Injunctive Relief in Sherman Act Monopolization Cases

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While the popular image of the Sherman Act is that of a "trust-busting" statute, conduct remedies have been more common than structural relief. This paper evaluates the effect on economic welfare of conduct remedies that have resulted from ten prominent Sherman Act monopolization cases. In general, we find that in some cases the behavioral relief has had no consequence other than the cost of litigation and cost of compliance; in other cases, the remedies probably reduced consumer welfare. Cases studied are *United Shoe Machinery, AT&T, Std. Oil of California, IBM, United Fruit, Kodak*, *Safeway*, *GM*, *Jerrold,* and *Blue Chip Stamp*.

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In antitrust's division of labor, lawyers care a great deal about who wins and who loses cases and why. Economists are not disinterested in these matters, but they care as much if not more about what happens *after* an antitrust case has been decided or settled. Economists ask: what are the benefits and costs of the antitrust remedy?

The primary objective of any antitrust remedy is to halt the defendant's anticompetitive behavior so consumers can enjoy the benefits of competition. The bottom line of any assessment of the effects of an antitrust remedy should be its effect on consumer welfare.[1] In the entire corpus of antitrust scholarship, only a small portion has been concerned with the "back-end" of antitrust enforcement.[2] Some of this attention has been devoted to structural relief. Elzinga offered the first economic assessment of

[1] "The view that the guiding principle of the antitrust laws should be efficiency, rather than the taking of resources from one group and granting them to another, has gained increasing acceptance among legal and academic scholars," Dennis W. Carlton and Jeffrey M. Perloff, *Modern Industrial Organization* (2000), p. 604. "The only legitimate goal of American antitrust law is the maximization of consumer welfare," Robert H. Bork, *The Antitrust Paradox* (1978), p. 51.

[2] A notable exception to the relative obscurity of antitrust remedies is the debate over the Proposed Final Judgment in *United States v. Microsoft Corporation*, Civil Action No. 98-1232, (D.D.C.). Over 30,000 public comments were filed during the 60 day "Tunney Act" response period ending January 28, 2002. (By contrast, only 600 comments were received regarding the 1982 decree that settled the *AT&T* case discussed in this paper.) For the record, both authors have consulted with Microsoft on antitrust matters.

divestiture under the amended antimerger law.[3] This assessment was updated by a study from the Federal Trade Commission.[4] More recently, Crandall presented a critical empirical assessment of Sherman Act structural remedies.[5]

While the popular image of the Sherman Act is that of a "trust-busting" statute, conduct remedies have been more common than structural remedies. This paper evaluates the effect on economic welfare of *conduct* remedies that have resulted from a sample of Sherman Act monopolization cases.

I. Government Victories in Monopolization Cases

In more than 100 years of enforcing the Sherman Act, the U.S. Department of Justice (DOJ) has succeeded in monopolization cases on 426 occasions, either by obtaining a court verdict against the defendant(s) or a negotiated consent decree. In a few cases, structural relief – such as divestiture – has been the result. In most, however, the government has obtained injunctive relief, requiring various changes in the defendants' conduct. In many cases, these remedies involve the prohibition of price fixing or market division, but others involve an attempt by the government to alter the defendant's conduct, presumably to eliminate anti-competitive conduct and to allow the market to evolve towards a more competitive structure.

[3] Kenneth G. Elzinga, "The Antimerger Law: Pyrrhic Victories," *Journal of Law and Economics*, Vol. 43, April 1969, pp. 43-78. See also Kenneth G. Elzinga and William Breit, *The Antitrust Penalties: A Study in Law and Economics*. Yale University Press, 1976.

[4] *A Study of the Commission's Divestiture Process*, Federal Trade Commission, Bureau of Competition, 1999. See also, Robert Pitofsky, "The Nature and Limits of Restructuring in Merger Review," February 17, 2000, accessible at www.ftc.gov/speeches/pitofsky/restruct.htm

[5] Robert W. Crandall, "The Failure of Structural Remedies in Sherman Act Monopolization Cases", *Oregon Law Review*, Vol. 80 (1), Spring 2001, pp. 109-98.

Of the 423 monopolization cases that the government has either won or entered into a consent decree with the defendant(s) and for which documentation could be found,[6] 87 were criminal cases and 336 were civil cases. All 87 criminal cases resulted in fines. Of the remedies that resulted from the 336 civil cases, 172 were injunctive or conduct remedies (51.2 percent), 69 required compulsory licensing (20.5 percent), and 95 were structural remedies (28.3 percent).[7] Our research universe in this paper is the 172 cases that resulted in conduct remedies.

From these 172 cases, we have chosen ten for careful analysis. This is not a random sample, but rather reflects the importance of the case; each represents a major DOJ effort to use Section 2 of the Sherman Act to affect a substantial sector of the U.S. economy, such as grocery retailing, gasoline distribution, telecommunications, or data processing. Early cases involving small companies that have long since disappeared, such as *United States v. Lay Fish Company* (1926), are ignored. Also ignored are the many conspiracy cases brought under both Sections 1 and 2 of the Sherman Act that resulted in an injunction dissolving the cartel or barring future conspiracies. We also were influenced by the availability of data that would permit us to assess the consequences of the remedy. Conduct remedies for the following monopolization cases are studied in detail:[8]

1. *United States v. United Shoe Machinery,* 1947
2. *United States v. AT&T*, 1949

[6] There were 426 cases *in toto*, but only 423 for which documentation could be found. See Crandall (2001), *supra* note 5.
[7] Greater detail may be found in Crandall (2001), *supra* note 5.
[8] The cases are listed in chronological order based on the date that the original complaint was filed by the government.

3. *United States v. Standard Oil Co. of California*, 1949
4. *United States v. International Business Machines*, 1952
5. *United States v. United Fruit Co.*, 1954
6. *United States v. Eastman Kodak Co., 1954*
7. *United States v. Safeway Stores Inc., et al.*, 1955
8. *United States v. General Motors Corp.*, 1956
9. *United States v. Jerrold Electronics Corp., et al.*, 1957
10. *United States v. Blue Chip Stamp Co. et al.*, 1963

II. The Case Studies

In each of the cases selected, we examine the available evidence that would assist us in determining whether the government's conduct remedy affected market performance in a manner that increased consumer welfare. Given the passage of time and incomplete data availability, it is no easy task to reach a dispositive evaluation of each of the ten cases in our sample. But if government antitrust remedies have favorable consequences for consumers, there should be some evidence of changes in output or prices of the relevant products or services. Complex behavioral remedies may also require the expenditure of substantial resources by the government and the defendants. These costs should, in principle, be deducted from the consumer gains, if any, that accrue from the relief.[9]

[9] These administrative costs of injunctive remedies are generally not available because the DOJ and the defendants do not generally report the costs of each case.

1. United Shoe Machinery[10]

United States v. United Shoe Machinery is the earliest case selected. United Shoe Machinery Corp. ("USM") began operations in 1899 with the acquisition of five shoe machinery manufacturers, three of which were dominant sellers in their segment of the industry.[11] These acquisitions provided USM with a prominent position in the major segments of shoe machinery manufacturing. The company grew rapidly thereafter, making several additional acquisitions, and it eventually centralized its manufacturing operations in one plant in Massachusetts.[12]

As early as 1911, USM faced a civil suit charging it with violations of Sections 1 and 2 of the Sherman Act.[13] USM won the suit, but faced another in 1915, charging that USM's equipment leasing practices violated Section 3 of the Clayton Act because of tying and exclusive-use provisions in the contracts.[14] This suit was won by the government, resulting in a court decree that required USM to modify the terms of its leases.[15]

USM manufactured a full line of machines used to produce shoes. By the 1940's, the company offered more than 300 types of machines, of which a shoe manufacturer might need as many as 100 to perform the operations required to produce a shoe.[16] As of

[10] Much of this material appeared in Crandall (2001) because United Shoe Machinery was eventually forced to divest some assets. In this article, we focus only on the conduct remedy that resulted from the 1953 case.

[11] Carl Kaysen, *United States v. United Shoe Machinery Corporation*. (Harvard University Press, 1956), p. 6.

[12] *Id*., p. 9.

[13] *Id*., p. 3.

[14] *Id*.

[15] *Id*.

[16] Scott E. Masten and Edward A. Snyder, "*United States versus United Shoe Machinery Corporation*: On the Merits," *Journal of Law and Economics*, Vol. 36, 1993, p. 38.

1949, USM had a 91 percent share of major machines and a 74 percent share of minor machines in shoe manufacturing plants.[17]

USM offered its shoe machines through a combination of sale and lease programs, but the overwhelming share of revenues came from leased machines. Shoe machines were extremely complex and often experienced technical problems or failure. As a result, in addition to offering machines for sale or lease, USM provided repair and advisory services, relating to both machines sold by USM and to the shoe making process in general.

a. The 1947 Sherman Act Suit

A third major antitrust case was brought against USM in 1947, charging USM with violations of Section 1 and Section 2 of the Sherman Act. The government claimed that USM had monopolized the shoe machinery market through the strategic design of leases that impeded the purchase or lease of their competitors' machines. Specifically, the government charged that several provisions of USM's leases were exclusionary. Among the most important of these provisions were: (i) the ten-year terms of the leases; (ii) the return charges or deferred payments due upon early termination of a lease; (iii) the minimum monthly usage charges on machines subject to per-unit payments; and (iv) the "full-capacity" clause that required lessees to use the machine to the fullest extent possible in producing all shoes for which the machine is capable of being used.[18]

b. The Government's Victory and Proposed Relief

In February 1953, the District Court found that USM had violated Section 2 of the Sherman Act by illegally monopolizing the shoe machinery market and the market for

[17] Several different analyses were performed to determine the market share of USM and its competitors. These results are taken from Kaysen, *supra* note 11, p. 52.

some shoe machinery supplies.[19] The Supreme Court upheld the court's decision.[20] The government asked the court to divide USM into three full-line manufacturers and separate the supply activities from the machinery business. The major obstacle to structural relief was the fact that USM produced virtually its entire output in a single manufacturing plant. In addition, the government sought to end USM's reliance upon leasing and to dissolve USM's outstanding leases. This remedy, in conjunction with modifications in USM's patent policies and a ban on expansion of USM through acquisitions, was to reduce barriers to entry.[21]

The court declined to order dissolution of USM, but instead structured a decree that focused on USM's leasing policy. Under the decree, USM was to offer its machines for sale as well as lease, but could not make it more advantageous to lease the machines. In addition, the duration of all new leases had to be five years or less with an option to return machines after one year. Return charges or deferred payments were banned. USM was barred from acquiring any shoe machinery factory or shoe supply business, or stock in such business, for more than $10,000. USM also was severely restricted with respect to the acquisition of patents.[22]

The decree was intended to stimulate competition in at least three ways. First, by stimulating the purchase of machines, the decree might create an active second-hand market. Second-hand machines would limit USM's market power in the sale or lease of new machines and provide potential entrants with valuable information about USM's technology. Second, by limiting the terms of the leases and limiting discriminatory

[18] Masten and Snyder, *supra* note 16, p. 57.
[19] *United States v. United Shoe Machinery*, 110 F. Supp. 295 (1953).
[20] *United States v. United Shoe Machinery*, 347 U.S. 521 (1954).
[21] Kaysen, *supra* note 11, pp. 272-73.

termination fees, the decree might induce shoe manufacturers to choose competitors' machines. Third, by creating a second-hand market and stimulating incremental sales of competitive machines through a relaxation of USM's leasing terms, the decree might create an active independent repair sector, freeing shoe manufacturers from reliance on USM's service staff.

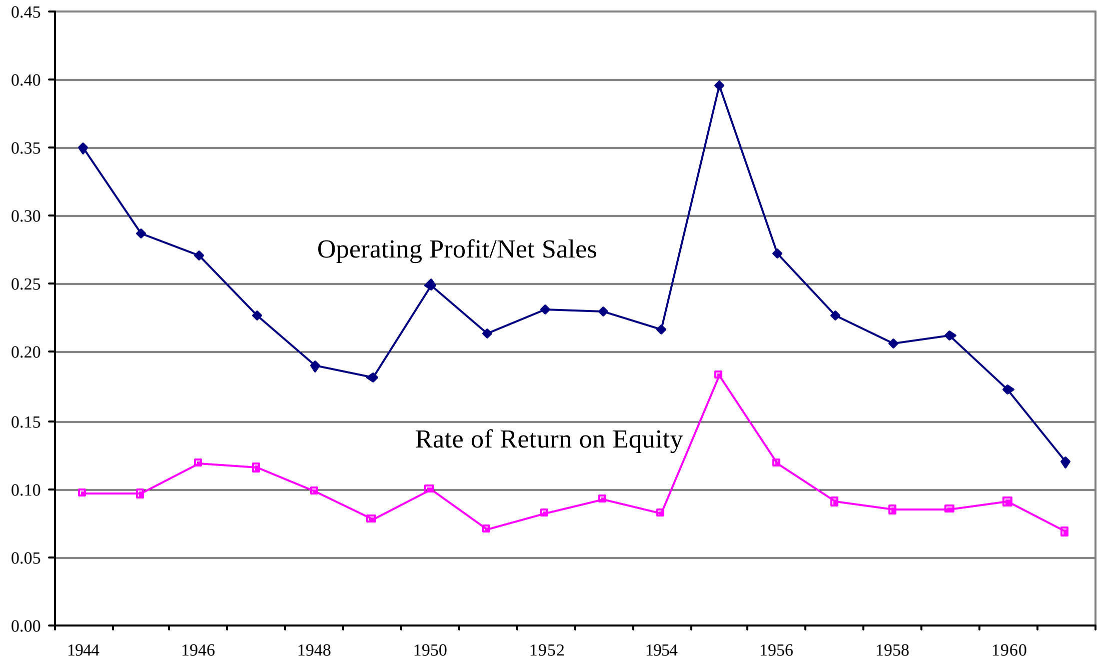
c. The Effect of the Decree

After ten years, the lower court held hearings on the effectiveness of the decree and concluded that the decree generally was accomplishing its purposes. Specifically, Judge Wyzanski found: (1) USM's market share of lease and sale revenue had fallen from approximately 85 percent in 1953 to approximately 62 percent in 1963; (2) the number of new entrants had increased, and machinery shipments of USM's principal competitors increased substantially; and (3) a secondhand market had developed.[23]

Between 1953 and 1963, shoe factories purchased approximately 53,000 previously leased machines from USM. No single firm attained a large market share by 1963, but USM nevertheless lost about one-quarter of its pre-existing share because the rate of entry increased following the decree. According to Waldman, entry into the industry increased in three successive three-year periods following the decree

[22] *Id*., p. 283
[23] Gordon Parrish, The Experience With Antitrust Relief In Shoe Machinery, Ph.D. dissertation, Washington State University, Department of Economics, 1973 at 142.

FIGURE 1-1
USM'S PROFIT MARGIN AND RATE OF RETURN ON EQUITY, 1944-1961



Sources: Don E. Waldman, *Antitrust Action and Market Structure* (1978) at 48; *Moody's Manual of Industrial Securities* (Moody's Investors Service, various years).

by 11, 19, and 26, respectively.[24] However, Waldman offers no evidence that such entry was atypical of the pre-decree period, or that the entrants provided much competition for USM.

During the first two years after the decree was entered, USM's net income increased and reached an all-time high, apparently because of the sale of USM machines that had low book value and because of an increase in lease prices. Moreover, USM's rate of return on equity was little affected by the decree. As Figure 1-1 shows, in the first

[24] Don E. Waldman, *Antitrust Action and Market Structure*. Lexington Books, 1978, p. 47.

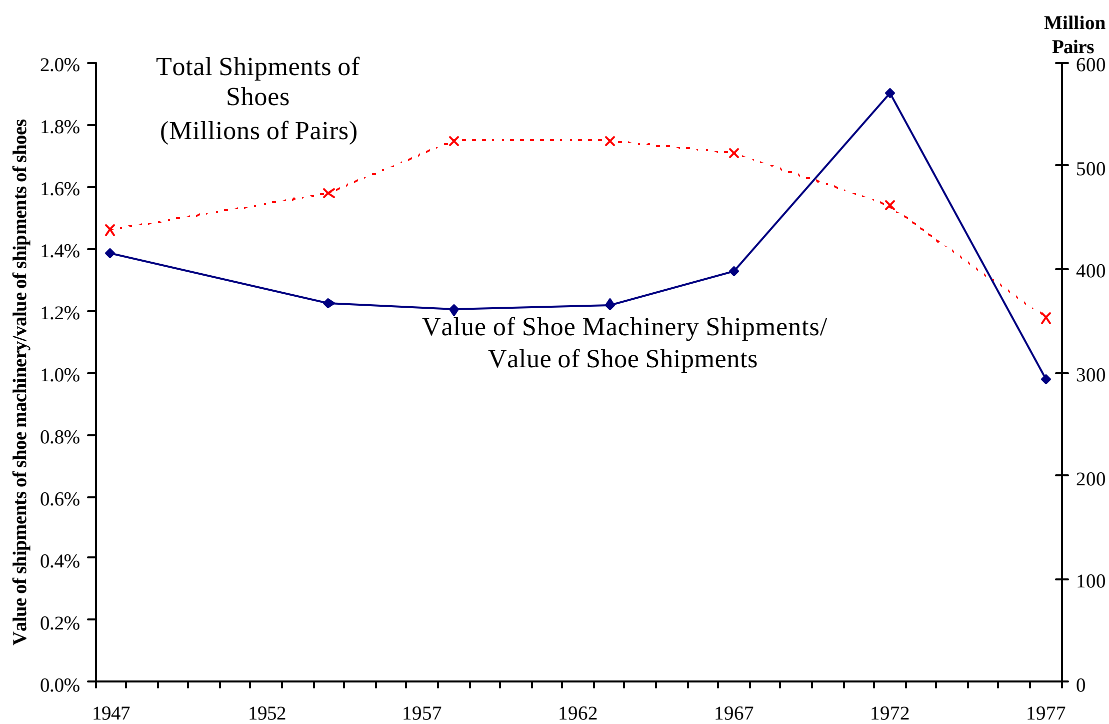
two years after the remedy, USM's return on equity rose, but then returned to the levels of 1945-53.

Waldman argues that the high prices following the decree may have resulted from USM attempting to placate the court and thereby invite competition. Waldman shows that the average lease price for USM machines actually rose with declining market concentration over the 1954-63 period. [25] This increase in prices, designed to attract new entrants, was surely not conducive to an improvement in consumer welfare.

Given the heterogeneity of shoe machinery, there is no readily available index of shoe machinery prices before and after the decree. An indirect test of the effect of the decree on prices is possible. If the court's remedy had succeeded in reducing machinery prices, shoe manufacturers should have incurred lower machinery expense relative to the value of shoes produced. Even if these lower costs were fully passed through to consumers, the ratio of machiners' expenses to prices should have fallen because the ratio of capital costs to total costs would have declined. In the short run, a lower price of shoe machines probably would not result in much substitution of machines for labor. Yet, the ratio of shoe machinery shipments to shoe shipments declined from 0.014 in 1947 to 0.012 in 1954, but then remained constant at 0.012 in 1958, 1963, and 1967. (See Figure 1-2.) In 1972, this ratio rose sharply—perhaps in response to machine sales following the revision of the decree in 1968, but then declined just as sharply in 1977. The average ratio was 0.015 for the 1972-77 years combined, or approximately the same as when the case was filed. That the value of shoe-machinery shipments did not decline relative to the value of shoes surely suggests (but does not prove) that the decree did not put downward pressure on shoe machinery prices.

The court's decision also had several other less quantifiable effects on USM and the shoe machinery industry in general. USM's ability to combat free riding was reduced, as was USM's incentive to commit resources to developing new technology.[26] In addition, the number of rentals increased. The share of imports rose, from a very small fraction before 1950 to 25 percent by 1964, and continued to rise thereafter.[27] Finally, the U.S. shoe industry began to decline in the late 1950's following the decree (which may or may not have been related to the decree).[28]

FIGURE 1-2
VALUE OF SHIPMENTS OF SHOE MACHINERY/VALUE OF SHIPMENTS OF SHOES AND SHIPMENTS OF FOOTWEAR, 1947-77



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[25] *Id*., pp. 47-49.

[26] Prior to the antitrust decree, USM provided shoe manufacturers with technical advice which was paid for, in part, by leasing the full line of USM machines. After the consent decree, shoe producers could "free ride" on USM technical advice because they could subsequently lease or buy other equipment makers' machines after receiving USM technical advice.

