

**IMPACT EVALUATIONS OF  
FEDERAL TRADE COMMISSION  
VERTICAL RESTRAINTS CASES**

edited by

Ronald N. Lafferty, Robert H. Lande,

and John B. Kirkwood

BUREAU OF COMPETITION  
BUREAU OF ECONOMICS  
FEDERAL TRADE COMMISSION

**August, 1984**

**IMPACT EVALUATIONS OF  
FEDERAL TRADE COMMISSION  
VERTICAL RESTRAINTS CASES**

edited by

Ronald N. Lafferty, Robert H. Lande,

and John B. Kirkwood

BUREAU OF COMPETITION  
BUREAU OF ECONOMICS  
FEDERAL TRADE COMMISSION

**August, 1984**

FEDERAL TRADE COMMISSION

JAMES C. MILLER, III, Chairman  
MICHAEL PERTSCHUK, Commissioner  
PATRICIA P. BAILEY, Commissioner  
GEORGE W. DOUGLAS, Commissioner  
TERRY CALVANI, Commissioner

BUREAU OF COMPETITION

TIMOTHY J. MURIS, Director  
BARBARA A. CLARK, Deputy Director  
WALTER T. WINSLOW, Deputy Director  
WILLIAM DOYING, Deputy Director  
for Administration  
WALTER VANDAELE, Economic Advisor  
to the Director  
CHARLES JAMES, Assistant to the  
Director  
JAMES McCARTY, Associate Director  
JOHN B. KIRKWOOD, Assistant Director  
for Evaluation  
WINSTON S. MOORE, Assistant Director  
for Planning

BUREAU OF ECONOMICS

JOHN L. PETERMAN, Acting Director  
RONALD S. BOND, Deputy Director for Operations and Research  
RICHARD HIGGINS, Deputy Director for Consumer Protection and  
Regulatory Analysis  
DAVID T. SCHEFFMAN, Deputy Director for Competition and  
Antitrust  
PAUL PAUTLER, Assistant to Deputy Director for Competition and  
Antitrust  
JOHN E. CALFEE, Special Assistant to the Director  
JAMES A. HURDLE, Special Assistant to the Director  
JEFFREY EISENACH, Special Assistant to the Director  
KEITH B. ANDERSON, Assistant Director for Regulatory Analysis  
JAMES M. FERGUSON, Assistant Director for Antitrust  
PAULINE IPPOLITO, Assistant Director for Industry Analysis  
ROBERT D. BROGAN, Assistant Director for Competition Analysis  
PAUL H. RUBIN, Assistant Director for Consumer Protection

IMPACT EVALUATIONS OF  
FEDERAL TRADE COMMISSION  
VERTICAL RESTRAINTS CASES

edited by

Ronald N. Lafferty, Robert H. Lande, and John B. Kirkwood

August, 1984

This report was prepared by outside consultants to the Federal Trade Commission and by professional members of the staffs of the FTC's Bureau of Competition and Bureau of Economics. The opinions expressed in this report are exclusively those of the authors and do not necessarily reflect the views of the Federal Trade Commission, of any individual Commissioner, or of the Bureau of Competition or Bureau of Economics.

TABLE OF CONTENTS

	<u>Page</u>
I. Introduction and Overview.....	1
Ronald N. Lafferty	
Robert H. Lande	
John B. Kirkwood	
A. The Project's History and Design.....	6
B. Study Summaries.....	11
C. Contributions to the Understanding of Vertical Restraints.....	26
II. The Impact Evaluation Analyses.....	46
A. <u>Levi Strauss</u> .....	47
Sharon Oster	
B. <u>Interco - Florsheim Shoes</u> .....	91
Timothy Greening	
C. Audio Components.....	200
William A. McEachern	
Anthony A. Romeo	
D. Hearing Aids.....	270
Howard P. Marvel	
E. Industrial Gases.....	385
Gerald Brock	
III. The Vertical Restraints Protocols.....	428
A. Vertical Restraints as Integration by Contract: Evidence and Policy Implications....	429
Richard E. Caves	
B. Study Protocol for Design of the Vertical Restraints Research Project.....	467
Benjamin Klein	

## Introduction and Overview\*

The recent Supreme Court decisions declaring vertical nonprice restraints subject to the rule of reason<sup>1</sup> but retaining the per se rule against vertical price restraints<sup>2</sup> have generated considerable controversy.<sup>3</sup> Since vertical price restraints (also known as resale price maintenance) seem able

---

\* We would like to thank our colleagues Phyllis Altrogge, Neil Averitt, Joseph Brownman, Donald Clark, Richard Craswell, Douglas Dobson, Alan Fisher, Judith Gelman, James Giffin, James Hurdle, Winston Moore, Dennis Murphy, Philip Nelson, Thomas Overstreet, Paul Pautler, John Peterman, and Robert Steiner for their valuable contributions to this project.

<sup>1</sup> See Continental T.V. v. G.T.E. Sylvania, 433 U.S. 36 (1977), overruling United States v. Arnold, Schwinn & Co., 388 U.S. 365 (1977); Monsanto v. Spray-Rite Service Corp., No. 82-914 (U.S. March 20, 1984).

<sup>2</sup> See California Retail Liquor Dealers Ass'n v. Midcal Aluminum, 445 U.S. 97, 102 (1980); Sylvania, 388 U.S. at 51 n.18; Monsanto, No. 82-914 at 7.

<sup>3</sup> A far-from-complete list of recent works on this issue includes: T. Overstreet, "Resale Price Maintenance: Economic Theories and Empirical Evidence," (FTC Staff Report, 1983); Pitofsky, "In Defense of Discounters: The No-Frills Case for a per se Rule Against Vertical Price Fixing," 71 Geo. L. J. 1487 (1983); Posner, "The Next Step in the Antitrust Treatment of Restricted Distribution: Per Se Legality," 48 U. Chi. L. Rev. 6 (1981); J. Kirkwood, "The Per Se Rule Against Resale Price Maintenance: A Time for Change?," (Comments before the Antitrust Section of the American Bar Association, 1981); Meehan & Lerner, "A Proposed Rule of Reason for Vertical Restraints on Competition," 26 Antitrust Bull. 195 (1981); Zelek, Stern & Dunfee, "A Rule of Reason Decision Model After Sylvania," 68 Calif. L. Rev. 13 (1980); R. Bork, The Antitrust Paradox 280 (1978); Hard, "A Criticism of the Post-Sylvania Decisions and a Proposal to Make the Rule of Reason Reasonable Again," 1 Utah L. Rev. 795 (1980); Williamson, "Assessing Vertical Market Restrictions: Antitrust Ramifications of the Transaction Cost Approach," 127 U. Pa. L. Rev. 953 (1979).

to achieve many of the procompetitive benefits that the Court cited as justifying rule of reason treatment for vertical non-price restraints<sup>4</sup> several scholars have argued that resale price maintenance (RPM) should also be evaluated under a rule of reason.<sup>5</sup> Indeed, some authorities would go further and declare purely vertical instances of RPM per se legal.<sup>6</sup> Other respected scholars, however, have taken a very different approach.<sup>7</sup> In their view the anticompetitive effects of both price and non-price vertical restraints are frequent and significant. For these scholars, the way to harmonize the Court's treatment of price and non-price restraints is not to relax the per se rule against RPM but to impose that rule on certain especially restrictive non-price restraints.<sup>8</sup>

This particular controversy is only the latest in the long debate over the proper antitrust treatment of vertical restraints. This debate began when the courts first considered

---

4 See, e.g., Justice White's Concurring Opinion in Sylvania, 433 U.S. at 59.

5 See, e.g., Williamson, supra note 3; Meehan & Larner, supra note 3.

6 See Posner, supra note 3; Bork, supra note 3.

7 See Pitofsky, supra note 3.

8 See Pitofsky, "The Sylvania Case: Antitrust Analysis of Non-Price Vertical Restrictions," 78 Colum. L. Rev. 1 (1978).

vertical restraints to be an antitrust issue<sup>9</sup> and has continued nearly unabated.<sup>10</sup> While a great many papers have been written and strong conclusions have been reached by scholars on all sides of this issue, the discussion has actually proceeded on the basis of remarkably few detailed case studies or other

---

<sup>9</sup> For example, when the Supreme Court found resale price maintenance to be illegal in Dr. Miles Medical v. John D. Park and Sons Co., 220 U.S. 373 (1911), Justice Holmes stated in his strong dissent that "I cannot believe that in the long run the public will profit by this court permitting knaves to cut reasonable prices for some ulterior purpose of their own and thus to impair, if not to destroy, the production and sale of articles which it is assumed to be desirable that the public should be able to get . . . ." Id. at 412.

<sup>10</sup> An overview of the history of antitrust treatment of vertical restraints and references to much of the scholarly debate is found in A.B.A. Antitrust Section, Monograph No. 2, Vertical Restrictions Limiting Intra-Brand Competition (1977).



empirical analyses of the actual effects of the various vertical practices under consideration.<sup>11</sup>

The Federal Trade Commission undertook the Vertical Restraints Impact Evaluation Project, culminating in the case studies presented in this volume, primarily to supplement the existing body of empirical analyses of vertical restraints. The aim was to provide a clearer understanding of the precise mechanisms by which vertical restraints can enhance or impede consumer welfare. Through this increased knowledge the Commission hoped to contribute to the larger debate over the

---

<sup>11</sup> For example, even though there have probably been more empirical studies involving RPM than any other vertical restraint, these studies have yielded only limited information about RPM's effects. Most of these empirical studies evaluated the effect of "Fair Trade Laws" on prices and thus only indicate whether RPM was effective rather than whether RPM was socially beneficial or harmful. Other literature ascribes particular motives to the application of RPM in specific cases, but these determinations were apparently made without in-depth empirical investigation. Another study, by A. Hourihan & J. Markham, The Effects of Fair Trade: The Case of Rhode Island (Marketing Science Institute, 1974), provides qualitative findings on both price and quantity but refrains from drawing welfare conclusions. To the best of our knowledge the only detailed case analyses which indicate the probable welfare effect of RPM are: Goldberg, "Resale Price Maintenance and the FTC: The Magnavox Investigation," 23 Wm. & Mary L. Rev. 440 (1982) (hereinafter cited as "Magnavox"); R. Steiner, Brand Advertising and the Consumer Goods Economy (unpublished draft, 1980) (analysis of Levi Strauss); Goldberg, "Enforcing Resale Price Maintenance: The FTC Investigation of Lennox," 18 Am. Bus. L. J. 225 (1980) (hereinafter cited as "Lennox"); A. McLaughlin, "An Economic Analysis of Resale Price Maintenance," (unpublished Ph.D. dissertation, UCLA, 1979) (analysis of Bakers of Washington and Coors cases). For a comprehensive and insightful review of many of these empirical studies see Overstreet, supra note 3.

appropriate legal treatment of vertical restraints and to improve its own enforcement policy towards them.

Each of the studies provides novel insights into the motivation behind and the actual effects of the application of vertical restraints. As a group, these evaluations seem to us to be better at demonstrating the potentially significant shortcomings of the enforcement policies that have been proposed than at providing guidance in deciding which of the various per se or rule of reason options is the optimal policy. However, the evaluations of the RPM cases would appear to be consistent with the following policy conclusions: (1) an approach that allows RPM by a new entrant is very likely to be socially beneficial, and (2) a provision in RPM remedial orders that allows dealer selection on the basis of quality is also likely to be beneficial. Thus, the evaluations cast doubt on the desirability of retaining the current rule on RPM -- a per se ban with no exceptions.

Section A of this Introduction reviews the history and design of the Vertical Restraints Impact Evaluation project. Section B presents summaries of the analyses of the cases against Levi Strauss (Sharon Oster - Yale University); Interco - Florsheim Shoes (Timothy Greening - Tulane University); audio components firms (William McEachern and Anthony Romeo - University of Connecticut); hearing aid firms (Howard Marvel - Ohio State University); and industrial gas firms (Gerald Brock - Brock Economic Research). The final section assesses the studies' contributions to the understanding of vertical

restraints, and discusses possible policy implications derived from them.

Following this introduction, each consultant's impact evaluation is presented. This volume ends with an Appendix containing protocols prepared as a guide for this project by Professors Richard Caves of Harvard and Benjamin Klein of U.C.L.A.

A. The Project's History and Design

This impact evaluation project is the result of two convergent influences. Because of his interest in vertical restraints enforcement policy, Senator Kennedy, acting in his capacity as Chairman of the Senate Judiciary Committee, requested that the Commission evaluate the impact of its recent vertical restraints cases. At the same time, the Bureau of Competition and the Commission expressed a desire for increased understanding of the actual impact of recent FTC cases. Vertical restraint cases were thought to be especially good candidates for analysis because of the controversy concerning their appropriate antitrust treatment and because the effects

of Commission action might reasonably be discerned through retrospective analysis.<sup>12</sup>

Accordingly, the Vertical Restraints Impact Evaluation project was commenced in 1978 as a joint project of the FTC's Bureau of Competition and Bureau of Economics. The first step was to hire two leading industrial organization economists, Professors Caves and Klein, to prepare protocols to assist the Bureaus in selecting both the kinds of vertical restraints studies to be performed and the cases that should be evaluated. In addition, the protocols contain insightful

---

<sup>12</sup> An evaluation of a vertical restraints case where the Commission prevailed can compare a pre-complaint market, when the restraints existed, to a post-intervention market, when they no longer exist. This type of analysis cannot be performed for antitrust cases involving prophylactic intervention, such as a horizontal merger case filed before the merger is consummated. If the FTC is successful in such a case, any market power or economies that might have arisen from the merger will not occur. As a result, it will usually be extremely difficult to determine what would have happened if the FTC had not intervened.

analysis of the competitive effects of vertical restraints<sup>13</sup> and provide useful advice as to how the consultants should conduct the impact evaluations.

With the advice of Professors Caves and Klein in mind, the staff developed criteria for selecting cases amenable to impact evaluation analysis. Those criteria were: (1) the cases should involve sizeable markets; (2) there should exist sources of data describing the market before and after the Commission's action; (3) there should be as few factors as possible that would obscure causal relationships between the Commission's intervention and subsequent market changes; (4) the anticipated effects of the Commission's actions should be significant and potentially quantifiable; and (5) the cases should be relatively recent. Using these criteria, the staff performed an internal evaluation of virtually every significant, recently

---

<sup>13</sup> Included in Caves' protocol is his substantially original hypothesis that vertical restraints often arise out of a bargain between a manufacturer and a retailer where each has some degree of market power. Caves believes that the various vertical restraints are often interrelated and represent alternative terms of a bargain struck between manufacturer and retailer. In cases where this hypothesis applies, the net effect on consumer welfare of any particular vertical restraint can be determined only when its interrelation with the other restraints is taken into account. Thus, Caves' hypothesis may explain the existence of and relationships among a wide variety of vertical restraints. Although this hypothesis was substantially developed in Cave's protocol, similar views have been mentioned on prior occasions. See M. Porter, Interbrand Choice, Strategy, and Bilateral Market Power (1976); Preston, "Restrictive Distribution Arrangements: Economic Analysis and Public Policy Standards," 30 *Law & Contemp. Probs.* 506 (1965); Bowman, "The Prerequisites and Effects of Resale Price Maintenance," 22 *U. Chi. L. Rev.* 825, 849 (1955).

completed Bureau of Competition case involving vertical restraints to identify those cases most amenable to analysis.<sup>14</sup> This evaluation resulted in the selection of three cases or groups of cases involving RPM which seemed appropriate for impact evaluation. These were Levi Strauss (jeans), Interco (Florsheim shoes), and a group of audio component cases. Also selected were a group of hearing aids cases and a group of industrial gases cases that involved vertical restraints other than RPM, including exclusive dealing and tying.<sup>15</sup>

The economists selected to carry out the impact evaluations were chosen on the basis of both their academic expertise, particularly in vertical restraints, and the diversity of perspectives they would bring to the project. These economists were to (1) identify the possible explanations

---

14 The need for sufficient information to carry out an impact evaluation caused us to select cases involving firms which are probably larger than the average firm in an FTC vertical restraint case. (For a discussion of the size of firms in RPM cases see Overstreet, supra note 3.) We do not believe that firms that are larger in terms of sales differ significantly from smaller firms in their use of vertical restraints. One possible difference, however, is the possibility that smaller firms have more difficulty substituting among vertical restraints. For example, several of the firms studied replaced RPM with increased national advertising and restriction of distribution to selected retailers; such a strategy for replacing RPM may not be as feasible for smaller firms.

15 In addition to the impact evaluations presented in this volume, three other studies were begun: Levi Strauss (Victor Goldberg - U. Cal. Davis); Interco - London Fog Raincoats (Kurt Brown - Harvard); and Coors (Benjamin Klein). Goldberg, Brown, and Klein were not able to finish their studies, however, due to administrative factors and other commitments.

for the challenged restraints; (2) determine what explanation is most likely to be true given the data at hand; and (3) suggest additional data that could be collected to refine or refute their conclusions and to estimate the size of the effect that the Commission's action had upon competition and societal welfare.<sup>16</sup>

The preparation of the impact evaluations involved considerable interaction between the economic consultants and the FTC staff.<sup>17</sup> The staff comments on drafts involved discussions of the relevant evidence, suggestions of additional hypotheses concerning why vertical restraints were enforced, and means of distinguishing the testable implications of the various hypotheses. The final opinions presented are, of course, solely those of the consultants.

---

16 It was originally envisioned that the additional data so identified would be collected and evaluated. For a number of reasons, including budgetary constraints, the difficulty of collecting the needed data, and the presence of factors which would obscure the causal relationship between the FTC intervention and market changes, the additional data collection and analysis has not been funded. The impact evaluations' results may thus be considered provisional. However, all of the consultants concluded that the available data enabled them to determine the most likely explanation for the application of the vertical restraints in each case. Each consultant also concluded that it is highly unlikely that his or her selected explanation would be rejected by the additional analysis. (Several of the impact evaluations denote the identification of additional data that could be collected as "Task IV" -- the designation that their contracts had assigned to that requirement.)

17 In addition to ourselves, other Commission attorneys and economists, who had either worked on the cases being evaluated or had an interest in vertical restraint issues, critiqued each draft report.

## B. Study Summaries

In this section we summarize the findings and conclusions of each impact evaluation report. Our summaries deal only with the major conclusions involving the primary vertical restraints in each case; the studies themselves must be read to gain the full benefit of the authors' insights into the actual effects of the restraints examined.

### 1. Levi Strauss

Professor Oster finds that in the early 1960s Levi Strauss decided that sales could be increased if more high quality retailers could be induced to carry its jeans, which were at the time relatively unknown except as work clothes. Levi Strauss reasoned that, by carrying its jeans, these retailers would signal to consumers that the jeans were high quality products that could be worn in a wide variety of social situations. A combination of RPM and dealer selection was adopted to induce quality retailers to stock the goods and as a



way to prevent other retailers from free-riding<sup>18</sup> on the resulting quality image.<sup>19</sup> Since these retailers typically had higher costs than retailers with lower quality images (due at least in part to the higher costs of providing such images), Levi Strauss felt that the protection of the retail margin afforded by RPM was a necessary inducement. Dr. Oster

---

18 "Free-riding" in this context means using a retailer's services without paying for them. As an example of the traditional free-rider explanation, assume that extensive demonstration and explanation by the retailer's sales personnel will increase consumers' demand for a technologically complex product. Suppose that a customer, after learning about a product from the demonstration and sales explanation at one store, purchases the identical product from another store that offers a lower price because it does not incur these expenses. In these circumstances both the customer and the lower-priced store would be free-riding on the promotional services of the higher-priced store. If such free-riding is prevalent, these services will be reduced or discontinued, adversely affecting the product's overall sales. The use of RPM can, however, reduce the opportunities for free-riding and enhance the incentives to provide the desired services. Under RPM, competing retailers cannot attract customers through price cuts, so free-riding will be reduced and retailers are more likely to try to attract customers through the provision of the desired services.

19 The traditional free-rider explanation, substantially developed by Telser, concerns free-ridable retailers' services "specific to the commodity and unrelated to the retailers' methods of doing business." Telser, "Why Should Manufacturers Want Free Trade?," 3 J. L. & Econ. 86, 89 (1960). According to Oster, however, Levi Strauss was not interested in inducing the provision of any product-specific retailer service. Instead, it simply wanted to associate itself with stores whose general method of doing business -- its decor and ambience, its reputation for carrying premium quality goods, etc. -- signals the high quality of the products carried. Thus, Dr. Oster's thesis of a free-ridable quality image can be considered either a different theory or a significant expansion of the traditional free-rider explanation.

concludes that Levi Strauss' early use of RPM was an effective marketing device which benefited consumers.<sup>20</sup>

Oster also concludes, however, that by the mid-1970s the Levi Strauss brand name had gained sufficient consumer acceptance that signaling quality by distribution through their highest quality, highest cost retailers was no longer needed.<sup>21</sup> Thus, by the time the FTC case was brought in 1976, RPM was becoming an increasingly obsolete policy for Levi Strauss. Levi Strauss, however, continued to use RPM even though it was no longer optimal. The FTC intervention, it is argued, caused Levi Strauss to abandon RPM more quickly than it would have otherwise, to the benefit of both consumers and the firm.

Due to the hastened demise of the Levi Strauss RPM policy, society gained in two related ways. First, consumers benefited because the prohibition of RPM enabled price competition to occur which quickly caused a reduction in retail prices. Second, consumers and Levi Strauss benefited from the more efficient marketing strategy: Levi Strauss greatly increased

---

20 Dr. Oster emphasized the consumer benefits flowing from Levi Strauss' early use of RPM in a letter to Timothy J. Muris dated May 18, 1984, on file in the office of the Director of the Bureau of Competition, Federal Trade Commission.

21 Oster believes that once numerous customers had developed extensive experience with Levi Strauss' jeans it was probably more efficient to use an alternative marketing strategy. The consumer recognition of Levi Strauss' brand name and quality could be more efficiently reinforced through national advertising than through continued use of reputation-reinforcing dealer services supported by RPM.

its national advertising while continuing its policy of selling only through a limited number of selected retailers.<sup>22</sup>

Professor Oster believes that a "conservative" estimate of consumer gains is \$75 million for each year that Levi Strauss would have continued the obsolete marketing strategy without the prompting of the FTC action.<sup>23</sup> Professor Oster develops support for her conclusion that Levi Strauss gained from the FTC action by showing that over the three years following the abandonment of RPM, Levi Strauss' total sales, profits, and stock price approximately doubled, and that its sales and stock price also increased relative to those of the next largest jeans producer.<sup>24</sup>

Even though Professor Oster cites the FTC suit as the proximate cause of Levi Strauss' abandonment of RPM, she does

---

2 The FTC order preserved Levi Strauss' ability to continue its policy of selecting retail outlets and prohibiting jeans transshipments to unauthorized outlets. So, although Levi Strauss could no longer guarantee high margins for retailers, it could continue to signal the quality of its products through the type of dealers selected. Oster notes that Levi Strauss' quality signaling through national advertising may become sufficiently effective that the dealer selection policy might eventually be abandoned.

3 Approximately three million dollars of these consumer benefits is an efficiency gain to all of society in the form of increased "consumer surplus" while the remainder is the prevention of a "transfer" from consumers to Levi Strauss and its retailers. Levi Strauss (and society) gained from the more efficient use of marketing resources but Oster did not have sufficient data to attempt to estimate the size of this gain.

4 If RPM was Levi Strauss' most efficient marketing strategy then the firm's performance would generally be expected to fall, especially relative to other jeans producers, sometime after RPM was abandoned.

not attempt to guess when Levi Strauss would have abandoned the strategy on its own. She does, however, suggest that the vigor with which Levi Strauss fought the suit indicates that the FTC action may have provided some considerable time gain.

## 2. Florsheim Shoes

Dr. Greening concludes that the combination of RPM and dealer selection employed by Florsheim can best be explained by the firm's desire efficiently to signal the high quality of its shoes. Dr. Greening believes that the use of these vertical restraints allowed Florsheim to induce retailers to provide the kinds of service and ambience that are generally provided by stores carrying high quality products and to fix retail prices at a level that signaled the same degree of product quality. As Greening argues, price can be an important signal of quality that interacts with and supports the other quality signals generated by dealers.<sup>25</sup>

Greening believes that when shoes are carried by "quality" stores at the prices consumers expect to pay for "quality" shoes, consumers infer that the shoes are of a high quality. On the other hand, consumers are suspicious of the actual

---

<sup>25</sup> Greening concludes that Florsheim could not achieve the desired minimum retail price simply by adjusting its wholesale price. In the first place, that approach would not prevent dealers from cutting prices by foregoing the costly quality certification efforts Florsheim desired. Even setting this aside, however, some Florsheim dealers might cut prices simply out of greater cost efficiency or greater competitive aggressiveness. While in some circumstances a manufacturer might welcome such behavior, Florsheim wanted to eliminate it because of the adverse spillover effects it would have on the price-quality image that Florsheim felt was so important.

quality of shoes priced outside of a relatively narrow range of prices expected for shoes of a particular quality.

Accordingly, Greening concludes that Florsheim acted to discourage its dealers from either raising or lowering retail prices.

Greening argues that Florsheim's retailers also created an image of high quality, not through product specific point-of-sale promotional efforts, but through a combination of more general dealer services such as ample sales clerk assistance, a good return policy, and a high ambiance level. Consumers interpret these factors as a signal that the store will carry high quality products. Vertical restraints were thought to be necessary to implement this marketing strategy because lower quality discounters would otherwise be able to sell the brands certified by others to be of a high quality without bearing the costs of this certification. In sum, restricting retailing to a small group of high quality dealers and RPM were used to provide sufficient retail margins to allow competition among dealers to induce production of the proper quantity of "quality image" services, to eliminate free-rider problems, and to establish the proper "target price" quality signal.

Greening further concludes that while a traditional free-rider explanation<sup>26</sup> and several anticompetitive explanations<sup>27</sup> cannot be completely dismissed by the available evidence, it is much more likely that quality signaling described above led to the imposition of vertical restraints. Accordingly, he believes that the FTC's action made quality signaling more expensive for Florsheim without providing compensating consumer benefits. In Greening's view, therefore, the FTC's action against Florsheim probably harmed consumer welfare.<sup>28</sup>

---

26 Greening believes that the most important product specific, point-of-sale dealer services, such as a large inventory, information provided by sales help and room to try on shoes, are relatively immune to free-riding.

