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INTRODUCTION

Defining the relevant product market is one of the few areas in antitrust law that has escaped extensive commentary and criticism. Despite nearly twenty years of sometimes confusing, sometimes conflicting practice since the Supreme Court's last general prescription for treating market definition in *Brown Shoe Co. v. United States,*[1] little evaluation has issued on the value of the standard and the performance of the lower courts in following it. This article attempts to fill that void.

First, this article will provide the historical setting in which the prevailing guidelines governing market definition were framed. Next, the discussion will turn to an analysis and evaluation of those guidelines against the standards of consistency and predictability in serving the primary purpose of the antitrust laws. Finally, the elements and methodology of market definition analysis will be examined in detail, focusing on the case law and the degree to which courts have succeeded in following a consistent and logical pattern after *Brown Shoe.*

HISTORICAL DEVELOPMENTS PRIOR TO BROWN SHOE

The first significant Supreme Court decision dealing with the issue of relevant product market definition was the 1956 case of *United States v. E.I. duPont de Nemours & Co. (Cellophane).*[2] In that case, the Supreme Court affirmed a lower court finding that the relevant market for duPont's cellophane product was the flexible packaging material market. In so finding, the Court rejected the government's claim that duPont had monopolized trade in the

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1. 370 U.S. 294 (1962).
2. 351 U.S. 377 (1956).

narrower cellophane market.

On appeal to the Court, the government claimed that the district court had erred by broadening the relevant market to include other wrapping materials such as glassine, waxed paper, and grease-proof paper. The Supreme Court acknowledged that, in comparison with other wrapping materials, cellophane possessed unique characteristics and remained, over time, the clear preference of some classes of customers.[3] Nevertheless, it held that these factors were not determinative of the relevant product market issue before it. Rather, in rejecting any tests that would focus upon mere physical differences between competing products, the Court announced the reasonable interchangeability test which calls for the inclusion in the relevant market all goods reasonably interchangeable.[4] According to the Court, this test was satisfied by evidence in the record of functional interchangeability and price sensitivity among flexible wrapping products. Thus, the evidence supported the broad product market defined by the district court.[5]

One year later, in *United States v. E.I. duPont de Nemours & Co. (General Motors)*,[6] the definition of the relevant product market was again a prominent issue for the Court to address. In this case, the government challenged, under section 7 of the Clayton Act and sections 1 and 2 of the Sherman Act, duPont's acquisition of 23% of the common stock of General Motors. Prior to the attempted acquisition, duPont had been supplying paint and fabric to General Motors.

In reversing the district court's dismissal of the complaint, the Supreme Court held that there was a reasonable probability that, if allowed to acquire the stock, duPont would be able to foreclose its competitors from a substantial share of the relevant product market, automotive finishes and fabrics.[7] The Court, however, did

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3. *Id.* at 417.

4. *Id.* at 395. The Court laid down the following rule: "In considering what is the relevant market for determining the control of price and competition, no more definite rule can be declared than that commodities reasonably interchangeable by consumers for the same purposes make up that 'part of the trade or commerce,' monopolization of which may be illegal." *Id.* The Court indicated that interchangeability is "largely gauged by the purchase of competing products for similar uses considering the price, characteristics and adaptability of the competing commodities." *Id.* at 380-81.

5. *Id.* at 399-400.

6. 353 U.S. 586 (1957). Although the parties were the same, the facts were unrelated to the *Cellophane* case.

7. The Court stated: "The record shows that automotive finishes and fabrics have sufficient peculiar characteristics and uses to constitute them products sufficiently distinct from

not in any way refer to the general reasonable interchangeability test it ennunciated only one year earlier in the *Cellophane* case. Inexplicably, the majority did not even consider the existence of substitute uses for the kind of paint and fabric that duPont sold to General Motors, despite the dissenting Justices' emphasis that duPont's sales to General Motors amounted to only 3.5% of all similar finishes and 1.6% of similar fabrics.[8] Rather, the majority was satisfied by the peculiar characteristics and uses of automotive finishes and fabrics.[9] Thus, on the basis of criteria it had apparently repudiated one year earlier in constructing a market of broad dimensions, the Court drew very narrow boundaries around the sales from one industry to another.

Both the *Cellophane* and *General Motors* decisions have been severely criticized on the basis of the substantive rules or tests set forth by the Court as well as the casual fashion in which the Court applied such rules to the facts before it.[10] The Court in *Cellophane* ignored many factors that suggested that cellophane was unique and that the cross-elasticity or functional interchangeability between cellophane and other flexible wrappings was quite low. Then, in *General Motors,* the Court focused on the unique features and uses while ignoring the alternative uses of automotive paints and fabrics. Certainly, the most troubling aspect of the two cases was that each apparently employed entirely different legal theories to define relevant product markets. This was the dilemma facing the district court in *United States v. Brown Shoe Co.*[11]

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all other finishes and fabrics to make them a 'line of commerce' within the meaning of the Clayton Act." *Id.* at 593-94.

8. *Id.* at 593-96. (Burton and Frankfurter, J.J. dissenting).

9. *Id.* at 593-94.

10. *See* SULLIVAN, HANDBOOK OF THE LAW OF ANTITRUST, § 16 (1977) [hereinafter cited as SULLIVAN]. Stocking & Mueller, *The Cellophane Case,* 45 AM. ECON. REV. 29 (1955); Turner, *Antitrust Policy and the Cellophane Case,* 70 HARV. L. REV. 281 (1956) [hereinafter cited as Turner]. Serious questions concerning the efficacy of either test was raised by the Court itself in *Cellophane.* The Court noted that the flaw in focusing on peculiar characteristics of certain products was that such a test could exclude all but physically identical products from a relevant market. Simultaneously, however, the Court acknowledged that reliance on the vague standards of interchangeability necessarily results in uncertain applications to particular facts and circumstances. 351 U.S. at 394-95.

11. 179 F. Supp. 721 (E.D. Mo. 1959), *aff'd,* Brown Shoe v. United States, 370 U.S. 294 (1962).

THE BROWN SHOE DECISION: A SYNOPSIS

The District Court Decision

In *Brown Shoe,* the government attacked a merger between Brown Shoe Company, Inc. (Brown) and Kinney Company, Inc. (Kinney) that raised issues of horizontal restraint and vertical foreclosure.[12] The parties offered incompatible definitions of the relevant product market to the district court. The United States argued for a broad product market comprising all shoes. Brown and Kinney urged that the broad market be divided into smaller markets distinguished by the age and sex of the purchasers and the price and quality of the shoes.

The district court struggled with the various tests it perceived to be potentially applicable.[13] Based upon its review of "the maze of cases" previously decided, the court concluded that the relevant market "cannot be determined by any process of logic and should be determined by the processes of observation."[14] The court decided that it had no recourse but to "go to the facts in the case" and make its determination guided by the "practices in the industry, the characteristics and uses of the products, their interchangeability, price, quality and style."[15] The object of this inquiry would be to determine how the industry and the public perceive shoe products. The court, then, derived three lines of commerce—men's shoes, women's shoes, and children's shoes—and determined that competition was sufficiently threatened in these submarkets to condemn the merger.[16] It was this matter of market definition the Supreme Court was called upon to address.

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12. Brown, the fourth largest shoe manufacturer and third largest retailer, merged with Kinney, the eighth largest retailer and seller of two percent of the nation's shoes. In some metropolitan areas, however, the shares of Kinney and Brown were significantly greater, resulting in 40% or more of the nation's sales. *Id.* at 297-303 (figures taken from plaintiff's exhibits cited in the decision).

13. The district court noted that the reasonable interchangeability test of the *Cellophane* case had been distinguished and limited to the monopolization clause of § 2 of the Sherman Act in United States v. Bethlehem Steel, 168 F. Supp. 576 (S.D.N.Y. 1958), but that arguments to the contrary could be found in American Crystal Sugar Co. v. Cuban-American Sugar Co., 152 F. Supp. 387 (S.D.N.Y. 1957). The court also found authority in the *Bethlehem Steel* case for dividing broad lines of commerce into smaller separate lines of commerce. 179 F. Supp. at 730.

14. *Id.*

15. *Id.*

16. *Id.*

The Supreme Court Decision

On appeal by Brown and Kinney, the Supreme Court in *Brown Shoe Co. v. United States*[17] not only affirmed the decision of the district court but also essentially adopted the district court's reasoning on the market definition issue. Cognizant of the tensions created by the two tests which had been perceived as alternatives by lower courts,[18] the Supreme Court directly addressed the relationship between the "interchangeability" and the "unique characteristics and uses" tests.[19] Although paying homage to the theoretical ambitions of the reasonable interchangeability test, the Supreme Court seemed to give priority to the approach suggested in *General Motors*, qualified by the caveat that each case stand upon its own particular facts.[20]

The Court set forth a two-step test for market definition which begins with the inquiry of reasonable interchangeability among products and proceeds to an evaluation of various "practical indicia" of market characteristics. Elaborating on reasonable interchangeability of use, the seven "practical indicia" listed by the *Brown Shoe* Court were: (1) industry or public recognition of the submarket as a separate economic entity; (2) peculiar characteris-

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17. 370 U.S. 294 (1962).

18. Not every court, however, shared the confusion of the Missouri district court in *Brown Shoe*. By the time the Supreme Court decided *Brown Shoe*, courts in the Southern District of New York and the Eastern District of Pennsylvania had reconciled the two tests as noted by the following quote: "The tests enunciated by the authorities are consistent. Effectively, the test 'reasonable interchangeability for the purposes for which (the products) are produced-price, use and qualities considered,' and the test 'sufficient peculiar characteristics and uses to constitute the products sufficiently distinct' . . . are but different verbalizations of the same criterion." United States v. Philadelphia National Bank, 201 F. Supp. 348, 362 (E.D. Pa.), *rev'd on other grounds*, 374 U.S. 321 (1962) *quoting from* United States v. Columbia Pictures Corp., 189 F. Supp. 153, 183-84 (S.D.N.Y. 1960).

19. The Court stated:

> The outer boundaries 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. However, within this broad market, well defined submarkets may exist which, in themselves, constitute product markets for antitrust purposes. The boundaries of such a submarket may be determined by examining such practical indicia as industry or public recognition of the submarket as a separate economic entity, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors.

370 U.S. at 325.

20. The factual investigation required by these standards was emphasized in United States v. Continental Can Co., 378 U.S. 441 (1964), wherein the Court observed that the legal "guidelines offer no precise formula for judgment and they necessitate, rather than avoid, careful consideration based upon the entire record." *Id.* at 449.

tics and uses of the products; (3) uniqueness of production facilities; (4) existence of distinct customers; (5) existence of distinct prices; (6) customer sensitivity to price changes; and (7) existence of specialized vendors.[21]

ANTITRUST POLICY AND THE LAWS APPLICABLE TO MARKET DEFINITION

Antitrust Policy

If the volumes of opinion and commentary could be reduced to a single statement, it would resemble the following: the policy of the antitrust laws is to promote free market competition as the means of allocating the production of limited resources among ultimate consumers.[22] Competition, in this sense, is simply the process whereby producers are motivated by profits and free to enter any endeavor to meet the demands of consumers for goods and services. The reasons are varied for articulating such a procompetition policy. For example, in *Brown Shoe Co. v. United States*,[23] the Supreme Court identified the desirability of retaining local control over industry and protecting small business, even in spite of possible economic cost as a possible explanation for such a policy.[24] Other grounds that have been advanced for a procompetition policy include the desirability of preventing the aggregation of wealth into a few hands, the sociological benefits of employment in smaller businesses, and the concern over undue political influence that accompanies economic power.[25]

The feature that makes competition attractive from an economic perspective is that competitive markets are generally the most efficient allocators of production. Indeed, the overriding concern addressed by the antitrust law and their procompetition policy has been the efficient allocation of the economy's resources.[26] Aside from the obvious advantage of getting the maximum the economy can provide, the most powerful argument for using the economic concept of allocative efficiency as the sole goal of antitrust policy is that it provides an objective analytical framework from which con-

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21. 370 U.S. at 325.
22. *See* Standard Oil Co. v. Federal Trade Commission, 340 U.S. 231, 248 (1951).
23. 370 U.S. 294 (1962).
24. *Id.* at 316.
25. *See* Elzinga, *The Goals of Antitrust: What Else Counts?*, 125 U. PENN. L. REV. 1191 (1977); Sullivan, *Sources of Wisdom For Antitrust*, 125 U. PENN. L. REV. 1214 (1977).
26. *See* National Society of Professional Engineers v. United States, 435 U.S. 679 (1978).

sistent and defensible rules can be derived.[27] More importantly, in the context of relevant market definition, allocative efficiency is the only relevant aspect underlying antitrust policy, given that the sociologically-based policies of absolute firm size, local control, and political influence are either consistent with or independent of the conditions of free competition. This article, thus, takes the approach that the efficient allocation of the economy's resources is the underlying goal of the antitrust laws.