[27] Masten and Snyder, *supra* note 16, pp. 66-67.

Note: Shipments of shoes includes shipments of all footwear excluding rubber and slippers, and including interplant transfers.
Source: U.S. Bureau of the Census, *Census of Manufactures*, various years.

d. A Concluding Assessment

After the 1964 review, the trial court rejected the government's plea for further relief, but the Supreme Court reversed, citing the need for "more definitive means" to achieve competition because there had not been a sufficient decline in USM's market share.[29] As a result in 1969, the lower court ordered USM to divest itself of about one-third of its assets. Shortly after, the U.S. shoe industry went into steep decline. (See Figure 1-2.) The Supreme Court judged the 1953 decree to have been a failure, and the lower court essentially acquiesced despite its view that a one-plant firm should not be broken up even in the mildly-growing market of 1953.

The theory that competition would be increased by offering machines for sale as well as for lease clearly was in error. USM continued to account for almost two-thirds of shoe-machinery revenues 16 years after the case was first brought. The price of shoe-machinery leases during the ten years that the behavioral remedy was in place actually rose. The decline in market concentration appears to have resulted from the defendant's desire to keep an umbrella over prices so as to facilitate entry and to forestall even more punitive relief when the decree was reviewed on its tenth anniversary.

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[28] *Id*., p. 66.
[29] *United States v. United Shoe Machinery,* 266 F. Supp. 328 (D. Mass. 1967); *United States v. United Shoe Machinery,* 391 U.S. 244 (1969).

2. The 1949 AT&T (Western Electric) Case

The antitrust activism of the early post World War II years was reflected in a case brought in 1949 against the American Telephone and Telegraph Corporation and its subsidiary, Western Electric.[30] A case filed in 1913 had been resolved through a consent decree in 1914, but since that time AT&T had been regulated by the Interstate Commerce Commission (ICC) and – beginning in 1934 – the Federal Communications Commission (FCC).[31] AT&T's share of the nation's telephone services market subsequently increased substantially through mergers approved by the ICC.

a. The Telephone Industry in 1949

Prior to 1984, AT&T's local operating companies enjoyed monopoly status in offering local exchange and access services to residential customers and all but the largest business firms. AT&T's local companies had franchises that embraced nearly 85 percent of the country's access lines; the remaining lines were controlled by smaller independent companies, such as GTE, United, Rochester, and Continental as well as hundreds of small, rural companies. AT&T also had a dominant position in interstate ("long distance") services through its Long Lines division. The FCC began to open the interstate services market to competition in the late 1960's, but entry into ordinary dial-up long distance services did not occur until the mid 1970's.

AT&T's Western Electric division dominated the market for telephone equipment, including transmission, signaling, and switching equipment, because its local operating companies and Long Lines divisions accounted for the overwhelming share of

[30] *United States v. Western Electric Co.*, Complaint, Civil Action No. 17-49 (D.N.J. Jan. 14, 1949).

purchases. Western Electric also dominated the market for terminal or "customer premises" equipment that connected subscribers to their local access lines until the FCC began to liberalize this market in the 1970's.

Finally, AT&T owned Bell Labs, one of the premier research institutions in the country. This institution held hundreds of patents in areas that were important for the development of telephone service, but its activities extended far beyond telephony. Bell Labs was credited with developing the transistor and fiber optics, as well as making major breakthroughs in fields as diverse as chemistry, physics, and the physiology of speech.

b. The Antitrust Complaint

Despite the fact that decades of regulation by the ICC and FCC had guided the development of telephony in the United States, the DOJ filed a Sherman Act suit in 1949, alleging that AT&T had attempted to monopolize telecommunications equipment and services through its control and licensing of telephone equipment and technology. It identified Western Electric's exclusive contracts with its operating companies as anticompetitive arrangements that protected AT&T's equipment monopoly and increased the cost of telephone services to consumers.[32] The DOJ also claimed that AT&T and Western Electric impeded competition in local telephone services by refusing to sell AT&T equipment to independents, requiring independents to apply for licenses to AT&T

[31] In 1921, Congress passed the Willis-Graham Act, which gave the FCC authority for telephone-company merger review.

[32] Complaint, *supra* note 30, ¶ 72-3.

patents, or ultimately "forcing" the independents into the Bell System by their selling out to AT&T.[33]

The complaint focused only minimally on an issue the FCC staff had identified more than a decade earlier: Western Electric's prices for equipment were essentially unregulated; therefore, the AT&T operating companies could evade the strictures of rate-of-return regulation of its service companies by paying inflated prices for Western Electric equipment.[34] This practice did not necessarily *contribute* to monopoly power, but certainly could allow AT&T to exploit any market power it enjoyed in the delivery of telephone services.

The complaint also contended that AT&T impeded competition in communications through its aggressive pursuit of patents in "alternative methods of communication."[35] For example, the DOJ claimed that AT&T had patents on important technologies that it refused to license to telegraph operators or radio stations. The complaint identified AT&T's innovations and the control of those innovations as the source of AT&T's market power.

While the technological prowess of Bell Labs might have contributed to Western Electric's dominant position in equipment, decades of regulatory policy also were to blame. Had the ICC not approved scores of acquisitions by AT&T, the company would not have enjoyed its prominent position in the purchase of telephone equipment. Perhaps local and long distance services were still a natural monopoly in 1949, but regulators had not yet begun to test this proposition by admitting entry into either type of service. Yet the 1949 complaint did not identify regulation as a cause of AT&T's market power. It

[33] *Id*., ¶ 74.
[34] *Id*., ¶ 124-25.

merely concludes that "The absence of effective competition has tended to defeat effective public regulation of rates charged subscribers for telephone service."[36]

c. The 1956 Consent Decree

The DOJ and AT&T settled the 1949 Sherman Act case in 1956, entering into a "Final Judgment" that 26 years later would prove not to be the "final" resolution of AT&T's antitrust problems.[37] The Final Judgment required AT&T to license all current and future patents at a reasonable fee. Much more important were the provisions that limited AT&T to the regulated telephone industry. Western Electric was forbidden from manufacturing any equipment other than telephone equipment.[38] In addition, AT&T would be confined to the business of furnishing "common carrier communications" services.[39]

The DOJ had asked for divestiture of Western Electric from AT&T, but settled for much less. However, the decree did not include alternative provisions that would control Western Electric's relationship with AT&T's telecommunications services divisions because the DOJ was persuaded that the Federal Communications Commission had ample authority to regulate AT&T's conduct in the telecommunications sector. Thus, the ultimate "behavioral remedy" in this case was the far-reaching regulatory authority of the FCC that it assured the DOJ that it would use.[40]

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[35] *Id*., ¶ 90-99.
[36] *Id*., ¶ 124.
[37] *United States v. Western Electric Co*., Final Judgment, Civil Action No. 17-49, (D.N.J., Jan. 24, 1956).
[38] *Id*., Section IV.
[39] *Id*., Section V.
[40] Note, Antitrust: Consent Decree: The History and Effect of Western Electric Co. v. United States, 1956 Trade Cas. 71,134 (D.C.N.J. 1956), *Cornell Law Q*., Vol. 45, 1960, p. 91.

The Final Judgment addressed the concern that AT&T (through Bell Labs and Western Electric) would use its technical prowess to exclude competition from alternative technologies, thereby insulating its telephony subsidiaries from non-telephony communications. This contention was surely not at the heart of the 1949 complaint. Indeed, the government's contention that AT&T had attempted to suppress competition from telegraph companies or from other companies in the long-distance distribution of radio and television signals was a relatively minor component of the complaint. On the other hand, there was little indication at that time of how the technologies developed by Bell Labs could be used in other industries, such as office equipment (later, computers). The DOJ's decision to limit AT&T, Bell Labs, and Western Electric to the regulated confines of telephony was unexpected, and would prove to be unfortunate.

The remaining provisions of the decree required AT&T to license patents at reasonable royalties and, in some cases, on a royalty-free basis. AT&T also was enjoined from entering into exclusive distribution agreements with its competitors and into requirements contracts with other telephone companies. It also was barred from acquiring, in whole or in part, other telephone equipment suppliers or any assets from such suppliers.

d. The Effects of the Decree

As described above, telephone service in 1949-56 was a regulated monopoly. At the time, there was no intimation of the prospects for competition, although the FCC had begun to consider opening up some spectrum for private microwave services. The price and output of telephone services were both completely under the control of the FCC and the state regulatory commissions. No antitrust decree could have increased competition in telephone services if the regulators were uninterested in liberalizing the intrastate and interstate markets.

Moreover, as noted above, the DOJ was persuaded to leave the Western Electric-AT&T relationship in the hands of the FCC, which had sufficient power under the 1934 Communications Act to control any anticompetitive conduct that developed from this relationship. The FCC and the states had begun to use their joint regulatory authority to keep AT&T's local rates suppressed by shifting a substantial burden of paying for AT&T's local fixed network costs to interstate long-distance services. This regulatory compact apparently appeased the state regulatory authorities and relieved the pressure for further restrictions on AT&T's behavior.[41] Unfortunately, the "cross subsidies" that were spawned at this time were eventually to grow and cost consumers billions of dollars per year in lost benefits from long-distance calling.[42]

Western Electric's domination of the telephone equipment market would continue well after the1956 decree was entered. Regulators continued to approve tariffs that mandated the use of Western Electric's terminal equipment.[43] It was not until the mid 1970's that the FCC finally succeeded in prying this market open for competitors despite the strenuous objections of state regulators.[44] Given that AT&T and its operating companies continued to enjoy a regulated monopoly status in the delivery of intrastate and interstate services, it was not likely to look kindly on the purchase of transmission and switching equipment not produced by Western Electric. Indeed, competition in such

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[41] Geoffrey M. Peters, "Is the Third Time a Charm? A Comparison of the Government's Major Antitrust Settlements with AT&T This Century," *Seton Hall Law Review*, Vol. 15 (1985), p. 262.

[42] See Robert W. Crandall and Leonard Waverman, *Who Pays for Universal Service? When Telephone Subsidies Become Transparent*. Brookings, 2000, for a critique of this universal service policy.

[43] As late as 1966, the courts affirmed the FCC's jurisdiction in approving tariffs that limited terminal equipment competition. See Carter v. AT&T, 365 F.2d 486 (5th Cir. 1966).

equipment did not begin in earnest until long distance service competition began in the 1970's.

Banishing AT&T and its manufacturing subsidiary from all markets except regulated telephone services and the equipment required to deliver them had little effect on its telephone monopoly. This monopoly continued until regulators and the courts began to pry open the long-distance market 20 years later. However, the court-imposed quarantine meant that AT&T could not enter the new electronics markets, such as computers or home electronics. Since Bell Labs had invented the transistor and later developed a major software operating system, it was well positioned to invade the computer market as it began to develop. Instead, AT&T licensed its UNIX software on a royalty-free basis and was forced to ignore the computer business altogether.[45]

No one can be sure if AT&T would have become an important competitor in either computer hardware or software, but it might have. Had AT&T been allowed to develop a successful line of computer equipment, it could have negated any need for the DOJ to bring its mammoth and eventually unsuccessful suit against IBM in 1969. In addition, UNIX could have become an important operating system for personal computers, competing with Microsoft in this market. Instead, UNIX developed as an operating system for servers and work stations.[46]

Ironically, the Attorney General at that time, Herbert Brownell, viewed the decree as an important step in unleashing competition in electronics:

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[44] *North Carolina Utilities Commission v. FCC*, 552 F. 2d 1036 (1977), *cert denied*, 434 U.S. 874 (1977).

[45] For a discussion of the development of UNIX, see http://www.bell-labs.com/history/unix/sharing.html

[46] For a discussion of the role of UNIX, see Charles H. Ferguson, *High St@kes, No Prisoners: A Winner's Tale of the Greed and Glory in the Internet Wars*. Random House, 1999, p. 44.

> "The decree makes available to any citizen all inventions and know-how of the Bell System. Thus there is a sound basis for the expectation that the judgment will lead to a further expansion of the electronics art and that new enterprise will be encouraged to enter that field."[47]

Unfortunately, the Attorney General apparently did not think that allowing AT&T the opportunity for exploiting its intellectual property in areas outside of telephony was important in applying Bell Labs' "know how" to other problems. He cut off a major potential source of innovation for the next 28 years.[48]

Finally, the decree probably slowed AT&T's development of a full digital, stored program control telephone switching machine – essentially a digital computer for switching telephone calls. In the early 1980's, Western Electric was so far behind its rivals in developing such a switch that its New York operating company petitioned AT&T's central office for the right to buy Northern Telecom (now Nortel) switches to serve its large business customers in New York.[49] Had AT&T and Western Electric been permitted to participate in the nascent computer business after 1956, they might have developed a fully digital switch much sooner.

The effect of the antitrust case on the financial market's expectations of AT&T's future performance was surprisingly muted. Using the standard capital-asset pricing model, the excess return on AT&T stock was only -1.5 percent over the first month and the six months following the complaint. The comparable returns following the entering of

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[47] As quoted in "Note," *supra* note 40, p. 92.

[48] AT&T would be freed to enter non-telecommunications businesses after the 1984 divestiture that resulted from the next major AT&T antitrust case.

the conduct remedy were a positive 3.9 percent and 2.5 percent, respectively. The financial markets clearly viewed the decree as favorable to AT&T relative to prior expectations. Of course, the market could not have known nor been interested in how the decree might affect AT&T's ability to participate in the computer, software, and electronic switching markets 15 to 25 years later.

e. Conclusion

The 1949 Western Electric (AT&T) case did not and could not increase competition in telephone equipment or services because AT&T's market position in local and long-distance services was controlled by federal and state regulators. The government suit did not address the actual source of AT&T's monopoly power, but instead left the FCC with the authority to regulate the activities that were at the heart of the antitrust complaint. The behavioral remedy required AT&T to license its existing patents on a royalty-free basis and to confine itself to common carrier telecommunications. It is possible that this limitation on AT&T's activities impeded the development of competition in related industries, such as computers and computer software. The remedy relegated one of the country's premier sources of innovation in electronics and software, Bell Labs, and its parent to the regulated telecommunications sector. Whether this competition would have developed to a level that would obviate the 1969 case against IBM or the current Microsoft litigation we will never know. However, it is possible that consumers were deprived of an early source of competition for IBM and Microsoft.

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[49] Robert W. Crandall, *After the Breakup: U.S. Telecommunications in a More Competitive Era*. Brookings, 1991, p. 81.

3. Standard Oil (Cal.)

For decades, “integrated” oil refiners have produced crude oil, refined it into various petroleum products, and distributed these products. As part of their distribution chain, integrated refiners invested in wholesale and retail facilities, including retail gasoline stations. However, only a small share of gasoline was distributed through refiner-owned gasoline stations in the early part of the 20^{th} century.[50]

Prior to 1946, most refiners relied primarily on independent retailers to market their gasoline under the refiner’s trade name. The refiner provided the motor fuel and motor oil as well as automobile accessories, such as tires, batteries, and accessories (“TBA”), generally under exclusive contracts that required the retailer to purchase all such products from the refiner whose brand was displayed by the gasoline station. These requirements contracts foreclosed competing suppliers of petroleum products and automobile accessories from marketing their products at retail gasoline outlets affiliated with these refiners, including Standard Oil of California.

a. The antitrust case

Gasoline retailers can be classified in three ways in terms of property relationships. “Company-owned” stations are owned and operated by an oil company. The oil company makes the business decisions for the company-operated station. Other stations are owned by the oil refiner but leased to an independent service station manager (“lessee-dealer”). Finally, there are independent stations that have no refiner ownership (“open-dealer”). In the latter two cases, oil companies supply oil to independent stations,

[50] Thomas F. Hogarty, “The Origin and Evolution of Gasoline Marketing,” Research Study # 022, American Petroleum Institute, October 1, 1981, Section III, P. 17.

but they do not make business decisions other than those specified in the supply contract. All of the major oil companies used exclusive requirements contracts in supplying the latter two types of stations through World War II.[51]

In 1946, Standard Stations, a wholly owned subsidiary of Standard Oil of California, had exclusive requirements contracts with 16 percent of the retail gas stations in the seven-state Western area[52] and sold 23 percent of the total taxable gallons of gasoline. These exclusive contracts covered mainly gasoline, but some covered TBA. The contracts were annual, but terminable in six months with 30 days written notice.[53]

In 1947, the DOJ brought suit against Standard Oil for employing requirements contracts in selling motor gasoline, oil, and TBA to its dealers, alleging a violation of Section 1 of the Sherman Act and of Section 3 of the Clayton Act.[54] The DOJ alleged that the use of requirements contracts lessened competition in both interstate and intrastate commerce because exclusive requirements contracts prevented retail gasoline marketers from dealing with other suppliers. Requirements contracts were seen as a means of foreclosing independent refiners from the retail gasoline market, thereby erecting a barrier to entry into the refining sector. The DOJ contended that the elimination of requirements contracts would open the market to independent refiners and encourage "split-pump" stations (stations offering more than one brand of gasoline).

The District Court ruled that the requirements of a potential lessening of competition or a tendency to establish monopoly were adequately met by proof that the

[51] Don E. Waldman, *The Economics of Antitrust: Cases and Analysis.* Little, Brown and Company, 1986, p.248.

[52] Arizona, California, Idaho, Nevada, Oregon, Utah, and Washington.

[53] *United States v. Standard Oil Co. of California*, Complaint, Civil Action No. 6159-B (D. So. Cal., 1947).

[54] *Id*.

contracts covered "… a substantial number of outlets and a substantial amount of products."[55] The court ruled that "the substantial lessening of competition was an automatic result, for the very existence of such contracts denies dealers the opportunity to market the products of competing suppliers and excludes suppliers from access to the outlets controlled by those dealers." The Supreme Court concurred that the use of requirements contracts by Standard Oil foreclosed competition in the petroleum products and automobile accessories market and therefore Standard Oil had violated Section 3 of the Clayton Act.[56]

The decree entered against Standard Oil in the lower court banned the use of requirements contracts in refiner sales of gasoline, oil, and TBA to independent stations. Justice Douglas dissented, arguing that the decree would simply encourage vertical integration by refiners into gasoline retailing, thereby reducing the presence of independent gasoline refiners and retailers.[57]

1. The Theory of the Case

The DOJ's theory of the case was that Standard Oil employed these requirements contracts to reduce competition in the sale of gasoline, oil, and TBA. These contracts excluded independent refiners, both *in toto* and as suppliers to stations that might offer more than one brand of gasoline. The government claimed that such contracts prevented "split-pump" stations from developing, thereby reducing competition in refining and retailing.

[55] *United States v. Standard Oil Co. of California*, 78 F. Supp. 850 (1948).
[56] *United States v. Standard Oil Co. of California*, 337 U.S. 293 (1949).
[57] Dissent of Associate Justice William O. Douglas in *United States v. Standard Oil Co. of California*, 337 U.S. 293 (1949).

Requirements contracts serve a useful economic purpose, however, regardless of their alleged effects on competition. They offer added predictability and stability in a fluctuating market. Indeed, the lower court decision granted that such contracts may reduce uncertainty for both the seller (refiner) and the buyer (the station owner/ manager). "In the case of the buyer, they may assure supply, afford protection against rises in price, enable long-term planning on the basis of known costs, and obviate the expense and risk of storage in the quantity necessary for a commodity having a fluctuating demand. From the seller's point of view, requirements contracts may make possible the substantial reduction in selling expenses, give protection against price fluctuations, and – of particular advantage to a newcomer to the field to whom it is important to know what capital expenditures are justified – offer the possibility of a predictable market."[58]

In addition, such contracts may solve a principal-agent problem and avoid "double marginalization" in the setting of the downstream price.[59] It is in the interest of refiners for its retailers to exert effort in selling its products and to exact no more than competitive markups. But station managers may thwart these goals through a lack of effort or a desire to raise price above a competitive level if the stations enjoy any advantages of a favorable location. The requirements contract, appropriately written, can negate any such attempts by the dealer to engage in double marginalization.

If these alternative theories are valid, requirements contracts could actually improve economic efficiency and reduce consumer prices.