27 One possibility is that the continued use of the vertical restraints was a mistake. As Oster concluded with Levi Strauss, it was possible that their imposition had at one time been efficient but had since become obsolete. Greening rejects this possibility because he is unable to distinguish Florsheim in this regard from other leading apparel manufacturers who were using the same practices and he is very reluctant to believe all these manufacturers could be pursuing suboptimal distribution policies. Another possible explanation is that Florsheim was irrationally trying to "protect" its considerable investment in its own stores from competition from more efficient retail outlets. The distribution division and manufacturing division might be resolving conflicts over the desired retail price in a way that led to the use of RPM to benefit the distribution division even though its use would be suboptimal for the corporation as a whole. Greening thought that such behavior was implausible. Finally, Greening considered various collusion theories but concluded that all were in conflict with the unconcentrated structure of shoe manufacturing and distribution.

28 Even if the average price of Florsheim shoes decreased following the Commission's order, consumers would still be hurt on balance because of the case's impact on Florsheim's quality signaling efforts.

### 3. Audio Components

Professors McEachern and Romeo analyze the effects of a series of consent agreements prohibiting RPM by seven major audio components manufacturers.<sup>29</sup> McEachern and Romeo believe that RPM was beneficial during the early stages of the industry's development. Audio components manufacturers had new, unfamiliar products for which they needed access to retail shelf space, demonstrations of the components' capabilities, and certification that the components were of high quality.<sup>30</sup> The manufacturers adopted RPM to induce retailers to produce these services by providing the needed retailer margins and protecting dealers delivering these services from free-riding problems.

As time passed, however, the public's exposure to the concept of audio components and their increased familiarity with the characteristics and quality reputations of various brands reduced the need for retailer services. As a result,

---

<sup>29</sup> Audio components include styli, turntables, loud speakers, player/recorders (cartridge, cassettes, and reel-to-reel), radio tuners, preamplifiers, amplifiers, and stereo headphones. Of the seven firms signing the consent orders, five were considered to be producers of a broad line of components and two specialized in a single type of component. Audio components may be purchased as single items or as a prepackaged system. The very cheapest "systems" are single-unit packages which cannot be decomposed and sold as separate components.

<sup>30</sup> Even though Japanese producers entered the U.S. at a later time, they may have been at a particular image disadvantage when their products were first introduced. At that time, Japanese products were not considered high quality items by many American consumers so retailers with established reputations may also have provided "respectability" for foreign brand names.

RPM became a less useful marketing strategy, particularly for the cheaper and less sophisticated "low end" brands. Policing RPM also became more difficult and the possibilities of free-riding by low end buyers were reduced by the proliferation of brands and models<sup>31</sup> and by increased use of prepackaged systems.<sup>32</sup> McEachern and Romeo conclude that by the time of the FTC intervention RPM had become an inefficient strategy for manufacturers of low end components.<sup>33</sup> The FTC orders banning RPM, therefore, benefited manufacturers as well as consumers of low end products while disadvantaging manufacturers and consumers of "high end" products.

Despite the obsolescence of RPM for low end brands, McEachern and Romeo believe that a number of reasons could explain the manufacturers' reluctance to abandon RPM. These

- 
- 31 Policing of retail prices becomes more difficult as the number of prices to be maintained increases.
- 32 According to McEachern and Romeo, low end buyers generally purchase prepackaged systems rather than buying individual components. Since these prepackaged systems are usually made up of several manufacturers' components, it is difficult for a manufacturer to determine if the minimum price is really being charged on a particular component, especially if a "house brand" component without a maintained price is included. It also makes it difficult for the consumer to free-ride because available systems will differ across retailers. In contrast, high end purchasers generally upgrade their systems by the purchase of particular components. Free-riding on retailers' presale services therefore seems much more likely in the high end of the market.
- 33 There were also indications that retailers bore the brunt of the post-order price reductions while manufacturers continued to earn comfortable rates of return. This would be expected if RPM was an obsolete strategy; if the use of RPM had still been efficient, however, then manufacturer profits would have tended to decline.



reasons include inertia, mistake, and risk aversion. In addition, the authors suggest that, although all manufacturers would have gained from RPM's demise, any one of them might have been unwilling to act alone. The manufacturers, in other words, may have confronted a "prisoners' dilemma;" any manufacturer that unilaterally ended RPM risked confronting a deteriorating product image and a loss of distributors when retail price discounting occurred only for his brand. Whatever the explanation, McEachern and Romeo conclude that the FTC orders caused manufacturers to abandon a restraint on the distribution of low end products that was no longer efficient for them -- or for consumers.

McEachern and Romeo further conclude that the FTC intervention was beneficial when gains and losses at both ends of the product line are considered. In the low end, the FTC action caused RPM to be abandoned earlier than it otherwise would have. This created savings in the form of lower prices and in the elimination of the "wasteful subterfuges" used by retailers to circumvent RPM restrictions.<sup>34</sup> Concerning the high end, McEachern and Romeo conclude that although the potential for detrimental free-riding continues to exist for such products, manufacturers appear to have instituted alternative vertical restraints, such as exclusive dealing and

---

<sup>34</sup> Since the authors believe that the manufacturers would have eventually abandoned RPM anyway, these savings should be counted only for the period during which RPM would otherwise have been maintained. McEachern and Romeo do not attempt to estimate the length of this period.

limiting distribution to selected dealers, which help ensure the provision of point-of-sale information and other free-ridable services. Since the manufacturers had preferred to use RPM, however, these alternative arrangements are likely to be a somewhat inferior way to provide the desired services. Thus, in the high end of the market the FTC actions may have had a significant, but not overwhelming, negative effect on consumer welfare. Because the low end of the market is the largest, making up an estimated 85 percent to 90 percent of total audio component units sold, McEachern and Romeo conclude that the positive effect of the FTC actions in the low end outweighs the negative effects in the high end,<sup>35</sup> resulting in an overall improvement in societal welfare.

#### 4. Hearing Aids

Professor Marvel analyzed the exclusive dealing and other vertical restraints imposed by manufacturers utilizing door-to-

---

<sup>35</sup> The authors note that the prohibition of RPM has the potential to reduce social welfare because new entrants cannot use RPM to attract retail distribution or signal the quality of new products. In this case, though, the adverse effects on entry were considered unimportant because the industry has long been, and is likely to remain, innovative and competitive.

poor distribution of hearing aids.<sup>36</sup> He argues that the principal restraint -- exclusive dealing -- was designed to protect the returns to manufacturers on information they generated and disseminated to dealers.<sup>37</sup> The crucial information was the names and addresses of potential hearing aid users ("leads") obtained through manufacturers' national advertising. Marvel believes that it would not have been practical for manufacturers to sell this information to dealers, so these leads were assigned to dealers who were charged for them by an increase in the wholesale price of the manufacturer's hearing aids.<sup>38</sup> This pricing method, however, makes free-riding possible; dealers could use the leads supplied by one manufacturer to locate customers and then free-ride on this information by selling hearing aids purchased at a

---

<sup>6</sup> Marvel analyzed the impact of consent orders against Dahlberg Electronics, Maico Hearing Instruments, Sonotone, and Radioear. Although he uses some of the data provided through the litigation, he did not evaluate an FTC suit in this same industry which was under litigation while he was writing his report. This suit, against Beltone Electronics, was dismissed on July 6, 1982 when the Commission concluded that Beltone's restraints were not anticompetitive.

It should also be noted that the Commission has not made a determination of the validity of the allegations concerning industry practices made in the September 1978 "BCP Staff Report" which Marvel discusses.

<sup>7</sup> Telser's traditional explanation for RPM, supra note 19, can be described as a concern with dealers' property rights while Marvel's explanation for exclusive dealing is concerned with manufacturers' property rights.

<sup>8</sup> Marvel concludes that it would not have been practical for the manufacturer to sell the leads to retailers because the risk created by the considerable uncertainty over the leads' value could best be borne by the manufacturer.

lower cost from a different manufacturer who did not provide leads. Exclusive dealing was necessary to prevent such free-riding.

Marvel concludes that the FTC actions against the hearing aid firms did not promote competition because the actions effectively outlawed a distribution system which had succeeded in a competitive environment. Marvel goes on to argue that the FTC's orders may nonetheless have had net positive effects on social welfare. The door-to-door segment of the hearing aid industry is considered by industry observers to provide lower quality service than that available through other distribution methods and other forms of treatment.<sup>39</sup> By hampering the door-to-door distribution of hearing aids by the lead generating firms, the FTC's orders "almost certainly" increased the average quality of the service received by those consumers who continued to obtain treatment for hearing impairments.<sup>40</sup> However, the attenuation of lead generating activity also prevented some consumers, who otherwise would have secured

---

39 Hearing aid dealers have considerably less training in the testing of hearing than do alternative practitioners and have an economic incentive not to refer customers to physicians even if the customer would be better served by surgery than by a hearing aid. In addition, the customers in the door-to-door segment tend to be ill-informed which makes them susceptible to "sharp practices" by dealers; allegations have been made of widespread fraud by door-to-door hearing aid salesmen.

40 Even those customers still served by door-to-door salesmen may receive better quality assistance. Since salesmen for consent order companies can now carry other brands of hearing aids, the customers are more likely to obtain aids that more exactly meet their needs.

treatment by the lead generating firms, from receiving any service at all. Marvel demurred from making a judgment as to the net effect of the FTC action on social welfare because the necessary balancing of the positive and negative effects of the FTC action is "beyond the range of the economist's tool kit."<sup>41</sup>

##### 5. Industrial Gases

Dr. Brock observes that, prior to the late 1960s, the producers of acetylene, oxygen, nitrogen, and other industrial gases delivered their products directly to large industrial users but used independent distributors, such as welding supply stores, to supply smaller customers. In the late 1960s, new entry and changed technology increased competition at the gas manufacturing level. According to Brock, this new competition had its greatest initial impact on prices and profits of direct sales to large industrial users. As a result, the relative profitability of sales to smaller customers rose. The largest gas manufacturers responded to this change by imposing restrictive contracts on the independent distributors and by directly distributing to small customers. The restrictive contracts required the distributors to purchase all their requirements of industrial gases and welding equipment from a

---

<sup>41</sup> Marvel concludes that the consent orders should not affect the retail prices of hearing aids. While the lack of comparison shopping in this market does give door-to-door salesmen some market power over many customers, the FTC orders did not change the nature or extent of this relationship; consumers who see only one door-to-door salesman are as likely as before to be exploited on price. In addition, Marvel thought that the other segments of the industry were likely to be just as price competitive before the decrees as afterwards.

single manufacturer. Under these contracts, a distributor could not substitute a lower-priced source of gas when it became available from a new or expanding manufacturer. By thus forcing distributors to purchase their gas supplies in a package, these contracts prevented them from capitalizing on the increased competition among gas manufacturers.

According to Brock, the manufacturers were able to impose these restrictive contracts, despite increasing competition, for two basic reasons. First, most distributors were linked to a particular manufacturer by considerable investment in brand-specific equipment and by their own customers' loyalty to, and sunk cost in, the manufacturer's welding equipment. These linkages created high costs to distributors of switching gas suppliers completely so the distributors would not refuse the restrictive contract if the alternative would be a major loss of customers compensated only by a small cost reduction for a few of the gases they sell. Second, the distributors apparently were slow in perceiving the heightened competition at the manufacturing level. At the previous low level of price competition in gases, the restrictive contracts would have simply formalized a linkage that business realities already largely dictated. So from the distributors' uninformed perspective, these contracts did not appear to work to their disadvantage.

Brock concludes that the contracts did disadvantage distributors and consumers. Since the contracts prevented distributors from taking advantage of the increase in

ompetition among gas producers, the FTC cases outlawing the contracts probably raised distribution flexibility and caused prices to consumers to decrease somewhat. Brock believes that the Commission's actions were desirable although he believes that these effects are unlikely to show up quickly or to be large in magnitude.<sup>42</sup>

2. Contributions to the Understanding of Vertical Restraints

The results of these impact evaluations provide interesting contributions to the understanding of the effects of vertical restraints. In discussing these contributions we first note that the most commonly expressed explanations for the use of vertical restraints did not appear appropriate for the cases studied. Next, we highlight the explanations, several of which are substantially new or relatively unknown, that our consultants found appropriate and that we believe may be important in evaluating other vertical restraints cases. Finally, the relationship between the studies' findings and the needs of antitrust policymakers are briefly explored.

1. Inadequacy of Frequently Offered Explanations for Vertical Restraints

According to our consultants, the most commonly expressed reasons for applying the various vertical restraints were not

---

<sup>42</sup> Brock believes that it is likely that many distributors will continue to purchase all their requirements from their accustomed supplier. The societal gains from the FTC action are therefore likely to show up only over a significant period of time and be limited to marginal changes in the profitability and competitive relationships in the industry.

adequate to fully explain their use in any of the cases studied. For example, although a number of arguments have been advanced to explain the use of RPM, the explanations found most often in the legal and economic literature are (1) to aid a retailer or manufacturer cartel<sup>43</sup> and (2) to prevent free-riding on point-of-sale services specific to the product.<sup>44</sup>

The consultants found no evidence of any type of collusion in any of the cases studied. There also was little evidence that RPM was imposed to prevent free-riding on product-specific dealer services. The Levi Strauss and Florsheim studies, moreover, explicitly rejected the product-specific point-of-

---

43 RPM can facilitate collusion at the retailer level when the manufacturer can be coerced into enforcing the retailers' collusive scheme. By imposing RPM, colluding retailers need not incur the costs of disciplining a price-cutting rival. Instead, enforcement can be carried out, often more cost-effectively, through termination or other punishment administered by the manufacturer. RPM can also facilitate manufacturer collusion in several ways. A cartel that requires its members rigorously to enforce RPM reduces the rewards to "cheating" on the cartel agreement. A member of an explicit or tacit cartel can cheat by charging a lower wholesale price than agreed upon by the cartel but, since the retailer cannot (without detection) lower the retail price and increase sales in response to this lower price, the gains to the cheater are less than would be if RPM was not required. In addition, the RPM requirement eliminates a cheater's ability to blame cartel-disrupting retail price cuts on the independent actions of retailers. Finally, by rigorously enforcing RPM, a manufacturer limits its own competitive options and thus demonstrates a commitment to the collusive plan.

44 The free-riding on specific services explanation was discussed earlier. See note 19 supra. For a lucid explanation of many of the anticompetitive and procompetitive explanations for RPM, see Overstreet, supra note 3, and P. Areeda, Antitrust Analysis: Problems, Text, Cases 643 (1981).



sale dealer services explanation.<sup>45</sup> To be sure, RPM was explained in part on traditional free-rider grounds in the audio components cases; the consultants thought that one of the purposes of RPM was to prevent free-riding on information provided by sales personnel. But McEachern and Romeo's product life cycle analysis goes well beyond the narrow specific services argument that has been customarily offered as an explanation for the use of RPM.

In the hearing aid study, Marvel finds that none of the previously expressed explanations for exclusive dealing were appropriate.<sup>46</sup> Marvel's explanation -- the prevention of free-riding on manufacturer-produced services -- is entirely new. Even in the industrial gases cases, the traditional theories could not fully explain the use of tying.<sup>47</sup> Brock's explanation contains a complex and possibly unique set of circumstances involving (1) manufacturers initially holding market power in two complementary products (industrial gas and welding equipment) and then losing market power in one of the products (industrial gas); (2) the recognition of this loss by the manufacturers but not by their distributors; and (3) the

---

45 Both studies, however, explicitly adopted a generalized free-rider explanation based on quality signaling. See pages 11-17, infra and pages 34-36, supra.

46 Marvel, "Exclusive Dealing," 25 J. L. & Econ. 1, 3 (1983) references some of the previous literature. Areeda, supra note 44 at 810, lists a number of explanations that have been suggested as justifications for exclusive dealing.

47 Areeda, supra note 44 at 732, lists various explanations for tying arrangements.

distributors' customers having sunk costs which led to both a need for brand-specific welding equipment and a desire to buy both the gas and the welding equipment from the same outlet.<sup>48</sup>

The lack of applicability of the most commonly expressed theories is an important result of the impact evaluation project because most antitrust policy suggestions concerning vertical restraints are premised on the prevalence of one or more of these common explanations. Thus, if these studies are representative of the purposes and effects of vertical restraints, the commonly expressed explanations should receive less weight and different policy recommendations may be warranted.

## 2. Efficacious Theories and Issues

Our consultants conclude that a number of new, relatively new, and old-but-nontraditional theories were most appropriate for the cases studied. We believe that these theories may also prove to be important in explaining a number of other vertical restraint situations.

---

<sup>48</sup> The vertical restraints were apparently imposed in order to formalize existing relationships that had previously existed in a more informal manner. Since additional firms were entering into gas manufacturing, one would expect that the gas manufacturers' bargaining power relative to their distributors would decrease and that any change in the manufacturer-distributor relationship would reflect the manufacturers' weakening bargaining power. As noted above, however, switching costs and impacted information permitted the manufacturers to preserve the existing bargain despite their eroding position.

a. New Entrant and Product Life Cycle Theory<sup>49</sup>

All three RPM studies found that the use of RPM was beneficial for consumers and for society as a whole when used early in the product's life cycle and when used by new entrants.<sup>50</sup> The studies' findings diverge, however, when they discuss whether RPM remains efficient and socially beneficial when used by established firms in the later stages of a product's life cycle.<sup>51</sup>

The findings that the use of RPM can be beneficial when used by newcomers suggest the possible desirability of a "new entrant," "new industry," or "new product" exception to the present per se illegality of RPM. At a minimum, these results suggest that a carefully defined exception which allowed new

---

<sup>49</sup> The discussion of the product life cycle theory is considerably longer than the other discussions. This is not because we consider that theory more important than the others but because there are no critiques of this theory in the literature.

<sup>50</sup> The idea that RPM is valuable when used by new entrants has often been expressed. See Telser, supra note 19, at 95; Lee, "Problems of Resale Price Maintenance," 23 J. Marketing 274 (1959); and E. Seligman & R. Love, Price Cutting and Price Maintenance 209 (1932).

<sup>51</sup> To the best of our knowledge Robert Steiner was the first to suggest that manufacturers could use RPM longer than it was optimal for themselves. See Steiner, supra note 11. Steiner's analysis also emphasizes the relationship between RPM and the speed of evolution of more efficient retail distribution practices. For example, Steiner argues that efficient discounters cannot acquire a high quality reputation until several major manufacturers of a given product will sell to them. If no manufacturer would willingly be the first to sell to a possibly nascent "upscale discounter," they might never be able to emerge. Steiner's analysis was provided to our consultants.

entrants to use RPM holds little possibility for competitive harm and instead may substantially raise the entrants' chances of becoming effective competitors.<sup>52</sup>

This unanimity of views on the benefits of RPM in the early stages of a product's life cycle does not, however, carry over into the later stages. For some well-established products (Levi Strauss jeans and low end name brand audio components) the consultants found that RPM had become obsolete and its continued use was detrimental for the manufacturer, consumers, and society as a whole. For other products (Florsheim shoes and high end audio components), however, the consultants found that the use of RPM continued to be in the public interest. Partly because of these conflicting results and partly because the life cycle theory is not fully developed, its implications for antitrust enforcement are unclear.

At this stage in the "life cycle" of this theory we have more questions than answers. For example, if the theory was thought useful as a case selection device, how could antitrust enforcement agencies distinguish products for which RPM remains efficient from those where the restraint has become inefficient

---

52 The Supreme Court may have indicated that a new entrant exception for RPM is appropriate when in the Sylvania decision the court stated that the Schwinn opinion "broadly hinted that it would recognize additional exceptions to the per se rule for new entrants in an industry and for failing firms. . . ." 433. U.S. at 53 n. 22. The desirability of new entrants using non-price vertical restraints has long been advocated. See Flicker, "Newcomer Defenses: Reasonable Use of Tie-Ins, Franchises, Territorials, and Exclusives," 18 Stanford. L. Rev. 457 (1966).

and therefore undesirable?<sup>53</sup> What market failures or other conditions will cause firms to continue using RPM longer than is optimal?<sup>54</sup> How could we tell during an investigation where a product is in its life cycle and how do we determine whether RPM is being abandoned too slowly?<sup>55</sup> How might we tell even after a case is complete whether a life cycle explanation was involved, and how do we reliably tell at which point in the

- 
- 53 Is there a learning phenomenon? For example, were vertical restraints continually needed for shoes and high end audio components because the products continually change while such restraints were not needed with Levi Strauss' jeans or low end components because the consumers' information about these products did not become obsolete over time?
- 54 When a single firm with market power is involved, such as Levi Strauss, it is possible that the vertical restraints persisted because the firm's management had made a mistake. When more firms are involved, however, it becomes less likely that all firms' managements are mistaken, so an alternative explanation is required. A prisoners' dilemma, as suggested in the audio components investigation, can provide this explanation because it can cause a number of firms to maintain the restraints longer than would be socially optimal; however, it may be difficult to determine if a prisoners' dilemma actually exists.
- 55 Products may change position in their life cycle very gradually. If we view RPM as part of a complex bargain between retailers and manufacturers, we would expect the elements of that bargain to change gradually. See Caves, supra note 13. The change in a product's position in its life cycle might also lead to the gradual abandonment of RPM by the manufacturer. How do we tell how fast the bargain is changing in different industries? Most importantly, if the changing bargain results in the gradual abandonment of RPM, how do we tell if firms are maintaining RPM too long?

product life cycle the antitrust enforcers intervened?<sup>56</sup> Might the possibility that RPM is used for "too long" provide an additional ground for a broad prohibition against RPM?<sup>57</sup> If antitrust enforcers found a situation where they believed that a discontinuation of RPM would raise producer and consumer welfare, would a public report be more appropriate than a lawsuit?

As this list of questions shows, the concept that a firm might use RPM for longer than is desirable presents a number of intriguing -- but dangerous -- possibilities for antitrust enforcers. Despite its evident difficulties, however, this concept should not be lightly brushed aside. Two of the three studies involving RPM find that the Commission's intervention

---

56 For example, if the quality image developed through RPM is long lived, it may be difficult to determine if the RPM policy was obsolete when abolished. If the quality image does not disappear immediately after RPM is abolished, an immediate rise in sales is possible whether RPM is obsolete or not. In either case, the product is offered at a lower price and still has a high quality image. Over time, however, sales will tend to remain high if RPM was obsolete. But, the longer it takes for an image to deteriorate, the more likely are other factors to influence sales, making the isolation of the RPM abolishment effect more difficult. To the extent we believe that short term changes in stock value can help determine whether the discontinuation of RPM is in the long run best interests of the firm, however, it may be useful to make pre-intervention and post-intervention stock price comparisons.

57 Sole reliance upon and misapplication of this theory would leave the antitrust enforcers and courts open to the charge that they incorrectly thought that they knew more about marketing a particular product than did that product's manufacturer.

was socially beneficial because the firms involved used RPM too long.

b. Generalized Quality Certification Theory

In each of the RPM studies the consultants found that vertical restraints were being used to protect the signal of high quality created by the retailers' general method of doing business.<sup>58</sup> By carrying the manufacturers' products, retail stores with high quality reputations signal that the products are of high quality, thereby helping the manufacturers establish or maintain their products' reputations. This signal of high quality is free-ridable; other retailers could refrain from the expense of creating a quality reputation, yet have their sales of the manufacturers' products benefit from the certification efforts of quality-signaling dealers. According to our consultants, the manufacturers' desire to prevent the deterioration of this quality certification through free-riding explained, in part or in whole, the use of RPM in each of the three RPM cases studied.

These findings differ from the standard explanation advanced by Telser and others which emphasizes that product-specific services provided by retailers at the point of sale could lead to RPM. To apply this explanation to the Levi Strauss, low end audio components, and Florsheim situations,

---

<sup>58</sup> For Levi Strauss jeans and low end audio components, the reputation of the items seems to have been so well established that RPM became obsolete. For Florsheim shoes and high end components, however, continual recertification of the products through RPM-induced efforts is apparently required.

for example, one must believe that such services as dressing rooms, point-of-sale information concerning low end audio equipment, and facilities for determining shoe size have important free-riding potential. While each of these services might have some free-riding potential, the traditional point-of-sale services argument was found by our consultants to be either inappropriate or an incomplete explanation in these situations. The consultants concluded that a retailer's general method of doing business can create a quality image for the products carried, and that this seems a more satisfactory explanation for the imposition of RPM in each of these cases.<sup>59</sup> Regardless of whether this generalized quality certification theory is viewed as an expansion of the traditional free-rider explanation or an entirely new theory,

---

59 Although he did not attempt to distinguish the concept from the traditional free-rider theory, Goldberg seems to be identifying free-ridable generalized quality images in both his "Lennox" and "Magnavox" studies. See Goldberg, "Lennox" supra note 11 at 245, 248; and Goldberg, "Magnovox" supra note 11, at 456. Interestingly, in his textbook F.M. Scherer expresses the casual empiricism that free-riding on specific services "can of course happen. . . . But its empirical significance appears modest." F. Scherer, Industrial Market Structure and Economic Performance 593 (1980). He considers the generalized quality image problem to be more common. See Scherer, "The Economics of Vertical Restraints," 52 Antitrust L. J. 687, 694-96 (1983).



its importance should be stressed in future vertical restraints analyses.<sup>60</sup>

c. Free-riding on Manufacturer Services

Dr. Marvel's hearing aids analysis clearly explains why free-riding by dealers on manufacturers' services can cause them to impose vertical restraints.<sup>61</sup> While this novel argument has thus far only been applied to exclusive dealing,<sup>62</sup> it may be that Marvel's explanation has not been offered as a more common explanation for vertical restraints because researchers have not until now known to look for it. The extent of manufacturer involvement in dealer training and financing, as well as in many aspects of the retailing function such as cooperative advertising and marketing programs, suggests that this explanation might be applicable to many

---

60 At the same time, however, the quality image signaling argument should be applied with caution, for it would seem to be very easy to allege but relatively difficult to prove. Virtually every manufacturer and retailer wants to signal customers that its products are of a high quality. Many take vigorous steps towards this end. For quality image signaling to be the cause of vertical restraints, however, there must be significant aspects of these signaling efforts that can be free-ridden. Before this argument is accepted, substantial care should be taken to establish that (1) the free-riding potential is likely to be so significant as to explain the decision to impose vertical restraints; and (2) that no alternative explanation is more likely.