The role that competition plays in providing an efficient allocation of society's resources is clear and simple.[28] Under basic price theory, the existence of competition prevents any individual producer from raising prices above the costs of production because customers could simply switch to a competitive producer to avoid the higher prices. This follows from the condition that in a perfectly competitive market, the goods of competitors are theoretically perfect substitutes for the goods of any individual producer. Therefore, a minor increase in the price of one product is all that is required to prompt the customers' desertion. To the extent that perfect substitutes are not available for a firm's products or services, that firm can charge a higher price without losing a significant number of customers.

Society incurs a loss when customers who are willing to pay for a firm's cost of production, but not willing to pay a premium above that price, must resort to less satisfying alternatives. Thus, if the antitrust laws do foster competition, they should reduce this loss. In view of these underlying economic principles of the antitrust laws, the importance of correctly defining the relevant product market becomes obvious: once the market is defined, the alternatives to which customers can turn, thereby discouraging costly premiums, have been identified. If those alternatives have been appreciably reduced by a combination of competitors within the market, that combination may affect the ability of competition to restrict discretionary pricing.[29]

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27. *See* BORK, THE ANTITRUST PARADOX, (1978) [hereinafter cited as BORK]. Professor Bork argues that the goal of consumer welfare is the only competing antitrust policy which can be defined without relying upon conflicting value judgments concerning the "preferred" status of industry. *Id.* at 50-89.

28. The following discussion summarizes the essential points of basic price theory. More detailed treatments may be found in MILLER, INTERMEDIATE MICRO-ECONOMICS (1978) and STIGLER, THE THEORY OF PRICE (3d Ed. 1966).

29. Whether and how much resource allocation may be impaired by increased concentration within markets are subjects of continuing debate. *See, e.g.*, GOLDSCHMID, MANN & WES-

The allocative function of competition, however, may be frustrated by mergers and acquisition, monopolizations, and attempted monopolizations. Because any one of these activities result in varying degrees of danger to competition, distinct standards of illegality have been applied to each. Section 7 of the Clayton Act[30] prohibits mergers or acquisitions, the effect of which "in any line of commerce . . . may be substantially to lessen competition or to tend to create the monopoly." Section 2 of the Sherman Act[31] proscribes acts, attempts, and combinations "to monopolize any part of the trade or commerce among the several States. . . ." The specific reference in both sections to parts or lines of commerce establishes the primacy of defining relevant product markets when interpreting these sections. As a result, exercises in market definition appear as frequently in section 2 cases as in section 7 cases. It is appropriate, therefore, to consider whether the distinctions between the two sections should affect market definition analysis in cases governed by the statutes.

The Distinctions Between Section 7 and Section 2 Concerning Market Definition

The key distinction between section 7 of the Clayton Act and section 2 of the Sherman Act flows from the recognition that an act which may tend to create a monopoly or which may substantially lessen competition under section 7 may not itself amount to an act of monopolization under section 2. Congressional desire to close the loophole of failing to proscribe assets acquisitions inherent in section 7 prior to its amendment in 1950 by the Celler-Kefauver Act[32] led to judicial reiteration of the fundamental policies behind the Act. The Supreme Court's exegesis in *Brown Shoe Co. v. United States* of the legislative intent underlying the amended section 7 of the Clayton Act[33] confirms that the major

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TON, INDUSTRIAL CONCENTRATION: THE NEW LEARNING (1974). The merits of that debate are beyond the scope of this article. It should be noted, however, that the Supreme Court has accepted the argument that the vigor of competition is inversely related to the level of concentration. *See* United States v. Philadelphia National Bank, 374 U.S. 321 (1963) (a merger significantly increasing concentration of a market is inherently likely to decrease competition).

30. 15 U.S.C. § 18 (1976).

31. 15 U.S.C. § 2 (1976).

32. Celler-Kefauver Act of December 29, 1950, ch. 1184, 64 Stat. 1125 (1950).

33. 370 U.S. at 318 n.32. (citing S. Rep. No. 1775, 81st Cong., 2d Sess. 4-5 and H.R. Rep. No. 1191, 81st Cong. 1st Sess. 8). As noted by the Court, the Senate Report stated that the intention was to "cope with monopolistic tendencies in their incipiency and well before they

difference in the treatment of anticompetitive practices under the Sherman and Clayton Acts is essentially a difference in degree.

In *Brown Shoe,* the Supreme Court indicated that mergers, even in concentrated industries, were not to be deemed unlawful *per se.* Thus, the amendments to section 7 would not prohibit a merger between two small companies that could compete more effectively with larger rivals by combining their resources, nor would the amendments prohibit the acquisition of a failing firm which was no longer a competitive factor in an industry.[34] Rather, the Court was concerned that mergers could pose dangers to the economy similar to those already addressed by the antitrust laws. After assessing the entire legislative record, the Supreme Court concluded that Congress was concerned "with the protection of *competition,* not *competitors,* and its desire to restrain mergers only to the extent that such combinations may tend to lessen the competition."[35]

It should, therefore, be clear that any of the practices proscribed by the various statutory provisions of section 2 of the Sherman Act and section 7 of the Clayton Act present the same ultimate threat to smoothly functioning competitive markets. Monopoly simply represents the most extreme departure from perfect competition. Any act which lessens competition necessarily tends to encourage the creation of a monopoly. The conduct which actually accomplishes a monopolization of a market manifests the same tendency, but with a greater degree of certainty.

If the ultimate concern under both section 2 and section 7 is the protection of competition and the definition of a particular market is relevant only insofar as such a protection of competition is concerned, the same market definition tests should apply under either section. The Supreme Court has adopted this position, stating that market definition analysis in merger cases and monopolization cases should take into account the same considerations.[36] Most courts which have considered the question have reached the same

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have attained such effects as would justify a Sherman Act proceeding," and the House Report noted that mergers and acquisitions could have a cumulative effect in reducing the "vigor of competition," which would be difficult to attribute to any single transaction.

34. *Id.* at 319. When given the opportunity, however, the Court ruled otherwise on this hypothetical. *See* United States v. Philadelphia National Bank, 374 U.S. 321 (1963), discussed in SULLIVAN, *supra* note 10, § 200.

35. *Id.* at 320 [emphasis in original].

36. In United States v. Grinnell Corp., 384 U.S. 563 (1966), the Court stated: "[w]e see no reason to differentiate between 'line' of commerce in the context of the Clayton Act and 'part' of commerce for purposes of the Sherman Act." *Id.* at 573.

conclusion.[37]

This position is sound. If market definition is to be useful as a predictable and reliable fact-finding tool, the standards by which it is pursued should not vary from case to case. The probability of ultimate competitive harm is an element of the action separate and apart from the entity that may be harmed[38] and, thus, should not be a factor unnecessarily complicating market analysis. The only distinctions, if any, that should be recognized between market definition in section 2 and section 7 cases should be the different facts that each case is likely to involve. Once it is recognized that the standards are common to both sections, the predictability of outcomes under each is enhanced by the larger common body of precedent.

The important fact difference between all section 2 and section 7 cases, then, is a question of quantity not quality. In a section 7 merger case, the existence of two firms[39] often will involve a wider

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37. *See* Photovest Corp. v. Fotomat Corp., 606 F.2d 704 (7th Cir. 1979) *cert. denied*, 445 U.S. 917 (1980); Columbia Metal Culvert Co., v. Kaiser Aluminum & Chemical Corp., 579 F.2d 20 (3d Cir. 1978), *cert. denied*, 439 U.S. 876 (1978); Twin City Sportservice Inc. v. Charles O. Finley & Co., 512 F.2d 1264 (9th Cir. 1975).

The minority view, however, suggests that § 2 market definition analysis should be distinguished from § 7 market definition analysis. *See, e.g.*, United States v. Mrs. Smith's Pie Co., 440 F. Supp. 220 (E.D. Pa. 1976); Pargas v. Empire Gas Corp., 423 F. Supp. 199 (D. Md. 1976), *aff'd*, 536 F.2d 25 (4th Cir. 1976). *See also* Comment, *Relevant Geographic Market Definition*, 1979 DUKE L.J. 1152 [hereinafter cited as *Geographic Market*]. The argument most commonly advanced for treating the concept of relevant market according to the law under which it is raised focuses on the concern under § 7 to arrest competitive deterioration at the earliest possible moment. It is suggested that, because the question in merger cases is "less ultimate," i.e., § 7 cases address the mere likelihood of competitive harm, any of several alternative definitions may be more suggestive of such proscribed effects. The most useful market definition in a merger case, then, may be different from the appropriate definition in a monopolization case. For example, the aluminum industry may be the appropriate market for an aluminum producer charged with monopolization, whereas a market that includes steel, aluminum copper, and other metals may be appropriate to a merger between an aluminum producer and a steel producer. *See* SULLIVAN, *supra* note 10, § 203.

Unless the argument for distinguishing between market definition in § 2 and § 7 cases is that the burden of proof of the relevant market should be shifted to defendants in all cases, which none of the proponents has intimated, it is impossible to impute what market definition rule is being advocated except perhaps to say that the rule should be governed by a policy that simply favors plaintiffs in merger and monopolization cases. Such a policy, however, eliminates the possibility of deriving objective and consistent rules to govern market definition. Neither liberalization nor restriction of market boundaries has a consistent effect. Narrower markets tend to favor mergers of differentiated goods, whereas broader market definitions favor monopolists and mergers of producers of very similar products.

38. *See* Illinois Brick Co. v. Illinois, 431 U.S. 720 (1977).

39. Because two firms are voluntarily combining operations in a merger context, the inference can be made that the parties perceive a net benefit from the move. The possibility exists that the benefit may come in the form of supra-competitive returns resulting from the

variety of products. Thus, additional product markets must be identified.[40] The existence of many different markets, with their own characteristics, may call for the assessment of different facts but not for a different methodology by which to assess those facts. Accordingly, in the legal analysis that follows, section 2 cases will be treated analogously with section 7 cases except where noted to the contrary.

The Distinctions Between Vertical Mergers and Horizontal Mergers Under Section 7 and the Potential Effect on Market Definition

The bulk of cases brought under section 7 of the Clayton Act falls within one of two categories: vertical or horizontal combinations. The immediate cause of competitive harm is not the same in the two types of cases. The analysis of horizontal consolidations is straightforward because the potential injury to competition is di-

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elimination of competition between them. This inference, however, adds nothing to the record of a merger case in that a court will be alerted to the merger's potential anticompetitive effects by the filing of the complaint. Beyond indicating to the court which market or markets may be involved, the fact that competition in one or more of them may be harmed depends upon the influence that each firm may have on competition in a market that also includes the other firm. If the existence or activities of one firm is found to be entirely unrelated to any market in which the other firm operates, the fact that the two firms are merging does not, in retrospect, change that result. Thus, legality cannot be determined before the relevant markets have been defined. Any contrary interpretation would engender a *per se* standard of illegality to evaluate challenged mergers.

The previous example of metal producers discussed in note 17 *supra* contemplates this kind of inversion. A steel producer's merger with an aluminum producer does not suggest that steel and aluminum should be in the same line of commerce unless steel and aluminum are also relevant to the steel producer's attempt to monopolize the steel market. The competitive influence that the aluminum producer exerts on steel and aluminum producers is a fact that is antecedent to, and not determined by, the steel maker's decision to merge or monopolize. This fact should guide a court equally in both § 2 cases and § 7 cases. In this regard, § 7 should not be construed as a license to mold relevant facts.