[58] *United States v. Standard Oil Co. of California*, 337 U.S. 293 (1949).
[59] Andrea Shepard, "Contractual form, retail price, and asset characteristics in gasoline retailing, *Rand Journal of Economics*, vol. 24 (1), Spring 1993, pp. 58-77. For an early analysis of double marginalization,

b. The Effect of the Decree on Industry Structure

1. Refining

Large refineries with refining capacity of more than 40,000 barrels/day are generally vertically integrated into all four sectors of oil industry (production, refining, transportation, and marketing). Smaller refineries may or may not be integrated into all four sectors; some are not vertically integrated and some are integrated into less than all four sectors. Refineries that were vertically integrated into all four sectors controlled 89.1 percent of U.S. refining capacity in 1950, but substantially less of U.S. oil production and marketing.[60]

The DOJ's case was based in part on the theory that the elimination of requirements contracts would result in the entry of independent refiners into the refining sector. However, the available data indicate that both the absolute number and the percentage of independent refiners declined after 1949.

Table 3-1 shows the number and capacity of refineries belonging to the 20 largest oil companies between 1920 and 1972. The largest firms' share of refining capacity remained relatively constant from 1930 to 1940, but increased thereafter. The largest 20 firms owned 36 percent of refineries and 79 percent of capacity in 1950. These shares increased steadily for the next twenty years - to 49 percent of refineries and 84 percent of capacity in 1972. Table 3-2 shows the number and capacity of refineries belonging to independent oil companies (those not among the 20 largest oil companies) between 1920 and 1972. These independents owned 64 percent of refineries and 21 percent of capacity

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see Joseph Spengler, "Vertical Integration and Antitrust Policy," *Journal of Political Economy*, Vol. 58, 1950, pp. 347-52.

[60] John G. McLean and Robert W. Haigh, *The Growth Of Integrated Oil Companies*. The Plimpton Press, 1954, p.27.

in 1950, but by 1972 these figures had declined to 51 percent of refineries and 16 percent of capacity.

Table 3-1
The Largest Oil Refiners (Majors), 1920-1972

Year	Companies	Refineries	Percent of Refineries	Capacity	Percent of Capacity
1920	16	71	19.09%	810	52.91%
1930	20	134	32.52%	2,711	71.99%
1940	20	138	25.23%	3,365	72.69%
1948	20	132	37.08%	4,514	75.61%
1950	20	131	35.79%	5,262	78.58%
1952	20	132	40.37%	5,907	80.79%
1956	20	126	42.86%	7,312	81.63%
1960	20	125	42.52%	8,301	80.12%
1968	20	119	44.24%	9,641	82.70%
1972	20	124	49.01%	11,582	84.48%

Sources: E. Anthony Copp, *Regulating Competition in Oil* (Texas A & M University Press), Table 5. Melvin G. de Chazeau and Alfred E. Kahn, *Integration and Competition in the Oil Industry* (Yale UniversityPress, 1959), Table 23.

Table 3-2
Independent Oil Refiners, 1920-1972

Year	Companies	Refineries	Percent of Refineries	Capacity	Percent of Capacity
1920	258	301	80.91%	721	47.09%
1930	230	278	67.48%	1,055	28.01%
1940	363	409	74.77%	1,264	27.31%
1948	195	224	62.92%	1,456	24.39%
1950	203	235	64.21%	1,434	21.42%
1952	166	195	59.63%	1,405	19.21%
1956	143	168	57.14%	1,646	18.37%
1960	138	169	57.48%	2,060	19.88%
1968	125	150	55.76%	2,017	17.30%
1972	124	129	50.99%	2,127	15.52%

Sources: E. Anthony Copp, *Regulating Competition in Oil* (Texas A & M University Press), Table 6. Melvin G. de Chazeau and Alfred E. Kahn, *Integration and Competition in the Oil Industry* (Yale University Press, 1959), Table 23.

In order to understand the decline of the independent refiner, it is instructive to isolate those refiners that are truly independent. Even among refiners who are not among the major oil companies, there are some that are vertically integrated across the production, refining, marketing, and transportation sectors. Table 3-3 divides refineries into integrated and non-integrated and further divides integrated refiners into large and small. The demise of the independent refiner is even more apparent in Table 3-3. Between 1949 and 1963, the capacity of independent refiners declined from 19 to 9 percent, mostly due to the growth of the integrated small refiner.

Table 3-3
Integrated and Non-Integrated Ownership of Refineries: 1949-63

	Group I: 22 Largest Companies and Subsidiaries		Group II: Other Integrated Companies, (Capacity >= 25,000 b/d)		Group III: Non-Integrated Companies	
Year	Plants	%	Plants	%	Plants	%
1949	133	36.3	1	0.3	232	63.4
1952	137	41.3	6	1.8	189	56.9
1955	126	42	15	5	159	53
1958	123	41.4	20	6.7	154	51.9
1961	126	42.4	28	9.4	143	48.2
1963	125	42.7	33	11.3	135	46

	Group I: 22 Largest Companies and Subsidiaries		Group II: Other Integrated Companies, (Capacity >= 25,000 b/d)		Group III: Non-Integrated Companies	
Year	Capacity	%	Capacity	%	Capacity	%
1949	5.16	80.15	0.03	0.4	1.25	19.45
1952	6.01	82.18	0.08	1.14	1.22	16.68
1955	7.25	84.02	0.28	3.27	1.10	12.71
1958	7.43	82.12	0.41	4.49	1.21	13.39
1961	8.15	83.05	0.69	7.07	0.99	9.88
1963	8.24	83.09	0.77	7.73	0.91	9.18

Source: Robert Love Bryson, Jr., The Evolution of Private Brand Marketers in the Petroleum Industry (1965) (unpublished D.B.A. thesis, Indiana University)

The decline of the independent refiner after 1950 was the result of technological change in the refining process. With the introduction of catalytic cracking, many of the non-integrated refineries became obsolete. In addition, the minimum efficient scale of a refinery plant increased, increasing the capital required to build a new refinery. The DOJ's attempt to foster growth of independent refiners through a conduct remedy that banned requirements contracts did not succeed.

2. Retailing

Justice Douglas dissented from the court's majority opinion, predicting that oil companies would increase the percentage of stations that were company owned and operated at the expense of lessee-dealer and independently-operated stations if they were denied the right to use requirements contracts.[61]

> The method of doing business under requirements contracts at least keeps the independents alive. They survive as small business units. The situation is not ideal from either their point of view or that of the nation. But the alternative that the Court offers is far worse from the point of view of both. The elimination of these requirements contracts sets the stage for Standard and the other oil companies to build service station empires of their own.[62]

Douglas' prediction proved to be accurate. Standard Stations had entered into exclusive supply arrangements with 5,937 independent stations (in the seven Western states) as of March 12, 1947.[63] As of 1957, the number of independent stations (in the seven Western states) affiliated with Standard Stations had fallen to 3,919.[64] Standard Stations had 1,040 company operated gas stations in 1957.

[61] Both lessee-dealer operated and independent-dealer operated stations were cited as independent gas stations in the case.

[62] Dissent of Associate Justice William O. Douglas in *United States v. Standard Oil Co. of California*, 337 U.S. 293 (1949) at ¶ 315.

[63] *Id*.

[64] Exclusive Dealing in the Petroleum Industry: The Refiner-Lessee Relationship, Richard A. Miller, Ph.D. dissertation, Yale University, Department of Economics, 1962.

In the overall gasoline retailing industry, there was a gradual shift to company operated stations after the decree as the industry became more vertically integrated. In the late 1940's, the company-owned and operated station was extremely rare as Table 3-4 shows. Only about 0.5 percent of gas stations of the six integrated oil companies listed were company-owned and operated in 1949. The independent gas station was the dominant gasoline retailer, and the company-owned and operated gas station was virtually non-existent.

Table 3-4
Types of Service Stations, 1949

	Company-Owned and Operated	Lessee-Dealer Operated	Independent-Dealer Operated	Total
Gulf Oil Corporation	270	5,613	26,658	32,541
The Texas Company	3	10,371	31,446	41,820
Sinclair Oil Corporation	5	7,079	11,709	18,793
The Ohio Oil Company	10	664	1,115	1,789
Standard Oil Company (Indiana)	49	9,802	6,641	16,492
Standard Oil Company (Ohio)	312	581	3,621	4,514
Total	649	34,110	81,190	115,949

Source: McLean and Haigh, *The Growth of Integrated Oil Companies*, Table 16-1, p. 486.

After 1949, however, the percentage of gas stations that were company owned and operated began to increase. By 2000, 23 percent of all gas stations were company-owned and operated (Table 3-6).[65] Table 3-5 presents the percentage of company owned and operated gas stations in the intervening period of 1958 to 1977 based on a survey of oil companies conducted by *National Petroleum News*. Because the classification of companies in this survey changes over time, three percentages are displayed.

Table 3-5
Percentage of Company Owned and Operated Service Stations, 1958-77

Year	Integrated	Majors	Total
1958	1.04		2.57
1960	1.49		3.50
1963	1.73		3.29
1964	1.28		2.63
1965	1.20		2.62
1966	2.82		3.56
1967			3.24
1968			2.99
1969			3.55
1970			3.06
1971			3.04
1972			3.52
1973		2.75	6.04
1974		3.42	8.78
1975		4.71	11.11
1976		4.95	11.95
1977		3.97	10.07

Source: National Petroleum News Fact Book, various years.

The *total* column is consistent over time and shows the overall percentage of company owned and operated stations increasing over time. The *integrated* column is only available through 1966 and shows the percentage of company owned and operated stations increasing from 1958 to 1966. The *majors* data are only available starting in 1973 and show the percentage of company owned and operated stations for the 20 largest oil companies in the U.S. increasing from 1973 to 1977.

Table 3-6 shows the distribution of gas stations by type from 1977 to 1996 based on a survey of oil companies conducted by the Energy Information Administration. It shows that the percentage of company owned and operated stations was increasing at the

[65] Energy Information Administration, Department of Energy, Form EIA -28.

expense of open dealers (owned and operated by independent managers) over the entire 1977-96 period.

Thus, it is clear that the integrated oil companies responded to the attempt to use antitrust to control the refiner-dealer relationship. They steadily integrated forward into marketing their own gasoline, thereby mitigating the restraint of not being able to negotiate requirement contracts with their major retailers.

c. The Effect of the Decree on Gasoline Prices

It is possible to test for the effect of the decree on gasoline prices. If the decree had increased competition in refining and retailing, we should expect to find that prices

Table 3-6
Percentage of Company Owned and Operated Service Stations, 1977-96

Year	Company Operated	Lessee Dealers	Open Dealers
1977	5.96	36.17	57.86
1978	6.32	37.08	56.60
1979	6.10	36.03	57.87
1980	7.01	36.72	56.28
1981			
1982	8.33	39.53	52.14
1983	8.92	37.87	53.21
1984	9.53	33.68	56.79
1985	14.22	40.22	45.56
1986	14.67	38.07	47.25
1987	16.07	37.74	46.19
1988	16.18	34.09	49.73
1989	20.52	39.40	40.08
1990	21.88	39.89	38.23
1991	22.11	40.92	36.97
1992	21.34	41.52	37.15
1993	20.64	42.54	36.82
1994	21.69	40.50	37.86
1995	22.29	41.35	36.37
1996	23.29	39.78	36.92
1997	26.49	38.08	35.43
1998	23.17	27.84	49.00
1999	21.21	31.49	47.30
2000	22.78	30.69	46.53

Source: Energy Information Administration, Department of Energy, Form EIA-28.

of gasoline declined after the decree, after taking into account other influences on prices, such as the cost of crude oil, gasoline taxes, and the intensity of demand. On the other hand, if vertical integration into retailing offset the effect of banishing requirements, we would expect to find no effect of the decree on retail gasoline prices. Table 3-7 provides the results of a regression analysis of retail gasoline prices (both including and excluding taxes) on the price of crude oil, sales and excise taxes ("Tax"), the unemployment rate, a time trend, and a dummy variable that is equal to one for years after the decree. The data are from 1946 to 1969.[66] The post-decree dummy covers the period from 1950 to 1969.[67]

The regression results confirm that retail gasoline prices rise when the price of crude oil increases and decline in periods in which the economy is weak and unemployment is rising. The post-decree dummy variable is not statistically significant in these regressions, either by itself or when interacted with the crude-oil price, implying that the conduct remedy did not have an effect on the retail price of gasoline. This suggests that the requirements contracts had efficiency effects that could be obtained through forward vertical integration. When the conduct remedy banned requirements contracts, refiners simply integrated into retail gasoline distribution. The conduct remedy had neither beneficial nor deleterious effects on consumer welfare. It was largely irrelevant.

[66] The gasoline price, crude oil price, and sales tax data are from American Petroleum Institute's Petroleum Facts and Figures. The gasoline price index data are from the Bureau of Labor Statistics Consumer Price Index.

[67] The number of motor vehicle registrations and gross domestic product were also included in the original specification, but were dropped due to statistical insignificance and scarce degrees of freedom.

There is a growing literature on the effect of contractual relationships between the refiner and the retailer on retail gasoline prices.[68] The recurring conclusion from this literature is that retail prices are lower at company owned and operated stations and higher at independent stations. These results confirm the fact that vertical integration or some alternative, such as requirements contracts, helps to solve the principal-agent problem in gasoline refining and marketing. Fortunately, the DOJ's attempt to block one solution to this problem was overcome by forward integration on the part of refiners. Had this avenue not been available to the integrated refiners, the behavioral relief in the 1949 decree would likely have led to higher gasoline prices and lower consumer welfare.

d. Conclusion

The Standard Stations conduct remedy did not arrest the decline in independent refiners' share of capacity or sales. Moreover, as Justice Douglas predicted in his dissent, the integrated refiners' downstream integration into gasoline retailing grew after the decree. Whether it was *because of* the decree is not clear. Nevertheless, subsequent research has shown that forward integration by oil companies into retailing lowers retail gasoline prices. Unable to solve the principal-agent problem through contracting after the imposition of the Standard Stations conduct remedy, these companies expanded into providing the service themselves. Consumers of gasoline and other refined products were thus saved from a major misunderstanding of market forces that led the DOJ to seek a decree that banned an efficiency-enhancing form of transaction.

[68] *See*, for example, Andrea Shepard (1993), *supra* note 59; John Barron and John Umbeck, "The Effects of Different Contractual Arrangements: The Case of Retail Gasoline Markets," *Journal of Law and Economics*, Vol. 27, 1984, pp. 313-28; and Michael J. Vita, "Regulatory Restrictions on Vertical Integration and Control: The Competitive Impact of Gasoline Divorcement Policies," Federal Trade Commission, Bureau of Economics, Working Paper No. 227, August 1999.

Table 3-7
Regression Analysis of the Determinants of the Retail Price of Gasoline, 1946-69
(T-statistics in parentheses)

	Dependent Variable: Gasoline Consumer Price Index, 1944-69 (Including tax)		**Dependent Variable: Retail Price of Regular Grade Gasoline, 1944-69 (Excluding tax)**	
Intercept	8.64 (10.51)	8.55 (10.50)	0.25 (18.49)	0.25 (18.68)
Tax			-0.02 (-2.99)	-0.02 (-3.00)
Time Trend	0.45 (26.56)	0.45 (23.68)	-0.003 (-11.34)	-0.003 (-10.16)
Price of Crude Oil	2.33 (7.59)	2.37 (7.70)	0.03 (5.07)	0.03 (5.15)
Unemployment Rate	-0.19 (-2.11)	-0.19 (-2.04)	-0.006 (-3.72)	-0.006 (-3.64)
Post-Decree/ CrudeOil Interaction	0.09 (0.97)		0.003 (1.49)	
Post-Decree Dummy		0.30 (0.80)		0.01 (1.47)
Adj. R-Squared	0.9884	0.9883	0.9277	0.9275

4. IBM (1952)

The 1952 Section 2 case brought by the DOJ against IBM has many similarities to the *United Shoe Machinery* case. IBM dominated the "tabulating machine" business and the related business of tabulating cards, or "punch cards," long before the commercial development of the computer. It only leased these machines; it did not offer them for sale.

a. The Antitrust Suit

The DOJ alleged that IBM had achieved monopoly power in the business machines market, including tabulating machines, through its lease-only policy, the tying of service to its leasing agreements, and a restrictive patent policy. In addition, IBM allegedly enjoyed monopoly power in tabulating cards, which it maintained in part through discriminatory pricing and tying cards to machines. The complaint claimed that IBM had a 90 percent share of tabulating cards sold in the United States. Although much of the complaint was addressed to IBM's position in tabulating machines and tabulating cards, the government's complaint addressed IBM's position in all business machines, including the burgeoning electronic data processing machines, *i.e.* computers.

b. The Decree

IBM settled the case in 1956 by agreeing to offer its machines for sale at a reasonable relationship to its lease rates, limit leases to a period of one year, and to refrain from tying service or cards to the lease of its machines. IBM also agreed not to buy used machines and to offer its patents at reasonable royalties. In addition, IBM was required to offer its data processing services from a separate "service bureau" subsidiary[69] and divest some of its card manufacturing capacity if its share of this market had not fallen to 50 percent or less by 1962. Since its share of tabulating card sales had fallen to only 53 percent by the required date, some divestiture was required. In 1963, therefore, IBM sold rotary presses capable of producing about 3 percent of industry output.

c. Effects of the Decree

By 1962 the computer was rapidly replacing tabulating machines. Since IBM was using some of the same leasing and tying practices in selling computers as the antitrust case was being litigated, the decree also required IBM to abandon its reliance on long-term leasing and its tying practices in the sale of computers. Given the sharp rise in computer sales after 1956, the effect of the decree should be assessed in terms of its

[69] This service bureau was subsequently sold to Control Data Corporation to settle a private suit.

effect on the computer market. We begin, however, with a discussion of the effects on the price of tabulating cards.

Baldwin contends that the decree worked because it led to an increase in price competition for tabulating cards between 1959 and 1966.[70] Waldman, however, shows that card prices actually rose after the decree, partly because IBM wished to induce entry so that it could comply with the decree's requirement that it reduce its market share in cards to 50 percent by 1962.[71] Neither Waldman nor Baldwin compares the subsequent decline in tabulating card prices with the general decline in paperboard prices between 1959 and 1966.[72] Given the decline in prices of the feedstock for producing the cars, it is difficult to attribute even the decline in tabulating card prices to the decree.

Much more important was the effect, or lack of effect of the decree on the computer market. Even if the decree led to greater competition in tabulating cards, Walkman claims it was a failure because the new firms that entered the business machine market after the decree failed to achieve sustainable profits and could not wrest market share from IBM. At the time that the 1952 case was brought, IBM was not even in the computer market. Its first commercial machine was offered for lease in April, 1953, two years after Remington Rand introduces Univac I.[73]

Even though it initially lagged behind Remington in offering computers, IBM's share of electronic data processing equipment installed sales base increased steadily after 1955 even with the restrictions imposed by the decree.[74] IBM's revenues soared and its

[70] William L. Baldwin, "The Feedback Effect of Conduct on Industry Structure," *Journal of Law and Economics*, Vol. 12, April 1969, p. 137.
[71] Waldman (1978), *supra* note 24, p. 141.
[72] U.S. Bureau of Labor Statistics, *Producer Price Index*, WPU0914.
[73] Waldman (1978), p. 134.
[74] Waldman (1978), p. 139.

rate of return on equity remained very high. Nor is there any evidence that the new entrants affected the prices of IBM's machines, but such evidence would be difficult to muster given the rapid rate of technical change in this sector and the need to adjust prices for the changing performance of these machines.

The absence of evidence that this extensive decree had any favorable effects on competition in the electronic data processing machines sector as it evolved from tabulating machines to computers is particularly troubling because this failure soon led to further antitrust litigation in the form of private antitrust suits and another major DOJ investigation. Indeed, IBM vaulted to a dominant position in mainframe computers during this period, leading the DOJ to file another Section 2 case against the company in 1969. This latter case was eventually dropped in 1982, in no small part because the market had changed again.[75]

If there is a lesson in the antitrust actions against IBM it is that federal antitrust actions lagged market developments and conduct remedies did not catch up with these developments. The replacement of tabulating machines by computers was well under way when IBM settled the first case, and IBM was losing its market power in computers in 1969-82 to upstart firms offering mini-computers and personal computers. Competitive forces eroded IBM's position, leaving antitrust at the gate.

5. United Fruit

The banana industry in Central America was the setting for one of the more notorious stories in United States business history. The rise and fall of the United Fruit

[75] For a critical analysis of the DOJ's 1969 case, see Franklin M. Fisher, John J. McGowan and Joen E. Greenwood, *Folded, Spindled, and Mutilated: Economic Analysis and United States v. IBM*. MIT Press, 1983.

