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Market Definition and Antitrust Policy

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MARKET DEFINITION AND ANTITRUST POLICY

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Only in the last two decades has market definition been a serious concern for antitrust law.[2] Judges and lawyers involved with antitrust suits have always had to consider "lines of commerce." As long as antimonopoly policy was primarily concerned with exclusionary and predatory behavior, however, market definition was a minor problem. Today the situation is vastly different. Most antitrust cases involve the definition and determination of the effective area of competition: court decisions use economic concepts such as "cross elasticity of demand," legal journals discuss economic theories, and economic journals discuss judicial analyses.[3]

This change is due to two developments. The first is the stress now placed by the courts on "market power" as the key element of illegal monopoly under section 2 of the Sherman Act.[4] Since in order to de-

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[2]This paper is concerned with attempts to convert economic theory into judicial findings and therefore the economic literature on the theory of markets will not be considered. For standard treatments of the economic problems involved see:

Chamberlin, Monopoly and Competition and their Regulation, 255 (1954); Marshall, Principles of Economics, 325 (8th ed. 1947); Stigler, The Theory of Price, 92 (1947); Triffin, Monopolistic Competition and General Equilibrium Theory (1940); Bishop, Elasticities, Cross Elasticities and Market Relationships, 42 Am. Econ. Rev. 779 (1952); Pfouts & Ferguson, Market Classification Systems in Theory and Practice, 26 South. Econ. Rev. 111 (1959).

[3]For discussions of the legal problems of market definitions see:

Att'y Gen. Nat'l Comm. Antitrust Rep. 44 (1955); Kaysen & Turner, Antitrust Policy 100 (1959); Note, the Market: A Concept in Antitrust, 54 Colum. L. Rev. 580 (1954); Connelly, Emerging Theories of Mergers Extra Ed. Trade Reg. Rep. (1960); Bok, Section 7 of the Clayton Act of the Merging of Law and Economics, 74 Harv. L. Rev. 226 (1960); Hale & Hale, Monopoly in Motion: Dynamic Economics in Antitrust Enforcement, 41 Va. L. Rev. 431 (1955); Handler and Robinson, A Decade of Administration of the Celler-Kefauver Antimerger Act, 61 Colum. L. Rev. 629 (1961).

[4]26 Stat. 209; 15 U.S.C. 1-7; Public, No. 190 (1890). Section 2 reads in part: "Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States or with foreign nations, shall be deemed guilty of a misdemeanor..."

termine if a firm has the power to dominate a market—monopolize it—one must know the relevant boundaries of the industry, market definition has become a central issue in monopoly litigation. The second development is due to the "New Section 7," the Celler-Kefauver Amendment of 1950 to section 7 of the Clayton Act.[5] This amendment was designed to strengthen the ability of the federal government to stop mergers. It closed the loophole in the previous section 7 which had exempted asset transactions from the antimerger provisions. At the same time the amendment established more stringent tests of mergers. The result has been an active program of antimerger enforcement by both the Justice Department and the Federal Trade Commission. In turn this meant that the courts had to interpret "line of commerce" and "section of the country," key phrases in the amendment. This necessitates judicial definition of markets.

Both section 2 of the Sherman Act and section 7 of the Clayton Act are concerned with monopoly.[6] The former attempts to deal with those situations in which a large firm has the ability to control or determine prices, outputs, or other economic dimensions of competition. The latter forbids certain practices which may lead to or increase market power in the Sherman Act sense. The justification for the Clayton Act is that it is easier to correct situations before they develop than it is to change long-standing business practices or industrial organizations. That is, it is easier to prevent eggs being broken than to unscramble an omelet.

Although market definition plays a role in litigation under both statutes, there is considerable confusion about whether the criteria applicable under one law should apply under the other. This paper, there-

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[5] 38 Stat. 730; 15 U.S.C. 12 ff; Public, no. 212 (1914) as amended by Celler- Kefauver Act, Dec. 29, 1950, 64 Stat. 1125; 15 U.S.C. 18; Public Law 899. The revelant part of section 7 reads as follows with material in italics added by the Celler-Kefauver Amendment and material in parenthesis deleted by the amendment: "No corporation engaged in commerce shall acquire, directly or indirectly, the whole or any part of the stock or other share capital *and no corporation subject to the jurisdiction of the Federal Trade Commission shall acquire the whole or any part of the assets* of another corporation engaged in commerce, where *in any line of commerce in any section of the country,* the effect of such acquisition may be (to) substantially *to* lessen competition between the corporation whose stock is so acquired and the corporation making the acquisition, or *to* tend to create a monopoly (or any line of commerce)."