40. A steel fabricator that produces two goods, such as tools and auto body parts, with low production substitutability might compete with different entities with respect to each product. The firm could attempt to monopolize the steel tool market, in which only other tool firms would be relevant. In a merger with an aluminum sheet producer, on the other hand, these same tool firms would not be relevant competitors whereas other aluminum sheet suppliers would be. The different markets in each case are not dictated by the type of activity involved, but by the market in which the activity takes place.

Recognition of the potentially greater quantity of markets involved in a merger case may explain the repetitive language found in § 7 of the Clayton Act of "*any* line of commerce in *any* section of the country," 15 U.S.C. § 18 (1976), whereas § 2 of the Sherman Act refers simply to "any part of commerce." 15 U.S.C. § 2 (1976). This distinction has been interpreted as support for applying different standards under the two sections. *See Geographic Market, supra* note 37.

rect: there is a decrease in the number of competitors. In vertical cases, however, the immediate impact that results from the transaction is not the type of ultimate competitive injury with which section 7 is concerned. The danger of foreclosure in vertical cases is first and foremost felt by the sellers or distributors who have been foreclosed from their customer or supplier. It is possible, and indeed presumed, that following a merger between, for example, a material supplier and a fabricator who uses that material, the newly integrated firm will terminate outside sources of the material it can now provide internally.[41] Although this substitution may be devastating to a displaced supplier, the damage to that supplier does not become an actionable injury under the antitrust laws unless and until it can be shown that competition in any relevant market will also be harmed.[42]

The primary difficulty presented in the market analysis of vertical combinations involves identifying the level at which the relevant market should be drawn. By definition, a merger between a supplier and a customer in a distribution chain does not expand any firm's power control over the share of productive resources at either level of the chain. What may occur is that firms at either level of the distribution chain may lose sufficient outlets for their products or sources for their materials.[43] These shrinking markets will result in certain firms exiting from the industry which may, thus, endanger the competitive structure at the diminished level of the chain.

Once the appropriate level of production has been identified, however, the process of defining the relevant market in a vertical case should be the same as in a horizontal case for reason that the ultimate issue in either case is the same: whether the reduction of outlets or sources has posed a threat to competition at the level that suffers from attrition of the number of firms.[44] Whether or not the sales of raw materials to industrial users or the sales at retail to ultimate consumers are at issue, the same considerations apply to

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41. *See* Federal Trade Commission v. Consolidated Foods Corp., 380 U.S. 592 (1965).

42. *See, e.g.*, Devoto v. Pacific Fidelity Life Insurance Co., 618 F.2d 1340 (9th Cir. 1980), *cert. denied*, 101 S. Ct. 86 (1980).

43. *But see* BORK, *supra* note 27, at 231-38. Professor Bork argues that if previously unaligned traders merge, the foreclosure attributable to their exclusive dealing should equal the outlets and sources released by virtue of their switch. *Net* foreclosure, therefore, is zero.

44. The direction from which the threat has issued, be it from eliminated suppliers or customers, is irrelevant to the economic importance and identification of competition at a threatened stage.

determine the severity of a threat to competition. The relevant market inquiry must focus on an identification of those products or services that exhibit the degree of substitutability necessary to restrict the discretion of the surviving providers to raise their prices. The purpose of defining the market is to determine whether the range of available substitutes has become so narrow that the departure of yet another producer will substantially impact upon the number of viable alternatives to which customers may turn. Thus, although a vertical combination case may require that every market, each with its own peculiar characteristics, identified at different levels of the chain of distribution be analyzed separately for competitive harm, the kind of analysis called for should employ the same methods as in a purely horizontal case.[45]

Overview on Market Definition Policy and Analysis

The above conclusions regarding market analysis under the various antitrust laws and concomitant social and economic policies simplify market definition analysis. The discussion of the methodology of defining relevant market need not be cluttered with qualifications depending upon the statute involved or the characterization of the offense. The relevant market, as the Supreme Court has suggested, is a fact to be discovered at trial.[46] The standards governing the process of finding that fact, therefore, should not change from statute to statute or case to case.

POST-BROWN SHOE DEVELOPMENTS

An Introductory Overview

Although the two-step analysis set forth by the Supreme Court

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45. The Supreme Court has made little comment on the distinction between product market definition in vertical cases and that in horizontal cases. Although observing in Brown Shoe Co. v. United States, 370 U.S. 294 (1962) that the cross-elasticity of production facilities would be relevant in a vertical case, the Court held that the product markets relevant to the horizontal aspects of the challenged merger were identical to the markets relevant to the vertical aspects of the merger. *Id.* at 325 n.42. Without any additional analysis, the Court stated that the reasons leading to its conclusions on the vertical issues supported the same conclusions for the horizontal issues. *Id.* at 336.

By the same reasoning, the method of market definition followed in § 7 vertical merger cases should be equally applicable to other vertical arrangements cases, such as exclusive dealing practices dealt with under § 1 of the Sherman Act, 15 U.S.C. § 1 (1976), or § 3 of the Clayton Act, 15 U.S.C. § 14 (1976), in which foreclosure of part of the market is at issue. *Accord,* United States v. Charles Pfizer & Co., 246 F. Supp. 464 (E.D.N.Y. 1965); Tampa Electric Co. v. Nashville Coal Co., 365 U.S. 320 (1961).

46. *See* notes 17-21 *supra* and accompanying text.

in *Brown Shoe* has been followed by some lower federal courts[47] and questioned by others,[48] the market definition test propounded has generally escaped the kind of criticism that assailed the earlier market definition analyses set forth in the *Cellophane* and *General Motors* cases.[49] Some commentators, however, have criticized the analytical process that defines a "revelant market", but then negates its relevance by further dividing it into "relevant submarkets."[50] Nevertheless, after *Brown Shoe,* courts have had a clear mandate to resolve the product market issue. The issue has become a matter for the trier of fact to decide, based on findings relating to certain categories of facts.

It is difficult to take issue, on a theoretical level, with the general rule and standards espoused in *Brown Shoe,* except possibly to question the broad discretion that the analytical framework allows lower courts in determining the product market. Courts now should, at the least, be cognizant of the parameters within which the problem of defining a product market is to be resolved. Nevertheless, the Court did not give priority to any of the individual criteria enumerated or indicate what circumstances should favor

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47. In Harnischfeger Corp. v. Paccar Inc., 474 F. Supp. 1151 (E.D. Wis. 1979), the court felt bound to first examine evidence of interchangeability between two kinds of earth movers and to then proceed to analyze the other criteria, which in the final analysis rebutted the initial finding of interchangeability. In Reynolds Metals Co. v. Federal Trade Commission, 309 F.2d 223 (D.C. Cir. 1962) (Burger, J.), the court observed at the outset that interchangeability and cross-elasticity may be insufficient bases on which to form market definitions. Here the court also overruled the indications suggested by these criteria. *See also* United States v. American Technical Industries, Inc., 1974-1 Trade Cas. (CCH) ¶ 74,873 (M.D. Pa. 1974); United States v. Pennzoil Co., 252 F. Supp. 962 (W.D. Pa. 1965).

48. The court in Babcock & Wilcox v. United Technologies Corp., 435 F. Supp. 1249 (N.D. Ohio 1977) concluded that gas turbine systems did not compete with diesel or nuclear systems because of low interchangeability and zero cross-elasticity. In United States v. Charles Pfizer & Co. 246 F. Supp. 464 (E.D. N.Y. 1965), the court, relying on *Cellophane,* stated that the facts it had found rendered the *Brown Shoe* criteria of no significance. The evidence of interchangeability, examined for both a functional (potential) component and a reactive (actual) component, combined with positive cross-elasticity of demand provided sufficient evidence for the court of a relevant market.

These courts are apparently satisfied with a less extensive analysis than that proposed by the Supreme Court in *Brown Shoe.* There is obviously a degree of redundancy in pursuing detailed market study when interchangeability or cross-elasticity unambiguously delegate two products to separate markets.

49. *See* note 10 *supra* and accompanying text.

50. *See, e.g.,* AREEDA & TURNER, II ANTITRUST LAW 419-21 (1978) [hereinafter cited as AREEDA & TURNER]. It has been suggested that the mention of "submarkets" in only § 7 cases limited their application to § 7 actions. *See* BOCK, MERGERS AND MARKETS 102 (3d ed. 1964). It should be noted, however, that these problems were primarily academic and raised in the context of individual cases.

any criterion. Presumably, an affirmative finding as to any one criterion could control a case, although that finding may be contradicted by several other criteria. In the next case, however, the outcome could be different.

On a practical level, therefore, significant problems exist with respect to the market definition analysis set forth by the Court in *Brown Shoe*. Although, under the analysis, courts have, to some extent, been relieved of the agony over how to approach the problem of defining a relevant product market, the uncertainty implicit in the problem has been one step removed. Litigants are now the ones who must contend with the lack of predictability that the *Brown Shoe* standards have left to this area of antitrust law. As an issue of fact, *ad hoc* market definition can pose substantial risks for a firm assessing the prospects of a successful business transaction. Because facts vary from case to case, there seems scant comfort in precedent, regardless of how many cases may interpret the *Brown Shoe* guidelines. It is difficult, therefore, to isolate the impact of the individual standards because courts will, in most cases, rely on as many criteria as can be found.

It would be unrealistic to hope to eliminate the complexity from the task of defining the relevant market. As the Supreme Court demonstrated in its failure to find acceptable simple solutions in *Cellophane* and *General Motors*, the nature of the phenomenon to be defined is itself inherently complex. Nevertheless, recognition of the complicated dimensions of the subject does not excuse an *ad hoc* approach and should not obscure the opportunity to rationalize the process. Although the decision in *Brown Shoe* finally allowed that a variety of evidence could be probative on the issue of the relevant product market, the Court did not alter the basic purpose of the inquiry: a determination of the area of effective competition. "Competition," an economic concept, is itself a term of art in the antitrust lexicon. A reexamination of the economic understanding of competition and its role in antitrust law could, therefore, shed some light on the facts of relevant markets and the evidence that reveals them.

The decision of the Supreme Court in *Brown Shoe* itself anticipates that the complexity of economic evidence may sometimes be an incurable problem in antitrust litigation. Even in the ideal case, with a wealth of sales, price, and cost data, questions will often remain as to the accuracy of the data and the ability of judges, who

understandably resist tackling complex economic theories,[51] to properly analyze the figures. The direct application of economic theory in measuring the relevant market has, therefore, assumed a supporting role to that of descriptive characteristics with which courts and litigants are more familiar with.

The Brown Shoe Criteria

Because limited evidence can prevent cross-elasticity and functional interchangeability from fully describing a market, the Supreme Court enumerated the seven factual criteria it deemed relevant to resolving the ultimate issue involved in determining the relevant product market. The additional detail should not, however, obscure the ultimate purpose of the inquiry. Regardless of the evidence presented, the issue remains whether there is sufficient competition between firms to justify including the various products or services in the same relevant market.

Since *Brown Shoe,* the seven individual criteria listed by the Court have been subject to scant systematic analysis or comparison.[52] The absence of such analysis, however, invites trial courts to continue to engage in automatic accumulation of criteria without balancing relevance, a practice criticized by several courts of appeals. In the following sections, each criterion is analyzed in terms of its general relevance and the particular circumstances in which it is most probative of the issue of the existence of competition. Additionally, the case law is examined for the consistencies suggested by the analysis. The ultimate purpose of the following inquiry is to explore whether interchangeability or any of the factual criteria enumerated in *Brown Shoe* has a more specific and consistent function than as a mere tally in a balance sheet.

Reasonable Interchangeability

The validity of the theory of interchangeability espoused by the Supreme Court in the *Cellophane* case cannot be faulted, at least as a beginning to market definition. The identification of substitutes to which consumers can actually turn is the most direct demonstration of the competition which limits the losses connected

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51. *See, e.g.,* Illinois Brick Co. v. Illinois, 431 U.S. 720 (1977) in which the Court denied the indirect purchasers the right to recover damages because of the complexity of economic proof.