Company is sprinkled with tales of political intrigue, corruption, U.S. military intervention, and – ultimately – revolution.[76] In 1954, the DOJ brought an antitrust suit, alleging that United Fruit controlled such a large share of the arable land in Central America that it had been able to monopolize the importation of bananas to the United States.[77]

a. The United Fruit Company

The United Fruit Company was formed in 1899 from a combination of two U.S. companies, which in turn acquired a number of other companies with operations in Colombia, Honduras, and Costa Rica in the same year. The company subsequently expanded into Guatemala, Nicaragua, and – to minor extent – Panama. United Fruit made numerous other acquisitions of firms involved in the banana trade, including competing banana producers, Central American railway companies, steamship companies and distributors.

Through these myriad purchases, United Fruit accounted for more than 50 percent of bananas imported into the United States in 1928. Between 1935 and 1953, United Fruit's share of U.S. banana imports by weight allegedly averaged 63 percent, and its share by weight was 64.8 percent in 1953, the year before the Sherman Act case was filed.[78] United owned or controlled approximately 73 percent of the banana-carrying

[76] There is a very large literature on United Fruit's activities in Central America. For the views of a United Fruit insider, see Thomas P. McCann, *An American Company*. Crown Publishers, 1976. For an earlier and even harsher view, see Charles David Kepner, Jr., and Jay Henry Soothill, *The Banana Empire: A Case Study in Economic Imperialism*. New York: The Vanguard Press, 1935. For a more favorable view of United Fruit's operations, see Stacy May and Galo Plaza, *The United Fruit Company in Latin America*. National Planning Association, 1958.

[77] *United States of America v United Fruit Company*, Complaint filed in the U.S. District Court for the Eastern District of Louisiana, Civil Action No. 4560, July 2, 1954. An Amended Complaint was filed January 12, 1956. [Hereafter, "Amended Complaint."]

[78] Amended Complaint, *supra* note 77, ¶¶ 19-23.

ships serving the U.S. and 85 percent of the refrigerated capacity in these ships. The company allegedly controlled 85 percent of banana-growing land in the "American Tropics."[79]

b. The Antitrust Suit

United Fruit's sizable share of the importation of bananas into the U.S. attracted the attention of the DOJ. Although United Fruit's share of the relevant market, imported bananas, was somewhat lower than that of earlier monopolization cases, such as *American Tobacco*, *Standard Oil*, and *Alcoa*, United had engaged in a variety of business practices that would strengthen the government's case, brought under both Sections 1 and 2 of the Sherman Act.

The DOJ alleged that United Fruit had acquired control over the supply of bananas to the United States through its purchase of rivals and acquisition of land in Central America. The government's case contains frequent mention that Ecuador was one country where United Fruit did not enjoy a dominant position. As we shall see, this turned out to be an important exception.

The DOJ contended that United Fruit solidified and exercised its market power by controlling transportation and distribution facilities as well. It also contended that United even engaged in episodes of predatory pricing. While the government complaint provided no evidence on prices, it alleged that:

> "… United's prices have consistently remained stable and firm through periods of variation in supply and demand and periods of variation in business activity and

[79] *Id.*, ¶ 14.

prosperity. United has been able to set its prices without regard to those quoted by any other importer."[80] (emphasis supplied)

In short, through vertical integration, acquisitions, and exclusive dealing, United Fruit was seen by the government as a long-lived monopolist that would not be dislodged by market forces.

The case never went to trial. The Amended Complaint was filed in 1956, and the government and United Fruit entered into a consent agreement in 1958.

c. The Decree

The Final Judgment, or decree, was entered in 1958, providing the government with far-reaching injunctive relief.[81] United Fruit was barred from entering into exclusive dealing arrangements and from acquiring any business involved in the importation of bananas into the United States. The company also was to close its Banana Selling Corporation, which had processed and ripened bananas in the United States. It could continue to process and sell imported ripe bananas. United Fruit also was forbidden to enter into any agreement with its competitors for the sale of bananas in the U. S. or to have a joint ownership interest with its competitors in any company that imports or distributes bananas. A number of other provisions barred a variety of United Fruit's allegedly predatory or monopolistic business practices.

The strangest provision of the decree required United Fruit to assist in the formation of a new competitor by 1966. This "New Company" was to be provided, by United Fruit, with sufficient producing lands, ships, terminal facilities, and even liquid

[80] Complaint, *supra* note 77, ¶ 27.

[81] *United States of America v United Fruit Company*, Final Judgment, U.S. District Court for the Eastern District of Louisiana, Civil Action No. 4560, February 4, 1958.

assets to allow it to supply 9 million stems of bananas per year to the United States, about 18 percent of the stems supplied in the year before the complaint was brought. There was no provision for a waiver of this requirement if market conditions did not require additional competitors by 1966.

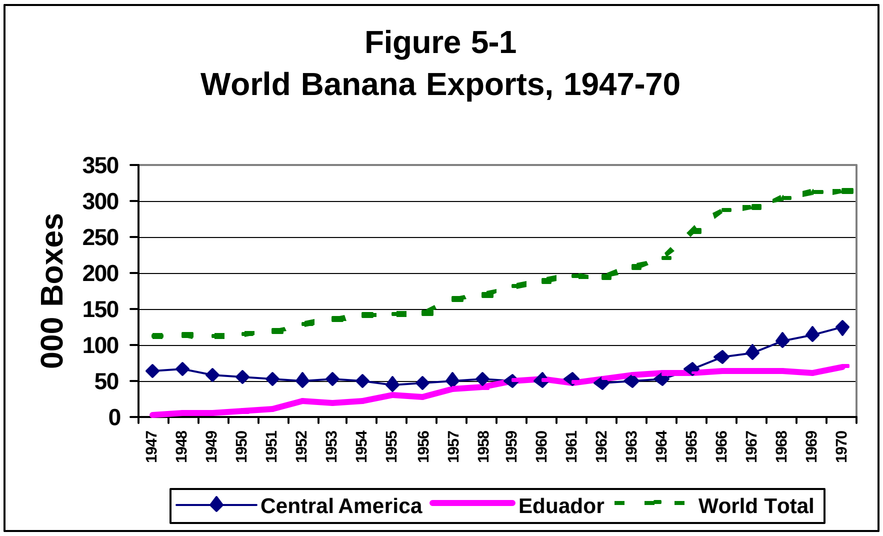
d. The Banana Market Before and After the Decree

The Complaint in this case did not explicitly define a relevant market. Rather it implicitly assumed that the importation of bananas into the U.S. was a stand-alone market. Left unexplored was whether the relevant market should have included other fruits.

In the first half of the 20th century, the U. S. obtained its bananas almost entirely from Central America and South America. The only major competitor facing United Fruit in Central America was the Standard Fruit Company, which accounted for roughly 15 percent of U.S. imports in 1953. Standard had major operations in many of the same countries where United Fruit operated.

After World War II, United Fruit's position in the banana market began to weaken for a number of reasons. The company faced substantial political instability in many of the countries in which it operated. Its workers began to organize and eventually went on strike in 1954. In addition, United Fruit could not control the most rapidly-growing source of bananas, Ecuador, because Ecuador's government refused to allow foreigners to own banana-producing land in that country.

Beginning in 1950, Ecuador's banana output began to soar. By 1957, Ecuador was exporting twice as many bananas as any Central American country. (See Figure 5-1)



Source: Frank T. Ellis, The Banana Export Activity in Central America: A Case-Study of Plantation Exports by Vertically-Integrated Transnational Corporations, Ph.D. Dissertation, University of Sussex, 1978, Table 52, p. 246.

On the supply side, United Fruit was beginning to lose control of the sources of supply to the U.S. market even before the antitrust suit was filed.

The rise of Ecuador as a source of independent supply affected U.S. banana prices. As Figure 5-2 shows, the real price of bananas soared after 1939 as the war effort reduced the availability of transportation for shipping bananas from Latin America. But the price began to decline steadily in 1950 as Ecuadoran supply began to rise. This same year, four years before the complaint was filed, the world supply of bananas began to rise sharply. (Figure 5-1) Not only was United Fruit losing its grip on the supply of bananas in Central America, but Central America was in decline as a source of the world's bananas. It would not rebound until the mid-1960's when two new entrants appeared.[82]

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[82] Frank T. Ellis, The Banana Export Activity in Central America 1947-1976: A Case Study of Plantation Exports by Vertically Integrated Transnational Corporations, Ph.D. dissertation, University of Sussex, Department of Economics, 1981, p. 76.

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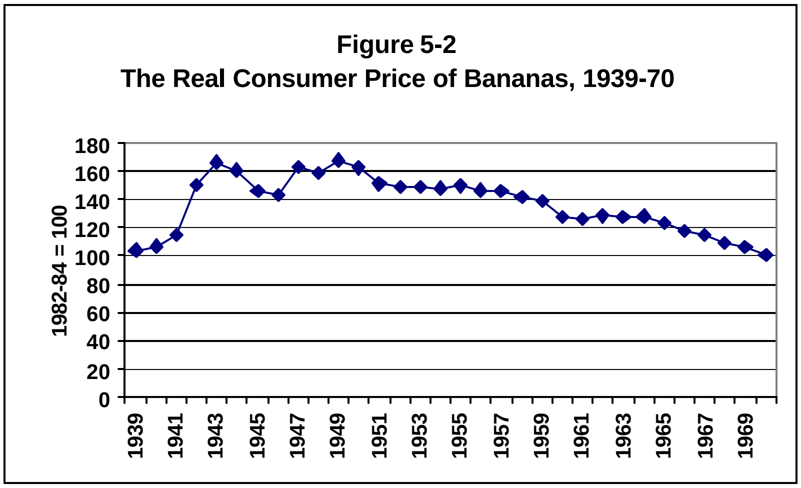
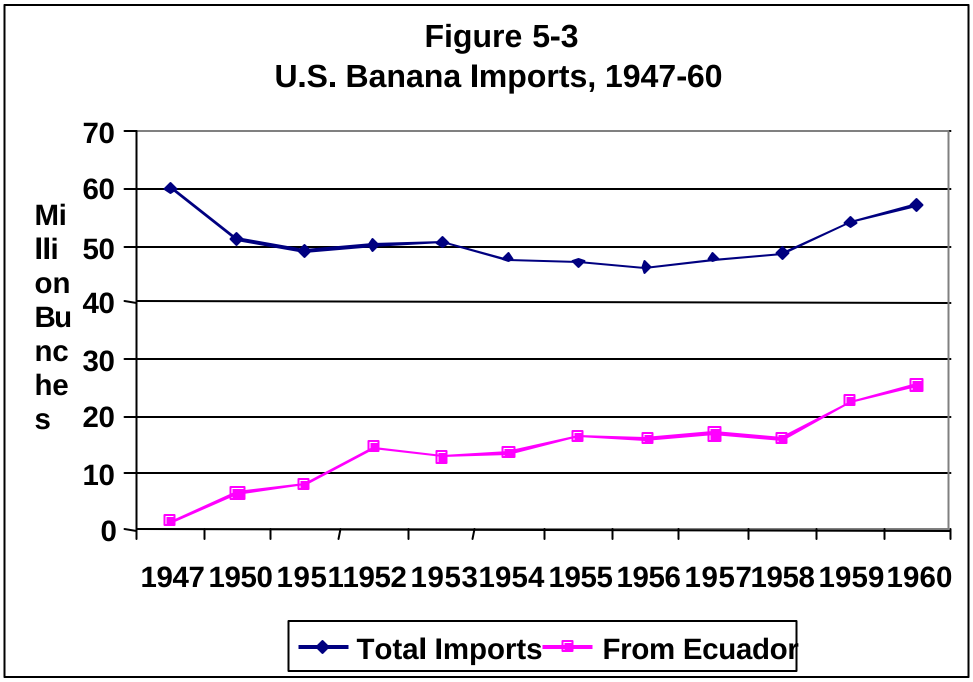


Source: U.S. Bureau of Labor Statistics, *Consumer Price Index.*

The decline in U.S. banana prices occurred as U.S. imports of bananas were declining. As Figure 5-3 shows, total banana imports fell rather substantially between 1947 and 1956 despite the decline in prices. Apparently, at the time bananas were an "inferior" good, whose consumption declined when income rose strongly.

According to recent studies of United Fruit, it had already begun exiting the *production* of bananas immediately after World War II because of Wall Street's perception of the risks of remaining in Central America.[83] Political upheavals and labor unrest were at least two major causes of United Fruit's disquietude. Labor problems began as early as 1949 in Guatemala, Colombia, and Costa Rica. In 1951-52, United Fruit suffered a labor strike in Guatemala followed by a ten-week strike in Honduras in 1954 where some of its lands were expropriated by a revolutionary government. In 1959, its Costa Rica workers struck, and Fidel Castro expropriated its lands in Cuba.

[83] Marcelo Bucheli, United Fruit Company in Colombia: Labor Conflicts, Political Relations, and Local Elite (1899-1970), Ph.D. dissertation, Stanford University, Department of History, November 2001, Chapter III.

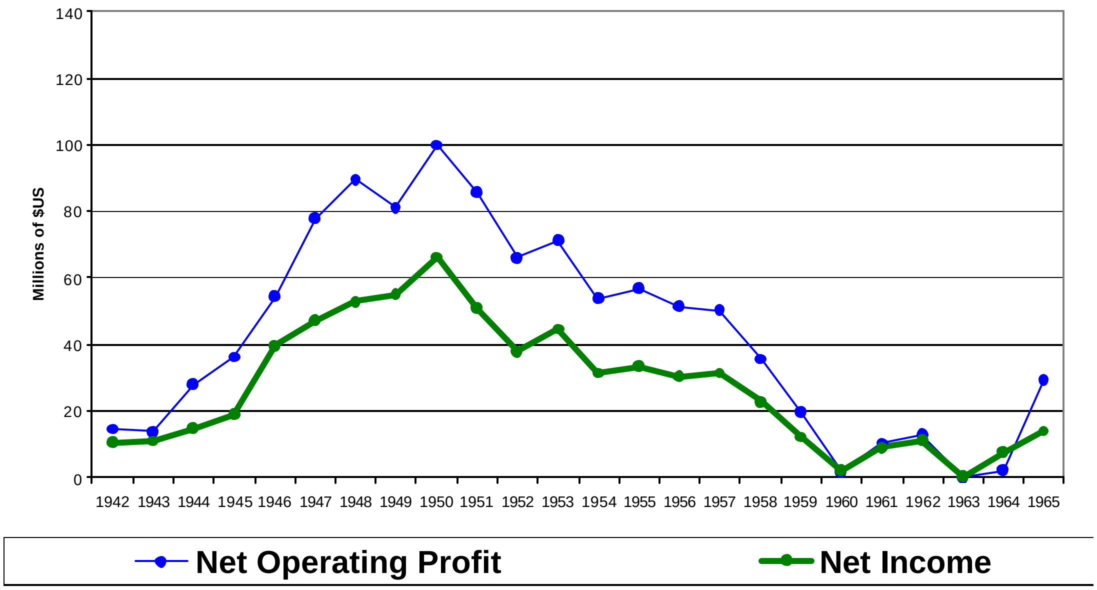


Source: U.S. Department of Commerce

Anticipating these problems, United Fruit had reduced its land holdings sharply during the years immediately following World War II.[84] Its profits rose immediately after World War II, but then began to plummet in 1950, the same year that Ecuadoran exports began to rise. (Figure 5-4) The antitrust decree may have accelerated this decline, but it surely did not initiate it.

[84] Marcelo Bucheli, "United Fruit Company in Latin America: Institutional Uncertainties and Changes in its Operations, 1900-70," *mimeo*, Stanford University, Department of History, 2001.

Figure 5-4
United Fruit Company Profits, 1942-65



Source: Company Reports to the Securities and Exchange Commission as reported in *Moody's Industrial Manual.*

e. Conclusion

In *United States v. United Fruit*, the antitrust remedy lagged behind market developments. The decree was imposed after U.S. banana prices began to decline and after competition in the supply of bananas had begun to accelerate, particularly in the form of imports from Ecuador. By the time the decree was entered, United Fruit's net income had fallen by more than two-thirds from its 1950 peak to a scant $20 million, and the company was well on the way to withdrawing from banana production before the case was decided. The DOJ's suit might have made sense in the 1930's or 1940's, but by 1958 it was simply judicial piling-on.

6 . Eastman Kodak (1954)

In the 1880's, George Eastman pioneered the development of a camera that could be used by amateur photographers. By 1904, he had established a dominant position in the sale of film, film cameras, and photographic paper.[85] The company he founded, Eastman Kodak, has been the leading manufacturer of photographic film in the U.S. for about 100 years.

a. Amateur Photography

The amateur photography industry is a "mosaic" of interconnected markets:[86] cameras, film, photofinishing, and photofinishing supplies. The interdependence among these markets and the strategic role of film in amateur photography are crucial to the understanding of Kodak's early market position in the amateur photography industry.

Cameras, film, and photofinishing are interdependent in two ways. First, because they are complements, the demands for cameras, film, and photofinishing are dependent on the price and availability of each other. Second, and just as important, a photograph requires that cameras, film, and photofinishing be technically compatible with each other.

The photography industry is functionally organized around film: film dictates the compatibility requirements that affect the design of cameras and of photofinishing technology and the specifications of photofinishing inputs (photographic paper, chemicals, and photofinishing equipment). The central role of film in amateur photography therefore allows the film manufacturer to affect the interrelated sectors of cameras and photofinishing. A firm with monopoly power in the film sector potentially could extend its market power to the camera and photofinishing sectors. The importance of film technology is reflected in the fact that Kodak never licensed its film technology, even though it occasionally licensed its camera technology.[87]

b. Kodak's Market Share

Kodak controlled 90 percent of the U.S. film market as early as 1904, and 88 percent in 1915. In 1932, *Forbes* estimated that Kodak's share of U.S. film sales was 84 percent. Over the period 1958 to 1976, Kodak still accounted for 86 percent of film sales, 68 percent of camera sales, and 89 percent of color photographic paper sales.[88]

Kodak pursued an aggressive research agenda, patenting new inventions that kept it ahead of rivals and potential entrants. "By the time rivals found ways around the current technology, Kodak was on to the next technology, which would also be protected by another patent."[89] In addition, in its formative years, Kodak acquired potential rivals. Between 1895 and 1899, for example, Kodak purchased three companies (Blair, Boston, and American) that made cameras as well as film and were threats to Kodak's film monopoly.[90]

c. The Antitrust Case

From its inception until the 1950's, Kodak had marketed its film at a price that

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[85] Vrinda Kadiyali, "Eastman Kodak in the Photographic Film Industry: Picture Imperfect?" in *Market Dominance: How Firms Gain, Hold, or Lose It and the Impact on Economic Performance*, David I. Rosembaum, ed., 1998, p. 91.

[86] *Berkey Photo v. Eastman Kodak Co*, 457 F. Supp. 404, at 411 (S.D.N.Y. 1978).

[87] Kadiyali, *supra* note 85, p. 97.

[88] *Id*., p. 91.

[89] *Id*., p. 97.

included Kodak processing and printing. Kodak's large share of amateur film sales was thus extended into photofinishing through the tying arrangement. Its market position in photofinishing was further secured by Kodak's refusal to sell paper and chemicals required to finish its films to independent photofinishers.[91]

1. The Complaint

The DOJ filed suit against Kodak under Sections 1, 2, and 3 of the Sherman Act in December 1954. The complaint contended that Kodak's monopoly power in color film was sufficient to foreclose competition in the photofinishing sector. But instead of attacking the source of Kodak's monopoly power, namely, its supremacy in the production and sale of color film, the DOJ focused its complaint on Kodak's practice of tying photofinishing to the sale of film. The complaint charged that:

> "Purchasers of Kodachrome and Kodacolor film have been required to pay monopoly prices for the processing of Kodachrome film and monopoly prices for the developing and printing of Kodacolor film … [and] have been denied the advantage of faster local processing, developing, and printing service …" [92]

Kodak marketed its film at prices that included all charges for processing at its Color Processing and Printing (CP&P) division and required resellers of its films to do the same. This was alleged to have completely foreclosed competitors from processing

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[90] James W. Brock, Market Control in the Amateur Conventional Photography Industry, Ph.D. dissertation, Michigan State University, Department of Economics, 1981, p. 21.