[6] Although market definition problems can arise under other sections of the anti-trust laws they most frequently occur under sections 2 of the Sherman Act and 7 of the Clayton Act. Therefore, this paper will be limited to these sections. For convenience, "Sherman Act" and "Clayton Act" when used in the text will refer to sections 2 and 7 respectively.

fore, will first consider how the courts define markets in Sherman Act cases, then consider how they define markets in Clayton Act cases and finally discuss the relationships between the two procedures.

I. Market Definition Under Section 2 of the Sherman Act

Current doctrine about market definition under the Sherman Act was established in a series of important cases decided between 1945 and 1955, in which it was held that a decision about monopolization requires a definition of the market and that an economic analysis of substitution is required for this task. The most important case was *United States v. Aluminum Co. of America;*[7] but as Judge Hand's decision is so well known, extensive consideration of this suit is unnecessary. Hand's emphasis on market domination as the essence of monopoly brought the determination of market boundaries to the center of the stage. His defintion of the aluminum market introduced what has come to be known as the "functional interchangeability" doctrine, that is, the market is composed of all those products which can perform certain consumer-demanded services. Virgin and secondary aluminum were considered by Hand to be functionally interchangeable although he excluded secondary in computing Alcoa's market share on the questionable grounds that Alcoa's control over virgin aluminum necessarily gave it control over secondary. The *Alcoa* case therefore, is significant both because of the importance it gave to market definition and the approach it used in delineating the area of competition.

The Hand approach was broadened in the *Alcoa Remedy* case, *United States v. Aluminum Co. of America,*[8] handed down five years later. Judge Knox took the position that the relevant market for aluminum was composed of all sources of supply for the major fabricated aluminum products. He defined the market by looking at the fabrication of end use products and deciding which sources of supply were technologically substitutable at no major cost disadvantage. This allowed the exclusion of other "light metals" but the inclusion of secondary aluminum and scrap. Secondary aluminum was included because Knox felt that the war and the existence of Reynolds and Kaiser prohibited control by Alcoa, and because the court concluded that from the standpoint of fabricators there was little difference between primary and secondary. The latter conclusion was partly based on evidence that secondary aluminum had sold at higher prices than

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[7] 146 F.2d 416 (2d. Cir. 1945).
[8] 91 F. Supp. 333 (S.D.N.Y. 1950).

primary on several occasions. Knox held that Reynold's and Kaiser's use of most of their own ingot production did not eliminate them as potential competitors of Alcoa. He ruled out a measurement of the market limited to sales of ingot and pig aluminum.[9]

The market definition used in the *Remedy* case was based on a recognition of both technological possibilities and price relationships, but other courts have differed frequently in the relative emphasis to be placed on these two aspects of substitution. Differences in the stress placed on one or the other element can lead to very great differences in market definitions as is evident from *United States v. E. I. du Pont de Nemours & Co.,* and *Cellophane* case.[10] This decision is fundamental for it firmly established that market definition is an economic problem and can not be solved by legal, historical, or conventional classifications of firms. The functional interchangeability doctrine was elaborated also and stated to be necessary for a finding of monopolization.

During the trial there was a lengthy dispute about how the market for cellophane should be defined. The defense argued that one could not consider cellophane without also considering substitutes. The government contended, on the other hand, that a single product could be considered a line of commerce under the antitrust laws. Counsel for the government stated that "the facts [about substitutes] that the defendant desires to prove are entirely against the express intent of Congress."[11] He went on to say that "there [has] been a single product in a line of commerce and substitutes have been disregarded again and again."[12] He argued that if the court were to consider substitutes it would be required to "wade through this great mass of detail, ... the statistics and the trivia that was dumped in with it" only to reach the conclusion that the search had been useless and that any product could comprise a market.[13] Judge Leahy analyzed and rejected this argument in a trial memorandum.[14] He ruled that market definition must be made on the basis of economic analysis and not on conventional classifications. The final decision followed this reasoning and rested on the finding that there were many substitutes for cellophane because of the functional interchangeability of wrapping materials.

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[9]Id. at 357-358.
[10]118 F. Supp. 41 (D. Del. 1953).
[11]Record at 1546-47.
[12]Ibid.
[13]Record at 1545.
[14]Record, Fifth Trial Memorandum.