61 The hypothesis that free riding on dealers' services can necessitate the imposition of vertical restraints has, of course, been known for decades. See Telser, supra note 19.

62 For a more detailed and generalized version of this explanation see Marvel, supra note 46. His article is in large part based upon the research that he performed for this project.

exclusive dealing situations and perhaps even explain the use of other vertical restraints.<sup>63</sup>

d. Remedies: Importance of Allowing Manufacturers to Select Dealers on the Basis of Quality

The impact evaluations involving RPM suggest the value of including in a RPM remedial order a provision allowing manufacturers to select dealers on the basis of quality. Such terms have, in fact, commonly been included in Commission orders. The order against Levi Strauss, for example, prohibited the company from maintaining resale prices but allowed it to continue to select dealers on the basis of quality.<sup>64</sup> Since Levi Strauss continued to distribute its product on a selective basis, the firm probably profited from the provision of the order which allowed this method to be used to protect quality signaling efforts.

A remedy that allows dealer selection can also be valuable when the antitrust action was ill advised. In the Interco case, Florsheim was prohibited from terminating dealers because they discounted but was permitted to continue to select dealers

---

63 At the same time, however, not every provision of a service by a manufacturer is subject to significant free-riding by retailers who also sell competing products. Moreover, the existence of such conditions as collusion or serious market failure might result in the application of vertical restraints having a net anticompetitive effect despite the existence of free-ridable manufacturer services.

64 The literature generally recognizes that the various vertical restraints are substitutable for each other to at least some extent. See Caves, supra note 13, passim, for an interesting discussion of the effects of such substitution on the "bargaining" between manufacturers and retailers.

n the basis of quality criteria. Although Dr. Greening's analysis concludes that the case harmed consumer welfare, the harm probably would have been more severe without the order revision which allowed Florsheim to continue selective distribution and thereby preserve one method of signaling the high quality of its products. Similarly, in the high end of the audio components markets, RPM was challenged although our consultants later found that it enabled manufacturers to prevent free-riding on the services of competing retailers. Revisions in the order that allowed the manufacturer to select retailers probably limited any harm resulting from the order. One difficulty with this approach towards remedies is, of course, the practical problem of ensuring that the manufacturers use the dealer selection provision to maintain the quality image rather than to enforce de facto RPM.<sup>65</sup>

### 3. Implications for Vertical Restraints Enforcement Policy

The consultants concluded that the FTC's interventions were probably harmful in two industries (five cases), and probably improved social welfare in three industries (ten

---

<sup>5</sup> The converse of this problem was recently illustrated by a petition of Pioneer Electronics -- one of the firms involved in the audio components cases -- to have its consent order modified. Pioneer claimed that the order's attempt to guard against de facto RPM by prohibiting restrictions on transshipments by dealers had greatly reduced Pioneer's ability to retain high quality dealers.

cases).<sup>66</sup> These studies are too few in number to draw generalized conclusions concerning the overall effect of past Commission vertical restraints cases. On the other hand, these five studies comprise a significant portion of the rigorous empirical evaluations of the effects of vertical restraints. So, some consideration should be given to the policy implications of the studies' results.

Development of an optimal enforcement policy towards RPM and other vertical restraints requires the balancing of a number of factors. Any sound vertical restraints enforcement policy must, for example, reflect a judgment concerning the relative empirical significance of the pro-competitive and anti-competitive explanations for vertical restraints. Consideration also must be given to designing a policy that is simple, clear, and predictable so that businesses have meaningful guidance concerning the legality of their actions. The policy should also be designed to minimize judicial

---

66 Since only one evaluation attempted a quantitative estimate of welfare effects, it is impossible to compare the benefits created in the three industries with the harm caused in the other two industries. In addition, while the consultant found that the hearing aids cases had a detrimental effect on "competition," he declined to state an opinion as to their overall effect on social welfare because the cases probably benefited one significant group of consumers and had a detrimental effect on another significant group.

application errors and litigation costs.<sup>67</sup> All this would have to be done with full realization that no policy can hope to perfectly accomplish each of these goals.<sup>68</sup>

Differing opinions about how these goals (and other goals) can be accomplished have caused antitrust policy recommendations to run from per se legality to per se

---

67 To illustrate the simultaneous application of these factors, suppose that we believed that 90% of the time RPM was anticompetitive (or, alternatively, procompetitive), but that it was extremely difficult in a litigation context to determine whether a particular instance of RPM was procompetitive or anticompetitive. To send a clear signal to businesses and minimize judicial application errors and litigation costs, we might want to make RPM per se illegal (legal) despite the knowledge that 10% of the time cases would be decided incorrectly.

68 The policy analysis becomes even more complex when detection, deterrence, private action, and remedial problems are considered. For example, even if collusion was widespread and the most frequent cause of RPM, a harsh rule against RPM would be much less needed if antitrust enforcers could typically detect sufficient evidence of the collusion to challenge it directly. Similarly, an optimal enforcement policy is more difficult to determine if deterrence effects are considered. Since policies may differ in their deterrent impact, we would want to know what would happen to the net mix of pro-competitive and anti-competitive instances of vertical restraints if a change in policy were announced. These deterrence concerns are accentuated by the ability of private parties to bring or threaten treble damage actions for alleged violations of the antitrust laws. Finally, the availability of a variety of remedies also affects the choice of an enforcement policy. The discussion above indicates that judicious use of remedies may substantially limit the harm to consumer welfare arising from mistaken vertical restraints interventions. To the extent that remedial provisions can eliminate the harmful effects of mistaken vertical restraints cases, a more strict enforcement policy is warranted.

illegality,<sup>69</sup> with many "rule of reason" and other options in between. A per se rule provides savings in costs that would otherwise be incurred through business uncertainty, litigation expense, and judicial application error; however, such a rule is likely to give perverse results in some cases. On the other hand, a rule of reason will tend to provide the court with more opportunity to determine if a specific use of vertical restraints is harmful or beneficial, but this approach is also likely to create increased business uncertainty, litigation

---

<sup>69</sup> For example, although Posner does not believe that cartels are common, since he believes that they are relatively easy to detect he would make RPM per se legal. In contrast, in part because Pitofsky believes collusive behavior to be more common, he advocates keeping RPM per se illegal (with specified exceptions) and expanding the per se illegality rule to certain of the non-price vertical restraints. Compare Posner, supra note 3, with Pitofsky, supra notes 3 and 8.

costs, and judicial application error.<sup>70</sup> The findings of the impact evaluations highlight the potential shortcomings of all these recommended approaches.

The mixed result that the FTC interventions were probably harmful in some industries and beneficial in others suggests that the adoption of a per se rule (whether of legality or illegality) is likely to result in large numbers of cases being decided incorrectly. To the extent that the impact evaluations' results are representative of vertical restraint

---

<sup>0</sup> In an effort to balance these considerations, commentators have proposed a wide variety of rule of reason options and per se rules with exceptions. The rule of reason options range from a complete rule of reason, where all potential issues are evaluated, to options that focus the issues to be adjudicated. Policy recommendations which most tightly focus the scope of judicial inquiry are per se rules with exceptions. Examples of this type of policy recommendation are per se illegal rules for RPM with exceptions for new entrants, maximum rather than minimum prices being maintained, or manufacturers' and retailers' market shares falling below specified levels. The complete rule of reason provides the most opportunity to determine if a specific use of vertical restraints is harmful or beneficial but this approach is likely to create the greatest business uncertainty, litigation costs, and judicial application error. The restriction of the scope of judicial inquiry through either a focused rule of reason or per se rules with exceptions is an attempt to maintain some of the flexibility of a rule of reason approach yet still reduce the costs of business uncertainty, litigation, and judicial application error. Those favoring a rule of reason approach contend that a rule of reason trial could, in some cases, be usefully structured through presumptions and similar devices. For example, market shares could be employed as a first cut indicator of the presence of absence of market power in order to establish a presumption of legality or illegality. For a discussion of some of these alternative proposals see Overstreet, supra note 3.

effects in general,<sup>71</sup> they indicate that although a per se rule might produce savings in terms of reduced business uncertainty, litigation costs, and judicial application error, these savings might very well not compensate for the social cost of incorrect decisions.

While the mixed results of the impact evaluations indicate that both the per se legal and per se illegal approaches have potentially substantial shortcomings, the complexity of the studies indicates that a rule of reason is not necessarily the appropriate legal approach. Each of the cases was complicated and, even with access to post-decision evidence to aid in testing hypotheses, it took the consulting economists considerable time and effort to determine the most likely explanations for the imposition of vertical restraints. A judge would obviously not have the benefit of post-decision evidence when evaluating a case under a rule of reason. In addition, the evidence which convinces an academic of the

---

<sup>71</sup> The "mixed result" of the probable effect of vertical restraints is not unique to this project. For example, the welfare conclusions of the other existing detailed case studies of RPM are mixed: Goldberg, supra note 11, reports that the FTC action probably harmed welfare in both the Lennox and Magnavox cases because RPM was being used to induce dealer services; McLaughlin, supra note 11, concludes that in Bakers of Washington RPM was being used to aid a manufacturers' cartel while in Coors RPM was being used to overcome free-rider problems, so he believes that the FTC actions aided welfare in the first case and harmed welfare in the second; and Steiner, supra note 11, concluded that the FTC benefited society by correcting a mistake made by Levi Strauss. In addition, Hourihan & Markham, supra note 11 at IV-3, report that a Fair Trade law's repeal did not cause the prices of all previously traded items to fall, but those items whose prices fell "were usually" less available.



applicability of a particular theory may not be sufficient in litigation. Some of the theories that proved useful in the impact evaluations -- generalized quality image, free-ridable manufacturer's services, and a mistake concerning the product's life cycle -- would be easy to assert in a litigation context but very difficult to prove or disprove conclusively.<sup>72</sup> Thus, a court or administrative agency might have great difficulty applying the rule of reason in vertical restraints cases. Such a legal standard may therefore involve unduly high costs due to uncertainty, litigation expense, and judicial application errors.

By highlighting the potential shortcomings of the rule of reason and strict per se approaches, the impact evaluations' findings confirm that there are legitimate reasons for debate and disagreement over the optimal enforcement policy toward vertical restraints. The findings do not, unfortunately, provide much aid in answering the ultimate policy question -- what is the optimal antitrust policy towards vertical restraints? The evaluations of the RPM cases do, however, appear to be consistent with the following policy conclusions:

- 1) an approach that allows RPM by a new entrant is very likely

---

<sup>2</sup> In addition, most of the cases involved competing welfare effects, and in each case the data on the record and in the public domain proved insufficient to conclusively resolve the welfare tradeoffs.

to benefit consumers and society as a whole;<sup>73</sup> and (2) a provision in RPM remedial orders that allows dealer selection on the basis of quality is also likely to be beneficial. Thus, the evaluations do suggest that the current RPM standard, per se illegal with no exceptions, is not in the public interest.

---

73 This could be accomplished, for example, by having RPM per se illegal except when used by a new entrant. Under such a policy the term "new entrant" should be carefully defined to provide appropriate deterrence and meaningful guidance for business. A new entrant exception already applies to tying arrangements. See United States v. Jerrold Electronics, 187 F. Supp. 545, 560-61 (1960) aff'd, 365 U.S. 567 (1961); cf. Brown Shoe Co. v. United States, 370 U.S. 294, 330 (1962). Further, the Supreme Court's Schwinn opinion "broadly hinted that it would recognize additional exceptions to the per se rule for new entrants in an industry and for failing firms . . . ." Sylvania, 433 U.S. at 53 n. 22.

II. The Impact Evaluation Analyses

A. Levi Strauss

Sharon Oster

The FTC v. Levi Strauss: An Analysis of  
the Economic Issues

Sharon Oster  
Associate Professor  
Economics  
Yale University

Revised, March 1982

Traditional antitrust prohibitions against vertical restraints have recently been challenged both in the courts and in the economics literature. Perhaps the strongest statement comes from Bork, who argues "analysis shows that every vertical restraint should be completely lawful,"<sup>1</sup> but similar doubts about the harms of vertical restraints come from Posner,<sup>2</sup> and in a milder form from Williamson.<sup>3</sup> The 1977 case of *Continental TV, Inc. v. GTE Sylvania*<sup>4</sup> overturning the earlier per se rule against vertical restraints embodied in the *Schwinn*<sup>5</sup> decision reflects these doubts. In part the new treatment of vertical restraints is a response to recent work in economics in which the evaluation of particular organization forms is seen as an efficiency-arguing response to a firm's environment. Caves,<sup>6</sup> for example, argues that vertical restraints can be seen as one element in the complex bargain struck between manufacturer and retailer. The use of these restraints is thus conditioned by the market power of the two bargainers, as well as the general institutional context in which the bargain is struck. Thus, vertical restraints may be seen as a way to reduce

---

<sup>1</sup>Robert Bork, The Antitrust Paradox (1978), p.289.

<sup>2</sup>Richard Posner, "The Rule of Reason and the Economic Approach: Reflections on the Sylvania Decision," 45 University of Chicago Law Review, 1977; Posner, "The Next Step in the Antitrust Treatment of Restricted Distribution: per se Legally," 48 University of Chicago Law Review 6 (1981)

<sup>3</sup>Oliver Williamson, "Assessing Vertical Market Restrictions: Antitrust Ramifications of the Transaction Cost Approach," 127 University of Pennsylvania Law Review, 1979.

<sup>4</sup>433 U.S. 36(1977).

<sup>5</sup>388 U.S. 365(1967).

<sup>6</sup>Richard Caves, "Vertical Restraints as Integration by Contract: Evidence and Policy Implications," Symposium on Vertical Integration, Journal of Industrial Economics, forthcoming.

transactions costs,<sup>1</sup> to eliminate free rider problems,<sup>2</sup> or as an expression of the market power of manufacturer or retailer.<sup>3</sup>

In this paper, I examine vertical restraints, particularly resale price maintenance and customer restrictions, as they appear in a recent FTC case against Levi Strauss. This case, which was being argued at the same time as *Sylvania*, illuminates some of a firm's motives for engaging in vertical restraints. In Section I of this paper, I provide a brief summary of the facts of the Levi Strauss case, taken from the court hearings. In Section II, I review the classic motives for vertical restraints, and consider which ones seem to make sense in terms of the history of the Levi Strauss operation. I am particularly concerned in identifying the characteristics of the environment facing Levi Strauss which might possibly make vertical restraints an efficient organization form. Finally, in Section III, I conclude with a brief discussion of the effect of the case on the Levi Strauss operation, and make some tentative estimates of the effect of the case on consumer welfare.

---

Williamson, op.cit.

York, op.cit.

Laves, op.cit.

## I. History of the Case

On May 5, 1976, the Federal Trade Commission filed suit against Levi Strauss charging the company with engaging in a series of vertical restraints with the intent of fixing prices at the retail level. Hearings on the case began in February, 1977.

The main charge of the Federal Trade Commission against Levi Strauss was that the firm "effectuated and pursued a policy throughout the U.S., the purpose or effect of which is and has been to fix, control, establish, manipulate and maintain the resale prices at which its dealers advertise, offer for sale, and sell its products."<sup>1</sup> In promoting resale price maintenance, Levi Strauss was charged with using a variety of instruments including suggestions, threats, pre-ticketing of merchandise, cooperative advertising schemes and, most prominently, customer restrictions.

At the time of the Levi Strauss case resale price maintenance was almost per se illegal. The one exception to this per se rule was found in the Colgate<sup>2</sup> decision. The court in the Colgate case argued that a manufacturer could announce his suggested retail price, and refuse to sell to retailers who would not comply. The crucial distinction in the Colgate case was the absence of any agreement between manufacturer and retailer to maintain suggested prices. Since Colgate, the court has broadened the definition of agreement<sup>3</sup> and thus limited even further the ability of firms to suggest resale prices.

---

<sup>1</sup>433 U.S. 36(1977)

<sup>2</sup>250 U.S. 300(1919)

<sup>3</sup>United States v. Parke, Davis & Co., 362 U.S. 29(1960).



... defending against the charge of resale price maintenance, Levi Strauss argued that in its pricing policy it was "a company that tried to walk the Colgate line."<sup>1</sup> All the firm did, the defense argued, was to suggest resale prices, "which suggested prices may or may not be followed as dealers unilaterally elect."<sup>2</sup> The emphasis on the unilateral nature of the price suggestions is clearly an attempt to meet Colgate requirements.

The second charge made against Levi Strauss by the FTC was that Levi Strauss as part of its general price-fixing strategy attempted to control the customers or classes of customers its dealers could sell to. Levi Strauss, in the late 1960's, began to restrict the class of dealers who they would allow to carry their line.<sup>3</sup> Restrictions were numerous. Basement operations were prevented from selling first-line Levi Strauss products, as were stores like Sears and Penney's. Levi Strauss also refused to sell to wholesalers. This was a strong prohibition; there was evidence that Levi Strauss stopped serving retailers who "diverted" part of the Levi Strauss merchandise to other stores.<sup>4</sup> Indeed, coincident with the FTC case, Levi Strauss was engaged in a private suit against one of these diverters (General Pants). The September 26, 1974 sales manual reiterated the Levi Strauss position: "Levi Strauss cannot impose restrictions on the resale of our goods. However, we are not obliged to continue selling to a customer who is diverting our goods."<sup>5</sup>

---

<sup>1</sup> FTC v. Levi Strauss, opening statement by Popofsky, p.1758 of the record.

<sup>2</sup> FTC v. Levi Strauss, para 7, Levi Strauss initial response, June 1, 1976.

<sup>3</sup> FTC v. Levi Strauss, Testimony of O'Shea, Levi Strauss Director of Marketing, p.1841 of the record.

<sup>4</sup> FTC v. Levi Strauss, Testimony of Spencer Stillman, head of General Pants retail chain, p.293 of the record.

<sup>5</sup> Levi Strauss Sales Manual, Sept. 26, 1974.

The intent of Levi Strauss' customer restriction policy is particularly important given the timing of the case. When the hearings on Levi Strauss began, the ruling precedent was Schwinn. Schwinn was charged in 1967 with restricting competition by preventing its retailers from reselling its bicycles to anyone other than consumers. Levi Strauss had been practicing the same attempt to prevent merchandise diversion. The Court found against Schwinn, arguing

"where a manufacturer sells products to his distributor subject to territorial restrictions upon resale, a per se violation of the Sherman Act results. And, as we have held, the same principle applies to restrictions of outlets with which the distributors may deal and to restraints upon retailers to whom goods are sold."<sup>1</sup>

In the midst of the Levi Strauss hearing, after the FTC had presented its case but before the firm had responded, the Sylvania case was decided. This case overruled the per se prohibition against customer restrictions in Schwinn, and introduced instead a rule of reason approach to this practice. So, the intent and form of the practice, as well as the market power of Levi Strauss while practicing these restrictions became more important after Sylvania. Indeed, the Levi Strauss lawyer argued that while Levi Strauss' customer restrictions would have been illegal under Schwinn, they were allowable under Sylvania,<sup>2</sup> since these restrictions were designed to serve a legitimate business function--quality control--and not to enforce resale price maintenance.<sup>3</sup>

---

<sup>1</sup>388 U.S. 365(1967)

<sup>2</sup>FTC v. Levi Strauss, opening statement by Popofsky, p.1747.

<sup>3</sup>The quality control issue is at the heart of the Levi Strauss defense and will be considered in detail in Section 2 of this paper.

In the testimony of September 20, 1977 the first prospect of a settlement between Levi Strauss and the FTC appeared. The Sylvania decision had knocked the wind out of the FTC case against customer restrictions. Further hearings were cancelled on October 11, 1977, and finally on July 12, 1978 the formal consent decree was filed ending the case. The final decree was a compromise. Levi Strauss is expressly prohibited from engaging in a wide variety of practices to fix resale prices; indeed it is prohibited from even suggesting retail prices for a period of five years. Tie-ins are also prohibited.<sup>1</sup> On the customer restriction issue, however, the FTC backed down a bit. In particular, Levi Strauss is prohibited from using customer restrictions to fix retail prices; customer restrictions are not (as in the initial FTC order) ruled out completely.

In sum, there are two related charges in the Levi Strauss case. First, that Levi Strauss engaged in resale price maintenance, and second, that they pursued this policy through the use of customer restrictions.

In the next section of this paper, I look at the environment in which Levi Strauss operated and the structure of the firm as factors explaining its strategy of suggesting resale prices and restricting its customers.

---

<sup>1</sup> The FTC also charged that Levi Strauss had engaged in tying. Levi Strauss' most popular product is denim jeans; in addition Levi Strauss carries a growing assortment of other clothing. The FTC claimed that Levi Strauss during the early 1970's used its market power in denims to try to induce retailers to carry other parts of the Levi line. The tying charge is a minor part of the FTC case and will not be dealt with in this paper; but the evidence on the market position of denims will come up again in the discussion.

## II. Vertical Restraints in Levi Strauss

Before 1976, Levi Strauss' selling strategy involved restricting the retail outlets to which it would sell and attempting to support retail prices. The evidence on whether the firm engaged in illegal price maintenance or not is mixed, although the evidence that Levi Strauss did indeed set prices is quite strong. It is certainly clear that at least in the period before 1976 Levi Strauss wanted to support retail prices. The 1974 sales manual, for example, states "Levi Strauss is firm in its policy not to sell to price cutters."<sup>1</sup> Throughout the record of the anti-trust case, there is testimony by Levi Strauss salesmen that customers were told during the early 1970's that "we don't sell to people who don't maintain the suggested retail price."<sup>2</sup> There was also testimony from retailers that they were denied merchandise after selling Levi's merchandise at less than the suggested retail price.<sup>3</sup> At the same time, Levi Strauss systematically refused to sell its merchandise to a number of different stores.

In 1976, the year of the FTC suit, Levi Strauss' policy changed. The pre-ticketing of merchandise, one of the instruments used by Levi Strauss to keep up prices, was abandoned. By 1977, the firm no longer even suggested appropriate prices to its retailers. This change in policy came at least in part as a result of the FTC action.<sup>4</sup> But there is some evidence

---

<sup>1</sup> Levi Strauss Sales Manual, September 26, 1974.

<sup>2</sup> FTC v. Levi Strauss, testimony of Cristol, p.150; Roncove, p.800; Kenfield, p.1646.

<sup>3</sup> FTC v. Levi Strauss, testimony of Stillman, p.293, Braul, p.752; Foonberg, p.152.

<sup>4</sup> FTC v. Levi Strauss, opening statement by Levi Strauss, p.1740 of testimony.

that at the time of the FTC action, Levi Strauss' selling strategy was becoming obsolete. If this is indeed the case, we would expect Levi Strauss to have eventually abandoned this strategy on its own.

The first question to consider is why Levi Strauss pursued a policy of vertical restraints in the 1960's and early 1970's. The advantage to manufacturers of imposing vertical restraints is an old puzzle. At first blush, the policy seems to be perverse; by supporting resale prices and restricting retail outlets, Levi Strauss would seem to be reducing its own sales. This puzzle was first treated by Telser;<sup>1</sup> recent work has been done by Posner<sup>2</sup>, Bork<sup>3</sup>, Williamson<sup>4</sup>, and Caves<sup>5</sup>. All arguments begin with the proposition that, if vertical restraints exist, they must be profitable either to the manufacturer or the retailer. The search is then for the source of the potential profit to be yielded by the restraints.

Between 1970 and 1979, the Federal Trade Commission charged 37 firms with engaging in resale price maintenance.<sup>6</sup> Nine of these firms were in the apparel industry.<sup>7</sup> It is thus interesting to consider through the special case of Levi Strauss the characteristics of this industry which cause it to behave in ways which can be interpreted as resale price maintenance.

<sup>1</sup>Lester Telser, "Why Should Manufacturers Want Fair Trade?" Journal of Law & Economics, Oct. 1960.

<sup>2</sup>Richard Posner, Antitrust Law: An Economic Perspective, 1966.

<sup>3</sup>Robert Bork, The Antitrust Paradox, 1978.

<sup>4</sup>Williamson, "Assessing Vertical Market Restrictions: the Transaction Cost Approach," University of Pennsylvania Law Review, April 1979.

<sup>5</sup>Caves, op.cit.

<sup>6</sup>Survey of the FTC Court Reporter, 1970 through 1979. I am indebted to a student, Marian Davis, for this statistic.

<sup>7</sup>Levi Strauss, Huk-a-Poo Sportswear, Jonathan Logan, Mother Maternity, Allan A. Company, Duofold, Gamble-Skogns, Interco, Inc. and Pendleton Woolen Mills.

It has been argued that resale price maintenance may help to facilitate collusion among manufacturers. Since retail prices are set, manufacturers cannot use price reductions to induce retail price cuts to expand sales; "therefore, a manufacturer who would induce retailers to increase their purchases from him by offering them lower prices loses profits to no avail."<sup>1</sup> Thus, it is argued, resale price maintenance discourages manufacturers' price cuts which would otherwise threaten the cartel. Both Telser, and later Bork, recognize that this argument is limited. In general, one might expect retailers under RPM regimes to respond to a price-cutting manufacturer--whose cheating has increased retailer profit levels--by competing for this firm's product. Competition in this case may take the form of increased service, which will expand product sales even given the price stability. So a manufacturer does have an incentive to reduce prices even under resale price maintenance. Nevertheless, that incentive is limited by the opportunities available in the retail sector for intrabrand quality competition; thus, one might expect somewhat more cartel stability under RPM than otherwise.

Is the collusion argument applicable in the Levi Strauss case, or for apparel generally? The apparel industry is one of the most competitive in the economy. Entry is very easy: there are virtually no economies to scale, no patent or raw material control, and capital requirements are low.<sup>2</sup> The only real barrier to entry is product differentiation, and even this is not high. The average apparel plant employs only 70 workers; this figure

---

<sup>1</sup>Telser, op.cit., p.97.