[91] *Id*., p.362.

[92] *United States v. Eastman Kodak Co*., Complaint, W.D.N.Y. (1954).

Kodak film.[93]

2. The decree

In 1954, the DOJ and Kodak negotiated a consent decree before the case went to trial. The government had sought the divestiture of Kodak's nine processing plants, but it settled for substantially less. The remedy required Kodak to exclude photofinishing charges from its film price and to license its patents in photofinishing technology. In addition, Kodak was to reduce its share of the photofinishing market to 50 percent or less by 1961 or else divest some of its photofinishing plants.

The decree also required Eastman to cancel its "fair trade" – or resale price maintenance - contracts requiring retailers to sell the film at a price specified by Kodak. Kodak also was enjoined from entering into similar contracts to control the price of its color film or print material sold to third parties.[94]

In addition the judgment imposed on Kodak an obligation to:

- Grant licenses to applicable patents at reasonable royalties;
- Make available manuals describing its commercial color film processing technology, and to bring out annual supplements for seven years;
- Upon request, send a technical representative to any recipient of a manual to assist in using the methods set forth in the manual;
- Upon request, permit the recipient to visit the Kodak processing plants for the purpose of observing and being advised as to the methods, processes, machines, and equipment used there.

Kodak also was required to sell materials it used or manufactured that were

[93] *Id*.
[94] *United States v. Eastman Kodak Co*., Consent Decree, C.C.H Trade Cases ¶ 67,920 (1954).

necessary for processing its amateur color film, and to make available the company's plans and specifications relating to machines and equipment used in the commercial processing of its amateur color film.[95]

Seven years after the effective date of the judgment, Kodak would be required to divest itself of sufficient facilities to reduce its share of the domestic capacity for processing its still color film to 50 percent or less. This requirement could be waived if Kodak could show the court that purchasers of its still color film had an option to have such color film processed by an independent processor and that any independent processors were then processing a substantial volume of Kodak-made still film.[96]

d. The Effects of the Decree

To assess the effects of the decree, one could analyze the changes it caused in the structure of the markets for photofinishing and for film. If the decree had the effect sought by the DOJ, it should have led to a lower price consumers paid for the combined product.

1. Photofinishing

Soon after the entering of the conduct remedy, there was a wave of entry into photofinishing. Kodak's share of U.S. color film photofinishing declined steadily from 96 percent in 1954 to 11 percent in 1975. (See Table 6-1) In 1961, there were 458 independent photofinishers; in 1977, there were 2,177.[97] Despite the decline in its market share, however, Kodak's Color Processing and Printing (CP&P) remained the largest

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[95] *Id*.
[96] *Id*.
[97] Brock, *supra* note 90, pp. 99-101.

photofinisher in the market.[98]

By 1961, Kodak's market share in the photofinishing industry had fallen to 29 percent. Therefore, on August 15, 1961, the court ruled that Kodak had complied with the provisions of the decree, and the company avoided a divestiture of some of its color print processing facilities.[99]

Table 6-1
Kodak's Share of Photofinishing

Year	% Color Film	Year	% Color Film
1954	96	1965	24
1955		1966	23
1956	69	1967	22
1957	57	1968	19
1958	45	1969	18
1959	38	1970	17
1960	33	1971	15
1961	29	1972	14
1962	29	1973	12
1963	27	1974	12
1964	25	1975	11

Source: James William Brock, Market Control in the Amateur Conventional Photography Industry, Ph.D. dissertation, Michigan State University, Department of Economics, 1981, p. 103.

2. Film sales

If Kodak derived its control in the photofinishing sector from its market power in the film sector, the decree would not necessarily have much effect on Kodak's position in the sale of color film. On the other hand, if Kodak's position in the film market derived in part from its control of photofinishing, the decree might have reduced entry barriers in the production of color film. Baldwin argues the latter proposition and points to a slight decline between 1954 and 1963 in Kodak's sales as a share of total shipments in

[98] *Id*.,, p. 104.
[99] *United States v. Eastman Kodak Co*.: Consent Decree Compliance Hearing, C.C.H Trade Cases ¶ 70,100 (1961).

"Photographic Equipment and Supplies" as reported by the *Census of Manufactures*. However, he acknowledges that there was no change in the four-firm concentration ratio in this industry during this period.[100]

A more recent study finds that Kodak maintained a large share of U.S. color film sales until 1980, enjoying upwards of 80 percent of the color film market through the 1970's.[101] (See Table 6-2) Clearly, the decree had little impact on Kodak's U.S. market share in film.

Table 6-2
Kodak's Share of Amateur Photographic Film Sales

Year	Film Rolls	Year	Film Rolls
1955	84	1968	90
1956	84	1969	89
1957	85	1970	87
1958	86	1971	88
1959	86	1972	87
1960	86	1973	87
1961	83	1974	87
1962	82	1975	86
1963	82	1976	86
1964	82	1977	80
1965	85	1978	80
1966	88	1979	80
1967	91	1980	80

Source: Vrinda Kadiyali (1998).

3. Kodak's sales and profits

Kodak's continued leadership position in film sales, its integration across the film and photofinishing sectors, and the perfect complementarities between film and photofinishing could have allowed Kodak to continue to operate as profitably as before. Indeed the evidence supports just such a theory. If Kodak had monopoly power in the

[100] Baldwin (1969), *supra* note 70.

sale of film, it might be able to extract as much monopoly rent from film as it was extracting from both film and photofinishing before the decree.[102] Indeed, the evidence supports just such a theory. Kodak's real sales and operating profits continued to grow rapidly after 1954, suggesting that the decree did not have a major impact on its profitability. Multiple regression analysis of both sales and real operating profits for the period 1950-78 finds no significant change in the trajectory of either variable after 1954, a result that suggests that Kodak was able to recoup any lost revenues or profits from finishing through higher film prices.[103]

Further corroboration of the absence of an effect on Kodak's profitability is available from *Census of Manufactures* data for SIC 3861, "photographic equipment and supplies." Kodak's sales as a ratio of all shipments reported by the Census for industry 3861 declined more slowly after 1954 than in 1950-54. (See Figure 6-1) Nevertheless, they remained very large relative to total SIC 3861 shipments.[104]

In addition, the price-cost margin for all of SIC 3861 actually *rose* after 1954, after remaining constant in 1950-54.[105] (See Figure 6-2) This suggests that Kodak, with a large and slowly declining share of the sales of all photographic equipment and supplies, may have actually enjoyed somewhat more pricing discretion after the decree. This conclusion is reinforced by the movement in the price-cost margin for Kodak, based on

[101] Kadiyali, *supra* note 85, p. 92.

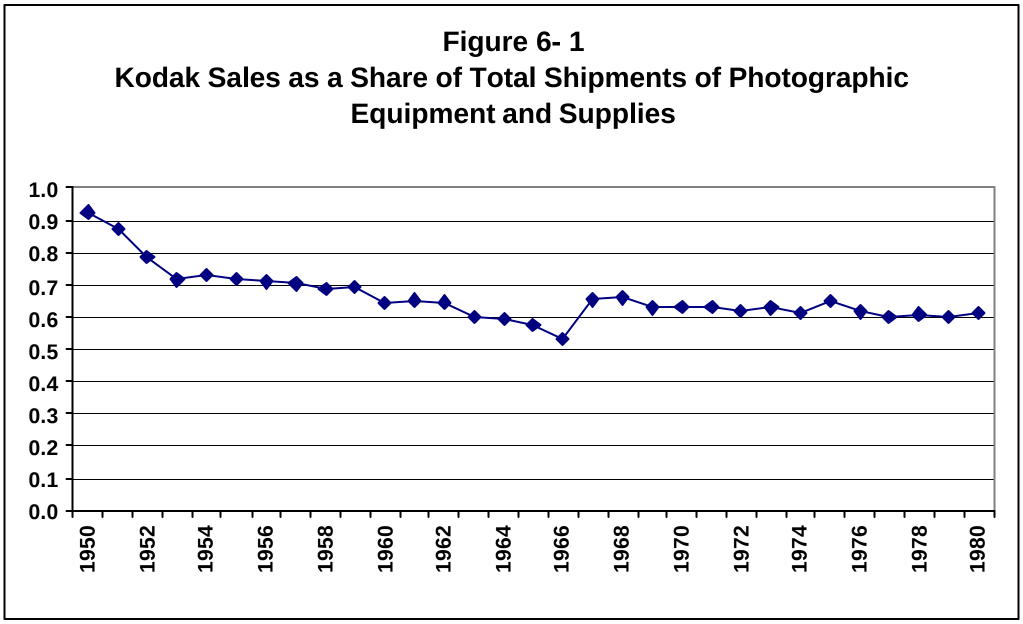
[102] This assumes fixed proportions in film and photofinishing and that independent film finishers could not integrate backward into the production of film.

[103] The regressions use total Kodak sales and Kodak operating profits, both stated in constant dollars, as the dependent variables. The independent variables are GDP and silver prices in constant dollars, a time trend, and a time trend interacted with a dummy variable equal to 1 for years after 1954. The interaction term is not statistically significant.

[104] Kodak's sales were equal to about 65 percent of total SIC 3861 shipments in the ten years following the decree. Some of Kodak's sales may have been outside SIC 3861.

[105] The price-cost margin is equal to [Shipments – Payroll – Materials Purchased + Change in Inventories]/[Shipments + Change in Inventories].

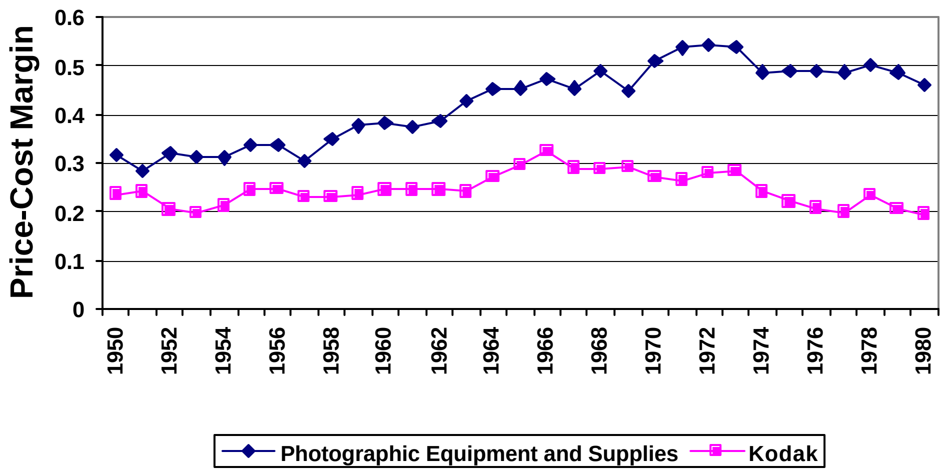
its annual financial reports, also shown in Figure 6-2. Although Kodak's margin does not rise as rapidly as the margin for industry 3861, it does rise.[106]



Source: U.S. Bureau of the Census, *Census of Manufactures*; Kodak Annual Reports.

[106] The calculation for Kodak does not include the term for inventory change, but it should nonetheless be comparable to the calculation for SIC 3861 over a substantial period of time.

Figure 6-2
Price-Cost Margin in Photographic Equipment and Supplies, SIC 3861, and Eastman Kodak



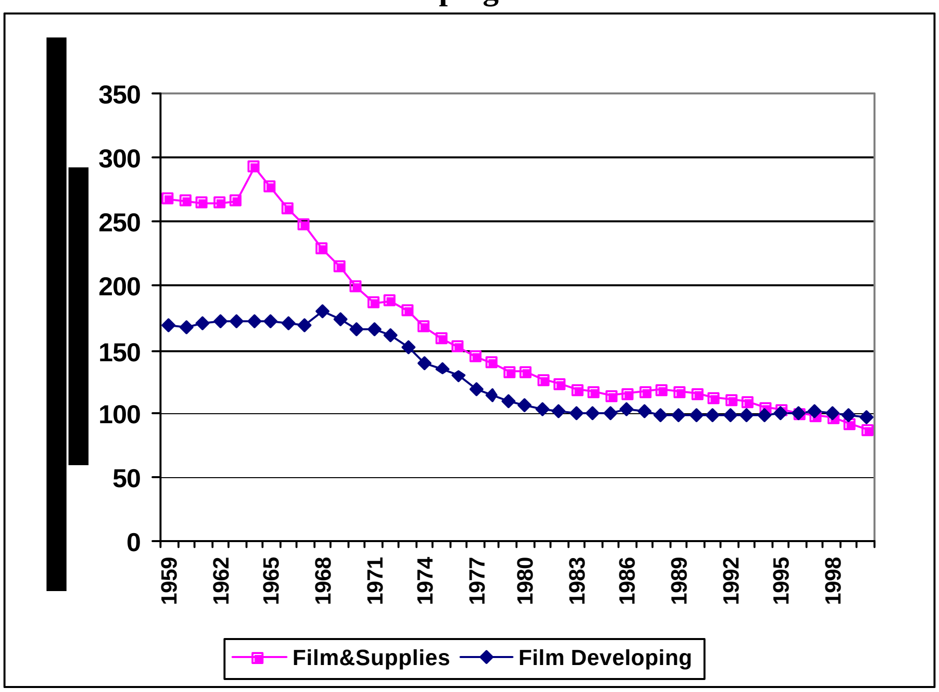
4. Prices

There are no official consumer price indexes for photographic film prior to 1959, but the overall price of photographic film and photofinishing does not appear to have been affected by the consent decree in 1954. Figure 6-3 shows the real chain-type Personal Consumption Expenditure deflators for film and developing that are available from 1959 forward. These indexes show that the price of film was stable until 1964 and the price of film developing stable until 1968. The decline in prices of film and film developing began at least 10 years after the decree. These patterns suggest that the remedy did not have a discernible impact on the market price for photographic film and photofinishing.

More extensive data are available on the *wholesale* prices of photographic equipment and supplies. (Figure 6-4). If breaking Kodak's hold on the finishing market had increased competition for a variety of photographic supplies, including film, one might observe a decline in the real wholesale price trend for photographic supplies after 1954. However, Figure 6-4 shows that these prices rose by 13 percent between 1954 and 1964, fluctuated somewhat for the next four years, and then began to decline steadily.

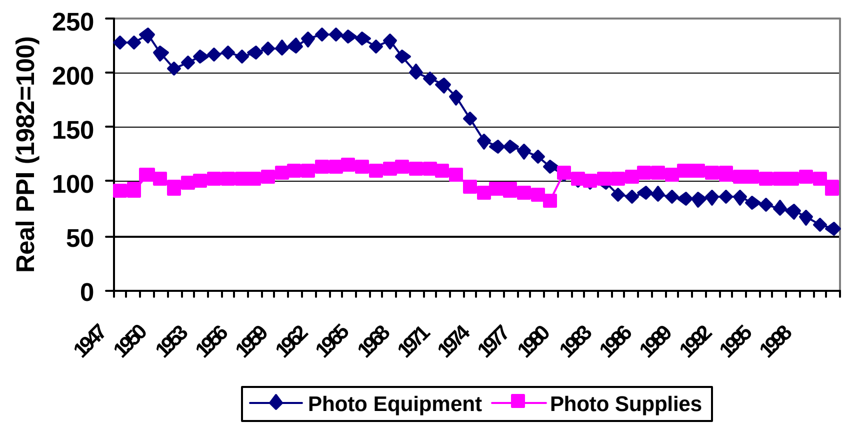
The declining prices of film and photofinishing after 1964 are consistent with declining costs of producing film and photofinishing. Rapid technological advance has been the norm in the photographic equipment and supplies industry, and prices would tend to reflect this advance regardless of the industry's market structure. Indeed, Kodak's price-cost margin actually increased for more than a decade after 1954. If the lower market prices were a result of the decree, Kodak's margins would be expected to decline.

Figure 6-3
Real Chain-Type PCE Deflators for Film & Supplies, Film Developing – 1959-2000



Source: Bureau of Economic Analysis, Department of Commerce.

Figure 6-4
Real Producer Price Indexes for Photo Equipment and Supplies



Source: Bureau of Labor Statistics. Both price series are deflated by the PPI for all commodities.

e. Conclusion

The 1954 antitrust action was the second that the DOJ filed against Kodak. The first one, in 1915, attacked Kodak's monopoly status in all sectors of the amateur photographic industry. The DOJ won the suit and had sought structural remedies against Kodak. The decision was being appealed when the United States entered WWI and Kodak was literally "saved by the war."

The 1954 conduct remedy resulted in hundreds of independent photofinishing firms entering the market. As a result of Kodak's continued dominance in the sales of film, however, the survival of independent photofinishing firms still depended on their ability to finish Kodak film. Consequently, independent photofinishers remained dependent on Kodak, and Kodak remained their sole supply of technical information on how to process Kodak film.

The price indexes for film and photofinishing began to decline in the 1960's. But this appears to be due to technical progress, not to any discernible effects of the decree. The industry price-cost margin for the manufacture of photographic equipment and supplies actually rose after the decree, suggesting that costs declined even more rapidly than prices in this sector in the 1960's. The decree could not have been responsible for the decline in film prices because the decree did not address film manufacture.

The stock market discounted this benign impact of the conduct remedy. In the first month after the entering of the decree, Kodak's stock had an excess return of a negative 1.6 percent. However, within six months, this excess return had become a *positive* 7.1 percent. Investors predicted that the remedy would not reduce Kodak's returns, a prediction that proved to be correct. In conclusion, it would appear that this extensive conduct remedy had little effect on Kodak or its customers. There is no evidence that consumers benefited from lower prices of film or photofinishing as the result of the decree.

7. The Safeway Case

Grocery retailing in the United States underwent major changes in the middle of the 20th Century. In the 1920's, the nation's first and, at the time, largest "supermarket" chain, The Great Atlanta and Pacific Tea Company (A&P), integrated into food wholesaling, bypassing independent food wholesalers. After World War II, supermarket chains began to replace smaller, independent food retailers. In the process, these chains engaged in a variety of low price, high volume marketing strategies to woo customers. This attracted the attention of antitrust authorities, who were concerned that such "predation" would drive smaller firms from the market, thereby increasing concentration in food retailing. Safeway Stores was one of the chains to attract the attention of the DOJ in the 1950's.

a. Food Retailing

A&P had begun to operate a large number of stores in the New York area in the late 1800's, but it did not grow rapidly until the World War I era. By 1921, it operated over 5,000 "economy" stores throughout the country, and by the mid-1930's it was opening large numbers of "supermarkets." Nevertheless, A&P did not capture much more than 10 percent of national grocery sales through 1936.[107] Even 18 years later, local grocery markets were unconcentrated. The average four-firm concentration ratio in the country's urban markets was still only 45 percent in 1954.[108] As recently as 1972, single store operators accounted for 52 percent of the retail food sales.[109]

In the years following 1954, concentration in food retailing increased as the national chains slowly displaced smaller, local food stores. Even as late as 1977, however, the average (weighted) 4-firm concentration ratio in the nation's Standard Metropolitan Statistical Areas was only slightly more than 53 percent, and the (unweighted) average Herfindahl-Hirschman Index (HHI) of market concentration was only about 1130.[110] Grocery retailing had become more concentrated, but was not highly concentrated despite the growth of large national chains.

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[107] Morris A. Adelman, *A&P: A Study in Price-Cost Behavior and Public Policy*. Harvard, 1959, Chapters I and II.
[108] Gerald Grinnell, "Trends in Grocery Retailing," *National Food Review,* January 1978, p. 17.
[109] *Id*.

b. The Antitrust Suit

The antitrust authorities' concern over the growth of food retailing chains and its ramifications for the continuation of the small, independent food store dates back at least to the 1930's. Adelman provides the details of the passage of the Robinson Patman Act in response to A&P's vertical integration and the government's 1939 decision to bring a case against A&P alleging violation of Sections 1 and 2 of the Sherman Act.[111]

These actions did not stem the growth of national supermarket chains. As a result, the government pressed a variety of other antitrust suits, ostensibly designed to prevent increases in concentration in grocery retailing. One of these was a Section 2 case filed against Safeway Stores for attempting to monopolize the retail food trade in certain parts of Texas and New Mexico.[112]

The DOJ complaint in this case is remarkable for its brevity. It did not allude to any evidence that Safeway had market power in the two regions singled out in the case – Safeway's Dallas and El Paso Divisions. The complaint simply asserted that Safeway had 150 stores in these two regions and that Safeway was the "dominant retailer of food and food products" there. The offenses alleged to constitute a violation of Section 2 of the Sherman Act were the fixing of market share "quotas" or goals for its managers in these regions and engaging in "price wars." Price wars were simply the pricing of various items below "invoice cost," selling some items at prices below the prices realized in other

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[110] Russell Parker, *Concentration, Integration, and Diversification in the Grocery Retailing Industry*, Federal Trade Commission, Washington D.C., March 1986, Tables 3-8 and 4-1.