The relevant market was held to be the "flexible wrapping industry." Judge Leahy concluded:

> The record establishes plain cellophane and moistureproof cellophane are each flexible packaging materials which are functionally interchangeable with other flexible packaging materials and sold at same time to same customers for same purpose at competitive prices; there is no cellophane market distinct and separate from the market for flexible packaging materials. . .[15]

This conclusion has been subjected to severe criticism.[16] The significant price differentials between cellophane and other wrappings and the ability of cellophane prices to change independently of other wrapping material prices indicates that the "flexible packaging materials market" included some heterogeneous commodities. Judge Leahy's approach can be attributed partly to the stress in the du Pont arguments on technical and engineering data about substitution. Because the government argued that market definition was unnecessary, it never presented an alternative theory of how the market should be defined. As is so often the situation, "something" beat "nothing." On the appeal of this decision the government made a persuasive analysis of the market boundaries based on price relationships. The majority of the Supreme Court, nevertheless, was unwilling to reserve the District Court findings about the nature of the market.

As laid down in *Cellophane* the functional interchangeability doctrine theoretically involves both technical relationships and "competitive prices." Academic criticism of this decision has mainly charged that in the decision the latter were ignored and that the market derived from the former overstated the economic alternatives available to packagers. A number of other cases have also presented the courts with a choice of technical or price-quantity data on which to base a market definition. A particularly interesting example of judicial handling of substitution possibilities is *Kobe, Inc. v. Dempsey Pump Co.*[17] The suit concerned infringement of patents held by Kobe on hydraulic bottom pumps for oil wells. Dempsey, another manufacturer of such pumps, in a counter claim for treble damages charged Kobe with violating the Sherman Act. To establish the validity of this claim it was necessary that the market be limited to hydraulic pumps and not include all oil well pumps. The parties agreed that many types of

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[15] 118 F. Supp at 194.

[16] Stocking and Mueller, The Cellophane Case and the New Competition, 45 Am. Econ. Rev. 29 (1955).

[17] 97 F. Supp. 342 (N.D. Okla. 1951), aff'd 198 F. 2d 416 (10th Cir. 1952).

pumps were satisfactory for shallow wells, but that in deep wells hydraulic pumps had substantial advantages, even though other types of pumps could be used. Kobe argued for a broad definition of the market because many wells used other types of pumps. Kobe introduced a journal article by three soil engineers on costs of pumps in deep wells as evidence that substitution between different types was possible.[18] Dempsey argued that in deep wells the cost advantage of hydraulic pumps was so great that other types of pumps could not be considered substitutes. The court agreed with Dempsey and ruled that the relevant market was for wells below 8,000 feet where hydraulic pumps had few substitutes.

On the appeal this definition was disputed and Kobe charged that to accept such a definition would be to say that "any produce with any differentiation" was a line of commerce. Kobe pointed out that only 1 per cent of all oil wells were "deep wells" and of these only 20 per cent were on artificial lift with only part of these using hydraulic pumps.[19] The Court of Appeals, however, agreed with the district court. It held that the Sherman Act does not require that an entire industry be monopolized before action can be taken but requires only that an appreciable part be controlled.

The *Hughes* cases,[20] which also involved the substitutability of drilling equipment, present an opportunity to observe how jurists may treat the same facts differently. Judge Vaught decided the *Cole* and *Conaghan* cases and Judge Wallace decided the *Ford* case. However, all three cases were tried together. Hughes won the *Cole* and *Conaghan* cases and lost the *Ford* case. All three cases went to the Court of Appeals for the Tenth Circuit where a majority of four held for Hughes in all three cases. One justice dissented saying he agreed "precisely" with Judge Wallace.

The cases involved a charge by Hughes that its patents had been infringed and a counterclaim by the defendants that Hughes had monopolized the market for roller-rock drilling bits.

Drillers use a number of types of bits but in deep formations "roller-rock" bits are much preferred. Such bits are of two types: cone and cross. Cone roller-rock bits are manufactured by the Hughes Tool Company and leased to drillers with the requirement that when worn

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[18]Record at 670; Plaintiff's Exhibit 78.

[19]Brief of Appellants, 10 Cir. 34.

[20]Cole v. Hughes Tool Co., 215 F. 2d 924 (10th Cir. 1954); Hughes Tool Co. v. Ford, 114 F. Supp. 525 (D. Okla. 1953); Hughes Tool Co. v. Conaghan, 113 F. Supp. 519 (W.D. Okla. 1953); Hughes Tool Co. v. Cole, 113 F. Supp. 527 (W.D. Okla. 1953).

they are to be returned to Hughes. The defendants were "retippers" who obtained worn bits, built up the teeth by welding, and resold them. Retipped bits are usually used in nonrock formations. Hughes argued that due to the competition of other types of bits in the softer formations, the market should not be limited to roller-rock bits. The retippers' position was that:

> It is manifest that the roller-rock bit is distinct physically, performance-wise, commercially and in utility from any other drill bit... and in consequence it is legally distinguished as a separate commodity or article of trade for the purpose of the antitrust laws.[21]