<sup>2</sup>U.S. Council on Wage and Price Stability, Textiles/Apparel, 1978.

is slightly higher for men's and boy's trousers (Levi's biggest market) at 131 but is still modest. The four-firm concentration ratios in the markets in which Levi Strauss competes (men's and boy's wear) are also modest, on the order of 30%.<sup>1</sup>

It may be argued that the relevant market in this case is not men's trousers in general, but jeans. If we define the market in this more narrow way, the industry appears somewhat less competitive. In particular, Levi Strauss controls about 30% of the sales of jeans in the U.S.<sup>2</sup> Blue Bell, the next largest firm, has about 18% of the market. Nevertheless, numerous other quite small competitors are successful in the industry, which suggests that the minimum efficient scale even on the jeans industry is not very large. Moreover, the product is differentiated. In this kind of market with uneven size distribution and product differentiation, a cartel is unlikely to develop.<sup>3</sup> And, indeed, the price pattern of jeans is also inconsistent with the existence of manufacturer collusion: prices changed fairly often; moreover, Levi Strauss typically priced its jeans several dollars above those of its rivals.

<sup>1</sup>U.S. Bureau of the Census, Census of Manufacturing, 1972.

<sup>2</sup>Several sources cite the 30% figure, including Fortune, and Robert Steiner, Brand Advertising and the Consumer Goods Economy, (forthcoming) p.451. This figure can also be obtained more directly. In 1976, Levi Strauss earned sales of \$569 million (source: annual report). The average mark-up, according to testimony in the case, is 50%. So the value of Levi jeans at retail was \$853 ml. The total jeans market has been estimated to be \$2,560 ml in 1976 (Chain Store Age, Oct. 1977; cited in Steiner). This yields a market share for Levi Strauss of 33%.

<sup>3</sup>George Stigler, "A Theory of Oligopoly," Journal of Political Economy (February, 1964).

Did Levi Strauss use resale price maintenance to protect a dealer's cartel? There is a suggestion in the testimony that at least some dealers desired the resale price maintenance. Dealers, for example, often reported deviations from the suggested price to Levi Strauss. Levi Strauss' Director of Marketing argues in his testimony, "I have always looked upon pre-ticketing and suggested retail prices as more of a service to the retailer than it was to us."<sup>1</sup> The regional sales manager of Levi's echoes this view in his testimony: "We do not want a price war because then we have a lot of accounts upset, and you hurt your own relations with the account."<sup>2</sup> In order to use resale price maintenance to support a dealer cartel, the industry must have two characteristics. First, the environment must be otherwise congenial for cartelization. Second, the dealer cartel must have some leverage over the manufacturer to induce the manufacturer to pursue a policy which is otherwise unattractive. Neither condition holds in the Levi Strauss case. The retail industry distributing Levi Strauss goods is quite competitive and very large: in the testimony it is estimated that Levi's are carried by about 20,000 retail outlets.<sup>3</sup> Caves<sup>4</sup> argues that the retail sector may in some instances acquire bargaining power given its localized character. This is not the case with a relatively easily-sold good like jeans. Even within a single shopping center, numerous stores with quite different cost

---

<sup>1</sup> FTC v. Levi Strauss, p.1883 of the record.

<sup>2</sup> FTC v. Levi Strauss, p.3792 of the record.

<sup>3</sup> FTC v. Levi Strauss, testimony, p.1883.

<sup>4</sup> Caves, op.cit.



and operating characteristics typically carried Levi's jeans.<sup>1</sup> Coordination costs are likely to be high under these conditions, and cartelization unlikely. Perhaps more importantly, retailers appear to have had very little power over Levi Strauss. Throughout the period Levi Strauss seems to have had the leverage. One of the regional managers of Levi Strauss testified, for example, that, since the late 1960's, he was consistently 20-25% short of what retail accounts ordered in jeans.<sup>2</sup> Testimony by Levi Strauss salesman confirms the short supply problem.<sup>3</sup> In this situation, it is hard to argue that retailers had sufficient power to induce Levi Strauss to pursue a policy which was otherwise unattractive.

Telser (1960) was the first to suggest that resale price maintenance might be used by manufacturers as a way to induce retailers to provide more services. In order for this story to make sense, we need a rather special situation. First, demand for the product must be a function of the service level as well as the price. Secondly, the service must be such that it is best provided by retailers, and not by the manufacturer. Finally, benefits from the service provision must not be fully appropriable by the providing retailer. Under these conditions and absent resale price maintenance, we will observe the following. Given that services are costly, retailers providing the service will charge a higher price for the good. Customers will

---

<sup>1</sup>Forbes, August 21, 1978.

<sup>2</sup>FTC v. Levi Strauss, testimony, p.1684.

<sup>3</sup>FTC v. Levi Strauss, testimony, p.840; p.984. One puzzle in this case is why Levi Strauss did not raise its price in the face of the jeans shortage, but instead chose to follow a direct allocation strategy. One explanation may be that the firm saw the shortage as temporary, and thought that, in these circumstances, fiddling with the price would involve high transactions costs.

then browse in the service-oriented store and buy from the discount store. Eventually, service-oriented stores will fail. When this happens, demand for the good will fall and everyone—manufacturer and retailer—will be worse off. This is a classic example of the free rider problem, and the result is an under-provision of services from the point of view of the manufacturer (as well as for retailers as a whole).

This story turns on the peculiar nature of the services. From the consumer's perspective, the services must be separable from the good itself. Otherwise the "browse here, buy there" strategy will not be possible. On the other hand, despite the fact that the good and service are separable, the retailer must have some special advantage in providing the service. So, for example, the refund policy of a store will not face the free rider problem, as it is not separable. Product demonstrations are separable, but often can be (and are) provided by the manufacturer, either directly or via national television advertising.

In the Levi Strauss case, is there any service which meets these special requirements? We can turn to the testimony to see what kind of services Levi Strauss was interested in having its retail outlets provide. There is ample evidence that Levi Strauss was concerned with the characteristics of its retail outlets. But in all the evidence, there is only one concrete service mentioned as being desirable—fitting rooms. Indeed, Levi Strauss explicitly argued that swap-meeters<sup>1</sup> and some discount stores were unacceptable outlets because they lacked fitting rooms.<sup>2</sup> This is

---

<sup>1</sup> Swap-meeters are referred to frequently in the testimony as undesirable outlets. Swap-meeters are open-air sellers, or "flea markets." Swap-meets are quantitatively small, and it is hard to believe that these stores really influenced Levi Strauss' marketing strategy so markedly.

<sup>2</sup> FTC v. Levi Strauss, testimony, p.1696.

a weak argument on several grounds. First, fitting rooms are reasonably cheap to provide and indeed can typically be found in most discount stores. Even in the absence of fitting rooms by some sellers, a likely result is not dominance by the non-fitting room seller, but rather the development of a two-part market: repeat customers who know their sizes will shop at the cheaper discount stores, and new customers at the more expensive stores. Sales at the stores with fitting rooms will naturally decline. But it is not at all clear that aggregate sales will decline; indeed one might well expect two-part pricing to increase sales. Finally, one might argue that, if Levi Strauss was concerned about fitting rooms, they could monitor the provision of these rooms directly, refusing to sell to stores which do not provide this service.

It thus seems implausible that Levi Strauss used resale price maintenance to induce the proper provision of any direct service. Services are not an important component of jeans consumption. Yet Levi Strauss indicated strong concern with the characteristics and pricing behavior of its retail outlets. I would argue that the selling strategy of Levi Strauss was adopted not to augment the service level of retailers, but rather to provide signals to the final consumer about the quality of its product. Suppose that product quality is at least to some extent unobservable. The manufacturer has available a set of instruments which can be used to convince consumers of the high quality of his product. Traditional instruments include advertising, changing physical characteristics of the good, or altering the conditions of sale. Two more unusual signalling devices which may be of relevance in this case are the vertical restraints of restricting store choice and fixing prices.

Do store choice and pricing policy serve as viable signals in this

industry? The marketing literature is interesting in this respect. There is a good deal of experimental evidence that store prestige has a positive effect on the perceived quality of goods. The standard experiment in this field is to take identical products, label them with different store, price and/or brand names and ask respondents to rate the products on quality. Wheatley and Chiu, for example, found significant differences in the quality rating given to carpets which were identical except for the store name attached.<sup>1</sup> The experimental evidence also suggests that price is often used as a quality signal.<sup>2</sup> The evidence suggests, however, that the strength of both price and store as a signal varies with the product being sold. As one might expect, products with low brand identification depend more on price and store as a signal.<sup>3</sup>

For a signal to be useful and persistent, high quality sellers must have lower signaling costs than low quality sellers; otherwise low quality sellers can mis-signal customers, and the signal will lose its value.<sup>4</sup> The standard example from Spence is education. More capable people find it easier to get an education than less capable people and as a result they will get more education. Thus, I can use someone's educational level as a proxy or signal for how competent they are. The signal works because, given their costs of education, it does not pay less competent people to get an education and try to disguise themselves as competents.

---

<sup>1</sup>John Wheatley and John Chiu, "The Effects of Price, Store Image, Product and Respondent Characteristics on Perceptions of Quality," Journal of Marketing Research, 1977.

<sup>2</sup>Ibid.

<sup>3</sup>David Gardner, "Is There a Generalized Price-Quality Relationship?" Journal of Marketing Research, 1971; and Jacob Jacoby, Jerry Olsen and Rafael Haddock, "Price, Brand Name and Product Composition Characteristics as Determinants of Perceived quality," Journal of Applied Psychology, 1971.

<sup>4</sup>Michael Spence, Market Signaling (1974).

Is store prestige a viable, persistent signal in the apparel industry? Can a manufacturer like Levi Strauss use its choice of first-rate outlets as a way to convince customers that jeans are a high-quality item? For store prestige to work as a signal there must be some affinity between high quality retailers and high quality manufacturers which makes it more profitable for these retailers to stock high quality merchandise than low quality merchandise. There are several reasons to believe this affinity exists. High quality retailers are characterized by generous refund policies and more general sensitivity to consumer complaints. So in some sense the costs of stocking shoddy merchandise increases with the quality of the retailer. The extreme example is the "swap-meeters" so objected to by Levi Strauss. These mobile marketers never take back shoddy merchandise, and so experience fewer losses from stocking inferior merchandise than do higher quality stores.

There is a second force at work encouraging quality specialization by retailers. In general customers who seek high quality in one item seek high quality in other items as well. This means that shopping costs will be minimized if stores "quality specialize." But, given this tendency, a firm whose product quality is somewhat unknown will gain from stocking the good in the high versus low quality store.<sup>1,2</sup>

<sup>1</sup>At present, Levi Strauss will not sell to discount stores because of their "poor image." But suppose the FTC forced high quality manufacturers to sell to discounters. Would this not eliminate the poor image of discounters and give us lower prices as well? This strategy will not, in general, work. As discussed above, there are economies to a store in generally specializing in one part of the quality line: these economies accrue both from reducing consumer search costs, and because there are retail handling strategies which may differ by quality of the good. Hence, there will always be some store specialization by quality; some stores will specialize in low priced goods and have a "poor image."

<sup>2</sup>The above argument is not meant to imply that customers at discount stores are not interested in buying Levis.

Price is on shakier grounds when used as a signal. If uninformed consumers interpret high prices as high quality, their demand curves may be upward-sloping and market equilibrium may not exist.<sup>1</sup> Nevertheless, it has been shown that if a market has some informed buyers, under some conditions, prices can convey information to the uninformed;<sup>2</sup> moreover, experimental evidence cited above suggests that consumers do use price in this way. This is not, however, a plausible story in the Levi Strauss case. In particular, if Levi Strauss believed that customers equated price and quality, they need only have raised their wholesale price as a way to raise retail prices. Instead, the firm chose to hold wholesale prices low--indeed, so low that there was excess demand at the retail level--while maintaining resale prices.

If price maintenance was not used as a signal, what was its function? I would argue that price maintenance was, in this case, inextricably bound up with Levi Strauss' pursuit of merchandise placement in high quality stores. In particular, Levi Strauss attempted to hold prices up to preserve retail margins as a way to induce high quality retailers to stock their goods. Price maintenance was the price paid by Levi Strauss to encourage retailers to allocate scarce shelf space to Levi Strauss jeans.

If the store choice as a signal argument is correct, then Levi Strauss has a stake in maintaining the quality of all its retailers. This is a quite different situation from the case of service provision; a two-type set of stores will not suffice. A two-tier system would both erode the profit margins of the sought-after high quality stores and obfuscate the store quality-goods quality connection. So, Levi Strauss' diligence in policing merchandise diversion is unremarkable.

<sup>1</sup>Steven Salop, "Advertising as a Signal: An Expository Note." 1979

<sup>2</sup>Sanford Grossman and Joseph Stiglitz, "Information and Competitive Price Systems," American Economic Review, May 1976.

Evidence from the case itself is consistent with this interpretation of the function of restrictions on sellers. A sales manager asserted that a particular store was turned down because it "is a discount store which projects a very poor marketing image."<sup>1</sup> A second similarly argued that discounters were avoided "because of the image they have."<sup>2</sup> My interpretation of the supportive role of price maintenance in this case also receives some support in the evidence. In complaining about discounts offered by a discounter, "Two Guys," one of Levi Strauss' regional managers claimed: "The magnitude of the Two Guys' promotion seriously affected the May Company's business in those products."<sup>3</sup> (The May Company was a large, valued customer.) Indeed, the Levi Strauss defense directly argued that Levi Strauss pursued a policy so that it would be known "as a price line that could give the retailer a sufficient margin to carry it, a fair return on their investment."<sup>4</sup>

Evidence on the performance of Levi Strauss since dropping rpm would provide some test of the theory discussed above. When Levi Strauss dropped rpm the retail margin on their jeans should have dropped; in response to this we would expect some stores to drop Levi jeans, because they now failed to cover a portion of fixed costs. As we will see in Section III of this paper, there is scattered evidence supporting this theory.

Under the FTC order, Levi Strauss was permitted to continue restricting retail outlets; only the policy of resale price maintenance was prohibited. In choosing this strategy, the FTC was allowing Levi

---

<sup>1</sup> FTC v. Levi Strauss, testimony, p.3734.

<sup>2</sup> FTC v. Levi Strauss, testimony, p.1648.

<sup>3</sup> FTC v. Levi Strauss, testimony, p.1670.

<sup>4</sup> FTC v. Levi Strauss, testimony, p.1759.

Strauss to continue to signal its quality through store choice. Nevertheless in restricting the use of resale price maintenance, the FTC limited Levi Strauss' ability to compensate high quality retailers for carrying their jeans. I will argue below that this mode of compensation was already losing some of its appeal by the mid-1970s. Indeed it is likely that the FTC order was close to the strategy that Levi Strauss would have eventually developed on their own. This theme will be pursued later in this paper.

In sum, the evidence suggests that beginning in the 1960's Levi Strauss tried to manipulate store quality to convince new customers of the quality of the Levi Strauss product. How did this strategy evolve over time? More importantly, how viable was this strategy at the time of the FTC suit?

Levi Strauss began selling jeans in 1850. Until the 1940's, the firm was primarily a wholesaler; about 25% of its revenues came from manufacturing and selling work pants; the balance came from wholesaling for other manufacturers.<sup>1</sup> After World War II, Levi Strauss gave up its wholesaling, and turned strictly to the manufacture and sale of its own merchandise. The product line was still quite narrow, consisting primarily of men's and boys work pants (Western wear). At this time, Levi Strauss sold to all buyers and made no attempt to control prices.

In the 1960's, Levi Strauss' policy changed. Sales to wholesalers were gradually eliminated (by 1968); basement operations were dropped as first-line merchandise outlets (1972); in general, the firm exhibited greater control over its retail outlets. Levi Strauss' Director of Marketing describes the period as one in which the firm "adopted several marketing policies all aimed at upgrading its distribution."<sup>2</sup> Among these policies

---

<sup>1</sup>The Levi Strauss history comes from several sources: old annual reports; the testimony of O'Shea, Levi Strauss Director of Marketing, in the FTC v. Levi Strauss case; Forbes, Aug. 21, 1978.

<sup>2</sup>FTC v. Levi Strauss, testimony of O'Shea, p.1841.



20

were customer restrictions and a greater concern with retail price levels.

In sum, in the 1960's Levi Strauss embarked on a sales policy which eventually led to the Federal Trade Commission action. There were several forces which led Levi Strauss to adopt this strategy at this time. In 1963, Levi Strauss developed a new permanent press process ("Stay-Prest") which improved the physical quality of their product. As a result Levi's products were now welcomed in department stores. The costs of abandoning basement and discount operations were thus smaller than they had been earlier when these higher quality outlets were not available. The product innovation also gave Levi Strauss more of a claim to the quality label, and perhaps more of a stake in using quality signals.

During this period Levi Strauss also diversified its line, moving into a broader range of clothing. Under these circumstances, the strategy of coupling the Levi name with a quality image becomes more profitable. The gains from signals decrease as customers use the product and learn about its true properties; as the market became saturated with Levi's jeans, the gains from restrictions to signal quality would naturally fall. So as Levi Strauss diversified its line, the worth of the name good-will would increase. Diversification during the period thus also increased Levi Strauss' demand for vertical restraints.

During the period beginning in the late 1960's, denim was almost constantly in short supply.<sup>1</sup> As a result, there was little pressure from retailers to lower prices below the suggested retail. Retailers commented that during the period, "the suggested retail allowed us to make a good profit, usually around 50% and we were getting it with no problem";<sup>2</sup> and "Levi Strauss goods moved very well at the suggested retail prices."<sup>3</sup>

<sup>1</sup> FTC v. Levi Strauss, testimony of Howard Oberg, regional sales manager of Levi Strauss, p.3709 of the record; also Thomas Kasten, Vice President of the Jeans Division, p.2136 of the record.

<sup>2</sup> FTC v. Levi Strauss, testimony of Steven Miller, p.2825 of the record.

<sup>3</sup> FTC v. Levi Strauss, testimony of Stephen Stillman, owner of General Pants, n.480 of the record.

Given the supply constraints in denim, Levi Strauss could not hope to expand its short-term market through retail price competition, or wide product distribution. Moreover, the shortage made it easier to convince retailers to charge the suggested retail. Indeed the suggested retail price during this part of this period may have been below the market equilibrium. Levi Strauss claimed that between 1965 and 1970, some retailers suggested selling at higher than the suggested retail price;<sup>1</sup> this is certainly consistent with the testimony that retailers could have sold considerably more Levi's than they had at existing prices. In sum, the denim shortage at least reduced any downward pressure on prices from retailers, and thus made the problem of policing retailers less severe.

In January 1977, in the middle of the antitrust case, Levi Strauss formally abandoned its policy of suggesting resale prices to its retailers. As Levi Strauss itself acknowledges, this was at least in part a response to the FTC action.<sup>2</sup> But the evidence suggests that the resale price maintenance was becoming obsolete as a marketing tool by the time of the FTC action.

Pressures by retailers to discount jeans appear to have increased significantly in 1975-1976. General Pants, a discounter against whom Levi Strauss brought suit in 1976, argued that they began discounting only in May 1975 because before this "Levi Strauss goods moved very well at these suggested retail prices."<sup>3</sup> In its defense, Levi Strauss argued that, while the FTC action had clearly influenced the firm, in large part it abandoned its policy of suggesting retail prices because the industry had "turned

<sup>1</sup> FTC v. Levi Strauss, testimony of O'Shea, Director of Marketing, p.1859 of the record.

<sup>2</sup> FTC v. Levi Strauss, opening statement by Popofsky, Levi Strauss lawyer, p.1740 of the record.

<sup>3</sup> FTC v. Levi Strauss, Testimony of Spencer Stillman, p.1740.

soft."<sup>1</sup> The apparel industry, which had grown on average 9% per year for the period 1969-74, grew only 2.6% in 1975; men's and boy's trousers, Levi's biggest market, suffered a decline in value of shipments in 1975 after some years of growth.<sup>2</sup>

The shortage in denim material also appears to have eased by 1975. Capacity utilization rates for cotton fabrics, which had been consistently well over 90%, fell to 79% in 1975.<sup>3</sup> In his testimony, Levi Strauss' Director of Marketing also suggested that the denim shortage ended in 1974,<sup>4</sup> as a result of new entry into the denim industry. As a result of the easing in the capacity problem in denim, Levi Strauss could anticipate expanding its jeans production if retail prices fell.

In sum, there is some evidence that at the time of the FTC action market pressures were increasing the costs to Levi Strauss of continuing to maintain resale prices. We have argued that resale price maintenance served as part of the implicit contract Levi Strauss used to induce high quality retailers to carry and promote its jeans. As the cost of using this device rose, one would expect its usage to diminish. Moreover, as the Levi Strauss brand itself gained consumer acceptance through experience and increased advertising (see below), Levi Strauss' bargaining position vis a vis retailers improved. Thus while the apparel market generally was sluggish, Levi Strauss' relative position was strong. Under these conditions we might expect that resale price maintenance would have diminished over time, absent the FTC action. The slow growth in aggregate demand made price concessions at the retail level more appealing, as did the end of the denim shortage. At the same time, brand identification of

---

<sup>1</sup>Popofsky, op cit, p. 1740

<sup>2</sup>U.S. Department of Commerce, Annual Survey of Manufacturers, 1976.

<sup>3</sup>U.S. Council on Wage and Price Stability, Textiles/Apparel, 1978.

<sup>4</sup>FTC v. Levi Strauss, testimony of O'Shea, p.1863.

Levi Strauss made rpm as a quality signal less useful. Of course, the natural demise of this policy might have taken some considerable time. It is interesting in this regard to note that it is only in the closing statements of the Levi Strauss defense, and in the final remarks of Walter Haas, Chairman of the Board, that the gains to Levi Strauss from free retail competition are articulated.<sup>1</sup>

The evidence on the trends over time in customer restrictions is less clear. At the present time, Levi Strauss still restricts the outlets to which it will sell. As indicated earlier, it is my view that this policy is being pursued with the intent of signaling consumers about the quality of the Levi's product. As Levi Strauss continues to diversify, the gains from promoting a quality image increase; on these grounds we would expect the firm to continue customer restrictions.

This is not the whole story, however. Firms have available a range of instruments with which they can alter the consumers' perceptions of their product. For Levi Strauss, vertical restraints--and in particular, store choice--served this function. For other firms, advertising serves a similar function. One of the most striking changes in Levi Strauss' performance since the onset of the FTC case has been its advertising strategy. Before 1976, advertising played a small role in Levi Strauss' selling strategy. The advertising budget averaged under \$3.5 million per year,<sup>2</sup> or less than 1% of sales. In 1976, the budget increased to \$23 million, or 2% of sales; by 1979 Levi Strauss had launched a massive advertising campaign including Olympic support and had increased its budget to \$66.7 million or 3.2% of sales.<sup>3</sup> It appears that Levi Strauss, having increased

<sup>1</sup>Popofsky argues "one might have assumed that all along...the real interest here is a congruity of interests [in low prices] between manufacturer and consumer." p.1757 of the testimony. Haas is even more direct: "I don't consider suggested retail pricing a viable marketing tool anymore." p.2226 of the testimony.

<sup>2</sup>Advertising Age, Sept. 15, 1978.

<sup>3</sup>Levi Strauss, 1979 Annual Report.

difficulty in using vertical restraints to promote product quality, was turning to an alternative mode—advertising. This may in the future make customer restrictions less attractive. As noted earlier, the marketing literature suggests that the value of both store prestige and price signals declines with brand awareness. So the use of advertising may have reduced the value of customer restrictions to the firm. And, indeed, there is some evidence, as we will see in the next section of this paper, that this policy too may be being abandoned.

I have argued so far that by the middle 1970s Levi Strauss was able to maintain its high quality image without using rpm, through the use of advertising, product development and so on.

In the next section of this paper, I look at the recent evidence on the effects of the change in selling strategy on Levi Strauss' performance, and make some tentative estimates of the welfare consequence of the FTC suit.

---

<sup>1</sup>The shift in Levi Strauss' position vis a vis its retailers is clear from statements by those retailers in the business press. Recently, Levi Strauss began marketing its jeans more broadly, including to J.C. Penney Co. and Sears. Higher quality stores reacted: "There's a general feeling of bitterness, but at this point most stores just can't afford to cut out as large a supplier as Levi's." (Business Week, March 8, 1982, p.77)

### III. The Effects of Price Competition

In January 1977, in the middle of the antitrust case, Levi Strauss formally abandoned its policy of suggesting retail prices to its retailers. In the discussion which follows, I trace the effect of this policy change on Levi Strauss in the three years since that change, and make some tentative estimates of the nature and magnitude of the changes produced by abandoning resale price maintenance on consumers.

The evidence in this case suggests that retail price maintenance was becoming, by the time the FTC case was brought in 1976, an obsolete policy for Levi Strauss. Still, in the absence of FTC intervention, it is likely that Levi Strauss would have continued this policy for several more years. The firm fought giving up the policy throughout the case; it was not until the end of the case that Levi Strauss' lawyer declared that maintaining prices was perhaps not in the firm's best interests. This rigidity in changing firm strategy is not unexpected. If we view the pricing policy as part of a complex bargain between retailer and manufacturer, as Caves does,<sup>1</sup> then one would expect it to take some time before the elements of that bargain would be changed.

The FTC complaint was brought in May, 1976. In January, 1977 the Levi Strauss policy of suggesting retail prices was formally abandoned. In June, 1977, price competition at the retail level began in earnest. County Seat stores, a large retail chain, lowered Levi's prices by about 20%; by the end of the summer prices had fallen to about 40% below previously maintained resale prices,<sup>2</sup> at least in this area of the country (the Midwest).

---

<sup>1</sup>Caves, op.cit.

<sup>2</sup>Robert Steiner, op.cit., p.455.