[111] Adelman (1959), *supra* note 107. *United States v. Great Atlantic & Pacific Tea Company, et.al.*, 67 F. Supp. 626 (E.D. Ill. 1946).

[112] *United States v. Safeway Stores, Inc.*, Complaint, Civil Action No. 3173, (N.D. Tex. Nov. 1, 1955) at ¶ 14. The DOJ also filed a criminal case against Safeway, provoking two of its executives to plead nolo contendere and receiving suspended jail sentences (for price competition!). We believe this may be the first time the DOJ brought a criminal complaint in a Section 2 attempt to monopolize action. We are indebted to Mr. Bernat Rosner for background material on this case.

cities, and sustaining losses in some stores. Safeway's low price policy stemmed from its policy not to issue trading stamps. When important competitors began to use trading stamps to attract customers, Safeway elected to meet this marketing ploy by lowering retail prices, in so doing attracting the attention of the DOJ.

The case did not go to trial. Instead, it was settled by a consent decree in 1957 in which Safeway agreed not to sell items at unreasonably low prices or below those in its other stores "for the purpose of attempting to monopolize or monopolizing the sale of food or food products … or for the purpose or with the natural or probable effect of destroying competition or *eliminating a competitor*…"[113] (emphasis supplied) This decree applied not only to Safeway's operations in the two regions that were the focus of the complaint, but to the company's activities in the rest of the country. It was not terminated until November 30, 1983. For more than 25 years, Safeway operated under a decree that limited its ability to cut prices if such price cuts would result in the elimination of a competitor. As a result of the decree, Safeway became a follower of pricing initiatives by its rivals, rather than a first-mover.[114]

c. The Impact of the Decree

It is difficult to assess the impact of this decree on competition in grocery retailing, grocery chain margins, or the price of groceries to consumers because the decree did not apply to other grocery chains. Safeway's total sales in 1957 were $2 billion, or only about 5 percent of grocery store sales in the U.S.[115] Between 1948 and 1977, Safeway increased its position from the second largest national grocery chain to the largest, notwithstanding

[113] *United States v. Safeway Stores, Inc.*, Consent Decree, Civil Action No. 3173, (N.D. Tex. Dec. 7, 1957).

[114] "Local Autonomy Still Preferred by Safeway," Supermarket News, May 8, 1978, pp. 1, 36.

the decree.[116] On the other hand, other large grocery chains may have believed they too were on notice because of the decree to avoid aggressive price cutting to increase market share. One can only conjecture about such an effect.

As mentioned above, concentration in grocery retailing continued its slow, inexorable rise as large national chains and looser confederations of independent stores replaced the smaller retailers. The average size of grocery stores increased as supermarkets replaced smaller stores. Grocery chains continued to integrate backward into food processing and manufacturing.[117]

The growth of integrated national grocery chains was associated with an increase in the average gross margins of food chains between 1950 and 1965, which abated thereafter. [118] Much of this rise may have been a reflection of the increase in vertical integration over the period, because the after-tax return on stockholders' equity for food retailing companies fell steadily from 9.0 percent in the 1950's to 7.5 percent in 1972-76. The average return for other retailing companies rose from slightly less than 5 percent to 8 percent over the same period.[119] Thereafter, the average return on stockholders' equity rose in both categories.[120] The decline in grocery retailing profitability between 1950 and the early 1970's reflected the increase in competition among large national chains vying for market share. Safeway's growth may have been impeded by the restraints imposed on it by the decree, but apparently price competition was quite strong in food retailing despite the Safeway decree.

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[115] "Safeway, Inc." in *International Directory of Company Histories*., St. James Press, 1999, p. 417.

[116] Parker (1986), *supra* note 110, Table 6-1; Federal Trade Commission, Economic Report on the Structure and Competitive Behavior of Food Retailing (Jan. 1966), Appendix Table 14.

[117] *Id*., Tables 8-3 and 8-6.

[118] *Id*., Figure 2-1.

[119] *Id*., Table 2-8.

One reason the *Safeway* remedy did not measurably thwart price competition in the grocery industry more than it did is because the consent decree did not seem to reduce price competition and promotions on the part of Safeway's rivals. Faced by competitors who had adopted EDLP (everyday low price) strategies, or rivals who used rifle shot promotions on selected product lines, Safeway took the position it was permitted to match these low prices without running afoul of the decree. The conduct remedy in the *Safeway* case would have been unfortunate for consumers had it applied to Safeway *and* its major rivals.

Between 1958 and 1977, there was virtually no increase in the share of U.S. grocery sales accounted for by the 20 largest chains, but there was considerable volatility in the market shares of individual companies. This lack of increase has been attributed to aggressive antitrust policy particularly with respect to mergers. In 1958, the DOJ filed a Clayton Act suit against the merger of Shopping Bag Food Stores and Von's Grocery Company, grocery chains in Southern California with a combined 7.5 percent of the Los Angeles area grocery market. The DOJ succeeded in preventing this merger in part because the number of single-store groceries in the Los Angeles area had fallen from 5,365 to 3,818 between 1950 and 1961.[121] This approach to assessing the effect of mergers was upheld by the Supreme Court well into the 1970's.

Despite vigorous anti-merger policy, concentration in grocery retailing increased moderately throughout the 1960's and 1970's.[122] The share of grocery sales accounted for by small, single store companies declined, but the margin between retail grocery prices

[120] This is an accounting phenomenon during an inflationary period. The value of stockholders' equity is measured on a historical basis while net income reflects current price levels.

[121] *United States v. Von's Grocery Co.*, 384 U.S. 270 (1966).

and wholesale processed food prices did not change. The movement in the Consumer Price Index for "Food at Home" is virtually identical to the movement in the Producer Price Index for "Processed Foods" for the fifteen years following the entering of the Safeway decree, 1958-72 (Figure 7-1).[123]

Neither the announcement of the filing of the case nor the entering of the conduct remedy had a deleterious effect on the value of Safeway common equity shares. In the first month after the filing of the case, Safeway shares had a positive excess return of 8.7 percent. Even after six months, the cumulative excess return was 8.7 percent. The entering of the conduct remedy was greeted by a negative excess return on Safeway shares of 4.8 percent, but after six months the cumulative excess return was a positive 8.4 percent. The financial markets did not view the antitrust remedy as a threat to Safeway's future returns.

d. Conclusion

The Safeway case and numerous other antitrust cases in the 1940's and 1950's did not achieve their goal of reversing the decline in the role of the independent, single-store grocery company. Despite this failure, the profitability of grocery chains did not increase and retail food prices did not rise relative to wholesale prices. Indeed, when the Safeway conduct remedy was terminated in 1983, the DOJ essentially admitted that the case had been a mistake from the outset:

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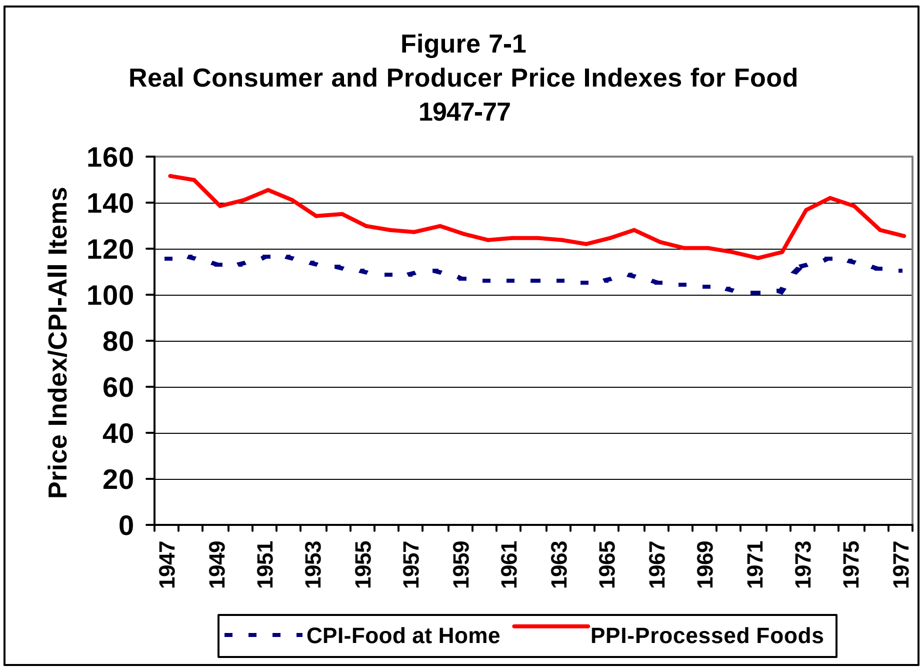
[122] Parker (1986) *supra* note 110, Figure 3-7. Average concentration in metropolitan areas increased even if the share of total grocery retailing accounted for by the largest 20 chains increased very little.

[123] The Consumer Price Index for Food at Home and the Producer Price Index for Processed Foods are deflated by the overall Consumer Price Index for urban workers to remove the effects of overall inflation from Figure 7-1.

"When this case was filed, the Department *apparently believed* that Safeway threatened to achieve monopoly power in the retail grocery business through predatory activity. The resulting Final Judgment enjoined a variety of business practices, some of which may be illegal, but others of which can be *legitimate and desirable methods of competition*." [124] (emphasis supplied)



Source: Bureau of Labor Statistics, *Consumer and Producer Price Indexes*.

8. The General Motors Bus Case

In the years following World War II, General Motors ("GM") enjoyed a prominent position in the sale of many types of motor vehicles, including transit and intercity buses. Its large share of domestic bus production attracted the attention of the

[124] Memorandum of the United States in Response to Motion of Safeway Stores, Inc., to Terminate the Final Judgment, *United States v. Safeway Stores, Inc.*, Civil Action No. 3173 (N.D. Tex. May 1983), Section II.

DOJ, which filed a Sherman Act case against GM in 1956, alleging that GM had monopolized the manufacture of intercity and transit buses.[125]

a. The Role of the Bus in the United States

There are three major types of buses, but only transit and intercity buses were included in the DOJ's Sherman Act suit against GM. These buses are of "integral construction," *i.e.*, the body and the chassis are constructed as one unit. School buses, which have a body-on-chassis construction, were excluded from the antitrust case.

Transit buses are designed for urban service at low speeds with frequent stops; they have lower floors for greater accessibility and wider aisles for greater passenger capacity. Intercity buses are designed for lengthy trips; they have high floors, narrow aisles, comfortable seats, luggage racks, and a toilet.

Transit and intercity buses are traditionally manufactured on an assembly line that produces about five units per eight-hour shift. These assembly lines may also produce other vehicles, such as motor homes. Given the small scale of production, many of the required components are purchased from independent suppliers or produced by a company's parts division for a variety of other vehicles, including trucks.

The demand for transit and intercity buses has varied greatly over time, responding to trends in bus ridership and public financing of transit systems. During the latter years of World War II, bus production declined substantially as production facilities were diverted to the war effort. (See Table 8-1.) After the war, production surged as transit systems sought to replace old transit buses that had depreciated during the war.

[125] *United States v. General Motors Corporation*, Civil Action No. 15816 (D.Mich. 1956).

Bus production rose to 12,000 units in 1947, a level that would not be achieved again in the next four decades.

Growth in the use of the personal automobile and an expansion of the nation's highway system in the 1950's placed substantial downward pressure on the demand for buses. In the four years immediately preceding the filing of the GM antitrust suit, transit bus deliveries barely averaged 2,000 per year, or less than 6 buses per day.

With the increase in oil prices in the 1970's, bus ridership increased, as did the demand for buses. In the 1970's, the Urban Mass Transportation Administration, which was established in 1965, provided an 80 percent subsidy for transit-system capital purchases. These federal grants increased the demand for buses significantly. Between 1965 and 1980, the average annual deliveries of transit buses increased by about 40 percent over their average in the 1950's.

Table 8-1
Number of Transit Buses Delivered by U.S.
Bus Manufacturers to Transit Authorities: 1940-91

Year	Buses Delivered	Year	Buses Delivered
1940	3,984	1966	3,100
1941	5,600	1967	2,500
1942	7,200	1968	2,228
1943	1,251	1969	2,230
1944	3,807	1970	1,442
1945	4,441	1971	2,514
1946	6,463	1972	2,904
1947	12,029	1973	3,200
1948	7,009	1974	4,818
1949	3,358	1975	5,261
1950	2,668	1976	4,745
1951	4,552	1977	2,437
1952	1,749	1978	3,805
1953	2,246	1979	3,440
1954	2,225	1980	4,572
1955	2,098	1981	4,059
1956	2,759	1982	2,962
1957	1,946	1983	4,081

1958	1,698	1984	3,894
1959	1,537	1985	3,367
1960	2,806	1986	3,379
1961	2,415	1987	4,224
1962	2,000	1988	3,548
1963	3,200	1989	4,960
1964	2,500	1990	4,779
1965	3,000	1991	4,722

Source: American Public Transit Association (APTA) Transit Fact Book, various years.

b. Competitors in Transit Bus Manufacture Before 1956

During the 1930's and 1940's, a large number of companies built buses, but there were five major manufacturers: GM, Fageol Twin Coach, Mack Trucks, A.C.F. Brill, and White Motor Co. About 6000 to 8000 transit buses were sold each year in the U.S. in the 1930's and early 1940's.[126] After the temporary spike in production in the late 1940's, annual bus sales fell precipitously, inducing a number of producers to close or sell their assets to competitors. A.C.F. Brill and White Motors exited the market in 1953. Fageol transferred its bus operations to Flxible. Mack Trucks decided to exit the market when GM introduced its "New Look" bus in 1959. As a result, by the mid-1950's, GM dominated the transit and intercity bus manufacturing market, accounting for 80 percent or more of sales.[127] GM and its only competitor, Flxible, were the sole producers of "New Look" transit buses throughout the 1960's.

c. The Antitrust Complaint

GM was charged with monopolizing the manufacture and sale of transit and intercity buses in a civil antitrust complaint filed by the DOJ in 1956. The complaint alleged that GM accounted for at least 65 percent of all buses delivered in the U. S.

[126] B. Weiers and M. Rossetti, Transit Bus Manufacturer Profiles, United States Department of Transportation, U. S. Department of Transportation, Urban Mass Transit Authority, March 1982, p. 3-1.

between 1952 and 1955. Moreover, it claimed that between 1925 and 1955 more than 20 manufacturers of buses had withdrawn from the manufacturing business, and no entry had occurred since 1946.

The complaint charged GM with:

- Pressuring other manufacturers to discontinue bus production;
- Acquiring the power to control bus operating companies and imposing requirements contracts on them;
- Inducing transit officials to issue bus specifications that favored GM;
- Having a GM officer serve on the board of a competitor;
- Refusing to sell parts, including diesel engines and automatic transmissions, to competitors;
- Acquiring exclusive rights to various technologies;
- Using its finance subsidiary to offer preferential rates to customers.[128]

The case never went to trial. GM and the government entered into a consent agreement in 1965.

d. The Remedy

The conduct remedy that settled the case contained four provisions ostensibly designed to reduce GM's market power in bus manufacture. GM was enjoined from:

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[127] *Id.*
[128] *See United States v. General Motors Corporation*, Civil Action No. 15816 (D.Mich. 1956).

- Allowing an individual owning a material share of any other bus manufacturer or bus operating company, or any officer or director of such companies, to serve as one of its officers or directors;
- Entering into exclusive supply contracts with any other bus manufacturer or bus operating company concerning bus parts or buses.

GM was required to:

- Grant royalty free licenses for patents that it had on the effective date of the decree and to license for a reasonable royalty any patents obtained during a ten-year period following the decree;
- Sell buses to any bus operator and sell bus engines or transmissions or any other parts to any bus manufacturer.[129]

The decree stipulated additional provisions in the event of certain market conditions between the second and tenth anniversaries of the consent decree. If bus deliveries exceeded their 1964-1965 levels substantially and no additional competitor had entered the market (or a competitor had exited and had not been replaced by another competitor), GM could be required to sell a physically separate U.S. plant that manufactured a substantial number of buses.

e. The Market for Transit Buses After the Decree

[129] *United States v. General Motors Corporation:* Consent Decree, C.C.H Trade Cases ¶71,624 (1965).

GM and Flxible accounted for the overwhelming share of bus sales for most of the 1960's. In 1965, GM accounted for 85 percent of transit bus shipments, and Flxble accounted for 15 percent.[130] Flxible had introduced a copy of the New Look GM bus in 1962 with a GM diesel engine and, as a result, was able to sell 1,000 buses between 1962 and 1965.

Bus ridership had declined in the 1950's as many people moved to the automobile as an alternative to public transportation. In the 1970's, there was a revival of the bus as commuters shifted to public transportation in response to the rising price of gasoline. The increase in bus ridership inevitably increased the demand for buses. (See Table 8-2.)

Since 1970, the demand for new transit buses has been driven primarily by Federal appropriations, because most new transit buses sold are purchased with UMTA grants.[131] As a result of the surge in federal subsidies that followed the first OPEC oil shock, shown in Table 8-3, transit bus deliveries increased from 1,442 in 1970 to 5,261 in 1975. (See Table 8-1.) They then receded to less than 2,500 in 1977 before rising again after the second OPEC oil shock (Table 8-1.) Thereafter, shipments fell again until the late 1980's. This erratic pattern in market demand growth was uncongenial for attracting new entrants into the market.

Table 8-2
Total Bus Passenger Rides per Year

Year	Total Passengers (Millions)	Year	Total Passengers (Millions)
1940	13,098	1978	7,935
1945	23,254	1979	8,461
1950	17,246	1980	8,567
1955	11,529	1981	8,284

[130] "GM Bus Suit Settled," *Business Week*, December 4, 1965.
[131] B. Weiers and M. Rossetti, *Entry and Competition in the United States Transit Bus Manufacturing Industry*, United States Department of Transportation, July 1982, p. 1-2.

1960	9,395	1982	8,052
1965	8,253	1983	8,203
1970	7,332	1984	8,829
1971	6,847	1985	8,636
1972	6,567	1986	8,777
1973	6,660	1987	8,735
1974	6,935	1988	8,666
1975	7,284	1989	8,931
1976	7,393	1990	8,799
1977	7,603	1991	8,575

Source: APTA Transit Fact Book, various years.

Table 8-3
Federal Transit Agency Appropriations

Fiscal Year	**Total Appropriations ($000)**	**Fiscal Year**	**Total Appropriations ($000)**
1964	8,000	1978	3,027,760
1965	65,300	1979	3,439,114
1966	135,455	1980	3,703,259
1967	130,735	1981	4,411,572
1968	125,690	1982	3,532,238
1969	175,000	1983	4,477,807
1970	176,600	1984	4,243,192
1971	600,000	1985	4,131,500
1972	900,000	1986	3,564,251
1973	1,000,000	1987	3,452,020
1974	1,010,650	1988	3,215,052
1975	1,803,330	1989	3,154,882
1976	2,360,000	1990	3,046,799
1977	2,642,072	1991	3,269,683

Source: Federal Transit Administration, http://www.fta.dot.gov/library/reference/statsum96/table_b.html.

1. Entry by AM General

The heightened federal commitment to public transportation encouraged AM General (AMG), a subsidiary of the American Motors Corporation, to enter the bus manufacturing industry in 1971. AMG built vehicles for the government (military and postal vehicles) and thus had experience with the government procurement process. In

1971, AMG bought a transit bus design from a Canadian manufacturer called Flyer Industries.[132] AMG redesigned the Canadian bus and named it "Metropolitan."[133] Under the conditions of the decree, GM provided its Allison transmissions and Detroit Diesel supplied the bus engines.[134] Actual production began in 1974.

The three manufacturers, AM General, Flxible, and GM had roughly equal market shares in the 1974-1975 period. GM had lost market share, but its total shipments were virtually identical to its 1952-55 output.[135] Within a span of five years, GM had gone from being the market leader to an equal player in a much larger market comprised of three companies. AMG's entry, however, was to prove short lived.