Judge Wallace in *Hughes Tool Co. v. Ford* held that all roller-rock bits are sufficiently interchangeable to constitute the same market but that the design and function distinguished roller-rock bits from other drilling tools.[22] In the other two cases, Judge Vaught held that whatever the market boundaries might be, Hughes' position therein was legal because it fell within the exemption of the Alcoa "thrust upon" doctrine.[23] The Court of Appeals indicated that the relevant market might be broader than that for roller-rock bits, but held that Judge Vaught was correct in holding that any monopoly power enjoyed by Hughes was exempt because it resulted from patents, efficiency and technical progress.[24]

The same year as the federal district courts used narrow market definitions in the *Kobe* and *Hughes* cases, the Supreme Court used an exceedingly broad concept of substitution to define the market in *Times-Picayune Publishing Co. v. United States*.[25] This litigation concerned newspaper advertising in New Orleans, where there was one morning newspaper, the *Times-Picayune,* and two evening papers, the *States,* and the *Item.* The *Times-Picayune* owned the *States* and instituted a policy charging one combined advertising rate for both morning and evening papers. The government charged this violated the Sherman Act by preventing advertisers from splitting their space purchases between the *Times-Picayune* and the *Item.*

During the trial, discussion centered around whether the *States* was a separate paper or an evening edition of the *Times-Picayune.* Judge Christenberry held, on the basis of letters, reports, advertising, etc., that the papers were separate and ruled for the government.

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[21] Opening brief for Ford, Cole and Conaghan, 10th Cir. 63.
[22] 114 F. Supp. at 538.
[23] 113 F. Supp. at 523.
[24] 215 F.2d at 937.
[25] 345 U.S. 594 (1953).

During the trial several witnessess had argued that the publisher was selling readers rather than newspaper space.[26] The *Times-Picayune* on the appeal made this the major contention, asserting that advertisers were concerned only with the milline rate, the cost of reaching a million people with one line of advertising. Therefore, the argument went, it was irrelevant whether the publisher sold the advertiser separate morning and evening groups of readers or combined them in a package. The Supreme Court decision turned on this point. It held:

> Although advertising space in the Times-Picayune, as the sole morning daily, was doubtless essential to blanket coverage of the local newspaper readership, nothing in the record suggests that advertisers viewed the city's newspaper readers, morning or evening, as other than fungible customer potential. We must assume, therefore, that the readership "bought" by advertisers in the Times-Picayune was the selfsame "product" sold by the States, and, for that matter, the Item.[27]

So defined the *Times-Picayune* controlled 40 per cent of the market as opposed to the one-third share it would have had if the newspapers had been equal. The court held this was not market domination.

Ignoring the validity of the finding that newspaper readers are "fungible" it is clear that the explicit market definition advanced by the defendant carried more weight with the Supreme Court than the evidence advanced by the government. The latter relied upon letters, memoranda, etc., in which the *Times-Picayune* executives spoke of the two papers as being separate, while the Supreme Court based its decision on a theoretical analysis. The Supreme Court's decision underlined the *Cellophane* verdict; market definition is not a matter of statutory definition, or of conventional or historical ways of classifying industries but it is an economic fact to be determined by logical analysis and empirical observation of substitution. Though it seems questionable that the evening newspaper readers were true substitutes for morning newspaper readers, the principle was laid down that substitutability is the issue.

Examination of these cases shows that the test used in section 2 cases does not necessarily yield a "narrow" or "broad" definition of the market. If, as in *Cellophane* and *Times-Picayune,* attention is limited solely to the engineering or technical possibilities for substitution, then the "functional interchangeability" doctrine will likely result in a relevant market that includes a large number of suppliers or products. If, however, the *cost* of making the technically possible

[26]Record at 94-98.

[27]345 U.S. at 613.

substitutes is also considered, the relevant market cannot be broader and often will be more narrow. The "functional interchangeability" doctrine allows for two interpretations of substitution. In terms of the outcome of any single suit the vital question is how the courts will interpret the price relations between possible substitutes.

The role of market definition in Sherman Act cases can be summarized in three propositions. First, it has been clearly established that before a firm can be held to have monopolized a market the boundaries of that market must be established on the basis of economic principles. Second, the criterion for determining the extent of the market is the degree of possible substitution—the functional interchangeability. Third, in some suits the cost of substitution as well as technical substitution possibilities have been considered; in other suits functional interchangeability has been regarded as almost exclusively an engineering problem.