From the point of view of the consumer, abandonment of retail price maintenance has two possible effects: a change in prices--typically a decrease, coupled with some increase in price variance; and a change in the level of services provided at the retail level. We have argued earlier that few services were provided at the retail level as a consequence of the pricing policy. There is further empirical evidence that abandoning retail price maintenance did not substantially reduce service provision. Richard Posner has argued that one way to identify whether a resale price maintenance agreement is actively helping to provide services is to look at the effect of imposing that restraint.<sup>1</sup> If output decreases after a restraint is imposed, this suggests that price maintenance is not providing important demand-augmenting services. In our case we have the opposite natural experiment: vertical restraints have been abandoned, not imposed. Removal of these restraints will increase sales as prices fall, but tend to reduce sales, if prior restraints encouraged service provision. So, if the removal of restraints is accompanied by a rise in sales, this suggests that price elasticity of the good is stronger than the service elasticity.

In the Levi Strauss case, the initial effect of the removal of the vertical restraints appears to have been to increase sales. The Levi Strauss 3rd Quarter 1977 company report describes the situation: "U.S. retailers initiated discount prices on certain jeans products to increase store traffic and in-store excitement during a period when retail activity was generally sluggish. The obvious result was an increased demand for Levi's jeans, which brought us many new consumers."<sup>2</sup> Company data indicate a large increase in

---

<sup>1</sup>Richard Posner, op.cit., p.151.

<sup>2</sup>Levi Strauss company report, Third Quarter, 1977.

les in both the second and third quarters of 1977. As indicated in table 1, annual sales growth was substantial.

The 1977 evidence, then, suggests that resale price maintenance is not, in this recent period, helping to support an essential service. This is consistent with my earlier argument that, by 1977, resale price maintenance as a quality signal was becoming obsolete. Later sales data followed the same pattern. 1978 at first appears to be contrary to our expectations. Growth in sales was quite modest; indeed employment growth was negative and for a period of time during the year the firm was forced to cut back to a 4-day production week. The annual report suggests the firm's poor performance was primarily due to the jeans division, which suffered a decline.

An examination of the financial data of Levi Strauss' nearest rival, Blue Bell, helps to put Levi Strauss' 1978 performance in perspective. Blue Bell suffered even more drastically than did Levi Strauss in 1978. Indeed in April, 1978, Blue Bell decreased its wholesale price by 18%.<sup>1</sup> This suggests that Levi Strauss' poor performance in 1978 was not primarily the result of some firm-specific change like brand-name deterioration; but rather came from an industry-wide phenomenon. The strong growth in 1979 supports the view that Levi Strauss' brand-name has not deteriorated as a consequence of the price competition. Levi Strauss' market share data also indicates its strong performance. Between 1976 and 1977, Levi Strauss' sales of jeans grew at a rate of just over 20%, which is about the same as the national growth in jeans.<sup>2</sup> This is quite good performance given the

---

<sup>1</sup>Robert Steiner, Brand Advertising and the Consumer Goods Economy, forthcoming.

<sup>2</sup>U.S. figures from Current Industrial Reports: Apparel; Levi Strauss data from annual reports.



increase in designer jeans during this period. A comparison with Levi Strauss' major "plain jean" rival, Blue Bell, is perhaps more illuminating. Blue Bell had been losing market share to Levi Strauss during the late 1960's and early 1970's (see Table 2). In 1974-1976, this market share erosion halted; indeed in 1976, Blue Bell's market share increased slightly. The price competition in 1977 was accompanied by a return to the earlier trend toward Levi Strauss dominance.

A comparison of stock prices is also revealing of the competitive position of the two rivals during the period. In Table 3 the closing stock prices for Levi Strauss and Blue Bell on the first trading day of each month are presented. In column 3 of that table, I have calculated the ratio of the Levi Strauss stock price to the Blue Bell price. This ratio falls in 1976 and then begins to climb again in mid-1977. So the evidence suggests that in 1977, Levi Strauss' relative position improved.

In sum, at least the preliminary evidence suggests that by 1977, and through 1979, unfettered price competition did not result in a deterioration of the Levi Strauss name. As Levi Strauss itself argued, retail chains in lowering prices were "using our jeans as traffic builders, not loss leaders."<sup>1</sup> The environment facing Levi Strauss had changed; advertising, and built up good will and consumer awareness, had changed the balance between Levi Strauss and its retailers, so that price protection was no longer necessary to induce high quality stores to carry Levi Strauss' goods. Moreover, the FTC suit allowed Levi Strauss to abandon what had become an obsolete policy graciously.

---

<sup>1</sup> Robert Grohman, in Forbes, August 21, 1978.

Estimating the magnitude of the gains to consumers from price reductions is difficult. The initial effect of abandoning the policy was to reduce prices, in some areas by 40%. This reduction came, however, before either Levi Strauss or the retail sector had adjusted to the new regime; moreover, this large reduction was localized. Thus, this figure seems to be a considerably overestimate of the price reductions to be expected from the FTC action in the first year. There is evidence in the testimony of the case that Levi Strauss' price was several dollars above that of its rivals. Part of this may well be attributable to the consumer's perception of higher quality of Levi Strauss; part is almost certainly a result of the retail price protection offered by Levi Strauss. A conservative estimate is that the immediate effect of the FTC action was to reduce the price of Levi Strauss' jeans by \$1. In 1976, the firm sold 75 million pairs of jeans.<sup>1,2</sup> In total, then, for 1976, a conservative estimate is that consumers saved \$75 million. If we assume a price elasticity of 1, this translates into a dead-weight gain of just over \$3 million, with the remaining constituting a transfer from Levi Strauss and its retailers to consumers.

There are two issues remaining in estimating the size of the gains from a price decrease: how far did it spread and how long did it last? Initial reports of the Levi Strauss price cuts indicate that Blue Bell reduced its wholesale price by 18%. This may suggest that Blue Bell and

<sup>1</sup>There are two sources for this: Advertising Age, Sept. 12, 1977; and independent calculation. In 1976, Levi Strauss had jeans sales of \$569 million (annual reports); if we divide these sales by an average wholesale price of \$7.50 (based on invoices available in the Court record) we get an estimate of volume of 75.9 million.

<sup>2</sup>1976 is used as a base year to calculate the welfare effect, even though Levi Strauss did not formally abandon rpm until January 1977. 1977 is not a useful year for comparisons since the growth in sales in that year may reflect a pent up response to the lifting of rpm. Using 1976 as a base gives a conservative estimate to sales, since steady-state post-rpm sales are likely to have increased.

other brand name jeans were also earning supra-competitive returns, shielded by Levi Strauss' price umbrella. On the other hand, the price reduction may represent a temporary, competitive response to Levi Strauss' policy change. If we assume the jeans business sans Levi Strauss was competitive prior to the FTC suit, the change in Levi Strauss' behavior will have little effect on long run pricing patterns by other firms, although the market share of the other firms may be reduced. A conservative estimate is to assume no price change in non-Levi Strauss jeans. Alternatively, one can assume as does Steiner<sup>1</sup> that the price reduction in non Levis' jeans was equal to that in Levis. In this case, since Levis has one-third of the market, the welfare gain from price matching would be an additional \$150 million.

The time issue is also difficult. I have argued in this paper that resale price maintenance was becoming, at the time of the FTC suit, a dated strategy; in the long run one would have expected this policy to be abandoned anyway. Thus, the prime effect of the FTC suit may well have been to accelerate the strategy change. It is hard to know how much acceleration was involved, although the vigor with which Levi Strauss fought the suit suggests that the FTC action may have given consumers some not inconsiderable time gain.

The move away from resale price maintenance affects not only the level of prices but the distribution across retail and wholesale levels. Since more of the cost of promoting its name will be done at the manufacturing level through advertising rather than at the retail level through services, we would expect an increase in the wholesale price of Levi's. At the same time, as retailers move toward price competition and away from service competition in response to the abandonment of resale price maintenance, retail mark-ups should fall. This appears to have happened in 1977; we would expect mark-ups to remain at a low level. There are two forces at

---

<sup>1</sup>Robert Steiner, op.cit.

work which might lead to further reductions in these margins. First, if Levi Strauss' customer restriction policy eases, allowing for sales by retailers with even lower service levels, margins should decrease further. Secondly, as Steiner<sup>1</sup> argues, margins may decrease as advertising levels rise, since such advertising affects the relative bargaining power of Levi Strauss versus its retailers.

Retailers typically compete along two dimensions, price and service quality. Resale price maintenance obviously limits competition on the former. In an industry like retailing in which there is easy entry, limiting price competition will result in an increase in average service levels until excess profits are dissipated. Stores which find it easy to provide services will do relatively well in this environment; stores which have traditionally been more price-oriented will stop carrying the supported merchandise. Abandoning resale price maintenance produces an important change in the environment in which retailers operate. One would expect a change in the relative success of service vs. price-oriented stores. In the Levi Strauss case this effect is muted somewhat by the continuation of the firm's customer restrictions policy, which limits the merchandise available to very low service, low price stores. Nevertheless, we have observed since 1977 a shift in the pattern of retailers carrying Levi jeans. Managers of small stores report "we can't compete with the big mall stores;"<sup>2</sup> and "where once as many as 16 jeans shops might be doing business in a single shopping mall, today it's mainly the large volume chains that are prospering in the basic jeans market."<sup>3</sup> Indeed, recently Levi Strauss began to open its sales up to mass marketers, including Sears and J.C. Penney Co.<sup>4</sup> This is consistent with our earlier arguments that customer restrictions may be coming dated in the light of Levi Strauss' stronger image.

<sup>1</sup>Steiner, op cit

<sup>2</sup>State Journal, op cit.

<sup>3</sup>Forbes, August 21, 1978

<sup>4</sup>Business Week, March 8, 1982, p.77.

#### V. Conclusion

The apparel industry has been a frequent target of Federal Trade Commission resale price maintenance charges. Levi Strauss was a prominent example. In this paper I have tried to examine Levi Strauss' motives for engaging in resale price maintenance and customer restrictions. During its 1960's expansion, the firm appears to have used these restraints to promote its brand name quality image. In the later 1970's, as the FTC action made resale price maintenance impossible, and as the structure of the company evolved, the firm turned instead to more aggressive advertising as a way to promote its brand name. Indeed the evolution of Levi Strauss' strategy followed closely the pattern outlined by Telser in his classic article on resale price maintenance.

If the manufacturer wishes the special services of retailers, he may set a floor to the retail price of this new product. After a new product has gained wide consumer acceptance, its producer no longer needs to maintain a minimum retail price. We may expect to observe the resale price maintenance agreements of new products to persist for as long as it takes the product to become familiar to consumers.<sup>1</sup>

The principal effect of the FTC action appears to have been to have stimulated the firm to make this transition in its policy.

---

Telser, op cit.

### Executive Summary

In May, 1976 the Federal Trade Commission filed suit against Levi Strauss charging the company with engaging in vertical restraints to fix prices at the retail level. Particular charges included resale price maintenance and customer restrictions. The case was settled in 1978.

In this paper, it is argued that Levi Strauss restricted its retail outlets as a way to signal consumers about the high quality of its jeans. Resale price maintenance was used to provide adequate retail margins to the more service-oriented retailers that Levi Strauss was trying to encourage to stock Levis.

Manufacturers have a variety of techniques which may be used to convince consumers of the quality of their product. Levi Strauss originally used store restrictions. As the company became more well known, through increased advertising and repeated customer purchases, store restrictions became less important. At the same time, Levi Strauss' improved image strengthened its positions vis a vis its retailers and made the resale price maintenance as a way to induce stores to stock Levis obsolete.

The FTC action nevertheless had an important effect on Levi Strauss, at least in accelerating the process by which resale price maintenance was abandoned. The effect of the FTC action appears to have been a substantial price reduction on Levis jeans, and perhaps rival jeans as well; a fall in retail margins on jeans; and a shift in the stores carrying jeans away from small, high overhead operations.

Levi Strauss Financial Data

	<u>Net Sales</u> (000,000)	<u>Annual Growth in Sales</u>	<u>Net Income</u> (000,000)	<u>Earnings per Share</u>	<u>Number of Employees</u>	<u>Annual Growth in Employment</u>	<u>Return on Equity</u>	<u>Return on Sales</u>
1967	176.5		7.8	\$ .40	12527		19.0%	4.4%
1968	213.5	21%	12.1	.62	14067	12	25.8	5.7
1969	269.0	26	14.7	.75	16466	17	25.6	5.5
1970	349.5	30	18.6	.96	18900	15	26.8	5.3
1971	432.0	24	19.7	.93	21383	13	23.2	4.6
1972	504.1	17	25.0	1.15	25137	18	16.8	5.0
1973	653.0	30	11.9	.54	29141	16	7.0	1.8
1974	897.7	38	34.9	1.60	30141	3	19.8	3.9
1975	1015.2	13	64.7	2.95	29675	-2	31.4	6.4
1976	1219.7	20	104.8	4.71	32540	10	39.5	8.6
1977	1559.	28	129.8	5.87	37170	14	35.8	8.3
1978	1682.	8	144.9	3.28	35100	-6	31.3	8.6
1979	2103.	25	191.4	4.5	44700	27	33.3	9.1

Source: Levi Strauss, Annual Reports

Table 2  
Blue Bell Data

	<u>Net Sales</u>	<u>Annual Growth</u>	<u>Net Income</u>	<u>Net Return on Sales</u>	<u>Market Share Blue Bell Sales + Blue Bell+Levi Sales</u>
1967	164.9	-	5.3	3.2%	.48
1968	188.3	14%	6.0	3.2%	.47
1969	202.7	8	7.9	3.9	.43
1970	238.8	18	9.6	4.0	.41
1971	293.9	23	13.2	4.4	.40
1972	344.5	17	15.0	4.4	.41
1973	412.3	20	15.1	3.7	.39
1974	513.8	25	19.8	3.9	.36
1975	568.6	11	25.8	4.5	.36
1976	730.4	28	56.6	7.7	.37
1977	873.7	20	70.7	8.0	.36
1978	872.3	-1	53.6	6.1	.34

Source: Annual reports.



## Trends in Stock Prices

<u>First trading day of</u>	<u>1976 - Present</u> <u>Closing Stock Price</u>		<u>LS Price/BB Price</u>
	<u>Levi Straus</u>	<u>Blue Bell</u>	
January, 1976	40.3	37.3	1.08
February	45.4	44.1	1.03
March	47.0	45.6	1.03
April	49.2	44.3	1.11
May	49.6	44.4	1.11
June	43.5	39.4	1.10
July	43.3*	42.4	1.02
August	22.1	40.4	1.09
September	19.5	40.3*	.96
October	21.5	21.4*	1.00
November	21.7	22.5	.96
December	25.7	25.5	1.01
January, 1977	27.5	28.4	.97
February	28.4	29.6	.96
March	27.2	30.1	.90
April	26.3	28.5	.92
May	26.7	28.6	.93
June	28.5	25.7	1.11
July	28	27.5	1.02
August	27.1	25.2	1.08
September	27.1	23.6	1.15
October	27.5	22.4	1.23
November	27.2	23.1	1.18
December	28.7	23.5	1.22
January, 1978	29.1	23.1	1.26
February	28.4	23	1.23
March	29.3	21.6	1.36
April	29	23.5	1.23
May	33	23.1	1.43
June	35.7	23	1.55
July	33.1	20.5	1.61
August	38	19.1	1.83
September	35	20.6	1.70
October	36	21.2	1.70
November	33	18.4	1.79
December	34.3	20.6	1.67
January, 1979	34.7	20.4	1.70
February	42.2	23	1.83
March	42.3	23	1.84
April	46.5	25.4	1.83
May	47.3	27	1.75
June	47.7	25	1.91
July	49.5	25.4	1.95
August	55	26.2	2.09
September	60.3	27.4	2.20
October	63.4	25.6	2.48
November	57.4	24	2.39
December	67.4	27.6	2.44

\* Stock split, 2 for 1.

References

- Andrews, I. and E. Valenzi, "Combining Price, Brand, and Store Cues to Form An Impression of Product Quality," Proceedings 79th Convention, American Psychological Association, 1971, 649.
- Byrnes, Peter, William Lowry and Emmet Bonduran, "Product Shortages, Allocation and the Antitrust Laws," Antitrust Bulletin 20 (Winter 1975).
- Cairns, James, "Suppliers, Retailers and Shelf Space," Journal of Marketing (July 1962), 34-36.
- Caves, Richard, "Research on Vertical Restraints," Prepared for the FTC, July 5, 1979.
- Continental TV, Inc. et.al v. GTE Sylvania, Inc., 45 LW 4828 (1977).
- Cox, Keith, "The Effect of Shelf Space Upon Sales of Branded Products," Journal of Marketing Research 7, (February, 1970), 55-58.
- Gardner, David, "Is There A Generalized Price-Quality Relationship?" Journal of Marketing Research 8 (May 1971) 241-243-
- Grossman, Sanford and Joseph Stiglitz, "Information and Competitive Price Systems," American Economic Review, (May 1976), 246-253.
- Jacoby, Jacob, Jerry Olson and Rafael Haddock, "Price, Brand Name and Product Composition Characteristics As Determinants of Perceived Quality," Journal of Applied Psychology, 55 (December 1971), 570-579.
- Klein, Benjamin, "Study Protocol for Design of the Vertical Restraints Research Project," prepared for the FTC, August 19, 1979.
- Nelson, Phillip, "Consumer Information and Advertising," joint research project of the AAAA Education Foundation and NBER, New York, May 1977.
- Posner, Richard, "The Rule of Reason and the Economic Approach: Reflections on the Sylvania Decision," University of Chicago Law Review 45 (Fall 1977) 1-20.

- Posner, Richard, Antitrust Law: An Economic Perspective, (Chicago: University of Chicago Press, 1976).
- Preston, Lee, "Restrictive Distribution Arrangements: Economic Analysis and Public Policy Standards," Law and Contemporary Problems 30 (Summer 1965) 506-529.
- Salop, Steven, "Parables of Information Transmission in Markets," in Andrew Mitchell, ed., The Effect of Information on Consumer and Market Behavior. (American Marketing Association, 1978).
- Spence, Michael, Market Signaling, (Cambridge: Harvard University Press, 1974).
- Stafford, James and Ben Enis, "The Price Quality Relationship: An Extension," Journal of Marketing Research 6 (November 1969), 456-458.
- Telser, L., "Why Should Manufacturers Want Fair Trade?" Journal of Law and Economics, October 1960.
- U.S., 95th Congress, "Future of Small Business in America," Hearings before House Antitrust, Consumers and Employment Subcommittee." April 1978.
- U.S. Council on Wage and Price Stability, Textiles/Apparel: A Study of the Textile and Apparel Industries. Washington, D.C., July 1978.
- U.S. Department of Commerce, Current Industrial Reports: Apparel (74-77-1).
- U.S. Federal Trade Commission v. Levi-Strauss Co., Complaint and Hearings, May 1976-Sept. 1977.
- U.S. 93rd Congress, Hearings before House Ways and Means on Trade Reform, June 1973.
- Wheatley, John and John Chiu, "The Effects of Price, Store Image and Product and Respondent Characteristics on Perceptions of Quality," Journal of Marketing Research 14, (May 1977) 181-

Williamson, Oliver, "Assessing Vertical Market Restrictions: Antitrust Ramifications of the Transaction Cost Approach," University of Pennsylvania Law Review 127 (1979) 953-993.

Williamson, O., Markets and Hierarchies: Analysis and Antitrust Implications (New York: the Free Press, 1975).

Levi Strauss: Some Hypotheses and Necessary Evidence. A Proposal for  
Data Gathering

1. Advertising

The major argument made in my analysis of the Levi Strauss case was that the firm used a mix of resale price suggestions and customer restrictions to promote its brand name, high quality image. Abandonment of the price suggestions should increase the firm's reliance on other available signals, most prominently advertising.

Up-to-date and past data on advertising levels of Levi Strauss and its major rivals should be collected. Levi Strauss annual reports provide advertising data back to 1976, although these data are inconsistent with that of Steiner (Steiner cites a figure of .5% advertising/sales in 1976, while annual reports give a figure of 1.9%). These discrepancies need to be cleared up; these data need to be extended into the further past and into the future. Also, parallel data from Blue Bell would make a useful comparison.

2. Wholesale Prices

Since more of the cost of promoting its name will be done at the manufacturing level through advertising rather than at the retail level through services, we would expect an increase in the wholesale price of Levi's.

3. Retail Margins

As retailers move toward price competition and away from service competition in response to the abandonment of resale price maintenance, retail mark-ups should fall. This appears to have happened in 1977; we would expect mark-ups to remain at a low level. There are two forces at work which might lead to further reductions in these margins. First, if

Levi Strauss' customer restriction policy eases, allowing for sales by retailers with even lower service levels, margins should decrease further. Secondly, as Steiner argues, margins may decrease as advertising levels rise.

In order to test this hypothesis directly, we need to compare the wholesale price data gotten from Levi Strauss with a sample of retail price data (see item 4 for a discussion of this).

An indirect test of the hypothesis would involve an examination of the change over time in the number and type of retail outlets carrying the Levi's product. As margins fall, high service-type operations will no longer find it profitable to carry the line; indeed there is scattered evidence cited in my paper that this is already occurring. A recent Business Week article suggests that Levi Strauss is widening its retailers to include Sears and Penney's. (Business Week, March 6, 1982) Further evidence from Levi Strauss on the characteristics of its retail outlets now versus 1976 would be extremely useful.

#### 4. Final Prices

The initial effect of the FTC action was to reduce retail prices, in some areas by as much as 40%. This reduction came, however, before either Levi Strauss or the retail sector had fully adjusted to the new regime. The arguments under 3, above, suggest that retail margins should in general fall as a result of the abandonment of resale price maintenance. Wholesale prices, on the other hand, given that Levi Strauss has increased its advertising levels significantly, should rise somewhat. So, the net long-term effect on prices is uncertain.

The abandonment of resale price maintenance will affect not only retail price levels, but the variance in retail prices. In particular,

we should expect to observe a diversity of price/quality combinations as a result of the loosening up of price restraints. This complicates the process of data collection. If there is more than one price, what price do we collect to observe trends over time? The best strategy would seem to be to go back through old newspapers in several cities, to find trends in advertised prices. Lansing, Michigan, where the Great Jeans War began is an obvious choice; perhaps New York and San Francisco might be other cases.

An additional issue raised in the paper, and a matter of dispute between Steiner and myself, involves the price reductions expected in Levi Strauss' rivals. There are reasonable arguments on both sides of this: Levi Strauss may have used its policies to support a price umbrella in which case all jeans' prices would fall after the FTC action; alternatively rival prices may already have been at competitive prices, in which case Levi Strauss' price decrease would simply have altered market shares. This is an empirical issue. Data could be collected on prices charged by Blue Bell and perhaps two or three other jeans' firms in the same way Levi's prices were collected (discussed above).

A final issue in Levi Strauss' prices is the short versus long run effects. As indicated in the paper, there is an argument that abandonment of rpm will degrade Levi Strauss' brand name; and that the surge in sales in 1977 simply represented the "cashing in" of Levi's image. If this is indeed the case, we should observe all else equal some decline in sales in later years. If, on the other hand, my hypothesis is correct, no such decline would be expected. Evidence on these contrasting hypotheses is difficult to gather, but comparative data on stock prices and sales of Levi Strauss and its two or three top rivals would be suggestive.

B. Interco - Florsheim Shoes

Timothy Greening



Analysis of the Impact  
of the  
Florsheim Shoe Case

by  
Timothy Greening  
July 1981  
Contract No. L0602

## CONTENTS

### The Industry Study: Marketing Shoes

- I. Shoes as a Product and the Demand for Shoes
  - A. Shoes as Shopping Goods: Buying Habits and Marketing Strategies
  - B. Nature of Footwear Demand and Market Segmentation
    - 1. Economic Determinants of Demand
    - 2. Psychological Determinants of Demand: the Importance of "Tastes"
    - 3. Effects of Diverse Tastes on Marketing Strategy
    - 4. Footwear Advertising: Evidence for Market Segmentation
    - 5. Bases for Market Segmentation
  - C. Aggregate Statistics on Footwear Supply and Demand: the Influence of Imports on Market Segment Choice
- II. Structure and Strategy in Shoe Retailing
  - A. Structure of the Footwear Retailing Industry
    - 1. Distribution Channel Structure
    - 2. Retail Outlet Structure
  - B. Conduct in Footwear Retailing
    - 1. Market Segment Choices
    - 2. Competing in the Market Segment
      - a. Inventory
      - b. Service
      - c. Sales
      - d. Perceived Differences Among Retail Outlet Types
  - C. Manufacturer-Retailer Interaction: Alternative Hypotheses on RPM
- III. Price and Other Quality Signals
  - A. Types of Quality Signals and Their Importance
  - B. Florsheim's Pricing Strategy
  - C. Plausibility of Florsheim's Strategy
- IV. Summary and Evaluation of Explanations for RPM
  - A. Alternative Hypotheses and Evidence from the Industry Study
  - B. Analysis of the Price Survey
  - C. Preliminary Conclusions

## The Industry Study: Marketing Shoes

The purpose of this review of the Florsheim case is to help determine if continued prosecution of vertical restraints imposed by manufacturers, particularly resale price maintenance (RPM), is in the best interest of consumers. The immediate concern is less with legality than with maximizing consumer welfare, for the objection to RPM is not simply that it is illegal, but also that it does not maximize consumer welfare, and may not even maximize manufacturers' profits.<sup>1</sup> While the FTC was properly concerned with both optimality and legality in the Florsheim case, the distinction between these goals in the case of RPM has been questioned recently. As noted by Justice White in his dissenting opinion, the logic of GTE-Sylvania implies that the rule of reason should be applied to price as well as non-price vertical restraints. GTE-Sylvania has prompted discussion of adopting a rule of reason test or even a per se legality rule for RPM. This case study is one step in considering new guidelines for vertical restraints cases: determining the welfare implications of prohibiting a reasonably typical consumer goods producer from imposing such restraints.

Analyzing the Florsheim case requires a thorough understanding of marketing, since the vertical restraints imposed by Florsheim were simply among the means by which it attempted to achieve its optimal (profit-maximizing) "marketing mix." "Marketing mix" is the phrase textbooks use to describe the bundle of attributes a company presents to the consumer: product, price, place and promotion.<sup>2</sup> The FTC complaint objects to Florsheim's practice of resale price maintenance (price), its attempts to secure exclusive dealing and to avoid discount outlets (place), and its discriminatory assistance to dealers (promotion).

