms and potential entrants can begin in a matter of weeks. At the same time, counsel may want to determine whether other firms, that initially seem more disadvantaged, have capabilities that have been overlooked. Since fringe competitors and potential entrants usually fall into natural groupings, interviews and limited discovery focusing on representative firms in each group should indicate whether the initial rough ranking needs to be modified.

Proceeding in this manner, counsel should be in a position — at an early pre-trial stage — to select with considerable confidence the half-dozen or so fringe competitors and potential entrants most capable of expansion and entry and to identify the significant mobility factors (usually one or two) that affect them. Consequently, the remainder of the discovery and trial preparation process can concen-

167. 2 P. AREEDA & D. TURNER, *supra* note 2, at ¶¶ 522-24.

trate on ascertaining the extent of the disadvantages that a handful of firms face because of the few significant mobility factors.

From studies and other information developed by firms in the market or in related industries and from interviews of experts in the field, the techniques businesses utilize to estimate cost and risk disadvantage effects and time lags of particular mobility factors can often be ascertained. Those techniques can be used to prepare analyses for trial showing the differential in unit cost resulting from a mobility factor and the period of time necessary to overcome it. Indeed, simply knowing the basic facilities and equipment of the established incumbents and of smaller competitors or potential entrants, production engineering experts may be able to prepare reasonable projections of cost differentials. Through such evidence and testimony, counsel can develop a sound evidentiary record for estimating the degree and duration of the dominant incumbents' pricing flexibility and, therefore, in conjunction with their market share, their market power.

Litigants easily can adapt this approach to trial preparation to develop evidence concerning the extent, if any, that market power has been, or is likely to be, increased. In monopolization cases, for example, discovery and investigation to develop evidence on the alleged monopolist's current degree of market power can be expanded slightly to determine the extent to which the alleged monopolist's practices have created or increased the cost and risk disadvantages and time lags for the "advantaged" competitors and potential entrants.¹⁶⁸ Competitors in the industry and firms that have considered entry will ordinarily have substantial information on such effects because of their importance in business planning and strategy.¹⁶⁹

Estimating the degree to which a merger eliminating a potential entrant is likely to increase market power is even simpler. The same methodology is used as in determining the dominant incumbents' pricing flexibility, assessing the effects of mobility factors on the half-dozen or so "most advantaged" potential entrants including the potential entrant to be removed by merger. The extent to which the merging firm has less of a cost or risk disadvantage vis-à-vis the

168. See text at note 70 *supra*. As noted previously, some or all of the monopolistic practices that may heighten disadvantages and increase market power may nevertheless be unobjectionable if they are necessary to achieve or maintain its efficiencies. See text at note 64 *supra*.

169. In vertical merger cases, similar techniques could also be employed to estimate the extent of any increased market power — such as to show the increased cost disadvantage of fringe competitors if they are foreclosed from a large portion of the market and scale economies are important. See 4 P. AREEDA & D. TURNER, *supra* note 2, at ¶¶ 1008-11.

dominant incumbents than all (or almost all) other potential entrants will indicate the degree to which the major incumbents' pricing flexibility is likely to be increased.¹⁷⁰ And the extent to which the firm would require less time than other potential entrants to enter and overcome any significant cost or risk disadvantage provides an estimate of the effect of the merger in increasing the duration of the incumbents' market power.

3. *Applying the Approach: An Example*

In many cases, this basic approach to trial preparation can, in fact, be fairly simple. An empirical demonstration of this occurred in the FTC case challenging Fruehauf's acquisition of Kelsey-Hayes,¹⁷¹ a major manufacturer of cast wheels for heavy-duty trucks and truck trailers. Counsel for Fruehauf initially interviewed two or three executives in the heavy-duty wheel industry and foundry experts to determine what facilities and expertise were necessary to design, produce, and sell the product as efficiently as the major incumbents. The interviews indicated that marketing posed no obstacle to entry since the major purchasers were the truck and truck trailer manufacturers who bought exclusively on the basis of price. To manufacture wheels on a competitive basis, however, required a foundry with automated (or, at least, semi-automated) molding lines, thus raising possible concerns about scale economies and capital cost.

To identify firms with major foundries which either had automated equipment or could add an automated molding line, Fruehauf retained a leading foundry consultant. While the consultant was preparing a list of such foundries, counsel for Fruehauf conducted initial discovery and interviews of the small wheel manufacturers and of firms with well-known foundry capability such as General Motors and Ford, which have the largest foundry complexes in the world. Then, based on the consultant's listing of foundries, Fruehauf's counsel and the consultant visited five or six foundries representative of the principal categories of foundries the consultant had identified.