II. Market Definition Under Section 7 of the Clayton Act

Judge Weinfeld's decision in *United States v. Bethlehem Steel Corporation*[28] presents in clear form the present confusion about whether a "market" under the Sherman Act is the same as a "market" under the Clayton Act. In determining whether the proposed merger between Bethlehem and Youngstown Sheet and Tube Co. was legal. Judge Weinfeld emphasized the necessity to determine the relevant market of the two firms. Much of his decision is devoted to a consideration of the economics of the steel industry and the theoretical problems involved in measuring markets.

The defendants argued that they were not "competitive" but "complementary" and therefore the merger would not lessen competition. They held that the relevant line of commerce should be decided by use of the "production flexibility" concept, another name for the functional interchangeability rule discussed in the last section The government argued on the basis of *United States v. E. I. du Pont de Nemours & Co.*, (the General Motors case), that "a line of commerce is any product or group of products that has peculiar characteristics and uses, which make it distinguishable from all other products."[29] Each side advanced

[28]168 F. Supp. 576 (S.D.N.Y. 1958).

[29]Id. at 589. In United States v. E. I. du Pont de Nemours & Co., 353 U.S. 586 (1957), (the General Motors case), the government argued that the 23 per cent of G. M. stock owned by du Pont meant that competitors of du Pont "have a hard road to travel" and therefore the Sherman and Clayton Acts were violated. (See Jurisdictional Statement by the Government on Appeal, 21). The defense argued that the boundaries of the market should be considered and that General Motors'

both a broad and a narrow definition of the market based on the rule it supported. For the government the broad definition included all iron and steel producers; for the steel companies, it included only finished steel products common to both producers. The narrow definitions divided the outputs into separate lines of end products. For example, the government considered "hot rolled bars" and "track spikes" as separate lines of commerce while the steel companies lumped both these end products into a classification of "bar mill products" which included a number of other steel commodities.

Judge Weinfeld's rejection of the "production flexibility" or "functional interchangeability" rule and his acceptance of the peculiar characteristics and uses criterion is essential for understanding current interpretation of the Cellar-Kefauver Amendment. He reasoned that:

> Competition is not just rivalry among sellers. It is rivalry for the custom of buyers. Also in many instances, and particularly in the steel industry, it is during periods of shortage, strongly present as rivalry among buyers for sources of supply. Thus competitive forces may move in a number of directions—buyer against buyer; seller against seller; buyer against seller. But however competition is defined and whatever its form or intensity, it always involves interplay among and between both buyers and sellers. Any definition of line of commerce which ignores the buyers and focuses on what the sellers do, or theoretically can do, is not meaningful.
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> The evidence establishes that the defendants' production flexibility or mill product line theory is indeed pure theory. In practice steel producers have not been quick to shift from product to product in response to demand. Moreover, the evidence establishes that the continuing relationships between buyers and sellers in the steel industry make such shifts unlikely.[30]

On this basis he held that:

> The Court is persuaded that the Government's position for determining lines of commerce by the particular characteristics and uses standard is sound and should be adopted.[31]

The market was defined, therefore, by the availability of substitutes from different concerns for a product with specifiable characteristics. The appropriate line of commerce was held to be the "iron and steel industry" and the proposed merger was illegal considering both the

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purchases were not meaningful for assessing monopoly power. The majority of the Supreme Court agreed with the government, though the minority held that a more detailed examination of the line of commerce involved in the purchases was required.

[30]168 F. Supp. at 592.

[31]Ibid.

product and geographical aspects of the market. Judge Weinfeld delineated three relevant geographical areas of competition; the northeastern United States; a four-state are within this quardrant, composed of Ohio, Michigan, New York and Pennsylvania; and each of these four states.

To summarize, the *Bethlehem* case advanced three points about market definition under the Clayton Act. First, it is different from market definition under the Sherman Act. Thus, Judge Weinfeld rejected the *Cellophane* concept of monopoly as the power to control prices or exclude competition as irrelevant in section 7 cases, because it is "substantial lessening of competition" which is forbidden and this can occur without the creation of control over all reasonably interchangeable items. The decision did note that interchangeability should be considered in assessing whether competition has been lessened, but concluded that this factor is not controlling.

Second, the applicable Clayton Act criterion is the peculiar characteristics and uses doctrine. The market is composed of those items whose aspects set them apart from all other products.

Third, *Bethlehem* established three markets for steel and held each to be relevant. Thus competition can be lessened in the meaning of section 7 if any significant part of a broad competitive area is affected by a merger.