52. Stripped of superficial distinctions, the *Brown Shoe* criteria are, primarily, elaborations of the theory set forth in the *Cellophane* case. *See* notes 2-5 *supra* and accompanying text.

with discretionary pricing ability.[53] The most concise description of the effect of substitute products to limit pricing power is the price elasticity of demand, a dimension-free measure of the responsiveness of quantity purchased to changes in price.[54] In *Cellophane*, the Supreme Court recognized the utility of such analysis.[55]

The Supreme Court in *Cellophane* relied on two sources of evidence in support of its market definition. First, it found substantial evidence in the record of functional interchangeability of cellophane in the majority of its uses.[56] Second, the Court relied upon the district court's finding that cross-elasticity between cellophane and other wraps was high.[57] It thus appears that the Court was attempting to articulate the general "reasonable interchangeability" test in terms of theoretical economics.[58] Although the Court's

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53. *See* notes 28 and 29 *supra* and accompanying text.

54. Price elasticity of demand for a good is defined as the rate of percentage change in price. The mathematical formula is: E_d = % change in Quantity/% change in price = $\Delta Q/Q/\Delta P/P$.

55. In the *Cellophane* case, the Court referred to a variation of price elasticity—the cross-elasticity of demand. Cross-elasticity of demand between two products is the ratio of percentage change in the quantity demanded of one product over time to the percentage change in price of another product. The mathematical formula is: XE_{dxy} = % change in quantity of y/% change in price of X = $\Delta Q_y/Q_y/\Delta P_x/P_x$. Because the effect of raising the price of a product is to induce customers to increase purchases of competitors' products, the cross-elasticity of demand between substitute products will be positive. To the extent that competitors' sales are not affected by price changes of the product in question, the cross-elasticity between the two products will tend toward zero. Finally, complimentary products, for which sales generally move in the same direction, will show negative cross-elasticity of demand.

This measure is not completely reliable for comparisons of several goods with respect to one product's price change because it varies inversely with the size of the original quantity of each substitute sold. For example, if a rise in the price of grapefruit caused equal increases in sales of oranges and nectarines, the percentage change in nectarines would appear larger because fewer are sold. *See* Stigeman, *Cross Elasticity and the Relevant Market*, 11 1974:2; ZEITSCHRIFT FUR WIRTSCHAFTS UND SOZIALWISSENSCHAFTEN (1974).

56. 351 U.S. 377, 405-10. For such food stuffs as bakery products, candy, snacks, meat, crackers, produce, and frozen foods, cellophane never amounted to one-half of the total wrappings used for any product. The only products for which cellophane was the clear favorite, accounting for 75-80% of the total wrapping used, were cigarettes.

57. *Id.* at 400.

58. This conclusion is best illustrated through a review of the evidence the Court did not rely upon. For instance, the district court opinion relied liberally upon testimony of sales and merchandising personnel for the various flexible wrapping material. This testimony revealed that the producers of the various wraps did indeed perceive others as competitive forces on their ability to increase market share or raise prices. 118 F. Supp. 41, 198. Without denying the importance of practical evidence, but apparently hoping to reduce the test for the relevant market to a few fundamental propositions, the Supreme Court virtually ignored this kind of testimony. Instead, the Court focused on cross-elasticity of demand and, more extensively, on the interchangeability in the end use. The Court did, however, recite in a

foray into theoretical economics has been criticized,[59] the theory of interchangeability is valid and relevant product market analysis should include an economic analysis along these lines.[60]

Industry or Public Recognition of the Submarket as a Separate Economic Entity

The standard of public or industry recognition of a submarket can encompass several economic factors germane to the definition of the relevant product market. Industry recognition, for example, may refer to the firm's recognition of competitors. A firm planning to increase sales of a new or existing product must account for the reactions of other producers who vie for the targeted consumers' patronage.[61] Industry and public recognition also play analogous roles as demand factors, distinguished only by their influence at different levels in the chain of production. In retail markets, the consuming public determines whether particular products are ade-

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footnote some of the district court's findings relating to duPont's consideration of the prices of other wraps when pricing cellophane. 351 U.S. at 401-10 nn. 29-31.

59. *See* note 10 *supra* and accompanying text. Critics of the *Cellophane* case argue that functional interchangeability, and the fact that consumers actually substituted one product for another at various price levels, could as easily have been the result of the price of cellophane having been set originally at a monopolistic level. Although it is true that the markets for competitors' products will demonstrate the interchangeability and substitutability that the Supreme Court was seeking, a monopolist setting prices to maximize profits will seek the price level that achieves the same result. Monopoly profits will increase along with increases in the price of a product until the point at which an appreciable number of consumers will begin to turn away toward other goods. *See* SAMUELSON, ECONOMICS 459-83 (8th ed. 1970). Those goods are substitutes, but only at the higher price of the monopolist's good. At a price near the monopolist's cost of production, its own product would be the clear preference of consumers. Therefore, substitutability and elasticity or cross-elasticity of demand cannot be used alone. Some measure of cost must be added to the equation in order to determine whether any substitutability detected is simply the result of a monopolistic price in the first place.

The critics of *Cellophane* would claim that the substantial rate of return generated by cellophane suggested that duPont had indeed enjoyed a monopolist's discretion to set prices well above costs and that price cross-elasticity was actually low. *See, e.g.* AREEDA & TURNER, *supra* note 50, at 399-400. These charges do not, however, attack the Court's methodology so much as the Court's view of the facts. The Court examined duPont's profits and simply did not find them excessive or out of line with the remainder of the flexible wrap producers. 351 U.S. at 404.

60. It appears, however, that the majority of courts using the *Brown Shoe* analysis have relegated functional interchangeability to an implicit status in their decisions. Although a modicum of an interchangeability analysis necessarily emerges from a discussion of the practical indicia enumerated in *Brown Shoe*, a court will typically proceed directly to a consideration of those indicia without pausing for a formal finding on interchangeability.

61. Indeed, the Supreme Court in *Brown Shoe* noted separately the relevance of cross-elasticity of supply and reserved another criterion for production facilities. 370 U.S. at 325 n.42.

quate alternatives to one another. At intermediate levels further down the production chain, buyer representatives of industry serve this function. Therefore, a plausible interpretation of this standard for market definition is simply whether the purchasers of particular products consider those products to be functional equivalents.

It may be significant that the Supreme Court began its list of practical indicia in *Brown Shoe* with this criterion, the application of which is very similar to the broader theoretical concept of reasonable interchangeability of use. A finding of purchaser recognition of distinct submarkets is similar to a measuring of purchaser participation, but without a statistical demonstration of actual substitution. The recognition standard opens the door to subjective proof, such as surveys of consumer attitudes, testimony of frequent purchasers, and tolerances of productive adaptability, all of which are more susceptible to judicial determination than the formula of cross-elasticity of demand.[62] Indeed, this kind of evidence can be more revealing in cases where consumer habit or inertia conceals potential competitive forces.

The close relationship between this criterion and the ultimate issue it is intended to address was emphasized by the Supreme Court in *Brown Shoe*. There, the Court called for recognition of the *submarket* as a separate economic entity, rather than recognition of a *product* as a separate competitive factor.[63] Recognition of the market as an entity, rather than the product as an entity, leads the trial court to consider consumers' views of viable alternatives rather than consumers' perceptions of superficial distinctions among similar products.

When viewed as a demand component, public or industry recognition of a submarket is an extremely persuasive factor and one that is seldom overruled by contrary indications from the other indicia. Moreover, a finding that customer recognition supports the court's definition of the relevant product market is seldom absent from a case. The frequency with which courts rely on this standard may be due in part to the relaxed and almost intuitive manner in which it may be proved. The *Brown Shoe* case itself provides a typical example, in which the Court stated simply that "these

62. *See* note 34 *supra* and accompanying text.

63. 370 U.S. at 325. A focus on recognition of differences between products would have reached a result similar to that found in *Cellophane* which the Court wished to avoid. Only identical products with no recognizable differences would tend to be included in the same relevant markets. *See* note 10 *supra*.

product lines are recognized by the public. . . ."[64] Courts taking a more analytical approach, however, have focused on the customers' decision-making process to determine whether they recognize that different products in the submarket serve the same purpose. If customers are free to choose among alternative products to serve their purposes, then the alternatives may be grouped in one market.[65] If purpose dictates the choice, then separation may be in order.[66]

Other courts have also relied upon evidence relating to government census classifications,[67] trade association membership,[68] and industry publications[69] as evidence of customer recognition. An analysis that includes these types of evidence, however, departs from a pure demand-side approach to market analysis and approaches a review of the supply side aspects of industry recognition. This broader evidentiary analysis may, therefore, be inconsistent with the belief that "it is not the perceptions of manufacturers but those of consumers which are most salient in the determination of market boundaries."[70] Consequently, although seller recognition can be a relevant factor in defining product markets, it should not stand alone.

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64. 370 U.S. at 326.

65. In George R. Whitten, Jr., Inc. v. Paddock Pool Builders, Inc., 508 F.2d 547 (1st Cir. 1974), *cert. denied*, 421 U.S. 1004 (1975), the First Circuit Court of Appeals found that engineers designing public swimming pools were generally free to choose between one of two alternative filtration systems. Although the systems differed substantially in construction, each performed the same function and were, therefore, included in the same relevant market. On the other hand, where the nature of the job to be performed has dictated the choice among alternative products and the buyer retains no discretion in choosing between the products, the products have been separated into different markets.

66. *See, e.g.*, Weeks Dredging & Contracting, Inc. v. American Dredging Co., 451 F. Supp. 468 (E.D. Pa. 1978) (topography of landscape dictated dredger); SmithKline Corp. v. Eli Lilly & Co., 427 F. Supp. 1089 (E.D. Pa. 1976), *aff'd*, 575 F.2d 1056 (3d Cir. 1978), *cert. denied*, 439 U.S. 838 (1978) (illness of patient determines choice of drug).

67. *See* United States v. M.P.M., Inc., 397 F. Supp. 78 (D. Col. 1975); United States v. National Steel Corp., 251 F. Supp. 693 (S.D. Tex. 1965).

68. *See* American Medicorp, Inc. v. Humana, Inc., 445 F. Supp. 589 (E.D. Pa. 1977); Pargas, Inc. v. Empire Gas Corp., 423 F. Supp. 199 (D. Md. 1976), *aff'd*, 546 F.2d 25 (4th Cir. 1976).

69. *See* RSR Corp. v. Federal Trade Commission, 602 F.2d 1317 (9th Cir.), *cert. denied*, 445 U.S. 927 (1980).

70. Columbia Metal Culvert Co. v. Kaiser Aluminum & Chemical Corp., 579 F.2d 20, 30 (3d Cir. 1978), *cert. denied*, 439 U.S. 876 (1978). *See also* Sargent-Welch Scientific Co. v. Ventron Corp., 567 F.2d. 701 (7th Cir. 1977), *cert. denied*, 439 U.S. 822 (1978); George R. Whitten, Jr., Inc. v. Paddock Pool Builders, Inc., 508 F.2d 547 (1st Cir. 1974), *cert. denied* 421 U.S. 1004 (1975); Reynolds Metals Co. v. Federal Trade Commission, 309 F.2d 223 (D.C. Cir. 1962); Credit Bureau Reports Inc. v. Retail Credit Co., 358 F. Supp. 780 (S.D. Tex. 1971).

The relative value of a finding with regard to manufacturer recognition can also be enhanced by justification for reliance on that standard. Corporate memoranda and executive statements containing market analyses which assess the competition a company faces have been cited as relevant.[71] On the other hand, it has been recognized that individual sellers may classify markets for internal accounting or managerial purposes in a manner entirely unrelated to product markets.[72]

Peculiar Characteristics and Uses of the Products

The identification of peculiar characteristics and uses of a given group of products[73] requires more than merely asking what is distinct about a particular product. This inquiry requires a determination as to whether there is something about the product which renders it adaptable to a purpose which cannot be served by any other product. The standard is the analytical complement of the standard of recognition. Whereas recognition of interchangeability seeks to identify those characteristics and uses that are common among products, the standard of distinct characteristics or uses

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71. The annual report of a friction material manufacturer, explaining the unique superiority of its product over the closest substitute, was relied upon to isolate the product in Abex Corp. v. Federal Trade Commission, 420 F.2d 928 (6th Cir. 1970), *cert. denied*, 400 U.S. 865 (1970). *See also* Sargent-Welch Scientific Co. v. Ventron Corp., 567 F.2d 701 (7th Cir. 1977), *cert. denied*, 439 U.S. 822 (1978) (speech to trade group); General Foods Corp. v. Federal Trade Commission, 386 F.2d 936 (3d Cir. 1967), *cert. denied*, 391 U.S. 919 (1968) (internal memoranda).