After only a few weeks of interviews, the group of firms most capable of entry had become apparent: the highly automated iron foundries supplying the automotive and farm equipment industries. Consequently, at an early pre-trial stage, discovery and trial prepara-

170. See notes 77-86 *supra* and accompanying text.

171. Fruehauf Corp., 91 F.T.C. 132 (1978), *enforcement denied*, 603 F.2d 345 (2d Cir. 1979).

tion focused on developing estimates of the unit costs such firms could expect to achieve in wheel production, the capital investment necessary for them to enter, and the effect of economies of scale. With information about the types of production facilities employed by the existing wheel producers, both Fruehauf's foundry consultant and several managers of the automated iron foundries were able to predict with confidence that this group of foundries would require only minimal investment in standard machining equipment to enter and could produce at a unit cost at least as low as that of the established manufacturers. In addition, the consultant and the foundry managers testified that these firms could avoid scale economies because the foundries had the capability of switching quickly from the production of wheels to their other product lines. In other words, their foundries could make as many or as few wheels as they wanted without increasing production costs.¹⁷²

Although the process of gathering the basic information and developing the evidence on the "advantaged" potential entrants took three or four months, it could have been completed in half that time had it been necessary to do so. While preparing a full evidentiary case concerning the effects of mobility factors may well prove somewhat more complicated and time consuming where cost or risk disadvantages of significance exist, it is difficult to believe that the process would require more than six months in all but exceptional circumstances.¹⁷³

172. The FTC, however, found that entry into heavy-duty wheel production by the automated iron foundries was somehow a "sub-optimal" mode of entry. 91 F.T.C. 132, 233-34. Clearly, it was not "sub-optimal" in terms of production costs (*id.* at 233 n.26) but the Commission believed that either in performance or in the minds of wheel purchasers there was a clear distinction between wheels made from ductile iron and those made from steel. *Id.* Ironically, the very evidence that the Administrative Law Judge and the Commission cited (Finding 214 of the Initial Decision, *id.* at 183) indicated precisely the opposite — that major wheel purchasers deemed ductile iron and steel wheels to be identical in terms of both performance and consumer acceptance.

Although noting the absence of any direct evidence corroborating this crucial finding, the Court of Appeals upheld it. The court inferred a preference for steel wheels because only one small wheel producer made wheels from ductile iron and because no other iron foundry had entered into wheel production. *Fruehauf Corp. v. FTC*, 603 F.2d 345, 357 (2d Cir. 1979). These facts, of course, could equally support just the opposite conclusion: that iron foundries have not expanded or entered because existing steel wheel manufacturers have held prices at a competitive level to forestall their expansion or entry. Indeed, given the record evidence showing the absence of any discernible preference for steel wheels, the latter inference seems more reasonable.

173. For example, detailed analyses of the revenue, cost, profitability, and risk effects of "hubbing" on potential entrants into numerous Denver city-pairs were prepared in less than two months by both sides in the CAB's second *Continental-Western* merger case. See note 165 *supra*.

B. *Estimating Efficiencies to be Obtained by Merger*

Mobility factor analysis can also be used in many situations to estimate the extent to which a merger is likely to increase efficiencies. While efficiencies have never been held by the courts to justify a merger that would otherwise be illegal, the extent to which the courts should permit an "economies defense" is currently a topic of considerable debate in the academic community.¹⁷⁴ In the near future, courts will undoubtedly encounter arguments that they should permit presumptively illegal mergers which are purportedly necessary for the merging parties to achieve substantial efficiencies. Whether or not those arguments should prevail where the merger would result in very large market shares,¹⁷⁵ ample justification exists for considering them where a merger would permit both partners to overcome a significant disadvantage vis-à-vis the principal incumbents.¹⁷⁶

Indeed, those types of mergers are unlikely to lessen competition. Assuming the inefficient firms' cost disadvantage is significant¹⁷⁷ and not easily overcome,¹⁷⁸ the firms are likely to be price-followers. Increasing the number of efficient firms that determine the price would make oligopolistic coordination in the market more difficult and

174. Compare 4 P. AREEDA & D. TURNER, *supra* note 2, at ¶ 946; Edwards, *supra* note 8; Muris, *supra* note 92; Williamson, *supra* note 92 (all supporting an "economies defense") with R. BORK, *supra* note 7, at 125-27; R. POSNER, *supra* note 2 at 112-13; Fisher & Lande, *Efficiency Considerations in Merger Enforcement*, 91 YALE L.J. (1982) (forthcoming).