Since this decision both the courts and the Federal Trade Commission have followed Judge Weinfeld's procedure. Almost every one of the eighty-one section 7 cases instituted between 1951 and 1960 considered market boundaries and market shares of the merging firms. Cases in which market determination was particularly important include: *Brown Shoe,*[32] *American Crystal Sugar,*[33] *Erie Sand,*[34] *Crown-Zellerbach,*[35] *Farm Journal,*[36] *Reynolds Metals,*[37] and *Maryland and Virginia Milk Producers.*[38] The first three cases will illustrate the current approach to market definition in merger cases.

United States v. Brown Shoe Company involved a proposed mer-

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[32]United States v. Brown Shoe Company 179 F. Supp. 721 (E.D. Mo. 1959); Brown Shoe Co. v. United States, 370 U.S. 294 (1962).

[33]American Crystal Sugar Co. v. Cuban-American Sugar Co., 152 F. Supp. 387 (S.D.N.Y. 1957).

[34]Erie Sand and Gravel Company v. Federal Trade Commission, 291 F.2d 279 (3d Cir. 1961).

[35]Crown Zellerbach v. F.T.C., Trade Reg. Rep. 70038 (1961).

[36]Farm Journal, Inc. v. F.T.C., Docket 6338.

[37]Reynolds Metals Co., Trade Reg. Rep. 28533 (1960).

[38]Maryland and Virginia Milk Producers Ass'n v. United States, 362 U.S. 458 (1960).

ger between the Brown Shoe Company, Inc., and G. R. Kinney Corporation. Brown was principally a manufacturer, while Kinney was primarily a shoe distributor though it did some manufacturing. Brown, the fourth largest company in the business, produced 5 per cent of the total U.S. shoe output and Kinney 0.5 per cent. The government contended that the relevant market should be defined as "shoes" or alternatively as three markets, "men's," "women's," and "children's" shoes. Brown and Kinney asserted that shoes are divided into certain grades and price lines so that the market should be composed of separate grade groups, such as "casual," "dress," etc., and should also be subdivided into price classes.[39]

The court decided that:

> An analysis of the maze of cases on the subject leads one to the conclusion that a "line of commerce" cannot be determined by any process of logic and should be determined by the process of observation.[40]

Judge Weber reached four conclusions about functional interchangeability in shoes. First, the manufacturing process can be adopted to produce a variety of types of shoes. Second, people often regard cheap shoes as a substitute for expensive shoes. Third, there is interchangeability of the use customers make of shoes; one person may wear "casual" shoes for work, while another person wears them for dress. Fourth, the shoe manufacturers admitted that trade classifications do not determine use; that decision is made by consumers.[41] Therefore, Judge Weber classified shoe production into three markets: "Men's," "women's," and "children's" shoes. On the basis of findings about the effects that the merger would have on "trends" in shoe manufacturing, the merger was held to be illegal.[42]

Thus the definition of the market in *Brown Shoe* followed the *Cellophane* precedent and considered interchangeability without reference to price relationships. It should be noted, too, that the district court maintained that market boundaries are not a "problem of logic." The context indicates that Weber believed that the market must be defined on the facts in each case, and that there is no *a priori* way of determining the area of competition apart from empirical data and an understanding of the industry in question. This is an attitude apparent

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[39]179 F. Supp. at 727-30.

[40]Id. at 730.

[41]Id. at 731.

[42]For discussions of this case see: Adelman, The Antimerger Act, 1950-60, 51 Amer. Econ. Rev. 236 (1961); and Mann & Lewyn, The Relevant Market Under Section 7 of the Clayton Act: Two New Cases—Two Different Views, 47 Va. L. Rev. 1014 (1961).

in most section 7 cases. The delineation of the market becomes a matter involving considerable judicial discretion.

A different approach to substitution from that of *Brown Shoe* was taken in *American Crystal Sugar Co. v. Cuban-American Sugar Co.* This case has not received the attention it deserves, but it is one of the most interesting examples of judicial analysis of competition.

Cuban-American Sugar Company owned 21 per cent of the stock of American Crystal Sugar Company. The plaintiffs asked for an injunction to keep Cuban-American from gaining control. Crystal manufactures beet sugar; Cuban-American manufactures cane sugar. Crystal sells in fourteen states where Colonial, Cuban-American's sales subsidiary, does not. Cuban-American, through Colonial, sells in eight states where Crystal has no customers. There are ten states in which both sell. Traditionally, cane sugar sells at a higher price than beet sugar and is used by households while beet sugar is used primarily by industrial consumers. The case turned on whether the different types of customers and the geographical differences meant that the two firms operate in separate markets.