Under a program called Transbus, the Urban Mass Transit Administration signed contracts with all three bus manufacturers to develop prototypes for a new bus design based on a study by the National Academy of Engineering. The Transbus design was supposed to replace the New Look design that had been used since the 1960's. All three manufacturers built prototypes, but each declined to produce the Transbus for business and technical reasons.[136]

In the meantime, both GM and Flxible produced a new bus design, called the Advanced Design Bus ("ADB"), which embodied a substantial amount of the research and development that went into the Transbus prototype. In 1976, UMTA abandoned the Transbus concept and endorsed the ADB. Transit authorities could now order ADB buses, which both GM and Flxble were ready to produce in 1976.

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[132] Weiers and Rossetti (March 1982), *supra* note 126, p. 4-51.
[133] *AM General*, Ohio Museum of Transportation, (Oct. 31, 2001), available at http://otot.org/roster/buses/amg.html.
[134] Larry Neal, "AMC's Got the Right Thing at the Right Time – Again," *Iron Age* (Feb. 25, 1974), p. 24.
[135] Weiers and Rossetti (March 1982), *supra* note 126, p. 3-8.
[136] *Id*., p. 3-11.

AMG had bought its initial bus design from Flyer Industries of Canada, purchased its engines from Detroit Diesel, and purchased its transmissions from GM. However, the consent decree only required GM to license bus designs that were patented within ten years of the decree, a requirement that expired in 1975. Having patented the Advanced Design bus in 1976, GM did not have to license this design to AMG. AMG had not developed a working model by that time, resulting in its loss of federal contracts.[137] Lacking its own design, AMG decided to exit the market instead of developing an ADB bus of its own.[138]

Flxible, on the other hand, developed its own version of the ADB and proceeded with actual production in 1978.[139] GM re-emerged as the leader in the domestic bus manufacturing industry, capturing more than half of domestic sales by 1980.[140] Other than Flxible and GMC, the only other suppliers were GM of Canada and Flyer Industries, a small manufacturer in Winnipeg, Canada. Thus, 15 years after the conduct remedy was launched, the structure of the industry was little changed.

The reason for the failure of competition to develop over the 1965-80 period is clear. The minimum efficient scale in producing transit buses was a large fraction of the total U.S. market. As a 1982 UMTA study reported, GM and Flxible had production capacity of about 9,000 buses per year, but orders for only about 4,000. At this scale, the two dominant manufacturers both could not operate efficiently. Indeed, the 1982 report concedes that "Neither GMC nor Flxible has prospered since 1978."[141] Yet total deliveries in 1978-82 were much greater than in 1956-65 when the DOJ was pressing its

[137] "Transbus Concept is Abandoned," *Automat*, (Aug. 2, 1976), p. 3.
[138] Weiers and Rossetti (March 1982), *supra* note 126, p. 3-11.
[139] *Id.*
[140] Weiers and Rossetti (July 1982), *supra* note 131, Table 1-1.

Section 2 case against GM. An attempt to force additional competition among multiple firms into such a small market with large economies of scale proved to be futile.

There was no further entry into the bus manufacturing industry until 1980-81, or 15 years after the date of the GM decree. Gillig, a California school-bus builder, announced a standard size transit bus. Crown Coach, a Los Angeles intercity and school-bus builder, announced that it would produce an articulated transit bus following a design by Ikarus of Hungary. Neoplan and M.A.N., West German firms, both announced plans to build production facilities in the U.S. to produce transit buses. This entry was unrelated to the 1965 decree.

2. Intercity Buses

The consent decree applied equally to both transit and intercity buses. Although there was no immediate entry into the manufacture of transit buses in response to the decree (AMG did not enter until 1971-72), the intercity bus industry was already undergoing major change at the time of the decree.[142] The two major intercity carriers, Greyhound and Trailways, began to integrate vertically into intercity bus manufacturing after 1965. Greyhound, which had purchased its buses from GM, started purchasing buses from Motor Coach Industries, a subsidiary of Greyhound. Greyhound bought its last GM bus in 1967. Greyhound eventually began producing buses in the United States, both for itself and for non-Greyhound customers. The Roswell plant, which produces most of the buses used by Greyhound itself, opened in 1974. Trailways, which had been importing buses from Europe, also established a manufacturing plant in 1974.[143]

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[141] *Id*., p. 1-18.
[142] Weiers and Rossetti (March 1982), *supra* note 126, p. 3-6.
[143] *Id*.

GM was barred by the decree from entering into long-term exclusive contracts with Greyhound, thereby depriving it of the assured benefits of scale necessary for efficient operation. GM therefore exited from intercity bus manufacturing in 1979. Flxible had abandoned intercity bus manufacturing a decade earlier.

3. The Effects of the Decree on Prices

The 1965 consent decree had very little effect on the supply of buses, which was (and still is) largely driven by federal funding decisions. The decree assisted the entry of AMG in 1971-72 because of its provision requiring GM to sell components, such as diesel engines and transmissions, to its rivals. On the other hand, there were numerous suppliers of the components required for large vehicles in the 1960's. Therefore, AMG may not have required GM's engines or transmissions. In a few years, however, AMG was gone and U.S. bus manufacturing returned to *status quo ante*.

If the decree had any substantial effect on bus output and prices, this effect should be visible in the average prices of buses. The entry of AMG and the temporary increase in the number of rivals might be expected to push prices downward. Figure 8-1 shows the real wholesale price of buses and the real wholesale price of trucks over the entire period of 1947 to 1978.[144] Despite the consent decree and the subsequent entry of AMG into the domestic bus manufacturing industry, the real price of buses follows the same trend as the real price of trucks, which were not the subject of antitrust action.

There is no evident response of bus prices to the filing of the suit in 1956, the entering of the decree in 1965, or the entry of AMG after 1972. The decline in the real price of buses after 1971 is virtually identical to the decline in the price of trucks, but

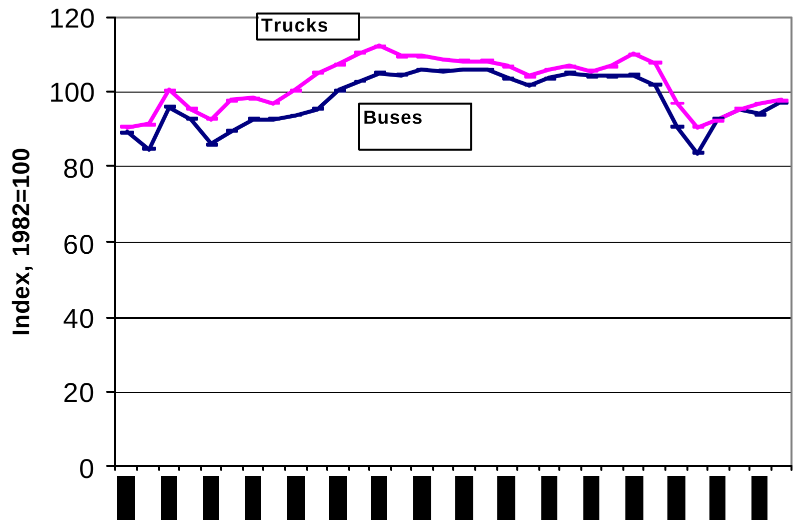
AMG did not enter as a truck producer. The obvious explanation for the decline in both price series from 1972 through 1974 was federal price controls. The easing of these controls in 1975 generated a rebound in both price series.

e. Conclusion

The manufacture of buses has been a small business in the United States for most of the post-World War II period. In the late 1950's and early 1960's, the number of bus manufacturers declined because of the sharp drop in the demand for transit buses. In this environment, the DOJ sought to find other explanations for GM's dominant position in bus manufacturing, bringing a Section 2 Sherman Act case that focused on GM's various business practices. The conduct remedy that settled the case required GM to change its marketing practices and to sell components to competitors. It did not require divestiture because GM's bus manufacturing did not even fully exhaust the capacity of one plant.

Figure 8-1
Real Wholesale Price of Buses and Trucks: 1947-78
Source: Bureau of Labor Statistics, *Producer Price Index.*

[144] The two series in Table 1 are the Producer Price Indexes of "motor coaches and buses" and "motor trucks and truck tractors," respectively, deflated by the overall Producer Price Index. The data are generally not available for years after 1978.



For seven years after the consent decree, no new competitor entered the U.S. transit bus manufacturing industry, in large part because the market was static and small. As the demand for public transit increased in the 1970's in response to rising oil prices and as federal funding for vehicle procurement surged, the demand for new transit buses increased. This increase in demand induced AMG to enter, a decision that may have been facilitated by the GM decree. However, AMG was only able to survive in the bus manufacturing industry from 1974 to 1978, and it did not have a measurable nor lasting impact on the intensity of competition as indicated by the movements in wholesale bus and truck prices.

By 1980, the two leading U.S. transit bus producers had a total capacity of 9,000 buses per year, far exceeding the demand for transit buses, which had receded to less than 3,500 buses per year. Thus, fifteen years after the decree was entered, there were still only two major U.S. transit bus suppliers, neither of which prospered because of limited demand for their output. The consent decree may have facilitated the unsustainable entry of AMG, but when AMG had to develop its own new bus model, it chose to exit. At best, therefore, the decree created a parasite that could not compete with GM and Flxible when it was required to provide an innovative product design. As a result, the decree did not increase competition or have a measurable effect on the price of transit buses. It was largely irrelevant.

9. The Jerrold Electronics Case

Cable antenna television (CATV) systems have their origins in small-scale attempts to transmit off-air television signals through wires to areas of limited or no off-air reception. Credit for the first CATV system is generally given to L.E. Parsons, who in 1947 set up a very limited operation in Astoria, Oregon. Soon, similar operations were flowering in a number of cities in Pennsylvania and Arkansas.[145] These early operations were simply engaged in the retransmission of local television signals. They did not originate or license programming as the multi-channel cable companies do today.

Jerrold Electronics was a pioneer in developing the technology of such systems and was responsible for building a large share of the early cable systems. It claimed to have built 80 percent of all systems by 1954. Jerrold not only built most of the early systems, but it required that its customers purchase all of the central electronic components, the subsequent maintenance of these systems, and even secure much of their financing from Jerrold. By engaging in such extensive "full-line forcing," Jerrold invited the interest of the antitrust authorities.

a. The Antitrust Suit

[145] Archer S. Taylor, *History Between Their Ears: Recollections of Pioneer CATV Engineers*. Denver: The Cable Center, 2000, pp. 10-17.

In 1957, the DOJ filed suit against Jerrold, alleging that its contracts with cable systems violated Sections 1 and 2 of the Sherman Act and Section 3 of the Clayton Act.[146] The complaint focused in particular on the following Jerrold practices:

- Tying Jerrold equipment to the construction or future upgrade of a system;
- Requiring that the system purchase a maintenance contract from Jerrold;
- Purchasing CATV systems so as to lessen competition;
- Threatening to enter the market as a CATV operator if an existing operator did not purchase Jerrold equipment.

In some respects, the case was a standard tying case, but it went much further. It alleged that Jerrold's forward vertical integration into cable system operation was used as a threat to other cable companies. If its actual or potential customers did not plan to use Jerrold's equipment or demand that their systems be built with its equipment, Jerrold might choose to enter the CATV operators' markets and compete with them. These practices were viewed by the DOJ as anti-competitive.

The case went to trial, and in 1960 Jerrold was found to have violated Sections 1 and 2 of the Sherman Act and Section 3 of the Clayton Act in requiring customers to purchase the full systems from Jerrold.[147] The court held that although such a policy might have been defensible in the earliest days of CATV system construction because of technological uncertainty at that time, it was no longer reasonable given the maturing of the technology and the availability of substitutes for the tied products.

[146] *United States v. Jerrold Electronics Corp, et.al.*, Complaint, Civil Action No. 22080 (E.D. Pa., Feb. 15, 1957).

b. The Decree

The trial court approved a conduct remedy in its 1960 decision that required the following of Jerrold:

- Limitations on Contracts -- Because there was no justification for Jerrold's imposition of full-equipment and compulsory service contracts beyond its pioneering product introduction, nor for requiring use of only Jerrold equipment in later channel capacity upgrades, Jerrold was required to terminate or cancel these provisions and refrain from unlawfully conditioning future sales on the ancillary purchase of either equipment or services.[148]

- CATV System Acquisitions -- Lacking sufficient evidence that any substantial lessening of competition had already resulted so as to warrant divestiture of Jerrold's existing CATV system holdings, the Court nevertheless enjoined Jerrold's future acquisitions for two years.[149]

- Vertical Entry Threats -- The Court found that Jerrold's threats to enter as a vertically integrated competitor when franchisees refused to purchase Jerrold equipment, and the actual installation of such systems, constituted attempted monopolization in violation of Section 2 of the Sherman Act, and Jerrold was

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[147] *United States v. Jerrold Electronics Corp*., 187 F. Supp. 545 (E.D. Pa 1960)

[148] *United States v. Jerrold Electronics Corp*., 187 F. Supp. at 552-561, 571 (Conclusion of Law No. 3), 574-575 (Decree,¶ IV and V).

[149] *Id*. at 572 (Conclusion of Law No. 10), at 575 (Decree ¶ VI).

enjoined to refrain from such coercive behavior or other threats of economic reprisal.[150]

c. The Effects of the Decree

The trial court admitted that some of Jerrold's tying arrangements for service and equipment were legitimate business practices in the early years of CATV, perhaps up to 1954, because of the novelty of the service and the instability of Jerrold's equipment. Jerrold needed to be sure that these new systems operated satisfactorily or it would have difficulty attracting additional sales. Inferior service by independent service providers or by Jerrold's customers could cause a "false attribution" problem for Jerrold.

After mid-1954, however, Jerrold began offering different service contracts on an area-by-area basis. Jerrold continued to tie other electronic equipment to the sale of its principal product, the "head-end" equipment. The trial court found that these tying arrangements had become unreasonable at some point after 1954 but before 1960, when the court's opinion was issued. Therefore, it outlawed any further tying arrangements in Jerrold's contracts.

To determine the effect of the decree on the CATV market and, therefore, on consumers, one would ideally wish to determine if the decree enabled cable operators to build and operate their systems at lower cost. If the decree had such an effect, it would increase consumer welfare by increasing the rate at which new systems were built after 1960, by reducing the marginal cost of serving subscribers and therefore the prices charged to consumers, or both.

[150] *Id*. at 572 (Conclusion of Law No. 13), at 575 (Decree ¶ VII).

One indication that the decree lowered the cost of building and operating cable systems might be found in the acceleration of cable television plant investment after 1960. However, there are no published data on capital expenditures in cable television in the period surrounding the *Jerrold* case. Nor are there measures of the technical improvements that might have been unleashed as cable systems were freed from their alleged ties to Jerrold. There is only anecdotal evidence about the various companies who were vying to develop the technology for cable television in the 1950's and 1960's, and there is no record that the antitrust suit played a role.

In an oral history of the engineers who participated in the industry in this period, Archer Taylor, one of the industry pioneers, reviews the developments at Jerrold and seven of its major competitors.[151] This extensive account of the rival technologies rarely mentions the antitrust suit, even when discussing the product developments and market successes or failures of Jerrold's competitors. Had CATV operators been chafing to free themselves from Jerrold's restrictive contracts in the 1950's, one would expect the industry pioneers to mention their good fortune as their customers were freed to buy their products and services.

Nor is there is evidence in the growth of cable television that *Jerrold* led to a surge in subscribers as cable operators accelerated their investment plans and/or reduced their rates in the post-1960 environment. Figure 9-1 shows a remarkably stable long-run growth trend in cable subscribers. (The vertical axis is scaled in logarithms to reflect growth rates.) There is no acceleration in growth between 1960 and 1964, a slight acceleration in 1964-67, but then a slowing of growth for a few years thereafter, probably

[151] Taylor (2000), *supra* note 145.

in response to the FCC's 1966 regulations that limited cable television's ability to offer new services.

Finally, there is no evidence of a sudden downward shift in the trajectory of cable system subscriber rates. Figure 9-2 shows the Bureau of Economic Analysis's Personal Consumption Expenditures (PCE) chain-type price deflator for cable television relative to the PCE chain-type price deflator for all consumer expenditures.[152] Between 1960 and 1965, this real price index rose at an annual rate of about 1.2 percent per year. Cable rates continued to rise in real terms through 1971, but then began to decline through 1983. This decline may have been triggered by the fact that cable television systems were blocked by the FCC in their attempt to expand their service offerings to subscribers throughout the 1970's. Whatever the cause, the turnaround in rates could not have been due to the conduct remedy in *Jerrold*, because the decree took effect more than a decade earlier.[153]

It is possible that the decree's provisions limiting Jerrold's activities in purchasing cable systems or entering the bidding for new franchises could have contributed to a decline in competition and, therefore, higher subscriber rates in the 1960's. Unfortunately, we have no data on franchise bidding from this early period with which we could test such a hypothesis.

a. Conclusion

In summary, there is no evidence from the period following the Final Judgment in *Jerrold* suggesting that the injunctive relief that the government obtained had a favorable effect on the cable-television industry or its subscribers. Cable television was in its

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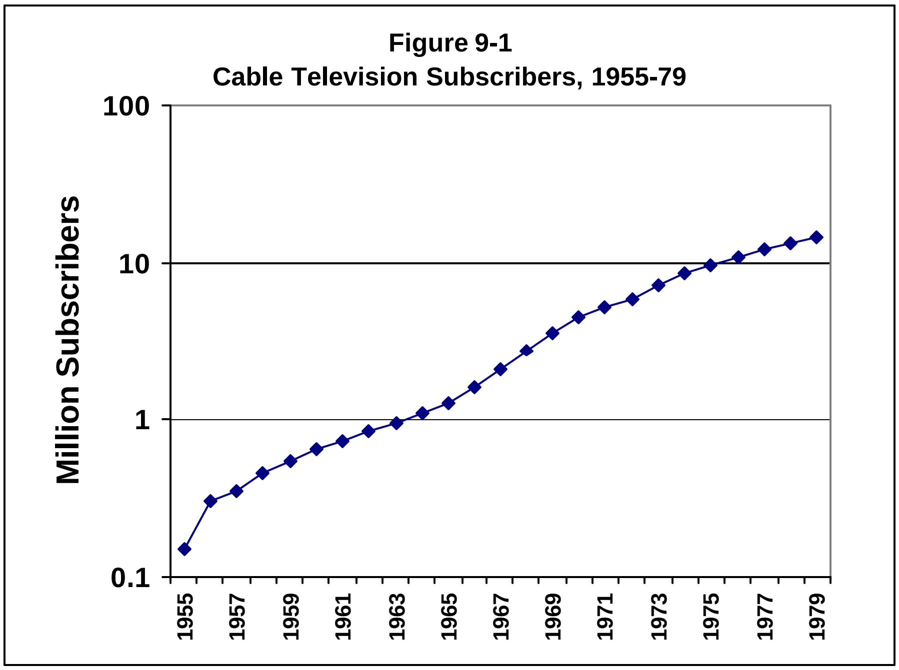
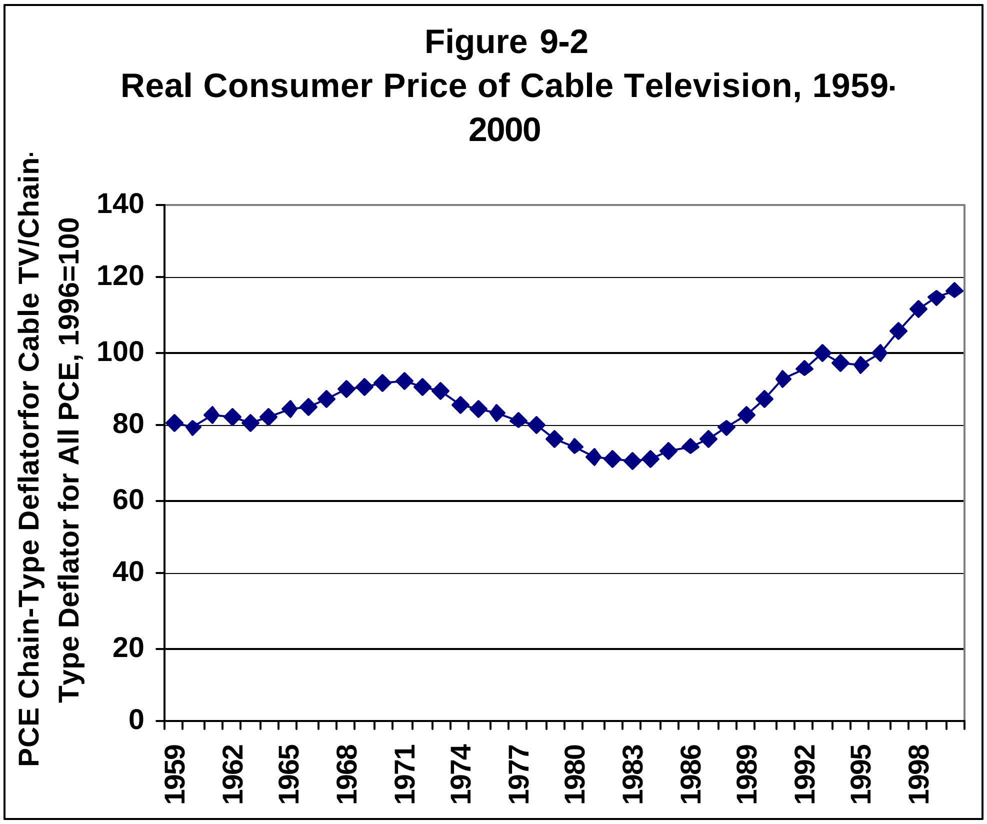
[152] There is no Consumer Price Index for Cable Television for this period.