175. A merger between two already dominant firms (with, for example, 40% of the market) could be claimed to increase efficiencies. The prospect that such a merger would greatly increase the firms' market power and the potential for very effective coordination, however, runs substantial risk that the benefits of any increase in efficiencies will never be passed on to the consuming public.

Most economists believe that the appropriate measure of the social cost of the merger is not, however, the monopoly overcharge but the "deadweight loss" resulting from the supracompetitive pricing. F. SCHERER, *supra* note 3, at 459-60. But see Posner, *The Social Costs of Monopoly and Regulation*, 83 J. POL. ECON. 807 (1975). The monopolistic overcharge, in their view, is merely a shift of income from consumers to the industry's stockholders. The real welfare loss — termed "deadweight loss" — is the amount that consumers would be willing to pay for the output that is no longer produced due to the monopolistic restriction of output. Thus, neither consumers nor producers derive any benefit from the "deadweight loss." F. SCHERER, *supra* note 3 at 460.

Since the "deadweight loss" is almost invariably much smaller than the monopoly overcharge, the "deadweight loss" produced by even large increases in price can be more than offset by small decreases in cost. A 20% increase in price can be offset, for example, by a cost reduction of 1% if market demand elasticity is $\frac{1}{2}$, or 2% if elasticity is 1. Muris, *supra* note 92, at 387; Williamson, *Economies as an Antitrust Defense: the Welfare Trade-offs*, 58 AM. ECON. REV. 18, 22-23 (1968).

176. See 4 P. AREEDA & D. TURNER, *supra* note 2, at ¶ 940.

177. Firms with a cost disadvantage of five percent or more are unlikely to be major factors in determining day-to-day pricing in the market.

178. If the individual firms can achieve costs comparable to the dominant incumbents in a year or two, the effect of the merger is to decrease by one the number of firms that will determine the market price in the near future.

lower total costs for the industry, thereby achieving resource savings.¹⁷⁹ That an "economies defense" is even necessary in these situations arises from the traditional preoccupation with market definitions and market shares without recognizing the importance of mobility factors in determining market power. If one also considered mobility factors, it would be readily apparent that the real prospect for anticompetitive behavior relates to the collusive potential among the efficient firms, which presumably could maintain price significantly above cost without provoking increased output by less efficient rivals.¹⁸⁰

However one may decide to analyze the situation — as an "economies defense" or a more sophisticated antitrust analysis — the crucial issue is the extent to which the merging parties can reduce their disadvantage through the merger. Probably, the easiest and most reliable method of estimating the extent of increased efficiencies, if any, is to use a technique similar to that employed in determining the likely increase in market power due to the removal of a potential entrant. The method involves, first, identifying the mobility factors which create disadvantages that the merger might reduce. Then, the probable increase in efficiencies can be estimated by ascertaining the extent of the individual merger partners' disadvantage compared to incumbent firms with attributes similar to those of the merged entity.

C. *The Potential to Simplify and Streamline Litigation*

Even were mobility factor analysis to introduce some additional complexity into antitrust litigation, its use may well provide a substantial benefit by providing greater assurance that the antitrust laws would be rationally applied in merger and monopolization cases. But, in actual application, the proposed approach to mobility factor analysis should actually increase the manageability of major antitrust litigation and, in many cases, would permit the proceeding to be considerably simplified and streamlined.

To understand why this is so, one must first recognize the effect that the present absence of accepted standards for evaluating mobility factors has in antitrust cases. Understandably, litigants concentrate their efforts on the issues and evidence that they perceive as most important in determining the ultimate outcome of the case. Because market share and concentration are so often decisional in merger cases today, parties will tend to concentrate their time and

179. 4 P. AREEDA & D. TURNER, *supra* note 2, at ¶ 940.

180. *Id.* at 148.

energy on the definition of the relevant market, inundating the court with evidence designed to tip the balance of the crucial line-drawing decision their way.¹⁸¹ But, as noted previously, precise determination of the outer bounds of a market is rarely possible and, even where it is, the market concentration and market shares of the merging parties may not indicate the degree of market power or the potential for oligopolistic coordination.

Undeniably, much of the evidence usually presented by the parties to persuade the court to adopt their market definitions relates to factors affecting new entry.¹⁸² Perusing the record of most merger cases, one will quickly realize that much of the trial is actually devoted to these factors. But, because the courts have no meaningful standards for evaluating their significance, litigants have a strong incentive to flood the courts with "impressionistic" testimony and evidence detailing the many steps and the large amount of capital necessary to enter the market. This evidence is certainly relevant in a legal sense. As we have seen, however, it usually contributes little to the court's understanding of how entry conditions affect market power and of how much pricing flexibility the dominant incumbents possess.