72. *See* ILC Peripherals Leasing Corp. v. International Business Machines Corp., 458 F. Supp. 423 (N.D. Cal. 1978).

73. The *General Motors* case gave birth to this indicia. Detailed economic evidence necessary to measure the relevant product market was not before the Supreme Court in that case because the district court had not engaged in any formal analysis of the relevant product market. *See* United States v. E.I. duPont de Nemours & Co., 126 F. Supp. 235 (N.D. Ill. 1954). The district court's conclusion that the plaintiff had not violated the antitrust laws was based upon a finding that no trade restraint was shown with respect to any product involved in the dealings between duPont and General Motors. The district court held that thirty years worth of postacquisition evidence failed to support any of the government's claims of restraint, obviating any effort to define a market within which to assess the restraint. *Id.* at 335.

When the Supreme Court reversed the central finding of the district court and held that the evidence did prove that free trade was restrained, it became necessary to determine whether this restraint would lead to a probable lessening of competition or the creation of a monopoly in any line of commerce. Lacking the benefit of a record containing the detailed economic evidence that the proceedings in the *Cellophane* case had developed, the Court based its market definition on the peculiar characteristics of the products involved. 353 U.S. at 593-95. Therefore, because the Supreme Court based its decision on the record and bypassed the obvious alternative of remanding the case to the district court for further findings of fact, it can be argued that the record was considered sufficient.

searches for those features that make a particular product "unique". The economic value of this standard is less apparent than the public recognition standard.

There is no proven connection between the viability of competition among alternative products and the possibility that one or more of those products serves a unique function. Of course, if a product has nothing in common with any other product in that its uses and characteristics are entirely unique, then the product will not have satisfied either the general substitutability test or the most casual appraisal of public or industry recognition. If a product has passed those tests, however, then it is not as clear why a particular product that otherwise competes with various substitutes should be set apart by virtue of the fact that it alone can serve, and is occasionally purchased for, a distinct purpose.

If the purposes and characteristics that make a product an adequate substitute for other products are sufficient to hold competitive reigns on the pricing of the distinguishable product, its peculiar characteristic and use should not put it into a relevant submarket all its own. The circumstance under which competitive forces do not sufficiently discipline the provider of a unique product or service occurs when the provider can engage in price determination between customers by taking advantage of the peculiar use or characteristic and the other customers of the product.[74] If there is a significant group of purchasers who can be segregated from the customers common to other producers, the unique provider can act as a monopolist in its dealings with the distinct group. This criterion thus looms important when considering products which can be easily differentiated, such as complex customized and personalized products. Moreover, services, by their personal nature, provide an excellent opportunity for price discrimination. Cases involving such products or services are, thus, cases in which the factor of distinct characteristics and uses should play a prominent role in defining the relevant product market.[75]

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74. *See* Turner, *supra* note 10, at 310-11.

75. Before the peculiar characteristics and uses standard was incorporated into the list of practical indicia by the Supreme Court in *Brown Shoe*, the theory underlying the current standard launched a unique line of cases relating to financial institutions that has remained independent of the *Brown Shoe* approach. These cases involve the concept of a relevant "cluster" of products or services. The first case to apply the cluster concept was United States v. Philadelphia National Bank, 201 F. Supp. 348 (E.D. Pa. 1962), *rev'd on other grounds*, 374 U.S. 321 (1963), a § 7 action brought by the government challenging the merger of the second and third largest banks in Philadelphia. The government urged that

If decisions favor customer recognition as the most consistently

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commercial banks should be viewed as a separate line of commerce under the *General Motors* standard. The defendents argued that the interchangeability test of *Cellophane* should control so that the various functions performed by the bank would be compared individually with relevant substitutes.

The Supreme Court perceived no conflict between the two tests urged to be applicable in accepting the government's position regarding the proposed market. Initially, the Court expressed its reluctance to explore competition for every possible distinct service a bank provides. 374 U.S. at 326 n.5. More importantly, the Court found that the "cluster" of services a commercial bank offers and the fact that almost all the services are dependent on one another were the reasons the institution existed. *Id.* at 356-57.

The Court did not explain why the combination was so important to the ultimate user. Presumably, the services were more valuable to customers in combination because the cost of seeking separate sources for each exceeded any likely savings. Reliance on the cluster concept was not, however, actually necessary to define the market because the same relevant market would have resulted if only one of the services provided, commercial checking, was considered. The Court could have, thus, based its finding on that market in view of the fact that all the plaintiff must show in a § 7 action is that competition may be lessened in "any" line of commerce.

The Supreme Court, nevertheless, adopted the concept of product and service clusters. The Court did note an apparent consumer preference for banks, as indicated by its recognition of one witness' observation that customers seemed to prefer using the commercial bank's coordinated facilities, despite higher returns available at savings and loans. *Id.* at 357 n.34. The primary rationale for its holding, however, was that the legal protection of certain components called for the grouping of those components into a cluster. *Accord,* United States v. Grinnell Corp., 384 U.S. 563 (1966).

The Supreme Court has held fast to the cluster concept, at least as applied to financial institutions. *See, e.g.,* United States v. Connecticut National Bank, 418 U.S. 656 (1974); United States v. Phillipsburg National Bank and Trust Co., 399 U.S. 350 (1970). In other contexts, however, the cluster concept has been treated more gingerly. Courts are cognizant of the danger the concept poses in permitting parties to gerrymander products and services into self-serving markets. For example, in Transamerica Computer Co. v. International Business Machines Corp., 481 F. Supp. 965 (N.D. Cal. 1979), the court found sufficient competition existent between components suppliers and full-line producers to include them in one market. Similarly, in United States v. Tidewater Marine Service, Inc., 284 F. Supp. 324 (E.D. La. 1968), the court rejected the defendant's attempt to expand markets into a cluster of boat chartering services because of "active competition with (partial service suppliers and) particularly in view of the fact that (customers) generally acquire vessels on a boat by boat bases . . . without regard to any total package service." *Id.* at 331. *Accord,* American Medicorp, Inc. v. Humana, Inc., 445 F. Supp. 589 (E.D. Pa. 1977) (cluster must be defined in the context of a buyer-seller transaction).

Properly viewed as a package containing distinct advantages not possessed by the sum of its individual component parts, the concept of the cluster of products or services provides a valuable clue to relevant product markets. Identifying a relevant cluster itself requires competent analysis comparing the costs of the transactions avoided in seeking specialists with the efficiencies sacrificed in combining functions at one source. Sophisticated services, such as those offered by banks, which involve more personal contact, are more likely to be found in clusters. The costs of establishing multiple relationships and transactions will, therefore, tend to be greater than is the case with transactions involving purchases of fungible materials. It is tempting, however, to identify clusters where they may not exist. One court recently confused the cluster concept with relevant market analysis, defining the market to be a cluster of goods without establishing whether any firm in the market actually produced

important criterion,[76] *dicta* in the opinions favor peculiar characteristics and uses as the essential ingredient of market definition.[77] In applying this criterion to the facts, however, courts have typically exercised caution in justifying the role to be taken in circumscribing markets. Identifying peculiar uses of functions has typically taken precedence over peculiar characteristics.[78] Although unique characteristics typically give rise to unique functions or uses, especially for consumer goods in which appearance is a greater factor, the Supreme Court and lower federal courts have heeded the conjunctive requirement by disregarding unique characteristics that are not closely related to function.[79] Thus, when the peculiar characteristics and uses standard is applied in support of the market definition construed by a court, it is the function and not the characteristic that the court cites in favor of the criterion.[80]

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the entire cluster. *See* United States v. Hughes Tool Co., 415 F. Supp. 637 (C.D. Cal. 1976).

76. *See* notes 62-72 *supra* and accompanying text.

77. *See, e.g.*, Sargent-Welch Scientific Co. v. Ventron Corp., 567 F.2d 701 (7th Cir. 1977), *cert. denied*, 439 U.S. 822 (1978); Harnishchfeger Corp. v. Paccar, Inc., 474 F. Supp. 1151 (E.D. Wis. 1979); Federal Trade Commission v. Rhinechem Corp., 459 F. Supp. 785 (N.D. Ill. 1978).

78. *See, e.g.*, Sargent-Welch Scientific Co. v. Ventron Corp., 567 F.2d 701 (7th Cir. 1977), *cert. denied*, 439 U.S. 822 (1978); Abex Corp. v. Federal Trade Commission, 420 F.2d 928 (6th Cir.), *cert. denied*, 400 U.S. 865 (1970); Weeks Dredging & Contracting, Inc. v. American Dredging Co., 451 F. Supp. 468 (E.D. Pa. 1978).

79. The Supreme Court followed this approach in United States v. Continental Can Co., 378 U.S. 441 (1964), where it was held that glass and metal containers were part of the same relevant market. The fact that bottles and cans were used for the same purposes was found to be more probative than were their physical dissimilarities. Similarly, in George R. Whitten, Jr., Inc. v. Paddock Pool Builders, Inc., 508 F.2d 547 (1st Cir. 1974), *cert. denied*, 421 U.S. 1004 (1975), the First Circuit Court of Appeals held that, although there were substantial physical differences between competing pool filter systems, identical use dictated the inclusion of the products in the same market. In United States v. General Dynamics Corp., 341 F. Supp. 534 (N.D. Ill. 1972), *aff'd on other grounds*, 415 U.S. 486 (1974), the court also held that the obvious differences between coal, other fossil fuels, and nuclear energy did not outweigh the competition found between these fuels for the patronage of public utilities.

80. In Federal Trade Commission v. Lancaster Colony Corp., 434 F. Supp. 1088 (S.D.N.Y. 1977), the court noted the relative lack of peculiar uses to which machine-blown and molded glasses were put. The slightly different characteristics of the two styles were, therefore, not considered significant.

In those cases emphasizing distinct uses, the distinct uses were predominant, not exceptional. In Sargent-Welch Scientific Co. v. Ventron Corp. 567 F.2d 701 (7th Cir. 1977), *cert. denied*, 439 U.S. 822 (1978), although the sensitive electrobalance could be used for the heavier work, over 80% of its sales were for the delicate purposes only it could serve. In RSR Corp. v. Federal Trade Commission, 602 F.2d 1317 (9th Cir. 1979), *cert. denied*, 445 U.S. 927 (1980), the court noted that although primary lead and secondary lead can *sometimes* be used for the same purpose, each was *generally* used for distinct purposes. In General Foods Corp. v. Federal Trade Commission, 386 F.2d 936 (3d Cir. 1967), *cert. denied*,

Courts have applied and interpreted the peculiar characteristics and uses standard rationally. In holding that the existence of a unique feature or function in a particular product will not alone create a market, courts have properly used the inquiry into distinct functions and uses more indirectly to determine the extent of common characteristics and uses. Thus, courts have improved on the performance of the Supreme Court in *General Motors* where the peculiarities were noted casually as sufficient unto themselves in defining a market.[81] Cases in which peculiarities in products have not loomed important generally confirm the conclusion that the usefulness of the standard declines in markets resistant to price discrimination.[82]

Uniqueness of Production Facilities

Where only a few firms within an industry possess unique production facilities, their competitive positions and ability to respond and control market conditions are strengthened vis-a-vis other firms. Moreover, possession of unique production facilities, as a component of cross-elasticity of supply, can be a significant competitive force upon a producer who, from the demand prospective, appears to be a monopolist.[83] Thus, the court should review the standard of uniqueness of production facilities in defining the relevant product market, although the existence of such facilities is by no means a prerequisite for finding distinct markets.[84] Neverthe-

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391 U.S. 919 (1968), the court relied upon the finding of the Federal Trade Commission that a difference between steel wool scouring pads and other scouring materials was more than cosmetic, in light of the fact that company memoranda revealed admissions by the steel pad producer that other products were not suitable for the same purpose.