A novel approach was used to adjudicate this dispute. American-Crystal suggested that lists of customers of the two firms be compared. Cuban-American objected to revealing trade secrets. A third party, therefore, was selected to match the two lists and to submit a report of the findings without disclosure of secrets. The court gave careful consideration to the statistical findings. The tabulation of the customers who, at any time during the period under consideration, had bought from both firms was particularly important.[43] Both the number of customers and sales volume were analyzed for two geographical areas: a ten-state area in the midwest called the "River Territory," and a three-state area composed of Illinois, Iowa, and Wisconsin. On the basis of the dollar volume of sales and the data on customers who purchased from both companies the court concluded that the two firms are in competition and their activities are major competitive factors in the sugar business in the "River Territory."

The court also considered the supposed quality difference between cane and beet sugar. While recognizing that to some extent cane has a "higher degree of customer acceptance," the evidence showed a "high degree of interchangeability."[44] At least for industrial uses relative prices controlled decisions as to which type of sugar is purchased. Judge Dawson concluded:

[43] 152 F. Supp. 387 at 391.
[44] Id. at 398.

> To establish that for consumer purposes cane and beet are not interchangeable, it would be necessary to show that within a given range of prices consumers would not shift from one to the other.[45]

Thus, unlike *Brown Shoe,* the market definition in *American Crystal Sugar* rests primarily on findings about price relationships.

Erie Sand concerned very narrow market boundaries determined by the Federal Trade Commission. Erie Sand and Gravel Company dredges and sells Lake Erie sand for use in making cement. In 1955, it purchased the other major dredging concern along Lake Erie, the Sandusky Division of Kelley Island Company. The FTC undertook to set the merger aside. After hearings the Commission held that the market is limited to lake sand produced and sold within a twelve-mile strip along Lake Erie from Buffalo, New York, to Sandusky, Ohio. The high transportation costs for sand mean that pit and bank sand though suitable for cement are separate commodities from lake sand.[46]

The Court of Appeals for the Third Circuit found on appeal that though pit and bank sand are also sold in the twelve-mile strip, this had not been taken into account by the FTC. The court rejected as inappropriate in appellate proceedings the Commission's attempt to redefine the market as a series of detached semi-circles along the lake. Judge Hastie noted that functional interchangeability had to be limited by economic costs. However, he questioned whether competition would be lessened by the merger even in the market area determined by the FTC. Consequently, the case was remanded to the Commission for a redetermination of the facts.

These cases show the current unsettled state of market definition under the Clayton Act. In *Brown Shoe,* both the District and Supreme Court made functional interchangeability the test and ignored price relationships; in *American Crystal Sugar,* the court made a careful analysis of price data. In *Bethlehem-Youngstown* the Court ruled that the *Cellophane* doctrine did not apply to section 7 cases. In *Bethlehem-Youngstown* the relevant market was defined as "iron and steel" in the northeast quadrant of the United States; in *Erie Sand* the relevant market was "lake sand" produced and sold in a twelve-mile strip along Lake Erie. Much of the difficulty is due to confusion about the difference between tests for market control or monopolization in the Sherman Act sense and tests for the substantial lessening of competition forbidden by the Clayton Act.

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[45]Id. at 399.

[46]291 F. 2d at 281-82.

III. The Relationship Between Market Definition Under the Sherman Act and the Clayton Act

To recapitulate, in the last twenty years two judicial doctrines about market definition have been established. One, the functional interchangeability rule, has arisen primarily out of Sherman Act litigation and holds that the market is composed of all items with "high cross elasticities of demand"; in other words, all items capable of easy substitution one for the other. The other doctrine, the peculiar characteristics and uses rule, has arisen primarily out of Clayton Act litigation and holds that the market is composed of those items whose aspects set them apart from all other products. What relationship is there between these two procedures for determining the relevant area of competition?

One possible reconciliation was suggested by the Supreme Court in the *Brown* case.[47] It was asserted that functional interchangeability might be used to obtain the "outer boundaries" of the market and the submarkets revelant for section 7 cases might be determined by other means.[48] This, however, does not solve the problem. The courts have been unanimous in holding that market definition in antitrust cases is an economic problem. If so, the relevant market is, in Adelman's words, the "locus of the supply-demand forces that determine price."[49] Therefore, only one rule can be valid in any specific case; either some submarket is the locus of the forces and the functional interchangeability rule is irrelevant or the outer limits encompass the forces and the peculiar characteristics and uses doctrine does not apply.

By this reasoning only one of the three markets held to be relevant in the *Bethlehem* case is appropriate. Mann and Lewyn, however, have defended Judge Weinfeld's procedure and in so doing have suggested another possible reconciliation of the two market definition doctrines.[50] Mann and Lewyn assert that section 7 is designed to protect producer interests as well as consumer interests. This means that in an industry in which each producer's output is somewhat different in form or style from all the others, markets will differ depending upon which producer's interest is being protected.[51] Thus, there can be more than one market in a single section 7 case. Moreover,

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[47] Id. at 283.