Use of the proposed analytical approach would fundamentally change those incentives and in most cases would actually assist the courts in managing and focusing the discovery and trial. With a disciplined and economically sound approach to analyzing mobility factors, parties are likely to perceive that market definition and market shares alone may not determine the outcome, particularly in close cases. Consequently, they will have the incentive to channel some of the effort currently directed to "tipping the balance" on the market definition issue to developing meaningful evidence. Litigants will also have a strong incentive to concentrate on establishing *how* the pertinent mobility factors affect those firms in the best position to enter or expand and on demonstrating the resultant degree of market power.

Moreover, courts concerned about maintaining control of the case and confining the scope of the inquiry into mobility factors can use a simple technique in managing the case. They can merely require that, at an early pre-trial conference or stage, the parties iden-

181. Markovits, *supra* note 14, at 602.

182. Surely any evidence concerning cross-elasticity of supply to support (or refute) a proposed market definition pertains to conditions affecting entry. Moreover, in most cases, litigants attempt to buttress their cases with considerable additional evidence intended to demonstrate the ease or difficulty of entry.

tify those mobility factors that, they believe, permit the major incumbent firms to enjoy some degree of pricing flexibility, together with the names of the fringe incumbents and potential entrants that appear best situated to enter or expand. As noted previously,¹⁸³ a few weeks of basic investigation usually can identify the significant mobility factors and the "most advantaged" potential entrants and fringe competitors. At the time they identify the significant mobility factors, the court should require the litigants to demonstrate (either in writing or orally at the pre-trial conference) *how* each allegedly significant mobility factor permits pricing flexibility. If experienced counsel cannot provide a coherent explanation at that stage, one can be confident they will not be able to do so at trial.

While the lists of mobility factors and firms may sometimes require modification later — such as where further discovery develops an unanticipated potential entrant — they serve to narrow the focus of the inquiry considerably in two respects. First, identifying the firms that each party believes are most capable of entry or expansion may well reveal that a particular mobility factor has no competitive significance. It may not affect the firms best situated to enter or expand, or they may have advantages in overcoming it. Second, the lists focus the discovery effort and trial preparation on the effect of *particular* mobility factors on *specific* firms or groups of firms. The examination of mobility factors is thereby limited in scope and concentrated on specific factual issues even before full discovery has begun.

Since the determinative issues in several types of structural cases relate primarily to mobility factors, many of these cases could also be simplified considerably. This, in fact, has been the experience of the Civil Aeronautics Board in recent airline merger cases where it has applied the same standards as those embodied in the Clayton Act. By making it clear to the parties that its primary concern was the effect of mobility factors on potential entrants, the Board has reduced the scope of its merger cases considerably while, at the same time, prompting litigants to develop very informative trial records on the competitive implications of the pertinent mobility factors.¹⁸⁴

A similar approach by the courts may streamline litigation where it is likely that issues relating to mobility factors will be important, if not determinative. The potential for focusing litigation is particularly great in monopolization and vertical and potential competition

183. See Part III-A-2 *supra*.

184. See *Continental-Western Merger Case*, CAB No. 38733, slip. op. at 4-5 (September 24, 1980); note 165 *supra*.

merger cases. In those cases, the decisional issues usually relate almost exclusively to mobility factors. Thus, by prompting the parties to recognize the importance of mobility factors from the outset of the litigation and by using the principles of mobility factor analysis to limit and manage that aspect of the case, courts may be able to simplify and streamline litigation in major structural cases.

CONCLUSION

Consideration of the competitive and efficiency implications of mobility factors is essential to reasoned decision-making in structural antitrust cases. Yet, having no economically sound and practical approach for analyzing mobility factors in litigated cases, courts and litigants have placed primary reliance on concentration and market share information which are often very misleading indicators of market power. As a result, there is a serious risk that the antitrust laws may be perversely applied. Mergers and practices that portend substantial reduction in competition may well be permitted while those with little or no prospect of injuring consumer welfare are prohibited.

In an attempt to deal with this problem, I have proposed an approach, based on accepted economic theory, for integrating sound mobility factor analysis into structural case litigation. Use of the proposed approach should not only assist courts in analyzing mobility factors but should also encourage litigants to develop evidentiary records that provide meaningful information about the extent of market power.