81. 353 U.S. at 593-94.

82. In Reynolds Metals Co. v. Federal Trade Commission, 309 F.2d 223 (D.C. Cir. 1962), the court downplayed the significance of peculiar characteristics and uses. The record in that case revealed that a large quantity of decorative foil was available to florists who purchased decorative florist foil. Similarly, the fossil fuels in United States v. General Dynamics Corp. 341 F. Supp. 534 (N.D. Ill. 1972), *aff'd on other grounds*, 415 U.S. 486 (1974) were fungible products, not amendable to price discrimination, and the acidic products for beverages involved in United States v. Charles Pfizer & Co., 246 F. Supp. 464 (E.D.N.Y. 1965) were homogeneous chemical products, probably easily arbitraged among its consumers.

83. *See generally*, Note, *The Role of Supply Substitutability in Defining the Relevant Product Market*, 65 VA. L. REV. 129 (1979).

84. In Harnischfeger Corp. v. Paccar Inc., 474 F. Supp. 1151 (E.D. Wis. 1979), for example, the peculiar needs of distinct customers were sufficient to outweigh similar production facilities and the court separated large front end loaders from smaller units. Nor was the existence of distinct methods of production viewed as a bar in United States v. General Dynamics Corp., 341 F. Supp. 534 (N.D. Ill. 1972), *aff'd on other grounds*, 415 U.S. 486 (1974) to grouping metal and glass containers or coal and other fossil fuels into a single

less, consideration of this factor may lend guidance to a court and parties faced with the market definition issue.[85]

Existence of Distinct Customers

The existence of distinct customers in a market environment provides a focus of concern similar to that of the peculiar characteristics and uses standard discussed earlier.[86] Instead of seeking to identify a significant group of customers for whom various products are functionally interchangeable, an attempt is made to identify distinct customers for whom a particular product is the only choice. Limited reliance should be placed upon the use of this criterion, however, because an improper application is frought with the propensity of giving misleading signals.

Whenever a noticeable degree of difference exists between two products, it is likely that some customers will prefer one to another. Catering to individual preferences is the very purpose of differentiating products. In stable markets, brand loyalty will perpetuate consumer buying patterns and tend to associate some customers with certain sellers. The indiscriminate, narrow segmentation of distinct customers and their purchases from a broader relevant market could, however, purge from that market all but identical goods.[87]

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market for the reason that substitutability in use was deemed sufficient to outweigh the low cross-elasticity of supply. *See also* United States v. Black & Decker Mfg. Co., 430 F. Supp. 729 (D. Md. 1976).

85. It was primarily the existence of unique engineering specialization that led the court in Heatransfer Corp. v. Volkswagenwerk, A.G., 553 F.2d 964 (5th Cir. 1977), *cert. denied*, Wolkswagenwerk, A.G., v. Heatransfer, Corp., 434 U.S. 1087 (1978) to define air conditioners made for German automobiles as the narrow relevant product market. Production of the product in *Volkswagenwerk* required specialized engineering that only foreign firms possessed. Similarly, in United States v. Kennicott Copper, Corp., 231 F. Supp. 95 (S.D.N.Y. 1964), *aff'd*, 381 U.S. 414 (1965), the court found persuasive evidence that only certain firms were equipped with the facilities and technology to insulate cable with chemically treated paper. These firms were the envy of the cable industry, which apparently could not easily convert to such methods. Thus, paper-insulated power cable was found to be the relevant market.

86. *See* notes 73-82 *supra* and accompanying text.

87. An analogous result may arise in the context of geographic market definition. For example, assume that two stores exist within a particular geographic area. 90% of the customers in that area shop at both stores but 10% of the customers shop only at the outlet nearer than rather than at the store which is farther away. It would not make economic sense to argue that the distinct 10% should place the store into a separate geographic market, for the stores compete with one another for the bulk of their business. *See generally* Elzinga & Hogarty, *The Problem of Geographic Market Delineation in Antimerger Suits*, 18 ANTITRUST BULLETIN 45 (1973).

The use of this standard to define a relevant product should, therefore, be used subject to the following qualifications. First, the distinct customers should represent a significant economic group. If the group of customers is too small to merit separate marketing attention by producers, then there is no need to expend antitrust resources to protect them. Second, the product or service involved should be one for which price discrimination is possible. If arbitrage cannot be prevented, the distinct group of customers cannot be forced to pay uniquely higher prices for goods available from other purchasers of the producer.

As in the identification of peculiar characteristics or uses, the inquiry into the possible existence of distinct customers would be rendered unnecessary by a finding that the markets are already distinct under the criteria of elasticity, substitutability, or industry or public recognition because such a finding would give *prima facie* validity to a proposed market. Thus, the criterion of distinct customers should be used to modify and finish the market contours rather than establish them. The issue of distinct customers should, therefore, be a secondary issue in determining market definition.

Courts have properly interpreted and applied this criterion and have recognized it as actually the least reliable basis for narrowing a product market. Even in cases involving sophisticated, personalized products, courts have generally been reluctant to find that a group of distinct and identifiable customers should be excluded from a broader product market.[88] When the existence of distinct

88. For example, in Telex Corp. v. International Business Machines Corp., 510 F. 2d 894 (10th Cir. 1975), *cert. denied* 423 U.S. 802 (1975), the Tenth Circuit Court of Appeals reversed, as clearly erroneous, the district court's finding that the market for peripheral computer equipment should be limited to products compatible with IBM computers. Although users of IBM computers were often bound by long-term leases on the central units and peripheral manufacturers sometimes specialized in equipment compatible with IBM machines, the ease of adapting the connecting plugs on most brands of computers to accommodate most brands of peripheral equipment eliminated justification for isolating IBM users. *Accord,* ILC Peripherals Leasing Corp. v. International Business Machines Corp., 458 F. Supp. 423 (N.D. Cal. 1978). *But see* Transamerica Computer Co. v. International Business Machines Corp., 481 F. Supp. 965 (N.D. Cal. 1979) (high compatability conversion costs led the court to find a narrow market of distinct customers).

An attempt by a producer of vending machines to define a submarket according to sales to Coca-Cola bottlers was similarly rejected in Seeburg Corp. v. Federal Trade Commission, 425 F.2d 124 (6th Cir. 1970), *cert. denied,* 400 U.S. 866 (1970). The producer, whose machines were not approved by Coca-Cola, acquired another producer whose machines had gained approval. The fact that Coca-Cola had approved the acquired firm's machines was the only factor distinguishing those machines from the acquiring firm's machines, and the court held that that fact was insufficient to narrow the definition of the relevant product market.

customers is found to support a narrowly defined market, it has typically followed similarly consistent findings regarding customer recognition or distinct uses. Moreover, the distinct customers identified in narrow markets have properly included the majority of the purchasers in those markets.[89] Finally, the absence of distinct customers, which may follow from a finding of common uses of functions, has been cited by courts to reject attempts to narrow the market.[90]

Existence of Distinct Prices

It would seem at first blush that the fact that products are trading at distinct prices indicates that the products do not compete with one another, for such price discrepancies are precisely what effective competition within a relevant market is expected to eliminate. If a perfect substitute exists for a high-priced product and that substitute is available at a substantial discount, the movement

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The distinct customer criterion served no better in Spectrofuge Corp. v. Beckman Instruments, Inc., 575 F. 2d 256 (5th Cir.), *cert. denied*, 440 U.S. 939 (1978), a monopolization case in which the plaintiff, having formed a firm consisting of former employees of a scientific instrument manufacturer for the primary purpose of servicing its products, was frustrated by the manufacturer's tactics. The defendants' alleged business torts fell short of attempted monopolization, however, because the court refused to restrict the market to purchases of the manufacturer's products. When competitors' products were included, market shares fell below threshold levels of probable success. *See also* International Telephone & Telegraph Corp. v. General Telephone & Electronics Corp., 518 F.2d 913 (9th Cir. 1975) (government or captive purchasers are not necessarily distinct customers meeting submarket treatment); United States v. Blue Bell, Inc., 1975-1 Trade Cas. (CCH) ¶ 60,271 (M.D. Tenn. 175) (affiliated purchasers not included in the defined product market).

89. *See, e.g.*, Sargent-Welch Scientific Co. v. Ventron Corp., 567 F.2d 701 (7th Cir. 1977), *cert. denied*, 439 U.S. 822 (1978); United States v. Black & Decker Mfg. Co., 430 F. Supp. 729 (D. Md. 1976); Reynolds Metals v. Federal Trade Commission, 309 F.2d 223 (D.C. Cir. 1962).

A recent exception is the case of U.S. v. Household Finance Corp., 602 F.2d 1255 (7th Cir. 1979), *cert. denied*, 444 U.S. 1044 (1980), in which the Seventh Circuit Court of Appeals reversed the district court's decision that banks and finance companies occupied the same market. The sole ground for reversal was the possibility, not found at trial, that at least 15 percent of finance company customers could not qualify for bank credit. 602 F.2d at 1255. Significantly, the *Brown Shoe* criteria were ignored. Rather, the Seventh Circuit, not relying on the threat of price discrimination, simply held that a significant number of district customers was sufficient.

90. In Science Products Co. v. Chevron Chemical Co., 384 F. Supp. 793 (N.D. Ill. 1974), the plaintiff's claim that dry chemicals and liquid chemicals, or alternatively lawn chemicals and garden chemicals, constituted separate submarkets was rejected by the court, in part, because the same customers used the products for both purposes. *See also* Brown Shoe Co. v. United States, 370 U.S. 294 (1962); United States v. Consolidated Foods Corp., 455 F. Supp. 108 (E.D. Pa. 1978); Federal Trade Commission v. Lancaster Colony Corp., 434 F. Supp. 1088 (S.D.N.Y. 1977).

of consumers to the lower-priced good should tend to equalize the two prices. The viability of this indicator is mitigated, however, by the possibility that subtle quality or quantity differences may be the true source of the distinct prices. The problem, therefore, involves a determination of the unit of good or service against which the price is to be applied.

The use of distinct prices as a criterion for determining the relevant market is complicated by the tendency that the criterion is most often an issue when very similar goods are being compared and the most noticeable distinction between the goods is price. For example, a pair of shoes selling at twice the price of another pair may actually be an adequate substitute for two pairs of lower-priced shoes, a fact which may significantly limit the discretionary power of producers. The usefulness of price distinctions is further limited by the likelihood that a continuous scale of prices and qualities will characterize most product or service lines. Therefore, the existence of distinct prices provides little insight into the perimeters of product markets. One would, thus, expect it to carry little weight compared to the other *Brown Shoe* criteria.

The experience of the defendants in *Brown Shoe* presaged the skeptical treatment courts have accorded claims that the existence of distinct prices should govern market boundaries. Brown Shoe and Kinney had urged that the market for shoes be divided into a submarket of high-priced fashions and one of cheaper economy shoes. The Court acknowledged the existence of the wide range of prices for shoes but refused to segment the market on the basis of price because it was unable to find a significant gap between the suggested submarkets distinguished primarily by price and quality.[91] Other courts have followed the Supreme Court's lead.[92] If,

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91. 370 U.S. at 326.

92. In Beatrice Foods Co. v. Federal Trade Commission, 540 F.2d 303 (7th Cir. 1976), Beatrice Foods attempted to defend its acquisition of a quality paintbrush manufacturer in arguing for an alternative market definition separating do-it-yourself paintbrushes from the more expensive professional brands. The court could not, however, find a meaningful break in price-scale to justify any such division. *See also* Nifty Foods Corp. v. Great Atlantic & Pacific Tea Co., 614 F.2d 832 (2d Cir. 1980) (relevant market includes private label and brand name frozen waffles); Liggett & Myers, Inc. v. Federal Trade Commission, 567 F.2d 1273 (4th Cir. 1977) (relevant market includes both premium and economy dog foods); Acme Precision Prods., Inc. v. American Alloys Corp., 484 F.2d 1237 (8th Cir. 1973) (interchangeability of aluminum alloys of use outweighs higher price of a specific alloy); United States v. Joseph Schlitz Brewing Co., 253 F. Supp. 129 (N.D. Cal.), *aff'd per curiam*, 385 U.S. 37, *reh. denied*, 385 U.S. 1021 (1966) (relevant market includes both private label and premium beers).

however, a significant gap can be found to exist between inexpensive and expensive products serving similar functions, the distinct prices criterion has been recognized to narrow the relevant product market.[93] Where a court has already found a valid market division by virtue of the existence of more fundamental criteria, a bona fide advancement of the distinct prices criterion has a better chance of affecting the market definition issue.[94]

Customer Sensitivity to Price Changes

Sensitivity to price changes is nothing more than an informal statement of the principles encompassed by elasticity and cross-

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93. In United States v. Black & Decker Mfg. Co., 430 F. Supp. 729 (D. Md. 1976), the court defined the relevant product market as light chainsaws for occasional use and selling at another $200. The court noted that virtually all retail sales to consumers were made in the price range of $170-$180 or less. Professional chainsaws, which were generally heavier and designed for continuous use, sold for prices in excess of $200.