Determining the impact on consumer welfare of prohibiting these measures requires the answers to three different kinds of questions. First, why did

Florsheim choose its original marketing mix? Did this mix maximize profits or sales? Second, why didn't Florsheim use the available legal methods of achieving its preferred marketing mix? For example, why didn't Florsheim sell only through its own outlets, like Thom McAn? Or, if Florsheim knew enough about consumer demand to impose RPM, why didn't it charge instead a wholesale price that leaves only a competitive retailer margin?<sup>3</sup> Third, what is the relationship between profit maximization for Florsheim and welfare maximization for consumers? In a competitive industry, profit maximizing behavior achieves only the required rate of return for that industry, and improves consumer welfare by preventing the seller's bankruptcy and disappearance from the market. The same tactics, pursued in a non-competitive industry, could harm consumers by extracting from them profits above the required rate of return.

This study addresses these questions in two stages. The first is an industry study; i.e., an analysis of material on strategy and structure in the shoe industry which helps explain how Florsheim's behavior emerged from its goals and the constraints of the market. Sections I - III examine in detail the structural and behavioral evidence on the welfare effects of Florsheim's marketing strategy. Alternative hypotheses about Florsheim's behavior, and its consequences for consumers, are introduced as the relevant institutional detail is developed. The hypotheses, their welfare implications, and the empirical tests which could distinguish them are all summarized at the end of the industry study (Section IV). Section IV also contains my evaluation of the evidence bearing on the validity of each hypothesis, including an analysis of the preliminary price survey taken by the FTC shortly after abolition of Florsheim's RPM practices. The hypotheses are not all mutually

exclusive, but they are not all equally likely, either.

The second step, presented in a separate report, is to utilize the information from the industry study and preliminary price survey to design a system for monitoring the shoe market during and after the Florsheim consent decrees. The purpose of this monitoring would be to establish, more firmly than possible with the present evidence, which of the hypotheses about Florsheim's marketing strategy are correct.

Carrying out the empirical study is the obvious third step; perhaps this study will persuade the FTC to make that investment.

#### I. Shoes as a Product and the Demand for Shoes

In the language of marketing texts, men's dress and casual shoes are shopping goods, sold in a segmented market, with several bases for segmentation. These product characteristics indicate a concentrated marketing strategy, with exclusive or selective rather than extensive or mass distribution and advertising. The purpose of this section is to render these statements into the language of economics.

##### A. Shoes as Shopping Goods: Buying Habits and Marketing Strategies

Of the many ways of classifying consumer products, the most relevant for our purposes is based on shopping habits. A common taxonomy divides products into three classes:<sup>4</sup>

Convenience goods: frequently purchased, with little expenditure of time or money per purchase; perceived risk and decision effort low.

Shopping goods: less frequently purchased, with considerable expenditure of time and money per purchase; perceived risk and decision effort high.

Specialty goods: any goods with such strong brand preference that "a significant group of buyers are habitually willing to make a special purchasing effort;" perceived risk high, but "in-store" decision effort very low.

Shoes, including men's shoes, are obviously shopping goods. We shall consider the characteristics of demand for footwear which make it a shopping good below; for the moment let us consider the implications of buying habits for marketing strategy.

Since advertising attempts to convert both convenience goods and shopping goods into specialty goods, successful advertising blurs these distinctions. For example, jeans are shopping goods but Levi's are specialty goods.<sup>5</sup> Porter's extensive research has shown that advertising is much more likely to succeed in elevating a convenience good brand than a shopping good brand to specialty good status. The reasons for this are fairly straightforward. Advertising is costless information of relatively low quality, and thus more likely to be influential in purchases where the consequences of error are low, either because little money is involved or purchases are frequent. Where consequences of error are high, usually because the product is expensive, the consumer invests in additional information by direct inspection, salesclerk assistance, etc.; in other words, he shops. Therefore, in most cases the manufacturer of a shopping good must rely on retailer inputs of advice, service, ambience, credit, etc., to resolve the consumer's decision problem in favor of his brand. Vertical restrictions to ensure provision of these services may, by maximizing sales, maximize both profits and consumer welfare. The real distinction between shopping goods and specialty goods (or convenience goods) is that for the latter, the manufacturer's advertising and/or product quality suffice by themselves to induce purchase--retailer efforts are irrelevant.

A shopping good manufacturer whose advertising or product quality has elevated his product to specialty good status should be indifferent to the quality of the retail outlets selling his product because consumers have been persuaded to purchase his brand before entering the store. This assumes that post-purchase service is either unnecessary (Levi's) or provided by the manufacturer (Sony TV's). A manufacturer in this position should aim for extensive, low-cost distribution to minimize consumers' total costs. Low-cost, low margin distribution will maximize sales, consumer welfare, and (given wholesale price) profits. In marketing terminology, Steiner's assertion that Levi Strauss was pursuing a suboptimal policy with RPM is equivalent to saying that Levi Strauss failed to recognize that Levi's had become a specialty good.<sup>7</sup> Furthermore, if Florsheim shoes have become specialty goods, a switch to extensive, low-cost distribution will maximize consumer welfare as well as Florsheim's profits (assuming no negative impact on wholesale price).\*

---

\* The convenience good/shopping good distinction explains why shoes are not used as "loss leaders" to attract traffic to the store. This question was raised when the FTC attorneys asked Florsheim to justify its discriminatory practice of making damaged shoes available to only one retailer (Chernin's in Chicago). This practice struck the FTC attorney as discriminatory because other dealers too "might want to sell damaged merchandise as a loss leader, something to bring people into the store, thus selling a greater number of Florsheim shoes."<sup>8</sup> But as retailing texts point out, effective loss leaders must be convenience goods, not shopping goods. That is, in order to both attract customers and produce sales of goods other than the loss leader itself, the loss leader must be frequently purchased, carry a familiar price so that the bargain is recognized, and be a "small ticket" item so that the shopper will want to buy something else to make the trip worthwhile and have money left over to buy something else.<sup>9</sup> Children's sandals, or possibly some cheap non-leather footwear may fit this description, but men's leather shoes do not. Furthermore, something not mentioned by the retailing texts (probably because they are oriented toward training department store management) is that loss leaders work only in stores with a variety of merchandise. Thus children's sandals could be an effective loss leader in a family shoe store, because shoes for other family members could be purchased. In a narrow product-line outlet such as a men's shoe store, the man who purchased the loss leader would have no further need to shop at that outlet. For these reasons, it appears to me that Florsheim's method for disposing of damaged, shopworn, and returned shoes does not place its regular dealers at a disadvantage.

Are Florsheim shoes a specialty good? Unfortunately there is no objective test of a brand's status in the market. Both Florsheim and local shoe retailers refer to "Florsheim" as "a magic name at retail," but Florsheim's PM practices, avoidance of discounters, and assistance to retailers indicate belief that Florsheim shoes are conventional shopping goods. This is an example of the methodological problem mentioned in the introduction. It is clear that Florsheim is following the profit maximizing strategy for a shopping good, but that may not be Florsheim's best strategy if in fact Florsheim shoes have become a specialty good. The policy issue facing the FTC is the extent to which it wishes to supplant manufacturers' judgment on this matter.

We shall return to the issue of Florsheim's status as a shopping good or specialty good repeatedly; evidence on the issue will be presented in the course of our discussion of the relevant aspects of marketing.

## B. The Nature of Footwear Demand and Market Segmentation

### 1. Economic Determinants of Demand

Economists have little to say about the demand for shoes, both absolutely and relative to other goods. While Houthakker and Taylor did estimate a demand function for shoes, "because of the low  $R^2$  and the assumption that depreciation equals zero, this equation leaves much to be desired."<sup>10</sup> The  $R^2$  of their footwear demand equation was only .71, much below the .92-.99 range for other goods and services. The short-run elasticity of demand with respect to expenditure (roughly, income elasticity) was .94, indicating that shoes are a normal good; and the short-run real price elasticity was -.91.

This kind of aggregate summary statistic about demand, an income or price elasticity, is almost useless as a guide to understanding the market for



a differentiated fashion good such as men's shoes because it assumes that shoes are a homogeneous good, and that consumption of shoes is influenced primarily by income and price. These assumptions of conventional economic demand theory are applicable to long-run demand; e.g., to the consumer's allocation of his budget between housing and shoes, but not to short-run demand; e.g., to the consumer's choice of a brand of men's shoes. To understand short-run demand, choice between brands, we need to survey consumer psychology. We need to understand short-run demand because that is what the marketing strategies of shoe companies such as Florsheim are trying to influence.

## 2. Psychological Determinants of Demand: The Importance of "Tastes"

Texts in marketing usually begin their discussion of consumer behavior with a brief summary of Abraham Maslow's theory of motivation.<sup>11</sup> Briefly, Maslow posited a hierarchy of human needs ("Maslow's Hierarchy of Needs"), and further hypothesized that the most urgent needs will be satisfied first, and that once a need is satisfied it ceases to be a motivator because the person moves on to the next need. Maslow's hierarchy is as follows:

1. Physiological needs
2. Safety needs
3. Social needs (belongingness and love)
4. Esteem needs
5. Self-actualization needs.

The needs and the hierarchy are fairly obvious, as is their relation to conventional economic theory. Traditional demand theory includes in its utility function only satisfaction of the first two of these needs, physiological and safety. Needs three and four are explicitly excluded via the assumption

that utility functions are independent; need five is never considered. Indeed, Leibenstein's attempt to incorporate those social, esteem, and self-actualization needs is appropriately titled Beyond Economic Man.<sup>12</sup> But because physiological and safety needs are satisfied for most people, at least in OECD economies, they are no longer motivators of humans even if they are more important than social, esteem, and self-actualization needs. Thus manufacturers, even of goods which satisfy an obvious physiological and safety need like shoes, generally ignore those attributes in favor of emphasizing the fashionableness of their goods.

Edward Filene, founder of Filene's Department Stores, commented on this trend in 1930:

...the whole tendency of production is to put as much style and as much variation as possible into staples, so that a style element enters importantly into most of the merchandise which most stores handle today.<sup>13</sup>

In short, the necessity of keeping one's feet warm and dry is the reason we buy shoes, but has almost nothing to do with the brand of shoe we select. Of course there are exceptions to this generalization: Wright "Arch Preserver" shoes, Dr. Scholl's sandals, Earth Shoes, and Naturalizers ("No thanks, I'd rather walk!") all appeal directly to physiological and safety needs. And mixed appeals are possible; e.g. Famolare's slogan, "High heels don't have to hurt!" But in general success in selling shoes to all but the poorest consumers will depend on satisfying the consumer's psychological needs rather than his physical needs.

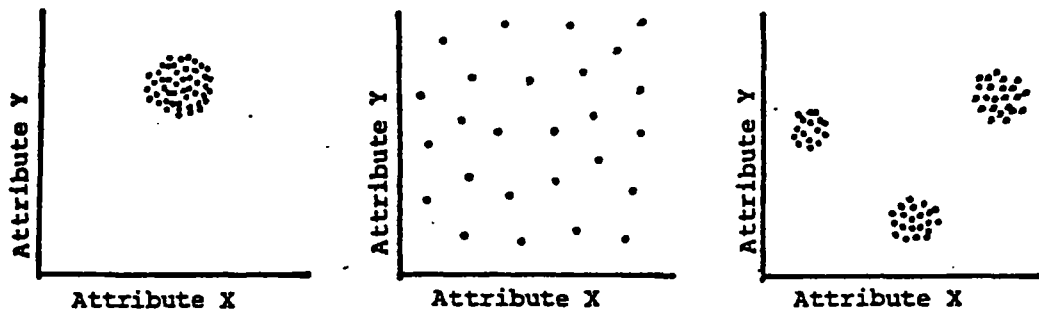
There is reason for mentioning the basis of consumer psychology, in addition to the obvious one of establishing the importance of tastes. The primacy of psychological needs as actual short-run motivators of behavior should be kept in mind when considering the welfare effects of advertising and other promotional expenditures. In high income countries such as the United States,

the marginal benefit to consumers of satisfying needs for esteem, status, and self-actualization may be much higher than the marginal benefits of increments to physiological or safety needs. The consumer's demand for fashion may be as "legitimate" a demand for the market to satisfy as any other needs.

### 3. Effects of Diverse Tastes on Marketing Strategies

Tastes for shoes, like tastes for most apparel, are remarkably diverse. Marketers have three basic ways of characterizing tastes: homogeneous preferences, diffuse preferences, and clustered preferences, as shown in Figure 1.<sup>14</sup>

FIGURE 1  
BASIC MARKET-PREFERENCE PATTERNS



A. Homogeneous preferences

B. Diffused preferences

C. Clustered preferences

The implications of preference pattern for marketing strategy are obvious. If preferences are homogeneous or weak, there are no natural market segments: extensive distribution and mass media advertising (particularly TV) are the dominant strategies. The appropriate strategy for diffuse or clustered preferences depends somewhat on how many sellers there are in the market. Even if tastes are diffuse or clustered, a single seller might well locate his product in "the center of the attribute space" to minimally satisfy all customers; two sellers might locate at the center and compete vigorously for market share with extensive distribution and mass media marketing. But if

any sellers populate a diffuse preference market, "they are likely to eventually position themselves fairly evenly throughout the space and show real differences to match consumer preference differences."<sup>15</sup> Sellers competing in a market with clustered preferences will select one or more market segments as their target. In either case, multiple sellers in diffuse or clustered preference markets will practice segmented marketing. This means selective distribution and advertising through specialized media, not extensive distribution and mass advertising.\*

These concepts are useful in understanding the footwear industry, which is characterized by diffuse tastes and many sellers. There is no direct evidence that footwear tastes are diffuse, although that is certainly suggested by the usual empiricism of one's own shopping experience. However, there are two pieces of indirect evidence for diffuse tastes. First, Consumers Union, the publisher of Consumer Reports, does not rate either apparel or footwear precisely because tastes are too diffuse to make such comparisons possible.<sup>16</sup> Consumers Union certainly rates products where subjective impressions and consumers' tastes are important, for example, frozen pizza and condoms. But tastes for these products are apparently clustered, so that a meaningful comparison of taste attributes can be made with a reasonably sized survey panel. Furthermore, there are laboratory methods for determining brand performance on objective attributes of these products, but not for apparel.

The second piece of evidence for diffuse tastes is the large number of brands: at least 179 brands of "Regular and Casual" shoes according to Leading National Advertisers' Class/Brand YTD for 1978.<sup>17</sup> If the textbook strategy for marketing to diffuse tastes is correct, and/or is being followed by shoe manufacturers, we can infer diffuse tastes from the proliferation of brands.

---

\*These conclusions would not hold if there were significant economies of scale in shoe production, combined with weak preferences. In those circumstances, all producers would locate at the center of the attribute space; segmented marketing would be precluded by consumers' preference for low price over variety. However, economies of scale in shoe manufacture are quite small relative to the market.

This inference is strengthened by another characteristic of apparel markets, one which I have not seen discussed anywhere: people buy more than one style of shoes. Unlike the purchase of a house or a car, the purchase of one pair of shoes does not preclude the purchase of another: the consumer does not have to make a once-and-for-all decision about which of his tastes he should indulge. This encourages manufacturers seeking market share to proliferate brands and styles, since persuading the consumer to buy your suede loafers does not preclude selling that same customer your patent leather disco boots.

#### 4. Footwear Advertising: Evidence on Market Segmentation

Careful study of the published data on footwear advertising provides considerable insight into the general marketing strategy of the industry, intra-industry variations in strategy, and Florsheim's strategy.<sup>18</sup> Table 1 shows the distribution of 1978 advertising expenditures by media, for all companies which spent more than \$10,000 on advertising. Table 2 shows the television and total advertising of the ten largest TV advertisers of shoes, Table 3 shows Florsheim's advertising expenditures, and Table 4 shows the men's shoe advertising expenditures of Florsheim's closest rivals. Table 4 also shows the advertising/sales ratio for the company owning each brand; disaggregation to brand level was impossible because of data limitations.

Economists and marketers have suggested that the more segmented the market, the more advertising expenditures should be directed to selective media such as magazines, rather than undifferentiated mass media such as TV, especially network TV.<sup>19</sup> Table 1 indicates that most firms place little reliance on network TV. Although network and spot TV together comprise half of aggregate advertising expenditures, TV advertising is concentrated in a

very few firms. Of the 179 brands in LNA's "Regular and Casual" shoe category, 8 (55%) advertised only in magazines. Only 11 brands comprise the \$4,085,000 of network TV advertising, and Hush Puppies accounts for 29.3%. While 52 brands use spot TV, the largest user (Thom McAn at \$4,976,600) accounts for 55.7% of the total. In sport footwear, the \$3,723,900 for network TV advertising is spent by only six brands, with Keds alone accounting for \$2,551,400, or 68.5%. In short, most manufacturers have chosen very selective rather than mass marketing, using magazines to reach their target audience. Note that even the aggregate figures show a higher percentage of magazine advertising for sport footwear. Most sport footwear is used for particular sports (except for jogging and tennis shoes) and specialized magazines exist to serve fans and participants in most sports. Thus targeted advertising is both more necessary and more feasible for this category of footwear.

Table 2 contains the exceptions which should prove (test) our rule: the advertising budgets of the ten largest TV advertisers. Of the ten, six have chosen TV as their only or almost their only advertising medium (92-100% of total advertising). The hypothesis that footwear should not rely on mass marketing actually fares rather well when one examines this list, although there is one genuine anomaly. Two of the ten, Thom McAn and Penney's Family Shoes, are retailers rather than manufacturers, and sell to the low income market ideally reached by TV. Buster Brown Shoes and Stride Rite children's shoes also rely almost exclusively on TV, as do Interco's brands of children's shoes, Red Goose Shoes and Poll Parrot (100% spot TV). Children's shoes are (relatively!) low-priced, frequently purchased, have much less variety of style than adult shoes, and of course are not purchased by the ultimate consumer. These characteristics make children's shoes much more like a convenience than a hopping good, making them suitable for TV advertising. Naturalizers, Mushrooms,

Scholl's sandals, and Hush Puppies each have some unique physical characteristic which their manufacturers believe, apparently correctly, will appeal to a large fraction of the population, thus making TV a natural advertising outlet. Interestingly, the characteristic each claims increases health or comfort: Naturalizers ("No thanks, I'd rather walk!") and Mushrooms ("She's taking that Mushroom Walk") claim uniquely comfortable soles; Hush Puppies claim uniquely comfortable uppers (breathable pigskin). The unique feature is heavily advertised, and is combined with a variety of styles so that diffuse tastes in fashion can be mated with the homogeneous or clustered taste for the unique feature. Scholl's approach is slightly different in that its shoes do not all have the same unique physical characteristic; the common feature being an over-riding design emphasis on health. Scholl's are probably more nearly specialty goods than Florsheim's.

The remaining two brands, Florsheim and its close rival Freeman, do not fit the hypothesis as well. Freeman appears to be a genuine anomaly, a medium to high priced men's shoe that relies solely on TV advertising. But TV is only 25% of Florsheim's advertising and Florsheim's TV ads are for men's and women's combined shoe stores. In Table 3, which shows Florsheim's advertising budget in more detail, we see that Florsheim's men's shoes are advertised almost exclusively in magazines. Florsheim does not advertise all of its brands; its lower-price "Worthmore" brand is carried only in company-owned stores and is not advertised. This is consistent with advertising quality rather than price in appealing to the tastes of the target audience.

Table 4 presents evidence on the advertising strategies of Florsheim's rivals. Except for Freeman, they rely on magazine advertising, an indication of selective marketing. The same is true of higher-priced brands such as Alden, Allen-Edmonds, Church's, Bally, Pierre Cardin, Clark's; and of lower priced brands such as Bostonian, Dexter, and Wright Arch Preserver. It is

Also worth noting that a few brands appear to do no advertising, relying instead entirely on company-owned outlets (e.g. Gucci, Hanover), or mail-order business (e.g. Stuart McGuire). Of course, this table may also reflect economies of scale in TV advertising, which preclude its use by smaller firms.

The manufacturers which advertise do not advertise very much, compared to other manufacturers of consumer goods. Even Florsheim, by far the heaviest advertiser among men's shoes, devotes only 0.25% of sales to advertising. This is another indication that shoes are shopping goods; i.e. that the manufacturer cannot "pull" shoes through the distribution channels by advertising to consumers but that retailers can "push" shoes through by their own promotional efforts on behalf of particular brands. Advertising helps, but less for shoes than for toothpaste, so that in-store promotion is essential.

However, we must be cautious about this inference because of our inability to correlate dollars spent on various media with messages presented to consumers or effectiveness of those messages. Magazine publishing is more competitive than television, so that the advertising/sales ratio of a company which relies on magazine advertising could be lower than that of a company which relied on TV, even if both were presenting an equal number of messages of equal effectiveness with their target audience.

##### 5. Bases for Market Segmentation

Having established that shoes in general and men's shoes in particular are sold in segmented markets with diffuse tastes, it remains to determine the segments relevant to this study. Marketers generally recognize four categories of "segmentation variables," characteristics of consumers that correspond to market segments: geographic, demographic, psychographic (lifestyle, personality), and behavioristic (e.g., purchase occasion, user status).<sup>20</sup> The first two bases



are self-explanatory; the latter two can be lumped together as "tastes" for our purposes.

Florsheim does not have geographic market segments; examination of its customer list confirms that it operates its own stores and sells to independent retailers in all states, and in both major cities and small towns. Company-owned stores are located in larger towns (SMSA's), but are not confined to any one region of the country. Therefore Florsheim's price policies for its own stores influence prices in all geographical areas of its market.

Florsheim does occupy a definite demographic market segment, middle-income males; appeals to relatively conservative, traditional tastes in men's shoes; and confines itself to leather dress and casual shoes. I feel quite confident of these conclusions, which are based on my own comparison shopping, interviews with local retailers, and case testimony. It is more difficult to be certain about why Florsheim has chosen this particular market segment. Simply listing the difficulties of operating in other segments will not suffice, since other companies do operate successfully in those segments. However, we can show in Sections II and III why operating in multiple segments is difficult, thus explaining why Florsheim does not also enter, for example, the low-income market. And there is some circumstantial evidence, presented next, to indicate why Florsheim and most other American shoe manufacturers, have chosen the middle-income, traditional leather shoe market segment.

#### C. Aggregate Statistics on Footwear Supply and Demand

Florsheim's choice of market-segment is considerably influenced by the relative cost of producing various types of shoes here and abroad. The American shoe industry is under great pressure from imports, but that pressure is not uniform. For the moment at least, American manufacturers have been able to

compete with imports in the middle-income price range, but not in the lower and upper price ranges. This seems paradoxical, and I cannot be certain that the present situation will persist; i.e., imports may eventually come to dominate the middle price range as well. But that is certainly not the case now, as you can see from Table 5.<sup>21</sup> Table 5 shows that total consumption of shoes is essentially static, that imports' share of the market is increasing, that imports have a greater market share in pairs than in value, but that the pair/value disparity is shrinking. Including non-leather footwear would increase imports' share in pairs and also increase the pair/value disparity, since Taiwan and South Korea export large amounts of low-priced footwear, mainly rubber-soled, to the United States (over half of imports in 1976).<sup>22</sup> Imports of very high-priced, high-quality shoes (Gucci loafers, etc.) are too small to affect aggregate statistics, but my own comparison shopping indicates that imports from Switzerland, Italy and France have a large share of the highest price market (\$100 and up).

The paradox is obvious: if imports are dominant in low-priced and high-priced shoes, why not in the middle? The answer is that while the standard explanation for imports, "cheap foreign labor," applies to shoes, it must be significantly modified to take into account differences in labor quality. The United States imports shoes from the following countries, in roughly increasing order of labor quality: Taiwan, South Korea, Mexico, Brazil, Spain, Portugal, Italy, Switzerland, and France. Shoes from the latter three countries dominate the high-priced lines; the former are coming to dominate low-priced footwear (especially non-leather).

The Swiss, Italians, and French dominate the highest-price, highest-quality market segment for men's shoes because they have the most skilled shoe production labor in the world, people who are more craftsmen than machine operators. These

craft methods are able to compete with more mechanized American methods because the highest-price market segment is not large enough for the American companies to achieve significant economies of scale. The small size of the high-price market is exacerbated by its increased variability due to changes in fashion, which also shortens production runs and prevents achievement of scale economies. In short, mass production methods are not optimal for this market, leaving it to those countries with a tradition of high-quality shoe manufacture and thus a pool of skilled shoe labor. European influence on American fashion may also help these countries.

Shoe production, at least for export, is relatively new to the other countries from which we import, and the labor in those countries is much less skilled. They are not yet capable of producing shoes comparable to the quality of American made shoes, and thus concentrate on the lower-priced lines where quality requirements are less. Of course, both intuition and the statistics in Table 5 indicate that production skills will increase in these countries with the passage of time and with increases in cumulative production, so that the present advantage of American companies in high-quality mass-produced shoes may disappear. This fear is currently the inspiration for a Federal government program to improve productivity in the footwear industry. Ironically, the Orderly Marketing Agreements negotiated with Taiwan and Korea in 1977 exacerbated this trend because they limited the pairs to be imported, inducing Korea and Taiwan to switch to higher-priced, higher quality shoes.<sup>23</sup>

American shoe manufacturers such as Florsheim do have one intrinsic advantage over importers: they can offer better service on "fill-ins," shoes ordered to replenish inventory as certain sizes are sold out and thus need to be "filled-in."<sup>24</sup> Many foreign shoe manufacturers either simply refuse to supply fill-ins at all, or will supply them only in standard lots of twelve pairs, a "prepack" in

industry jargon. Thus a retailer who needed two pairs of 9D's would have to order a "prepack" containing 7's, 8's, 9's, 10's, etc. in order to get the shoes he needed. Florsheim's, on the other hand, is a "stock house" which can get fill-ins to the dealer in two weeks.

The foreign manufacturers' reluctance to supply fill-ins is understandable because of the greater cost of international transactions. This logistical problem also explains the concentration of Florsheim, Freeman, Johnston & Murphy, etc. on traditional styles. The ability to provide fill-ins is of greatest advantage to perennial styles, which the dealer will continue to carry from season to season. For volatile styles, which the dealer does not expect to reorder in any case, a clearance sale rather than filling-in missing sizes is the optimal strategy as inventory is depleted.