[48] 370 U.S. at 325.

[49] Op. cit. supra note 42 at 237.

[50] Op cit. supra note 42 at 1019.

[51] Id. at 1018-1020. For another defense of the market definition in Bethlehem see: Houghton, The Anatomy of a Merger, 6 Antitrust Bull. 131. (1961).

since section 7 cases are concerned with producer's interests, they may have different markets than those appropriate for cases arising under the Sherman Act which protects consumer interests.

Such a position would rationalize much of the current confusion about market definition but it is, nevertheless, unacceptable. To regard the Clayton Act and the Celler-Kefauver Amendment as protecting producer interests would negate the purpose of the statute which is to protect competition and not consumers. The justification for competition as a means of organizing an economy is not that it is good for producers but that it is good for competitors. Antitrust laws, therefore, always should have one focal point—consumer interests. There is no indication either in the legislative history of the Celler-Kefauver Amendment or in the cases handed down under that act that competition is explicitly regarded as a process of protecting competitors. However, some commentators feel some recent cases have been implicitly concerned more with producers than with consumers.[52] The essence of competition is rivalry among businessmen for the custom of the public and therefore any law which protects market positions of firms is anticompetitive. As both the Sherman Act and Clayton Act are designed to promote such competition it is inadmissible to distinguish between them on the basis that they protect different interests.

Of course, the two acts differ. The variation, however, is not in the appropriate market boundaries but in the amount of control over the market necessary for a finding of guilty. Both statutes are designed to prevent monopoly or market power and there is no reason why the locus of this power should be different when a firm is setting a price than when it is consummating a merger. However, the Sherman Act requires that actual domination be demonstrated while the Clayton Act requires only that there be a reasonable probability that market power might be increased.

Although these suggested reconciliations are unsatisfactory the two doctrines are closely related for both are concerned with substitution, but the substitution stressed is somewhat different for each doctrine. Under the functional changeability doctrine the court examines the ability of buyers to vary means of production and to use alternative products. Under the peculiar characteristics and uses doctrine the court examines the ability of buyers to find alternative sources of supply for the same product. In both instances, however, the courts are

[52]For example, see Adelman's comments on the Brown case, op. cit. supra note 42.

concerned with the degree to which products actually are meaningful alternatives for each other.

The rivalry for custom which is the essence of competition takes place by offering substitutes or alternative products to buyers. Thus either doctrine can determine the supply and demand relationships for a group of firms, *if price relationships as well as technical possibilities are examined.* The significant difference between market definition and antitrust cases is not the doctrine applied, but whether price data as well as engineering or technical data are analyzed. If one examines only engineering possibilities there is almost always a wide range of choices open to the decision maker. The choice actually made will be strongly influenced by the relative costs of the technical alternatives. Therefore, when price data is examined the meaningful alternatives, or relevant choices, may be significantly limited. Put another way, when cost data is examined the market boundaries can never be broader than those established by examination of technical possibilities of substitution and will frequently be narrower.

Those decisions in which judicial attention focused primarily on technical substitution have been the ones most criticized by economists. Examples are *Cellophane, Times-Picayune,* and *Brown Shoe.* In the instances in which the courts have weighed price as well as engineering data, the market definitions have more nearly corresponded to what most economists consider the effective zone of competition. Examples are *Kobe Pump, Hughes,* and *American Crystal Sugar.* The significant differences, from an economic standpoint, between market definition in antitrust cases are not in the legal doctrine applied but in the extent to which the costs of substitutes are examined.

IV. Conclusion

Although there are two separate doctrines applied to market definition in antitrust cases—functional interchangeability and peculiar characteristics and uses—from an economic viewpoint there are great similarities between them. Both hold that markets must be defined by examining substitution possibilities. Skillfully applied, either can delineate the applicable supply and demand relationships. The significant difference between judicial handling of the problem of establishing market boundaries is not which doctrine is used but whether economically advantageous alternatives are investigated as well as technically feasible possibilities. The use or rejection of price-quantity data is the important distinction.

The courts in both Sherman and Clayton Act cases are concerned with applying economic theory to empirical problems. This is an exceedingly difficult task. The last twenty years have seen an increasing sophistication in judicial thinking about this problem and much improvement in the quality of the economic criteria applied. Nevertheless, as this review shows, there is still much room for improvement and there is still much confusion over the appropriate procedures for determining market boundaries.

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