The distinct prices criterion was also considered a significant factor in United States v. American Technical Industries, Inc., 1974-1 Trade Cas. (CCH) ¶ 74,873 (M.D. Pa. 1974) where the court held that artificial Christmas trees were not in the same market as natural Christmas trees, despite the fact that they were generally interchangeable and purchased by the same customers. In reaching its conclusion, the court also relied upon findings of weak industry recognition of competition and price insensitivity. *Accord,* Photovest Corp. v. Fotomat Corp., 606 F.2d 704 (7th Cir. 1979), *cert. denied,* 445 U.S. 917 (1980) (drive thru kiosks more costly and insensitive to other prices); Harnischfeger Corp. v. Paccar, Inc., 474 F. Supp. 1151 (E.D. Wis. 1979) (finding distinct prices for larger front end loaders but minimizing their importance); United States v. Pennzoil Co., 252 F. Supp. 962 (W.D. Pa. 1965) (higher prices, distinct vendors, and buyer recognition of Pennsylvania grade oil).

94. In Science Products Co. v. Chevron Chemical Co., 384 F. Supp. 793 (N.D. Ill. 1974), the court found a broad product market, in part, because it could not discern any distinction between the prices of the products the plaintiffs wished to separate. *See also* International Telephone and Telegraph Corp. v. General Telephone & Electronics Corp., 518 F.2d 913 (9th Cir. 1975) (telephone equipment); George R. Whitten, Jr., Inc. v. Paddock Pool Builders, Inc., 508 F.2d 547 (1st Cir. 1974), *cert. denied,* 421 U.S. 1004 (1975) (alternative filtration systems); United States v. Consolidated Foods Corp., 455 F. Supp. 142 (E.D. Pa. 1978) (fresh and frozen institutional pies); United States v. Mrs. Smith's Pie Co., 440 F. Supp. 220 (E.D. Pa. 1976) (fresh and frozen pies). Similarly, in cases where customer recognition and uniqueness of function suggest market division, the existence of distinct prices has buttressed the market definition result. *See* Sargent-Welch Scientific Co. v. Ventron Corp., 567 F.2d 701 (7th Cir. 1977), *cert. denied,* 439 U.S. 822 (1978); Seeburg Corp. v. Federal Trade Commission, 425 F.2d 124 (6th Cir.), *cert. denied,* 400 U.S. 866 (1970); Reynolds Metals Co. v. Federal Trade Commission, 309 F.2d 223 (D.C. Cir. 1962).

As the functional similarity between products diminishes, however, the usefulness of the distinct prices criterion is undermined by the difficulty of measuring the appropriate units of products. This was a problem the court faced in General Foods Corp. v. Federal Trade Commission, 386 F.2d 936 (3rd Cir. 1967), *cert. denied,* 391 U.S. 919 (1968). In that case, General Foods had claimed that price distinctions between other products and steel wool pads were illusory because the longer life of other products compensated for the price difference. The court took the opposite view in concluding that such a contrived argument only served to demonstrate the distinct prices. *Id.* at 942.

elasticity of demand. As is the case with the criterion of public recognition, the general terms of this criterion represent the Supreme Court's compromise between theoretical fidelity and practical necessity. Despite the reference in many cases to elasticity or cross-elasticity, it is extremely rare that the actual formulas have been used at trial. Even the *Cellophane* case, which gave wide currency to the concept, involved nothing more than an observation of price sensitivity demonstrated by a review of quantities of products purchased at various prices.[95]

The calculation of elasticity of demand has been considered by courts to be one of the most difficult statistical exercises of applied econometrics.[96] In the common situation, data are not available in sufficient quantity and regularity to permit statistically valid computations of elasticity. Indeed, the trial court is fortunate when it has any information from which the mildest implication of sensitivity can be drawn. Thus, although the criterion of consumer sensitivity to price changes shares with the economic concept of elasticity the advantage of reaching the essence of competition within a market, it also shares, albeit to a lesser extent, the disadvantage of limited availability and difficult measurement.

Although there remains occasional judicial reference to cross-elasticity of demand, and even a rare attempt to measure it,[97] the theoretical exercise of the *Cellophane* case has largely been incorporated into the more practical standard of market sensitivity to prices. This criterion often combines with seller recognition to provide a standard that has been found persuasive by many courts in defining narrow markets.[98] By the same token, courts finding broader markets have viewed sensitive prices as highly persuasive

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95. 351 U.S. at 402-04.

96. For example in Illinois Brick Co. v. Illinois, 431 U.S. 720 (1977), the Supreme Court based its general prohibition on indirect purchaser suits largely upon the difficulty of deriving a reliable measure of elasticity of demand.

97. After reviewing a detailed statistical demonstration of elasticity of demand for pies, a frustrated court in United States v. Mrs. Smith's Pie Co., 440 F. Supp. 220 (E.D. Pa. 1976) declared the result meaningless because there was no standard against which to compare the value.

98. For example, in General Foods Corp. v. Federal Trade Commission, 386 F.2d 936 (3d Cir. 1967), *cert. denied*, 391 U.S. 919 (1968), the court found persuasive internal corporate memoranda admitting that prices of possible competitive products could be ignored in marketing strategy. In SmithKline Corp. v. Eli Lilly & Co., 427 F. Supp. 1089 (E.D. Pa. 1976), *aff'd*, 575 F.2d 1056 (3d Cir. 1978), *cert. denied*, 439 U.S. 838 (1978), similar admissions, plus a generally available price survey, greatly undermined the defendant's argument that its trademark antibiotic competed with a broad spectrum of other antibiotics. The court found that the price of the drug rarely changed during massive shifts of consumer demand.

in grouping different products into one relevant market.[99]

Existence of Specialized Vendors

It is not immediately apparent what the consideration of specialized vendors adds to the overall framework of market definition analysis given that the criteria relating to distinct customers and unique production facilities tend to overlap into this criterion. Perhaps the most plausible distinction justifying the criterion is that vendors differ from customers in that vendors act primarily as distributors of a finished product whereby customers may purchase for ultimate use or further fabrication. If, however, the term "vendors" is confined to cover those business entities engaged in wholesaling and distribution activities, the process of identifying them provides little insight into the ultimate question of the product market as a relevant level of commerce. On the other hand, when a significant group of distinct vendors handles a product whose relevant market is in question, their identification can provide useful information which may reveal otherwise unnoticed barriers to competition or pockets of monopoly. As such, the criterion may prove a valuable perspective, rather than a different method, in approaching market analysis.

A disadvantage accruing to a recognition of the existence of distinct vendors as a separate index of market definition is that it can be cited as direct evidence of distinct markets and applied in ignorance of its important indirect implication. The most obvious hazard raised is the possibility of perceiving danger in the wrong industry.[100] In any horizontal merger, the market in which competition may be threatened and which therefore must be defined is the market threatened by a depleting number of firms, not the market containing the distinct vendors of those firms' products. There is no special cause for concern for the vendors of such products that does not apply with greater force to the ultimate consumers. Competition among vendors is not ordinarily threatened by monopoly pricing upstream in production. It is gen-

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99. *See* Federal Trade Commission v. Lancaster Colony Corp., 434 F. Supp. 1088 (S.D.N.Y. 1977); Science Products Co. v. Chevron Chemical Co., 384 F. Supp. 793 (N.D. Ill. 1974); United States v. General Dynamics Corp., 341 F. Supp. 534 (N.D. Ill. 1974), *aff'd on other grounds*, 415 U.S. 486 (1974).

100. For example, in Nifty Foods Corp. v. Great Atlantic & Pacific Tea Co., 614 F.2d 832 (2d Cir. 1980), the court was unpersuaded by the fact that different wholesalers handled the brands of waffles that the plaintiff had tried to separate into two markets, given that the products competed directly at the consumer level.

erally in the best interests of firms in the production chain to deal with efficiently operating competitive markets at other levels of production.

The importance of the specialized vendors criterion is best revealed by the fact that it is the standard least cited by courts for resolving a relevant product market issue. It is a factor that one court has dismissed as less relevant than the other criteria.[101] In a number of cases, the standard is employed primarily as an afterthought, with little explanation for its use.[102] The majority of courts that have used the criterion in the sense suggested by the economics of relevant markets, however, have examined the nature of the vendors to determine whether there is a commonality of ultimate customers and uses for products.[103]

Conclusion

The substantial representation of circuit court opinions on the relevant product market issue should serve as a warning. Despite the universal acknowledgment that defining the market is a question of fact, the issue is often retried on appeal. The pretext of the reviewing courts has, then, been to correct erroneous applications of law to fact[104] and clearly erroneous decisions.[105] The result, however, has provided few clear statements of law. The consistent message to emerge from the circuit courts is that the definition of the relevant market requires meticulous justification.

The theory articulated by the Supreme Court in the *Cellophane* case, as embodied in the methodology of the practical indicia set forth in *Brown Shoe,* has been accepted. The support for the theory and analytical framework provided comes not from the holding

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101. *See* Harnischfeger Corp. v. Paccar, Inc., 474 F. Supp. 1151 (E.D. Wis. 1979).

102. *See, e.g.,* United States v. Mrs. Smith's Pie Co., 440 F. Supp. 220 (E.D. Pa. 1976); United States v. M.P.M., Inc., 397 F. Supp. 78 (D. Colo. 1975); United States v. American Technical Industries, Inc., 1974 Trade Cas. (CCH) ¶ 74,873 (M.D. Pa. 1974).

103. Thus, in Science Products Co. v. Chevron Chemical Co., 384 F. Supp. 793 (N.D. Ill. 1974), the absence of specialized vendors led the court to a finding of identical consumers and a broad product market. *See also* Federal Trade Commission v. Lancaster Colony Corp., 434 F. Supp. 1088 (S.D.N.Y. 1977). Similarly, in United States v. Black & Decker Mfg. Co., 430 F. Supp. 729 (D. Md. 1976), the fact that different departments and different retailers handled lightweight chainsaws suggested that those items were distinct from the heavier professional models. *Accord,* United States v. Blue Bell, Inc., 1975-1 Trade Cas. (CCH) ¶ 60,271 (N.D. Tenn. 1975).

104. *See, e.g.,* United States v. Household Finance Corp., 602 F.2d 1255 (7th Cir. 1979), *cert. denied,* 444 U.S. 1044 (1980).

105. *See, e.g.,* Sargent Welch Scientific Co. v. Ventron Corp., 567 F.2d 701 (7th Cir. 1977), *cert. denied,* 439 U.S. 822 (1978).

of any one case, for the infinite variety of factual circumstances precludes such precedent, but from the gradual accumulation of applications of the various *Brown Shoe*criteria. Courts have recognized that market definition analysis involves an objective economic task and, thus, have declined the opportunities to define social policy in drawing the boundaries around markets. The consensus of the opinions reveals the influence of economics in the treatment of the *Brown Shoe* guidelines. The indicia most closely related to the ultimate issue of competition—market recognition and unique functions—are the ones most often used and least often disputed. The criteria bearing less directly on competition—distinct customers and specialized vendors—are invoked less frequently and justified more carefully.