Notice how distribution logistics and economies of scale interact to point the manufacturer like Florsheim toward the less style-volatile men's market, and even to relatively conservative styles within that market. The problem with this strategy is that it can degenerate into attempting to sell what one makes, rather than making what sells. One local dealer has reduced Florsheim from 90% to about 20% of his total inventory over the last decade because of Florsheim's slow delivery times on non-stock items. Foreign firms, in his case smaller Mexican and Italian firms, are more flexible at delivering non-standard shoes, make-ups in the industry jargon. Make-ups are shoes ordered by the retailer at one of the industry's seasonal trade shows. Make-ups are special orders in that they are non-stock colors, and/or have slight design changes (different ornamentation on a tasselled slip-on loafer, for example).

Florsheim's indifference to make-ups is consistent with a high-advertising, "pull" strategy; recall that Florsheim's advertising/sales ratio is much larger than all of its competitors except Freeman.

In any case, Florsheim and other leather footwear manufacturers occupy the middle-price range because they cannot compete in quality with the small-volume imports of high-quality shoes from Europe, or on price with the large-volume, low-quality imports from Asia, Latin America, and the Iberian Peninsula. The concentration of American manufacturers on the middle range of price lines is given in Table 6.<sup>25</sup> This table shows the distribution of United States shoe production by wholesale price line for 1976. The Census Bureau has discontinued this report because inflation has made it impossible to define meaningful price lines; i.e., price lines which can be compared from year to year. Note that the U.S. industry avoids both the low and the high end of the price range (double these prices for retail). Finally, it is worth noting that men's shoes per se are more costly than other shoes: the average wholesale price per pair for all shoes in 1978 was \$9.20, but \$14.59 for men's dress and casual shoes.<sup>26</sup>

## II. Structure and Strategy in Shoe Retailing

In this section I examine shoe retailing from the retailer's point of view, and attempt to explain the retailer's choices with respect to market segment, brands, inventory, and promotion. This analysis enables one to examine Telser's free-rider argument for RPM, and to reach a conclusion about the welfare effects of the exclusive dealing portion of the complaint and consent decree. The conclusion reached about RPM is that the free-rider argument applies in this case, in that it explains why Florsheim must enforce RPM if it is to secure the services of high quality retailers. Whether or not Florsheim and/or consumers would be better served by a switch to low-quality discount retailers is another question, considered in Section III, but there is little doubt that a mixed strategy of both high and low quality outlets is not feasible.

My research also indicates that Florsheim probably did not practice exclusive dealing, and that what evidence the case record offers is more consistent with normal retailing practices than with the manufacturer exploiting his market power to force suboptimal inventory decisions on the retailer.

A. Structure of the Footwear Retailing Industry

1. Distribution Channel Structure

Table 7 provides an overview of the distribution channels for American-produced footwear in 1978.<sup>27</sup> The table shows the value of shipments (at wholesale) to the customer classes listed. "Company outlets" are the owned or leased outlets of the manufacturer; "independent retailers" are single stores and chains of up to ten shoe or department stores; "all other retailers" is comprised mainly of large department, discount, and shoe chains (e.g. K-Mart, Sears) with over ten outlets; "wholesalers" are middlemen who service retailers too small to be served directly by manufacturers; "all others, including government and exports" is self-explanatory; and "shipments not reported by customer class" consists mostly of shipments by small firms with no retail outlets. The firms in the last category apparently do not keep sufficiently detailed records to determine what channel their output follows to the consumer. Florsheim is a typical manufacturer in that it sells about 20-25% of its output through its own stores and the remainder to independent dealers and chains. It is extremely unlikely that Florsheim uses wholesalers or other middlemen, given its desire to control its distribution, although I have not been able to verify this assertion.

This aggregate data indicates that most shoe manufacturers practice "dual distribution" or "multi-marketing." In fact, the distinction between shoe

manufacturing companies, shoe retailers, and shoe importers is no longer clear, and is becoming even murkier. For example, Florsheim company stores sell not only Florsheim brand shoes produced in the US, but also other domestic and imported brands, and "make-ups" imported by Florsheim to be sold under its "Worthmore" brand. Thus we have two tasks: to determine why dual distribution is the prevailing distribution strategy, and to determine how each store selects its product mix. Answers to the first question can be found in the Census of Retail Trade.

## 2. Retail Outlet Structure

The important facts about footwear retailing are that shoe stores are small, both absolutely and relative to other retail outlets, and that there are no economies of scale at the outlet level in shoe retailing. Shoe chains become large not by having larger outlets, but by having more outlets. Chains are probably taking advantage of economies of scale in advertising and other central office functions, but there is no direct evidence on this point.

Tables 8-10 provide the basic facts about retail shoe stores.<sup>28</sup> The average annual sales for shoe stores with payroll was only \$225,653 in 1977, compared to \$536,686 for the average US retail outlet with payroll in 1977 (see Table 8). Men's shoe stores are even smaller, at \$202,473. This is not surprising, given the narrow product line and market segment served by the average shoe store.

It appears that the average men's shoe store, with sales of about \$200,000 per year, is somewhat below the minimum efficient scale for all shoe stores of about \$250,000 to \$300,000. Minimum efficient scale for outlets was established by applying a rudimentary "survival hypothesis" to census data on sales and payroll data organized by establishments' annual sales (Table 9), firms' annual sales, and number of outlets per firm (Table 10). Table 9 shows that firms with annual sales of less than \$50,000-\$100,000 have a distinctly higher ratio

payroll to sales than stores selling \$100,000-\$300,000 annually, and that the former category also contains a much higher percentage of total stores (5.8%) than of sales (5.8%). Since stores in the \$100,000-\$300,000 category comprise 62.6% of stores and 53.4% of sales, they are much closer to the average efficiency of the industry. Stores in the \$300,000-\$500,000 category are only 12.6% of stores but make 22.7% of sales, and have a payroll/sales ratio of only 14%. Probably the MES for men's shoe outlets is somewhere around \$300,000. Notice also how the percentage of stores drops rapidly as store size drops below \$50,000-\$100,000, indicating a steeply sloping cost function in this size range.

Obviously this is rather crude because of the broad size categories used by the Census Bureau. Furthermore, the national averages may conceal geographic variations in MES (e.g., rural vs. urban). But the impression that \$300,000 is about MES at the outlet level in shoe retailing is reinforced by other data. Table 10 categorizes men's shoe retailing firms by the number of stores per firm, and gives the percentage of firms, sales, and outlets for each category, along with two performance ratios: sales per store and firm payroll/sales ratio. As one's own experience suggests, most firms are single outlet firms, but single outlet firms have only 26% of total outlets and 22% of sales. Single outlet firms are the least efficient in terms of sales per outlet, but have a relatively low ratio of payroll to sales, undoubtedly because of the mingling of wages and profit in small firms.

A striking fact, revealed by the table, is that there is no trend in sales per outlet as firm size increases. The greatest sales/outlet ratio is achieved by 4-5 store chains; chains with more than 50 stores (such as Florsheim) have only average sales/outlet ratios. Florsheim itself had average sales of \$158,740 in 1980, and \$141,827 in 1977, in its owned and leased outlets.



Comparing each category's percentage of outlets and firms with percentage of sales, we again see that \$250,000 to \$300,000 is the size class at which an outlet reaches average efficiency for the industry. Slightly larger firms have superior efficiency; the largest firms have only average efficiency.

The payroll/sales ratios tell much the same story. Efficiency continues to increase; i.e. the payroll/sales ratio continues to fall as the firm size increases. Notice that payroll/sales ratios continue to fall even after sales/outlet ratios have stopped rising, an indication that the medium sized chains (11-50 outlets) do take advantage of economies of scale in performing central office functions. But the very largest chains, while more efficient in this respect than the single outlet firms and 2-10 store chains, are less efficient than the medium sized chains. The largest chains have payroll/sales ratios of 13.9%; the medium sized chains achieve 12.7-13.6%. Unfortunately no information on the statistical significance or intra-class variance of these figures is available, but a general conclusion that there are few economies of scale in shoe retailing, beyond those that could be achieved by a local chain, is probably justified. The data for all shoe stores, rather than just men's, presents a similar picture.

We can now see why manufacturers rely on dual distribution. They seem to face the usual control problems as firm size increases, and although the census data show that on average these are offset by economies of scale in central office functions, this may not be the case at the margin. Relying exclusively on owned outlets would also require large amounts of capital. Consider Florsheim, which sells only about 25% of its output through its own stores. Florsheim's 1977 footwear sales were \$419,856,000; dividing 75% of that number by \$300,000 gives an estimate of the number of stores Florsheim would need to own to make those sales, 1050. This is a minimum number (much

smaller than Florsheim's customer list!) because it assumes that all sales can be made in MES stores, and that on average the new stores would have twice the turnover of present stores. Assuming that inventory turns over three times per year and that "fixturization" of each store costs \$85,000, Florsheim would need to invest about \$194,183,400 in working capital for those stores. Unfortunately Interco doesn't report assets by division, but total inventory for Interco as a whole was \$529,058,000 in 1977, which should give some idea of the magnitude of the required investment. The investment would be doubled if average store size remained at \$160,000.

In short, the conventional capital-requirements, span-of-control, and incentive problems used to explain reliance on franchise dealers and other middlemen apply to the shoe industry. The president of Florsheim testified that Florsheim built stores only where an independent would not, and the capital requirements for stores lend support to that testimony (Hamilton tr., p. 54).

## B. Conduct in Footwear Retailing

### 1. Market Segment Choice

The most important feature of retailing is that each store must pick a definable market segment and, with limited exceptions, stick to that segment. No store can practice undifferentiated marketing; i.e., be all things to all people. Of course a single firm may operate retail outlets in more than one market segment, but each outlet will have a separate identity, appropriate to the segment it serves.

The most important bases for market segmentation in apparel retailing, including shoe retailing, are demographic and psychographic ("lifestyle,"

"tastes"). Of the demographic variables, the most important are income, gender, and, increasingly, age. Age, lifestyle, and tastes are heavily co-linear, which creates difficulties for the textbook taxonomist but not for analysis. The types of retail outlets for shoes are typical of other apparel. The most basic segmentation is between men's and women's stores, with the latter being considerably more volatile with respect to fashion.

My reading and comparison shopping suggest the following list of retail shoe outlet types, each serving a particular market segment:

1. Medium to high-price and quality specialty stores (Florsheim, Freeman),
2. Low-price, low-quality specialty stores (Thom McAn, Kinney),
3. Medium to high-price department stores (Filene's, Marshall Field),
4. Low to medium-price and quality mass-merchandisers (Sears, Penney),
5. Lowest-price, lowest-quality discount stores (K-Mart, Woolworth),
6. Medium-price, medium-quality current fashion shoe "boutiques" aimed at the young adult market (Fayva).

Of course this categorization cannot be exact, especially with respect to quality differentials. It is meant to suggest that there is a correlation between price and quality; discounters have low prices not only because they have low overhead but also because the physical quality of the product itself is low. Apparel discount stores differ in this respect from appliance discount stores, which often carry very high quality merchandise.

The very highest quality men's shoes are such a small market that they cannot be sold in specialized outlets. Instead they are sold as the top price line of a basically medium priced shoe store, or as the only price line in very expensive men's wear stores.

The fundamental observation to explain is that there are definable market

segments at all, given consumers' extremely diffuse tastes. The basis for market segmentation appears to be income, since each store picks a price range and stocks shoes only within that price range. No store that I observed carried shoes priced over the whole spectrum, and interviews confirmed the impression that each store has a target market. A retail outlet picks one price point as its basic price, the price at which it expects to sell the bulk of its merchandise, and then purchases the highest quality merchandise which can be sold at that price. This price is geared to the store's estimate of the income of its average customer; or more accurately, of the average income of the customer it hopes to attract. The store will then carry small amounts of inventory at prices one "price point" above and one "price point" below its basic price. The position of Florsheim in a retailer's product mix varies from outlet to outlet. A middle income department store might use Florsheim as its highest price brand, the "frosting;" while a higher income department store might use Florsheim as its basic line. And of course, Florsheim stores themselves use Florsheim as the basic line.

This system for determining the product mix is frequently mentioned in retailing texts, and to judge from its frequent citation, was originated or at least popularized by Edward Filene's 1930 book, The Model Stock Plan.<sup>30</sup>

Filene's theory is based on his observation that income is a basis for market segmentation:

"Experience has shown that no retailer in a large community can cater to too broad a section of the economic scale, because people of such widely different income levels will not trade at the same store...There will be a definite shifting to a lower-priced class of trade."<sup>31</sup>

The extent to which this is true has undoubtedly changed, but Filene is still essentially correct. Filene argued that the key to success is picking the

income class one wishes to serve, and then "determining the prices at which, at a given time, the largest number of people [in that class] buy."<sup>32</sup>

Similarly, two British economists have confirmed through survey experiments that the price at which the largest number of people will buy an article does vary with income (see pp. 56-7 below). In short, there is a normal price of each income class, and prices above or below that price discourage purchases.

Why three prices? Essentially Filene argued that consumers of a given income class each buy different qualities of the same article: "inexpensive," "everyday," and "best" (recall that shoes, unlike houses, do not present the consumer with a once-for-all choice). The everyday quality purchased by the target income group should be the store's basic line, with one line below and one above. This line will also be the "best" line from the point of view of low-income shoppers, and the "inexpensive" line for high-income shoppers. Thus "the best-selling full-line is at the intermediate price at which all of our customers buy at one time or another, at which most of our customers buy all of the time, and at which we, consequently, sell the most goods." An example employing hats is reproduced as Appendix 1.

Why not a fourth line? "The answer to this is that we could not do business in bulk at four full-line prices without adding another class of customer" and (Filene believed) adding a lower class of customer would drive away the higher.<sup>33</sup>

Although Filene's book is fifty years old, it is worth quoting because with little exception it amounts to an articulate statement of the retailing principles I encountered in interviews and comparison shopping. For example, consider the inventory policies of a typical middle-income department store in New Orleans.<sup>34</sup> Florsheim is currently their "frosting," their highest-price, highest-quality brand. The manager does not stock more expensive brands because the demand by Holmes' customers for more expensive brands is too limited. Inventory costs for shoes which retail at \$150 to \$200 a pair are much higher than for

Florsheim; and the same dollars put into Florsheim inventory will produce much greater sales revenue. The inventory for each brand is almost a fixed cost, since a large variety and number of styles and sizes are necessary.

However, the Holmes' manager's explanation of why Holmes did not stock discount-priced shoes differed fundamentally from Filene's. Holmes' is apparently not afraid of tarnishing its image, or of driving away prosperous buyers by inviting the patronage of the lower classes. Instead, there are certain indivisibilities of retailing style within a retail outlet which preclude combining high-margin and low-margin items. For example, it would be difficult within one shoe department to have an easy return policy for some brands but not others; to provide sales assistance for some brands but not others, etc. In this situation, low-margin items couldn't make an adequate contribution to overhead. Thus a chain like Holmes might have a bargain basement, or some other distinct discount operation, but will not mingle low and high margin merchandise in the same outlet. In short, because all brands within a single outlet will receive approximately the same services, promotion, etc., they must all have approximately the same markup.

Not only must markups be approximately equal, there is also a limit on the range of wholesale and thus retail prices that a single outlet can carry. As wholesale price falls, the line becomes less profitable even with constant percentage markup because the fixed costs of at least some services become a larger percentage of the markup (it takes as much time and floorspace to display and fit a \$30 shoe as a \$90 shoe). At the other end, as wholesale prices and thus retail prices rise, inventory turnover and profits fall as the store's average customers are priced out of the market.

These considerations help motivate Telser's free rider argument, for they explain why a retailer will choose either a high-margin, high-service operation

or a discount operation, but will not mix marketing styles. Thus a high-margin shoe store facing competition from discounters in a particular brand will simply drop that brand rather than match the discounter's price. And the very indivisibilities which create this dilemma must make it very difficult to reach a contractual arrangement for the manufacturer to reimburse the retailer for brand specific service.

To summarize the discussion thus far, there are two reasons why a retailer stays within a narrow price and markup range: the desire to present a consistent price-quality image to consumers, and indivisibilities within the retail outlet which require all brands to have approximately the same markup and turnover. The precise reason why a consistent price-quality image is desirable may have changed since Filene's era. Filene's observation that persons of widely different income classes will refuse to shop at the same store has not been adequately tested, and may be less descriptive of our times than his.

Survey evidence indicates that there is considerable "cross-shopping," shopping in more than one outlet type for men's apparel. Cross-shopping occurs within price-quality levels, as when a consumer shops both department stores and shoe stores for shoes; and between price-quality levels, as when a consumer shops both department stores and discount stores for shoes. One recent survey found that 73% of men buying most of their clothing in traditional department stores cross-shopped for price.<sup>35</sup> Unfortunately discount stores were not included in the survey so that we do not know how far down the price/quality spectrum shoppers in this sample were willing to go. Obviously we expect cross-shopping to be asymmetrical, because of the budget constraint of low-income consumers. Only 55% of the men reporting a mass merchandiser (e.g. Sears) as their primary clothing store cross-shopped price (i.e., shopped in department stores).<sup>36</sup>

Since customers of high-quality high-margin outlets are apparently willing to visit lower price, lower quality outlets, Filene's conclusion that the presence of low income shoppers will drive away high income shoppers may no longer be valid. That is, a store's price range may no longer correlate with the income class of its customers as closely as it did before such developments as discount stores, and the mail order merchandisers' expansion into department stores. However, a store is still interested in sending out a definite price/quality signal to potential customers, of whatever income class, that customers' expectations will be met when they visit the store. Such signaling pushes the store towards a narrow, identifiable price/quality range, and will be considered at length in Section III, where pricing strategy is discussed.

## 2. Competing in the Market Segment

The basic conclusion of the previous section was that market segment price dictates price strategy. Given that price strategy, what are the non-price dimensions of competition? Inventory, service and ambience are the crucial non-price parameters of the marketing mix, and understanding competition along these dimensions will enable us to analyze the exclusive dealing element of the Perco case, and lay the groundwork for understanding the manufacturer's pricing strategy in Section III. This is also the appropriate place to examine sales variations from the retailer's basic price strategy.

### a. Inventory

Inventory policy is one of the biggest differences between high-margin retailers and discount stores, and is the key to the exclusive dealing charge.



all retailers face the problem of maximizing sales while minimizing inventory, and retailing texts devote considerable emphasis to increasing stockturn. For shoe retailers, stock turns over about three times per year, and generates about \$85 per square foot in annual sales.<sup>37</sup>

Improving on these averages means concentrating inventory investment on the most popular styles, sizes, and brands, and on avoiding duplications. Figure 13.1 shows how one retailing text suggests applying these principles to shoes.<sup>38</sup>

FIGURE 2

The heavy-shaded portion is known as the *heart stock* and the light-shaded portion as the *fringe stock*. Since it is not possible to forecast demand exactly, it is better to err in the direction of overbuying on the heart stock and of underbuying on the fringe stock. This rule applies not only to sizes and widths but also to colors and brands.

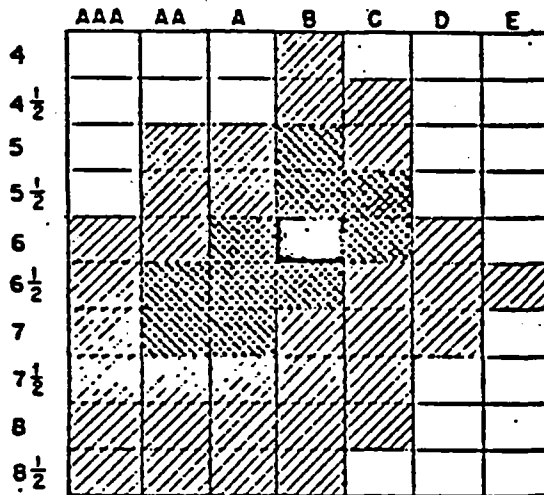


FIGURE 13.1 Size and Width Distribution of Women's Shoes in One Store

Discount houses carry this policy to an extreme: they stock only one width in men's shoes (D), and often carry only whole rather than half sizes. This was suggested in interviews and confirmed by shopping in local discount outlets. Since the evidence on cross-shopping indicates that shoppers at high-margin stores are probably aware of prices in discount stores, discounters

would almost certainly capture the standard size volume from high-margin department and shoe stores. This is why high-margin outlets will immediately drop any brand sold by discounters. High-margin stores want to concentrate their inventory on the "heart stock" rather than on fringe sizes, but they also do not want to disappoint customers. Department and shoe stores want to reinforce the shopper's initial decision to patronize their store not only by having the price/quality combination they have promoted, but also by having it available in the customer's size. As far back as Filene, texts have emphasized the importance of having a full line at each price point, since failure to have the correct size costs not only the immediate sale but also repeat business. A basic service offered by high quality stores is assurance that one's size is in stock.

Although high-margin shoe retailers maintain complete size assortments and a variety of styles, they also avoid having redundant styles.

...At some point it becomes uneconomical to add more depth to...present lines...because the addition of colors, sizes, and the like can reach the point where additional sales are acquired by diminishing the sales of other lines within the same department.<sup>39</sup>

At least one text uses shoes as an example of the principle.

The product...could be the previously mentioned wing-tipped shoes. The first color sells at the rate of four pairs per week. The addition of a second color raises the sales of the shoes to seven. Two additional colors brings the total sales to a peak of ten. A fifth color results in no additional sales. The buyer, knowing or sensing this, would restrict his offerings to four colors.<sup>40</sup>

The buyer would also restrict his offerings to as few brands as were needed to provide the four colors, since the cost of inventory is proportional to the number of brands, as well as to the number of colors. In fact, if the

textbook author quoted above had carried his intuitive marginalism a little further and included inventory cost in his example, the buyer would have stopped short of four colors.

I was able to observe his very example in the course of interviewing a new shoe manager for a local department store, observing that the store carried several brands of wing-tipped shoes (including Florsheim), instructed the store buyer to reduce the inventory to just one brand (Freeman). The discontinued lines were sold at large discounts; e.g., Florsheim was cut from \$105 to \$68. This store remains a Florsheim customer, and the manager maintains that similar decisions could have been taken before the consent decree.

These facts about the economics of retailing suggest that Florsheim's attempts to secure exclusive dealing were not socially harmful; that is, by reducing inventory costs they probably benefited both retailers and consumers. Scherer also concludes that exclusive dealing is not harmful as long as no barriers to entry are created and interbrand competition is vigorous, certainly the case in shoes.<sup>40.1</sup>

I refer to Florsheim's attempts to secure exclusive dealing because interviews with local retailers, including current Florsheim customers, turned up no evidence of coercion. Florsheim salesmen, like all shoe company salesmen, would like to avoid duplication of their styles in other brands, and attempt to persuade retailers to stock only Florsheim in the Florsheim price range. It is clear from the case record that Florsheim salesmen tried to persuade retailers of the wisdom of this policy, and kept track of the inventory of both Florsheim and other brands on store visits. But it is difficult to infer from these activities that Florsheim was forcing exclusive dealings on retailers.

The obstacle to this inference is that some costs of distribution, most

importantly the salesman's time to visit stores, are not infinitely divisible. Retailing texts devote considerable time to determining a store's "economic order quantity," which naturally depends on total store volume. As the store's total volume falls, Florsheim will need a larger share of that volume in order to cover its relatively fixed costs of servicing the store. It is important to keep in mind that it is the Florsheim salesman who makes the primary decision on new retail customers, and that the salesman may well not want to add a small customer. What matters to the salesman is the volume of Florsheim sold, not the store's total volume, so that the Florsheim salesman may well be presenting small stores with what amounts to an exclusive dealing proposition: you can't promise me enough volume to make your account worth my time unless you carry only Florsheim. The Census of Retail Trade data on shoe retailing certainly suggest that this explanation is plausible. For example, the average annual sales of the 13,783 single-outlet shoe retailing firms was only \$130,704 in 1977.<sup>41</sup> Since retail markups are roughly 50%, the manufacturer's revenue from those firms averaged only \$65,000 per year. Only about 23% of the total shoe market is men's regular and casual shoes. Thus the average store's potential for Florsheim is less than \$15,000. Although I do not know what Florsheim's commission is, one can see that a salesman constrained for time would want a large fraction of a small store's business. A salesman might also want all of the shoe business of a men's clothing store which carried shoes as "accessories" (i.e., a sideline to the basic business of selling suits).

#### b. Service

Shoe retailers' most important service is that they act as a middleman between the ultimate consumer and the manufacturer. The social utility of

market segmentation, and the retailer's ability to signal which market segment he serves, come from this basic function of reducing the consumer's transactions costs. This means that the retailer's inventory is his basic service. However, ancillary services are also important and consist of sales clerk assistance, ambience, credit, allowing returns, and delivery (a department store feature). Of these services, ambience is probably the most important in distinguishing types of retail outlets.

Innovation of bank credit cards has eroded the importance of differences in credit policies, and delivery is not important for small items like shoes. High-margin outlets generally have more generous return policies, but my subjective impression is that this is not crucial for shoes.

Sales clerk assistance is a peculiar service, in that some customers find it desirable and others find it undesirable, preferring self-service. One study found that of women who consider department stores easier places in which to shop than discount stores, about 50% mentioned salesclerk assistance as one of the reasons. But 57-64% of women who found discount stores easier to shop in cited self-service as the reason!<sup>42</sup> Also, fitting shoes does not require much sales assistance. Even in high-margin stores the customer essentially fits himself by trying one or more pairs; the standard foot-sizing device is usually used only when the customer has forgotten his size. Whatever its importance, there are obvious differences between discounters and traditional shoe stores in the amount of sales assistance they provide. Discount stores do rely exclusively on self-service, generally displaying their entire inventory on racks. Some discount outlets provide space and facilities for trying on shoes, others do not. In short, traditional stores have higher costs because they provide more service.