[153] Unfortunately, there are no consumer price data for cable television prior to 1959, making any further empirical analysis of the effects of *Jerrold* on cable rates impossible.

infancy when the case was first brought, and it was far from maturity when the decree was entered in 1960.The decree did not unleash a wave of new investment or innovation that expanded service and/or reduced consumer rates.





Source: U.S. Department of Commerce, Bureau of Economic Analysis.

If the conduct remedy had some salutary effects for Jerrold's rivals, these effects were not revealed in the recollections of the engineers that worked for these companies. Consumer cable TV rates did not begin to decline in real terms until 1971, more than a decade after the decree. On the other hand, the decree largely eliminated Jerrold as an entrant into the CATV business itself. This entry barrier could have reduced the competition for franchises or existing cable systems in the early 1960's, but we are unable to test for such an effect because we have no data on cable franchise bidding or acquisitions from this distant period. However, the data on cable subscriber prices and subscriber growth certainly do not suggest that the *Jerrold* case had a favorable effect on cable subscriber prices or subscriber growth.

10. Blue Chip Stamps

Blue Chip Stamps was formed in 1956 in California by Safeway and other leading grocery chains and one pharmacy chain. Blue Chip was organized to compete defensively with existing stamp plans – notably S&H Stamps.[154] According to one of the company's founders, Blue Chip Stamp was formed "largely to combat the edge Sperry & Hutchinson Co.'s franchised S&H Green Stamps gave competitor chains."[155]

a. Trading Stamps – A Marketing Tool

American manufacturers and retailers have used premiums as a promotional device to attract and retain customer patronage since at least the mid-nineteenth century. The earliest record of trading stamps in the U.S. dates back to 1891, when Schuster's Department Store of Milwaukee, Wisconsin, introduced the Blue Trading Stamp System. Gummed stamps substituted for the coupons commonly used by manufacturers and retailers since the middle of the nineteenth century.[156] Customers could paste these stamps in books that could be redeemed for merchandise.

In 1896 Thomas Sperry, a salesman, developed the concept of a trading stamp company as an independent business and Sperry and Shelley Hutchison, a businessman, founded the Sperry and Hutchison Company ("S&H"), which marketed premium catalogs and stamp books to merchants and provided merchandise for customers who redeemed the filled books at "premium parlors" or redemption centers. S&H became the

[154] Note, Trading Stamps, *New York University Law Review*, 37:1090, 1101 at f. 55 (1962).

[155] "Blue Chip Stamp, Agency Agree on Splitting Firm Into 2 Companies in 1969," *Wall Street Journal*, July 22, 1966, p. 22, col. 2.

[156] Federal Trade Commission, *Economic Report on the Use and Economic Significance of Trading Stamps.* 1966, pp. 1-2.

dominant stamp plan nationally, but it inspired perhaps 200-500 imitators, most of them regional.[157]

The stamp novelty faded with the outbreak of World War I and retailers' use of trading stamps dropped to about two percent of retail trade.[158] During the 1920's, when prices were stable, merchants' use of trading stamps remained at only 2-3 percent of total retail trade. During the Depression, when prices were declining and states began passing fair-trade laws to deter retailers from cutting prices, the number of retailers offering trading stamps dropped substantially.

The robust post-war economy of the 1950's and suburban population growth revived the popularity of trading stamps. Retailers of all kinds, including dry cleaners, movie theaters and feed mills, offered stamps to their customers. According to Haring and Yoder, grocery stores, gasoline stations, and pharmacies were the initial outlets for trading stamp companies, but food supermarkets were by far the principal users and "an outstanding factor in creating stamp popularity."[159] Between 1950 and 1963 the total of trading stamps purchased grew 25-fold.[160] Some supermarket chains, including A&P, began to establish their own trading stamp subsidiaries.

b. The Growth of Blue Chip

The retailers who used Blue Chip stamps included the largest pharmacy chain in California, Thrifty Drug Stores, and eight grocery chains, with 1962 sales constituting 30

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[157] Jeff R. Lonto, "The Trading Stamp Story," posted at http://www.berkshireblues.com/stamps.htm.

[158] Federal Trade Commission, *supra* note 156, p. 2.

[159] Albert Haring and Wallace E. Yoder, eds., *Trading Stamp Practice and Pricing Policy*, Indiana Business Report No. 27, School of Business, Indiana University, 1958, p. ix, 3, 12; Federal Trade Commission, supra note 154, pp. 12-13.

[160] "S&H Green Stamps Try For a New Life on the Internet," *St. Petersburg Times*, Mar. 20, 2000, p. 2.

percent of all grocery store sales in the state.[161] The Blue Chip Stamp, essentially a carbon copy of S&H, was launched in the San Francisco Bay area in the mid-1950's.[162] It then entered the Los Angeles area – where S&H had been well established for some time. The entry of Blue Chip Stamps in January 1960 was the first time in local food retailing history that all the major food chains (including independents such as Von's, Ralph's, Market Basket and others, that together owned four hundred area supermarkets) collaborated to support a new stamp plan.[163]

Since stamps were not sold but offered as "premiums" with the sale of groceries, drug store items, and gasoline, they were essentially a promotional device, similar to the coupons used by retailers today or frequent-flyer programs used by airlines. The decision by the retailers who founded Blue Chip Stamps to use them exclusively and to deny them to their competitors could only be anticompetitive if this decision led to these companies amassing market power in groceries, drug store items, or retail gasoline.[164]

c. The Antitrust Case

In 1963 the DOJ filed a civil antitrust action alleging that Blue Chip and nine retailers who owned 90 percent of its shares had: (1) engaged since 1955 in a conspiracy in restraint of trade, and (2) monopolized the trading stamp business in California in violation of Sections 1 and 2 of the Sherman Act.[165] The complaint charged, among other things, that the defendant retailers organized Blue Chip Stamp Company and agreed: (1)

[161] The grocery chains were: Alexander's Markets, Lucky Stores Inc., Market Basket, Purity Stores Inc., Ralph's Grocery Co., Safeway Stores Inc., Thriftimart Inc., and Von's Grocery Co.

[162] "Blue Chip bucks S&H in Los Angeles stamp clash," *Printers' Ink*, February 5, 1960.

[163] *Id.*

[164] Blue Chip apparently was willing to market stamps to retailers who were not in head-to-head competition with Blue Chip's founders.

[165] *United States v. Blue Chip Stamp Company, et.al.*, Complaint, Civil Action No. 63-1552S (S.D. Cal. 1963) at ¶ 29.

to refrain from the use of any other trading stamp except by agreement of the group; (2) that Blue Chip stamps would be sold and distributed at or about cost so as to stop other stamp companies from effectively competing with Blue Chip; and (3) that Blue Chip stamps would be issued only in those areas of California agreed to by the group. The complaint sought an injunction against continuation of the alleged activities and asked that the defendant retailers be enjoined from using Blue Chip stamps.

The government and defendants engaged in negotiations for several years to settle this case. Three separate consent decrees were eventually proposed and filed with the District Court. The DOJ withdrew its consent to the first judgment and the judge declined to approve the second. Finally the litigation was settled in 1967 when the court signed a decree filed by the parties, stating that it was "designed to limit the powers of Blue Chip and to open up and increase competition in the stamp industry in California, while at the same time preserving the legitimate interests of the users of Blue Chip stamps" and characterizing the reorganization of Blue Chip as the "most practical way to increase competition."[166]

The decree itself did not provide a plan for reorganizing Blue Chip, but merely directed the parties to the consent decree to present such a plan to the court. Under the terms the court approved, the nine chains who jointly established Blue Chip were allowed, if they wished, to retain 45 percent of the company's stock. Retailers who were Blue Chip customers were permitted to purchase another 45 percent, and Blue Chip's management was allowed to buy the remaining 10 percent. The reorganized Blue Chip was required to offer 55 percent of its shares of common stock and debentures, on a pro

[166] *United States v. Blue Chip Stamp Co.*, 272 F.Supp. 432, 440 (C.D. Cal.), aff'd sub. nom *Thrifty Shoppers Scrip Co.* v. U.S., 389 U.S. 580 (1968)

rata basis (determined by the quantity of stamps issued to each of these non-shareholding users during a designated period), to retailers who had used the stamp service in the past but who were not shareholders in the old company.

The remedy also prohibited the present and future Blue Chip companies from refusing service to a retailer because another retailer in the same locality already carried Blue Chip stamps or because the retailer was already using another brand of trading stamps. The company was also barred from refusing service because of the rate at which a retailer chose to dispense Blue Chip stamps.

d. Effect of the Decree

Trading stamps began to decline in popularity at the same time as the decree was entered. They suffered their first decline in thirteen years in 1967.[167] Supermarkets started to experiment with alternative means of securing consumer patronage, notably by simply advertising lower prices. Companies such as S&H and Gold Bond began to diversify into other businesses, while new discount stores such as Target and Kmart began transforming the retail landscape, competing directly with the stamp industry by aiming price-cutting efforts at the most popular redemption center items and offering in-store grocery departments without stamps.

The decline in stamp use is shown in the data on total volume and percentage of supermarkets using them after 1965. (Table 10-1) By the mid 1970's, coupons had surpassed trading stamps as a promotional device for retailers.[168] Even at their zenith, however, the value of trading stamps was never more than a small part of retail sales. In

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[167] Lonto, *supra* note 157.

[168] Anthony E. Gallo and William T. Boehm, "The Use of Trading Stamps in Food Stores," *Consumer Research*, September 1978, p.35.

nominal dollars, the volume of trading stamps was $821 million in 1969. Total grocery store sales in 1967 were $65.1 billion in 1967 and $93.3 billion in 1972.[169] The share of Blue Chip Stamps' total volume accounted for by grocery stores was about 60 percent. If this share was representative of the entire trading stamp business, the total value of stamps issued by grocery stores in 1969 would have been $492 million, equal to $7.80 per household per year and about 0.07 percent of food store sales. Such a small share of the retail food bill could not have had much effect on the structure of food retailing.

Table 10-1
The Decline in the Use of Trading Stamps, 1955-75

Year	Total Trading Stamp Volume in Constant Dollars (millions)	Percentage of Supermarkets Using Stamps
1955	264	15.0
1960	568	58.0
1965	792	63.0
1970	665	47.5
1975	164	15.0

Source: Anthon E. Gallo and William T. Boehm (1978), p.37.

On the other hand, $492 million of costs would attract the attention of food retailers. Trading stamps cost some retailers as much as 2 to 4 percent of sales before Blue Chip entered. Blue Chip's cost to its retailer members was only 1.4 percent and it still operated profitably.[170] This would appear to explain Blue Chip's rapid rise in California.

There is no reason to analyze Blue Chip's alleged monopoly in trading stamps issued in California. There was none. The retailers who formed Blue Chip did so to develop their own promotional program at a lower cost than those offered by the existing

[169] Parker (1986), *supra* note 110, p. 19, Table 2-2.
[170] "Safe on Its Own Turf," *Forbes*, July 15, 1968, p. 46.

vendors, such as S&H. The important question is whether the exclusionary nature of the Blue Chip fraternity, much the same as that now found in airlines' own frequent-flyer programs today, allowed its nine major participants to obtain market power in food retailing in California, Southern California, or even the Los Angeles area.

Even the facts stated by the government in its complaint belie the possibility that the defendants, Blue Chip Stamps and its nine major participant-owners, could have used these stamps to obtain market power in a retail market. Of the nine major participants, eight owned chains of grocery stores. These companies' combined market share of grocery store sales was 51 percent in Los Angeles area and 30 percent throughout California.[171] Even if these companies refused to allow other grocery chains to offer their stamps, they still faced substantial competition among themselves. Moreover, they accounted for little more than half of all sales in the DOJ's narrowest alleged relevant geographical market.

The drug-store chain, Thrifty, accounted for only 22 percent of sales by "pharmacies" in the Los Angeles area.[172] Even if other drug stores had been denied access to Blue Chip Stamps, Thrifty's rivals still accounted for more than three-fourths of "pharmacy" sales six years after the founding of Blue Chip.

An analysis of the development of competition in food retailing appears elsewhere in this paper.[173] If the Blue Chip Stamp decree had any substantial effect on competition in retailing, it should be evident in changes in grocery-store concentration and/or the margins realized by food stores in California relative to the rest of the country

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[171] Complaint, *supra* note 165, ¶ 7.
[172] *Id*., ¶ 8.
[173] See the analysis of the *Safeway Stores* case.

before and after 1967. Unfortunately, we do not have data on grocery store margins by geographical market.

As Table 10-2 shows, concentration in grocery retailing in California metropolitan areas in 1963 was actually lower than the national average. In Los Angeles,

Table 10-2
Four-Firm and Eight-Firm Concentration Ratios for Grocery Retail Stores
United States and Major California SMSA's
(Percent)

Four-Firm Concentration:	1954	1958	1963	1967	1972	1977	Percentage Growth 1963-77
United States Average	45.4	49.3	50.0	50.9	52.4	56.3	12.6
Anaheim	39.6	47.1	43.2	38.6	44.1	47.6	10.2
Los Angeles	29.6	24.6	30.3	28.5	35.6	38.3	26.4
Sacramento	45.1	44.5	36.3	40.1	48.5	44.8	23.4
San Diego	41.1	40.6	52.5	51.0	55.2	64.9	23.6
San Francisco	27.1	28.6	33.0	40.4	46.9	49.4	49.6
San Jose	28.4	30.7	33.9	37.8	46.0	47.9	41.2
Eight-Firm Concentration:							
United States Average	54.4	59.9	62.0	64.8	67.3	71.0	14.5
Anaheim	54.1	63.0	61.8	58.8	67.3	73.6	19.1
Los Angeles	40.6	39.6	43.1	46.3	53.8	60.2	40.0
Sacramento	60.6	51.3	47.4	58.4	66.0	64.1	35.2
San Diego	49.0	50.5	64.0	67.7	75.1	79.8	24.7
San Francisco	33.5	35.3	42.9	49.3	56.3	59.1	37.8
San Jose	37.3	40.4	43.7	49.6	60.3	65.8	50.6

Source: Russell C. Parker, *Concentration, Integration and Diversification in the Grocery Retailing Industry*. Federal Trade Commission, Washington, Figure 3-7 and Appendix Tables B-3 and B-4.

a major focus of the case, grocery retailing was particularly unconcentrated. After the filing of the case, however, the growth in concentration in grocery-store sales in California is substantially greater than the national average. The four-firm and eight-firm concentration ratios increased by 13 to15 percent nationwide, but the growth in concentration in California was generally much greater, generally in the 23-50 percent range. Had the lack of access to Blue Chip Stamps reduced competition prior to 1967, the decree might have increased competition thereafter, as a consequence reducing the growth in concentration after 1967. It clearly had no such effect.

e. Conclusion

The case against Blue Chip Stamps and its owners is among the last of the antitrust suits brought in the 1940's, 1950's and 1960's attempting to stem the tide towards large grocery chains and increasing concentration and integration in grocery retailing. Beginning with the *A&P* case and ending with *Von's Groceries*, the government pursued its strategy with very little support from economic analysis. The increase in market concentration as the grocery business evolved from a set of local individual stores to competition among a number of large national chains has not proved to be a threat to consumer welfare. In the case of Blue Chip Stamps, as with the earlier actions against A&P, the government attacked a market arrangement that was established to reduce the cost of distributing groceries. There is no evidence that eliminating the exclusivity of Blue Chip Stamps improved consumer welfare. Indeed, once again, the government acted just as the use of the product or service in question – in this case trading stamps – was starting to slide into economic obscurity.

III. Concluding Observations

Conduct remedies in Sherman Act cases warrant careful consideration to ensure that they do not replace competition with regulation. The principle put forward by the Supreme Court's squares with sound economic policy: making sure that competition prevails is “the key to the whole question of antitrust remedy.”[174] Competition, presumably, is to be the guarantor of enhanced consumer welfare.

We have reviewed ten separate conduct remedies that have been imposed on firms charged with monopolization and found little evidence that any of them contributed favorably to consumer welfare. The reasons vary across the cases, but there are some common themes.

- The DOJ complaint was based on a faulty understanding of the operation of the relevant market forces. In *Blue Chip Stamps* and *Safeway*, for example, antitrust authorities sought to ban competitive behavior by chain grocery stores. In *Standard Oil of California*, the DOJ failed to grasp that requirements contracts with franchised gasoline stations were an efficient mechanism to ensure effort by the station owner and to prevent the station owner from raising retail prices.
- The DOJ failed to grasp that the limited size of the market made it impossible to increase the number of rivals through any antitrust remedy, structural or conduct. United Shoe Machinery produced a large share of the country’s shoe machines in one plant. General Motors and Flxible could not operate their bus production facilities at full capacity. Attempting to induce entry into these industries through conduct remedies was not likely to succeed.
- The antitrust authorities brought the case after market conditions had changed. At the time it was charged with monopolization, United Fruit was already withdrawing from banana production because of problems in Central America and declining U.S. banana prices. The 1952 case against IBM focused on tabulating

[174] *United States v. E.I. du Pont*, 366 U.S. 316, 326 (1961).

machines and punch cards just as computers were beginning to replace the electro-mechanical tabulation of such cards. Blue Chip was in a market (trading stamps) moving to obscurity, not monopoly.

- In several cases, the conduct remedy may have impeded competition. In *Safeway*, the use of promotional discounts to gain entry or expand market share was banned as "predatory." The 1956 *AT&T* consent decree barred AT&T from exploiting its nascent comparative advantage in computer hardware and software, two industries in which the government later brought monopolization cases against other firms. The *Jerrold* decree largely prohibited Jerrold from expanding into cable-system operation.
- In several other cases, such as *Jerrold* and *Standard Oil of California*, the DOJ incorrectly challenged vertical integration as anticompetitive despite efficiency reasons for such integration.

The overall conclusions from our review of these cases is that the antitrust authorities (DOJ) often fail to understand the determinants of market structure, but are nonetheless able to prevail in court or to induce defendants to sign a consent decree, constraining their future conduct. Without a firm grasp of the economic forces that are driving changes in market structure, the DOJ cannot be expected to design "relief" that will result in increased competition, lower prices, and consumer benefits. In the best of circumstances, the behavioral relief obtained is simply irrelevant and has no economic consequence other than the cost of the litigation and any costs of compliance. In the 1956 *AT&T (Western Electric)* decree, the DOJ may have actually reduced consumer welfare by blocking AT&T from entering related businesses. And in *Safeway*, DOJ attacked

Safeway's aggressive pricing behavior that clearly would benefit consumers in the short run and later admitted that such behavior was not necessarily a threat to long-run competition.

Given the difficulty in perceiving the causes of market changes, the DOJ should be reluctant to try to design complex remedies to remedy conduct that it does not fully understand in markets where the trajectory of change is difficult to predict. To do so may impede technological progress without providing any offsetting consumer benefits.

The bottom line is that we cannot discern positive results for conduct remedies in the subsequent behavior of prices in any of these case studies. If antimonopoly policy were consistently successful, surely the effects would sometimes be visible in the prices consumers pay for the relevant products. These effects cannot be uncovered from the data, at least in this sample of cases, even by the trained eye of the economist.

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