Thus, the *Brown Shoe* indicia do not represent talismans or ballots to be counted mechanically in reaching a conclusion as to the relevant market. A simple majority count of certain of the indicia does not necessarily determine the proper product in a given case. The strongest criteria in any case have been the ones that have been applied and explained. The strongest cases have been the ones in which each criterion has been considered and assessed for its explanatory power of competition in the markets involved. There is no requirement that every indicia be analyzed and proved in every case. The fact that courts of appeals are anxious to stake their own market boundaries, however, is reason enough to evaluate all appropriate criteria enumerated by *Brown Shoe* whenever a definition of the relevant product market is an issue in a case.[106]

106. *See* the following Appendix for an examination, in table form, of cases employing the analysis set forth in *Brown Shoe* and the particular criteria used in each case.

APPENDIX

Selected Cases Applying *Brown Shoe*

The following table lists selected cases which have applied the analysis established in *Brown Shoe* and the particular criteria used in each case.

The column headed Narrow/Wide is included to show which of the proposed markets the court accepted and which party prevailed on that issue.

For each case, the criteria columns are marked with a positive sign, "+", or a negative sign, "—", to indicate whether evidence relating to the criteria supported or contradicted the court's overall finding. Thus, either sign could mean either a broad or narrow market depending on the court's finding.

Entries enclosed in parentheses indicte that the party pressed an alternative argument or that the evidence cited was considered barely relevant.

CASE	ACTION	RELEVANT MARKET	DECISION NARROW /WIDE	SUBSTITUT-ABILITY	FIRM/ BUYER RECOG-NITION	DISTINCT FEATURES AND USES	UNIQUE PRODUC-TION	DISTINCT CUSTOMERS	DISTINCT PRICES	SENSITIVE PRICES	SPECIAL VENDORS
Harnischfeger v. Paccar[20.1]	§7	Large Front End Loaders	P	—	+	+	—	+	—	—	+
FTC v. Rhinechem[21.1]	§7	Organic Pigments	P		+	+	+		+		
ILC Peripherals v. IBM[22.1]	§2	Electronic Data Storage Discs and Tapes	D	+	—						
U.S. v. Consolidated Foods[23.1]	§7	Fresh and Frozen Instituted Pies	D		+		+	+	+	+	
Weeks Dredging v. American Dredging[24.1]	§7	Bucket Dredging, Hydraulic Dredging, Hopper Dredging	P		+	+	+		+		
FTC v. Lancaster Colony[25.1]	§7	Machine Blown and Pressed Glassware	(P) P		+ +	+	+	+		+	+
U.S. v. Mrs. Smith's Pies[26.1]	§7	Frozen Pies, Retail Institutional	P	—	(+)	+	—		+		+
SmithKline v. Eli Lilly[27.1]	§2	Specific Antibiotic	P	—	+	+			+	+	
U.S. v. Black & Decker[28.1]	§7	Cheap Chainsaws For Occasional Use	P		+	+	—	+	+	—	+
Pargas v. Empire Gas[29.1]	§7	LP Gas	P		+	+			+		+
U.S. v. M.P.M.[30.1]	§7	Ready-Mix Concrete	P		+	+					+

20.1. Harnischfeger Corp. v. Paccar, Inc., 474 F. Supp. 1151 (E.D. Wis. 1979).
21.1. Federal Trade Commission v. Rhinechem Corp. 459 F. Supp. 785 (N.D. Ill. 1978).
22.1. ILC Peripherals Leasing Corp. v. International Business Machines Corp., 458 F. Supp. 423 (N.D. Cal. 1978).
23.1. United States v. Consolidated Foods Corp., 455 F. Supp. 108 (E.D. Pa. 1978).
24.1. Weeks Dredging & Contracting, Inc. v. American Dredging Co., 451 F. Supp. 468 (E.D. Pa. 1978).
25.1. Federal Trade Commission v. Lancaster Colony Corp., 434 F. Supp. 1088 (S.D.N.Y. 1977).
26.1. United States v. Mrs. Smith's Pie Co., 440 F. Supp. 220 (E.D. Pa. 1976).
27.1. SmithKline Corp. v. Eli Lilly & Co., 427 F. Supp. 1089 (E.D. Pa. 1976), *aff'd*, 575 F.2d 1056 (3d Cir. 1978), *cert. denied*, 439 U.S. 838 (1978).
28.1. United States v. Black & Decker Mfg. Co., 430 F. Supp. 729 (D. Md. 1976).
29.1. Pargas, Inc. v. Empire Gas Corp., 423 F. Supp. 199 (D. Md. 1976), *aff'd*, 546 F.2d 25 (4th Cir. 1976).
30.1. United States v. M.P.M., Inc., 397 F. Supp. 78 (D. Col. 1975).

CASE	ACTION	RELEVANT MARKET	DECISION NARROW /WIDE		SUBSTITUTABILITY	FIRM/ BUYER RECOGNITION	DISTINCT FEATURES AND USES	UNIQUE PRODUCTION	DISTINCT CUSTOMERS	DISTINCT PRICES	SENSITIVE PRICES	SPECIAL VENDORS
SUPREME COURT												
U.S. v. Grinnell[1.1]	§2	Central Station Alarm Systems	P				+		+			
U.S. v. Continental Can[2.1]	§7	Glass and Metal Containers		P	+		—	—		—		
U.S. v. Alcoa[3.1]	§7	Aluminum Wire and Cable	(P)	P	— +	+ +	+ —		+	+	+	
Brown Shoe v. U.S.[4.1]	§7	(1) Men's, (2) Women's (3) Children's Shoes		P		+	+	+	+	(-)		
CIRCUIT COURTS												
Nifty Foods v. A & P[5.1]	§2	Frozen Waffles		D	+	+	+	+		+	—	—
Photovest v. Fotomat[6.1]	§2	Drive Thru Photo Developing	P			+				+	+	+
RSR v. F.T.C.[7.1]	§7	Secondary Lead	P			+	+	+	—	+		+
Columbia Metal v. Kaiser Aluminum[8.1]	§2	Aluminum Culvert Pipe	P		+	+	+		—		+	
Sargent-Welch v. Ventron[9.1]	§2	Electrobalance Micronics Scales	P			+	+		+	+	(+)	
Beatrice Foods v. FTC[10.1]	§7	Paintbrushes and Rollers	P*			+		+		+		

1.1. United States v. Grinnell Corp., 384 U.S. 563 (1966).
2.1. United States v. Continental Can Co., 378 U.S. 441 (1964).
3.1. United States v. Aluminum Co. of America, 377 U.S. 271 (1964).
4.1. Brown Shoe Co. v. United States, 370 U.S. 294 (1962).
5.1. Nifty Foods Corp. v. Great Atlantic & Pacific Tea Co., 614 F.2d 832 (2d Cir. 1980).
6.1. Photovest Corp. v. Fotomat Corp., 606 F.2d 704 (7th Cir. 1979), *cert. denied*, 445 U.S. 917 (1980).
7.1. RSR Corp. v. Federal Trade Commission, 602 F.2d 1317 (9th Cir. 1979), *cert. denied*, 445 U.S. 927 (1980).
8.1. Columbia Metal Culvert Co. v. Kaiser Aluminum & Chemical Corp., 579 F.2d 20 (3rd Cir. 1978), *cert. denied*, 439 U.S. 876 (1978).
9.1. Sargent-Welch Scientific Co. v. Ventron Corp., 567 F.2d 701 (7th Cir. 1977), *cert. denied*, 439 U.S. 822 (1978).
10.1. Beatrice Foods Co. v. Federal Trade Commission, 540 F.2d 303 (7th Cir. 1976).

CASE	ACTION	RELEVANT MARKET	DECISION NARROW /WIDE	SUBSTITUT-ABILITY	FIRM/ BUYER RECOG-NITION	DISTINCT FEATURES AND USES	UNIQUE PRODUC-TION	DISTINCT CUSTOMERS	DISTINCT PRICES	SENSITIVE PRICES	SPECIAL VENDORS
Telex v. IBM[11.1]	§2	Peripheral Computer Equipment	D	+	+		+				
ITT v. GTE[12.1]	§2,§7	Telephone Equipment Sales To All Buyers	D	+	—	+		—	+		
Whitten v. Paddock Pool Builders[13.1]	§2	Public Pool Filter Systems	D	+	— +	— +			+		
Seeburg v. FTC[14.1]	§7	All Vending Machines	P			+		—			
Abex v. FTC[15.1]	§7	Metal Friction Materials	P		+	+	+		+		
CBS v. FTC[16.1]	§5	Sale of Records Thru Clubs	P			+	+		+	+	+
General Foods v. FTC[17.1]	7	Steel Wool Scouring Pads	P		+	+			+	+	
Reynolds Metals v. FTC[18.1]	§7	Decorative Florist Foil	P	—	+	+		+	+		
DISTRICT COURTS											
Transamerica Computer v. IBM[19.1]	§2	Collection of Computer Service Products	D		+	+	+			(+)	

11.1. Telex Corp. v. International Business Machines Corp., 510 F.2d 894 (10th Cir. 1975), *cert. denied*, 423 U.S. 802 (1975).
12.1. International Telephone & Telegraph Corp. v. General Telephone & Electronics Corp., 518 F.2d 913 (9th Cir. 1975).
13.1. George A. Whitten, Jr., Inc. v. Paddock Pool Builders, Inc., 508 F.2d 547 (1st Cir. 1974), *cert. denied*, 421 U.S. 1004 (1975).
14.1. Seeburg Corp. v. Federal Trade Commission, 425 F.2d 124 (6th Cir. 1970), *cert. denied*, 400 U.S. 866 (1970).
15.1. Abex Corp. v. Federal Trade Commission, 420 F.2d 928 (6th Cir. 1970), *cert. denied*, 400 U.S. 865 (1970).
16.1. Columbia Broadcasting System, Inc. v. Federal Trade Commission, 414 F.2d 974 (7th Cir. 1969), *cert. denied*, 597 U.S. 907 (1970).
17.1. General Foods Corp. v. Federal Trade Commission, 386 F.2d 936 (3rd Cir. 1967), *cert. denied*, 391 U.S. 919 (1968).
18.1. Reynolds Metals Co. v. Federal Trade Commission, 309 F.2d 223 (D.C. Cir. 1962).
19.1. Transamerica Computer Co. v. International Business Machines Corp., 481 F. Supp. 965 (N.D. Cal. 1979).

CASE	ACTION	RELEVANT MARKET	DECISION NARROW /WIDE	SUBSTITUT-ABILITY	FIRM/ BUYER RECOG-NITION	DISTINCT FEATURES AND USES	UNIQUE PRODUC-TION	DISTINCT CUSTOMERS	DISTINCT PRICES	SENSITIVE PRICES	SPECIAL VENDORS
U.S. v. Blue Bell[31.1]	§7	Sale of Rental Industrial Clothes to Unaffiliated Laundries	P		+	+		+	+		+
Science Products v. Chevron[32.1]	§2	Products Affecting Plants and Animals In Home & Garden	D	+	+	+	+	+	+	+	+
U.S. v. American Technical[33.1]	§7	Artificial Christmas Trees Taller Than 2 Feet	P	—	+	+	+	—	+	+	+
U.S. v. General Dynamics[34.1]	§7	Energy Fuels	D	+		—	—			+	—
U.S. v. Pennzoil[35.1]	§7	Pennsylvania Grade Crude Oil	P	—	+	+		+	+		(+)
U.S. v. Kennicott Copper[36.1]	§7	Paper Insulated Power Cable	P		+	+	+	+			

31.1. United States v. Blue Bell, Inc., 1975-1 Trade Cas. (CCH) ¶60,271 (M.D. Tenn. 1975).
32.1. Science Products Co. v. Chevron Chemical Co, 384 F. Supp. 793 (N.D. Ill. 1974).
33.1. United States v. American Technical Industries, Inc., 1974 Trade Cas. (CCH) ¶74,873 (M.D. Pa. 1974).
34.1. United States v. General Dynamics Corp., 341 F. Supp. 534 (N.D. Ill. 1972), *aff'd on other grounds*, 415 U.S. 486 (1974).
35.1. United States v. Penzoil Co., 252 F. Supp. 962 (W.D. Pa. 1965).
36.1. United States v. Kennicott Copper Corp., 231 F. Supp. 95 (S.D.N.Y. 1964), *aff'd* 381 U.S. 414 (1965).