This leaves ambience, about which there is little to say beyond the fact that it is an important part of the package the retailer offers the consumer. Many people take positive pleasure in shopping, and even for those who do not

the quality of the physical surroundings is an important attribute of shopping. Florsheim claims that its average suburban shoe shop costs \$85,000 for "fixturation" (interior decorating). Such expensive surroundings are intended both as a signal of product quality, as a positive attribute directly consumed by the shopper in the course of his visit, and as a signal of the style of the shoes sold therein. Florsheim shoe shops look like traditional men's clubs, and most Florsheim shoe styles are traditional or conservative. Retailers make considerable efforts to match their store's image with the self-image of the customers they are trying to attract, sometimes with remarkable candor, as in Bloomingdale's "Young East Sider" department.<sup>43</sup> Fortunately, we needn't understand why and how ambience is important to shoppers, only that it is expensive to provide and requires high margins on merchandise.

### c. Sales

Sales are the result of retailers' mistakes or of changes in fashion. Florsheim's policy of discouraging out-of-season sales, both by disciplining retailers who hold sales and by enforcing lower than average markups, is consistent with a long tradition in retailing.

...Many high-class stores with a clientele that is interested throughout the year in quality and style, and many small stores with little traffic, follow the policy of late markdowns. They often hold two annual clearance sales a year, in January and July, and take very few markdowns in between.<sup>44</sup>

In part this seems to be price discrimination, with markets separated by time. Customers more concerned with quality and current fashion pay the full price at the beginning of the season, and bargain hunters pay reduced prices at the end-of-season sale. Frequent off-season sales would eventually

persuade even fashion-conscious buyers to hold out for lower prices at mid-season sales. As the probability of encountering a mid-season sale rises, the expected cost in utility of waiting for a sale declines. At the margin, even the most fashion conscious consumer will be inclined to wait or to search for the next sale. The second major reason for avoiding sales and maintaining high margins is simply to keep prices high as a signal of quality. This will be discussed more fully in Section III.

Concentrating on the price discrimination argument, it appears that the FTC's reduction of Florsheim's ability to prevent out-of-season sales will increase consumers' surplus, if retailers are correct in believing that the whole price structure would eventually be eroded by out of season sales. However, given that twice-yearly sales at Florsheim's present clearance periods are an apparel industry tradition, it may be that Florsheim's influence is not crucial to maintaining this "focal point" pricing policy. Also, there is no evidence from the case record that Florsheim enforced prices during sales.

Another problem with estimating the welfare effects is that prohibiting Florsheim from enforcing sales periods may affect only the timing rather than the aggregate amount of price cutting. Remember that the basic reason for having a sale on a particular item is that the merchant made an error. The error could have been setting too high a price, incorrectly anticipating the season's fashion, or ordering too much to be sold during the season (even if price and fashion are correct). The latter mistake can be corrected only at the end of the season; the first two will be corrected as soon as possible by the unconstrained retailer. The retailer can either reduce prices and sell the merchandise himself, or sell the merchandise to a jobber. The latter course will be followed by a retailer who fears damage to his quality image or fears encouraging bargain-hunting among his regular customers. Florsheim attempted to prohibit both solutions (sales to jobbers would mean losing control of distribution, thus a weakening of RPM).

The important point is that not all shoe styles will go on sale, or be reduced by the same amount, so that allowing off-season sales may not erode the general price structure but only move forward the date at which unsuccessful models go on sale. It is not obvious that earlier clearance sales of unsuccessful models will reduce the average price at which the initial inventory is sold. The retailer will not reorder the style and will dispose of the entire stock at the end of the season in any case.

Finally, it is worth noting that Florsheim claims that its average initial markup under RPM, about 47%, was lower than the industry average or "keystone" of 50%. Florsheim also claimed that because of its high quality and lower initial markup, customers would perceive Florsheim as a good buy at the initial markup so that markdowns--discounts--would be less frequent than with other brands.<sup>44.1</sup> Thus the average markup over the selling season--the "sustained markup" in Florsheim's terms--would be higher than with other brands. His argument turns out to be another literal textbook example, presumably by coincidence.

Another important reason for tracking markdowns is to decrease errors which necessitate price reductions. Finally, such information is useful in planning purchases. For example, two suppliers' brands of shoes may have similar purchase prices, assortments offered, and advertising support. Still, one brand may be clearly superior to the other because it rarely requires markdowns. Hence, a merchandise buyer should be able to make better purchase decisions with information on relative markdown levels for the brands being considered.<sup>45</sup>

As implied by the textbook passage, Florsheim emphasized its "sustained markup" to attract dealers; in effect telling them that the variance of their margins would be lower with Florsheim since large clearance discounts would be less likely.



d. Perceived Differences Among Retail Outlet Types

A recent survey of shopping behavior provides some information on how shoppers perceive the three basic types of apparel outlets: department stores, fashion specialty stores, and discount stores. This survey of male shoppers was conducted like the "exit" poll of politics: men were asked to rank the store at which they last shopped.<sup>45.1</sup> For example, 64% of the men who last shopped in a discount store ranked that outlet type as having "lowest prices" while only 3% of those last shopping in fashion specialty outlets thought that outlet type had the lowest prices. Interestingly, shoppers at department stores thought they got the best value for the money (62%), followed by specialty stores (39%) and discount stores (36%). Discount stores were also weak on sales help compared to other outlets: only 15% of the shoppers at discount stores felt they had the "most knowledgeable, helpful salesclerks" while 50% of the department store shoppers and 56% of the specialty store shoppers felt that their outlet type had the best sales help. Finally, only 4% of discount shoppers felt that discount stores had the "largest overall assortment/selection," compared with 51% for department stores and 30% for specialty shops.

If these shoppers are acting in accord with their preferences and income constraints, we can conclude that there are real differences in the services offered by various outlet types. People shop in discount stores because they are interested in low price, not because they believe they are getting more for their money (at least in men's clothing). Discounters do not have lower costs for performing the same services; they perform fewer services and stock lower quality products (again, this applies to apparel only).

c. Manufacturer-Retailer Interaction: Alternative Hypotheses for RPM

The analysis to this point has established that the men's shoe market is

segmented, and that domestic manufacturers are obliged by import competition to select the middle-to-high price/quality segment. Retailers may pick any market segment, but can serve only one segment from each outlet. Indivisibilities in the provision of service compel high-margin retailers to stock only brands with high margins.

Because of cross-shopping, low-margin dealers could presumably sell at least some high-quality merchandise, but are prevented from doing so in two ways: directly, by Florsheim's refusal to sell to discounters, and indirectly, by Florsheim's policy of RPM, which deprives them of their one competitive advantage. These policies are almost certainly complementary. Given the traditional retailing focal points of twice-yearly clearance sales and 50% markups, prohibiting Florsheim from enforcing RPM may be ineffective unless it is also compelled to sell to discounters and/or mass merchandisers, as suggested in Steiner's memo, "Implications of Levi Strauss, A New Emphasis."

We are now prepared to consider alternative explanations for Florsheim's RPM policy (supported by refusal to deal with discounters). There are three basic hypotheses which explain why RPM may be rational for all or part of Florsheim, plus the previously mentioned hypothesis that the present marketing strategy is simply a mistake.

First, Florsheim may pursue its policy of RPM in order to provide high margins for its dealers in the belief that the retail services offered by them are essential to its sales. This explanation assumes both that services are essential to sales, and that contractual arrangements to provide those services are less efficient than RPM, perhaps even impossible. The diversity of tastes in this market and the low advertising/sales ratios of even leading companies are consistent with the assumption that retailers' promotional efforts are crucial. The indivisibilities in services explain why contracting for brand-

specific service is difficult.

This is the traditional RPM analysis of Telser, Posner, et. al.. Briefly, Telser's hypothesis is that RPM is essential to ensure provision of services which increase sales and which are subject to free-riding. Absent RPM, dealers who provide the service would find themselves losing sales to dealers who had lower costs and prices because they dispensed with services. Consumers would obtain service at the high-cost, high-price outlet; e.g., extensive salesperson assistance in selecting the appropriate model, then make their purchases at a low-cost, low-service outlet. If, as in our example, it is difficult or impossible to establish a separate fee for the service provided, no dealer will have an incentive to provide the service (or the optimal amount of the service) because at least some and perhaps most of the increased sales will be made by other dealers. RPM prevents other dealers from cutting prices to free-ride. Furthermore, if the retailing sector is competitive, the high margins created by RPM will be used to provide services, not flow through to higher retailer profits.

Note that the Telser hypothesis requires both that services be essential to sales, and subject to free-riding problems. There seem to be few possibilities for free-riding in shoe retailing, especially since the retailer's basic service is his inventory. However, the essence of the free riding argument is really that a high-quality, high-cost outlet creates positive externalities; i.e., increases in the sales of other outlets. High-quality shoe stores might well create such externalities.

The shoe store itself contributes to consumers' impression of shoes' quality. Such quality signals are important for shoes, as explained in Section III, and are subject to free riding. Discounters can take advantage of the favorable impression created by high quality outlets by stocking the same shoes

in spartan settings. As with the traditional Telser hypothesis, high-quality outlets will probably drop brands carried by discounters, especially as overall store quality and ambience are the most indivisible of store services. In short, RPM is optimal, for Florsheim and for society, if retailer services (including the advertising services of the outlet itself) increase sales and can be obtained in no other way. If these assumptions are incorrect; i.e., if margins need not be at traditional levels, then prohibiting RPM will lower margins and increase sales with no change in wholesale price. Both Florsheim and consumers will be better off.

A second, fundamentally different but not mutually exclusive explanation for Florsheim's RPM is that Florsheim is directly interested in retail prices, not indirectly interested in retail price as a means to the end of maintaining adequate retail margins to compensate for retailers' services. If Florsheim has strong views about the profit-maximizing retail price of its shoes, it has every reason to enforce that price. Company-owned outlets should prevent prices from rising above the optimum price, and RPM should prevent prices from falling below the optimum.

Note that this hypothesis about vertical restrictions, unlike the Telser hypothesis and its advertising variant, is completely symmetrical. It is as important to keep independent retailers from raising prices above the specified level as it is to keep them from undercutting the prescribed list price. Setting wholesale price alone is not adequate, because retail margins are not uniform. Given the amount of overhead in any retailing operation, the margin on any particular brand or style of shoe could vary significantly even in a perfectly competitive retailing market.

Note also that there could be several reasons why Florsheim wanted to supercede local retailers' judgments about retail price. The argument presented

in Section III is that price is an important signal of quality, and that local retailers could interfere with Florsheim's quality signalling strategy by raising as well as by lowering prices. However, Florsheim could also believe it had superior information about own and cross price elasticities (short run or long run); could have a longer planning horizon; or could have better information about the response of foreign producers to changes in prices. In any of these cases, Florsheim would have an interest in setting the retail price, an interest which could not be satisfied simply by setting wholesale price.

A final explanation for Florsheim's RPM policy is that it is trying to "protect" its considerable investment in its own stores from competition from more efficient retail outlets. This hypothesis was suggested by a local retailer, and is one of the problems inherent in dual distribution. If the distribution division and the manufacturing division are each profit centers, there can be intra-company conflict over such matters as transfer pricing.<sup>46</sup> The same conflict could lead to RPM, even though RPM is suboptimal for the corporation as a whole. Certainly such outcomes are possible in business decisions; for example, Porter has suggested that divestiture decisions are often suboptimal because of intra-company profit-center conflicts.<sup>47</sup> The hypothesis gains plausibility in this case when we recall that average sales of Florsheim Shoe Shops, \$150,000 to \$200,000 per year in 1977, are at or below the national average.

Fortunately all four hypotheses are distinguishable. If the traditional RPM analysis applies and retailer services (including store quality signalling) are essential, then abolition of RPM should cause both sales and price to fall. Quantity sold and consumer welfare may rise in the short run, for it will take some time for the quality signal to erode, either from deterioration of existing Florsheim outlets, or the appearance of Florsheim in discount stores. Unfortunately there is no evidence on how long the "short run" lasts. Advertising will probably rise, as "pull" via advertising replaces "push" via retailer provision of services. If the hypothesis that there is a single,

sales-maximizing price is correct, then abolition of RPM should increase the variance but not necessarily lower the mean of the retail price distribution. The short-run effect on sales is indeterminate, but in the long run sales should fall. If the third hypothesis is correct; i.e., if RPM is a globally irrational attempt to preserve the local maximum of Florsheim's retailing division, abolishing RPM should reduce retail prices and increase sales, but reduce the number and sales share of Florsheim owned stores. Finally, if the present Florsheim strategy is simply mistaken, abolition of RPM should lead to lower prices and higher sales. Assuming no impact on wholesale prices, both Florsheim and consumers will benefit.

The welfare effect implications of each hypothesis follow directly from the predicted effect on sales. As Posner argues, any reduction in physical sales represents a loss of consumer satisfaction; any increase in sales, an increase in consumer welfare.

Evidence on the likelihood of these hypotheses is presented next.

### III. Price and Other Quality Signals

This section will demonstrate that Florsheim had a direct interest in the retail price of its shoes and establish the nature of that interest. Florsheim's price policies were consistent with the notion that it believed price to be a signal of quality, and controlled prices in order to preserve the quality image created by its advertising, company and franchised stores, and physical product. A large body of research and our own experience indicate that consumers do perceive price as a signal of quality. The research will be reviewed below; as an example of the more casual empiricism of experience I quote an ad from the Wall Street Journal: "SUPER WATCH (\$29.95) Don't be fooled by the price..."<sup>48</sup> Other quality signals will also be considered.

### A. Types of Quality Signals and Their Importance

There are many clues to the quality of a product: the physical characteristics of the product itself, brand, store, and price. The relative importance of each signal varies from product to product, and the signals interact strongly. The more difficult it is for the consumer to evaluate the physical product itself, and the larger the consumer's perception of quality differences between brands, the greater the importance of attributes such as price, brand, and store. As one study summarized the relationships:

Products which were perceived to have very undesirable consequences [of mistaken choice], large brand-to-brand variation in quality, a pronounced price-quality relationship, and a high social significance with respect to brand choice, had a positive or upward-sloping price preference function. In contrast, products that were seen by the subjects as having mildly undesirable consequences, small variation in quality among brands, a dubious price-quality relationship, and little social significance had a price-preference function generally consistent with conventional assumptions [i.e., downward sloping].<sup>49</sup>

Note that the price signal becomes stronger as the correlation between price and perceived quality becomes stronger.<sup>50</sup> Shoes have all of the characteristics of a product where signals of quality (particularly price) are important. Consumer Reports has been unable to devise laboratory methods for judging quality of shoes; men's leather shoes are costly enough that errors are serious; and my own comparison shopping has revealed both enormous brand-to-brand variation in quality and a strong correlation between price and quality. We cannot "prove" that shoes are perceived by most consumers to have these characteristics without performing the kind of consumer survey used in the study cited, but the available evidence indicates that risk-averse consumers do face a real information problem in buying shoes. The fact that shoes are relatively simple and shoe technology relatively static compared to electronic devices and other hard goods often

discounted, does not make their quality relatively easy to judge. The performance of shoes, unlike the performance of a TV for example, cannot be adequately sampled either in the store or by observing the performance of a friend's purchase. Limited ability to judge performance (e.g., durability, comfort over an eight hour period) plus the large variance in the quality available in the market, make consumer reliance on brand, price, and store quality signals plausible.

The notion that consumers use price, brand, and store primarily as signals of quality is appealing to the economist because it is a rational response to risk aversion in consumption activities. Thus one can believe that higher prices could lead to higher demand, at least over some price ranges, without resorting to bandwagon, snob, and Veblen effects, i.e., to irrationality or to interdependent utility functions.

There is also a more objective reason for emphasizing brand, price and outlet as quality signals rather than as manifestations of the impulse to conspicuous consumption: most shoes are not conspicuous consumption items. Unlike Levi's, automobiles, Lacoste shirts, etc., the brand of one's shoes is imperceptible to others, so that the only opportunity for conspicuous consumption lies in chance encounters with one's friends and associates at the local haberdashery. Some shoe manufacturers are attempting to gain a toehold on the conspicuous consumption market by developing visible brand devices: Bass puts its name on an external brass or cloth tag, French Shiner shoes are adorned with a small French horn ornament in brass, Etienne Aigner shoes sport a distinctive brass horseshoe, and some Pierre Cardin shoes display the designer's initials. Of course people intensely interested in fashion can also distinguish brands by appearance, but for the average person brands are indistinguishable. Florsheim's traditional styles make its shoes particularly difficult to distinguish from



those of its closest competitors; recall the New Orleans department store manager's indifference to which wing-tip was stocked (p. 28).

The interactions among price, brand, and store are worth pointing out before a detailed examination of price alone as a quality signal. These signals are generally believed to be complements rather than substitutes, which has two implications for our analysis. First, manufacturers and retailers will try to present consistent signals; e.g., Florsheim refuses to sell to discounters because the discount outlet itself, and the price at which the discounter sells, would undermine the quality image built up by years of high prices and high advertising budgets. What makes Levi's an exceptional case is that the brand signal now completely dominates other signals, and thus can be substituted for store services and high retail prices. Second, the hypothesis that RPM maintains margins in order to provide store services and the hypothesis that RPM maintains prices in order to signal quality are not conflicting explanations of Florsheim's behavior. Each would be sufficient to inspire an RPM policy, but Florsheim may well have had both motives in mind simultaneously.

Many experimental studies have been made of the ability of price to signal quality, where price was the only quality signal available to the test subject. Fewer tests have been made of the effect of price in experiments where brand and store information were also available, and the results of these studies are less conclusive. Gardner found that brand was a much stronger signal of quality than price when both were present in a study involving men's shirts, men's suits, and toothpaste.<sup>51</sup> Yet Andrews and Valenzi found in a study involving shoes and sweaters that "...the lower the price, the greater the influence of brand names, but in combined quality judgments price was clearly the dominant cue."<sup>52</sup> This suggests that the subjects distrusted low prices, but that this distrust could be overcome by reliance on brand. One survey concludes that

Determining the specific effect price has on buyers' perceptions of quality is complicated by the multitude of research designs and products tested. But throughout the findings surveyed here emerges the suggestion that brand name is important and possibly dominates price for relatively inexpensive grocery products and beverages. For clothing there is an apparent increasing concern with price, although price may not always dominate the influence of brand name.<sup>53</sup>

Unfortunately many of these studies did not explicitly introduce tests for interaction effects between store, price, and brand, which may obscure the significance of one signal in a multi-signalling environment. One study which did test for interactions found that store and price interacted very strongly, even though store alone was not a significant signal of quality. Enis and Stafford's study of perceptions of carpet quality used both price and store name as signals of quality. Store prestige alone did not affect quality perceptions, while price alone did. But there were strong interaction effects, significant at the 99.9% level, indicating that high price and high store prestige together increased quality perceptions more than either one alone, even though store prestige alone had no discernible effect on quality rating.<sup>54</sup> This study, which indicates both strong interaction effects and the difficulty of determining the true effectiveness of individual signals, gives us some insight into the problems of marketing a product which competes on quality as well as price. The marketer of such a product will want all of the signals to indicate high quality, both because of possible interaction effects and for fear of missing an important signal.

The marketer may also want to avoid inconsistent signals for fear of confusing customers. Enis and Stafford found that the higher the status of a store, the more suspicious subjects were of the quality of a low priced carpet from that store.

Another interesting result was the inverse relationship of store prestige level or image and product quality perception for the low priced carpet...The present finding indicates that a prestige store's image might be endangered if it also carries a cross section of low-priced merchandise. In other words, retailers having attained a certain prestige image in the community may not be able to maintain a strategy of "being all things to all people."<sup>55</sup>

Notice how similar this sounds to Filene's observation that customers of widely different income class will not shop in the same store. Price-quality signalling is a less class-oriented explanation of the phenomenon that shoppers interested in high quality will cease shopping in a store that sells low-priced, presumably low-quality items. Now that incomes are generally far above subsistence, shoppers interested in high quality for a particular item are not necessarily high income customers, since tastes differ and most everyone can afford high quality for at least a small fraction of his "consumption bundle."

The literature on quality signalling, and on the interactions among signals, may explain a puzzling phenomenon of discount stores. Many discount stores carry the most expensive and prestigious brands of appliances, cameras, stereos, typewriters, etc., but no discount store carries a full line of high-quality apparel. There are a few discount stores in which famous brands of apparel appear: e.g., Filene's Basement, Loehman's, and the "Hit or Miss" chain. All of these stores have the characteristic suggested by the name "Hit or Miss": they do not carry a complete size assortment or a broad selection of styles for each brand. They are a continual clearance sale, and probably have little impact on the overall price structure of the famous brands they sell. Filene's description fits the modern chains as well as the famous basement store he founded in 1909:

An ordinary store demands the correct assortment of sizes and pays the price. The Filene basement takes what sizes there are and gets bargains. It does not have regular stocks; it has bargain merchandise and just whatever it may happen to have. A customer may get an article today and not be able to duplicate it at the price, or at any price, in the basement tomorrow.<sup>56</sup>

What makes appliances and some other non-apparel items suitable for continual sales through discount houses? Three features appear to explain the phenomenon. First, quality ratings for appliances are available through general readership magazines such as Consumer Reports, and through special interest magazines such as Modern Photography. Second, post-sale service is provided by factory-authorized repairmen, and the warranty is with the manufacturer rather than the retailer. The only warranty provided in most apparel merchandising is the willingness of the retailer to accept returns. Many department stores, for example, will allow the return of any item, with no questions asked. Third, the inventory turnover ratio should be higher because cameras and televisions come in fewer sizes than shoes. Thus the discount dealer can carry a full line of Sony televisions or Pentax cameras while earning an adequate return on inventory investment. These characteristics make consumers more willing to buy these products at discount stores and may make discounters more willing to stock high-quality brands of these products, than is the case for shoes and other apparel.

While this explanation of the failure of discount stores to carry famous brand apparel seems plausible to me, there are two alternative explanations which are also plausible. First, it could be that virtually all manufacturers of high-quality brands of shoes (and other apparel?) refuse to sell to discounters, believing that discount prices would destroy their quality image. Second, it could be that everyone is simply mistaken about the willingness of consumers to buy quality apparel in discount stores. There are successful discount stores

selling brand name women's shoes on a small scale (e.g., "Feet First Boutique" of New Orleans). More significantly, F. W. Woolworth is testing the latter hypothesis by opening eight units of a new kind of discount chain (called J. Brannam, not Woolworth's!).

This latest retailing operation...sells famous name brands of family clothing, footwear, and household linens at substantially reduced prices, with particular emphasis on designer label ladies and men's apparel. Customer acceptance has been gratifying and 19 additional units are scheduled for 1980 openings in the Kansas City, Houston, Tulsa and Des Moines areas.

The performance of these stores could provide an important indication of the potential welfare improvements from bringing the type of distribution case mentioned in the Steiner memo.

#### B. Florsheim's Pricing Strategy

Florsheim's pricing strategy is so common that marketing texts have a name for it: "perceived value pricing." In perceived value pricing

...a company develops a product for a particular target market with a particular market position in mind with respect to price, quality, and service...Then the company suggests the needed plant capacity, investment, and unit costs. Management then figures out whether the product would yield a satisfactory profit at the chosen price and cost. If the answer is yes, the company goes ahead with product development. Otherwise, the company drops the idea.<sup>58</sup>

This is also how Filene suggested deciding whether or not to stock an item: first determine the price and quality combination demanded by the market, then determine if the product can be bought at a price yielding an appropriate

return.\* 59

In any case, testimony and exhibits in the case material indicate that Florsheim first determined the price at which a shoe would sell, and then designed the shoe to meet that price while providing a normal margin. This was an iterative process, with adjustments being made in quality until target margin was achieved (Tauer transcript, pp. 20 ff). Also, the wholesale/retail price lists circulated by Florsheim do not show a constant markup over wholesale, even when RPM was being enforced. Both pieces of evidence indicate Florsheim practiced perceived value pricing.

Finally, as mentioned in the preliminary report, Florsheim influenced maximum as well as minimum prices by having company stores. Both the FTC's interviews (Wilston transcript, p. 21) and my own interview with a local independent Florsheim dealer indicate that independent dealers feel it is difficult to charge much more than the Florsheim store. Incidentally, my informant also noted that since the decree he does visit the Florsheim store to determine its prices, but that this is sufficient bother for him and other dealers that the variance of prices has indeed increased. His margins are now higher than under Florsheim's RPM, since he now uses the standard 50% markup on all shoes.

The point of this brief but crucial section is that Florsheim tried to fix the price at which each Florsheim shoe would be sold during the regular,

---

\* I mention Filene only to show that this description of how price-cost margins are determined has been around as long as the earliest studies purporting to show that price is determined by a constant markup over cost. Firms actually have much more control over costs than over market price, so that information about price-cost margins tells one absolutely nothing about the validity of the administered price hypothesis. Companies are not compelled to produce products for which returns are inadequate, and risk averse firms in competitive or even vigorously rivalrous markets are likely to invest any potential above-normal margin in increased product quality to reduce uncertainty in sales.

non-clearance sale period, not just the minimum price.\* Of course, since no price survey was taken before the consent decree, we have no way of knowing how effective Florsheim was at eliminating price variance. For example, the mere existence of company stores is not itself sufficient to set maximum prices, since above list prices were frequently observed in the post-decree price survey. Company stores probably reduce the extent of pricing above list, but evidently cannot eliminate such premium pricing. Empirical evidence that Florsheim was correct to believe that price was an important part of its marketing mix, and that lower prices do not always mean higher demand, is surveyed next.

### C. Plausibility of Florsheim's Strategy

Florsheim's initial markup strategy and RPM seem to be contradictory. Florsheim claims an average initial markup of 47%, lower than the industry average, and argues to dealers that this policy will increase sales as consumers perceive Florsheim's to be a relative bargain. Why then should Florsheim prevent discounts from the initial markup, which would enhance its reputation as a bargain?

The answer is that while sales would increase in the short run, they would fall in the long run. As Scitovsky pointed out in 1944, we usually attribute two prices to an article we see in the store: its normal price, an "indicator of worth" and its actual, observed price.<sup>60</sup> Immediately following abolition of RPM, actual prices would fall and consumers, comparing the observed with the normal price, would take advantage of the resulting bargains. In the long run, as discounting continued, the normal price of Florsheim's would drift below the normal price of brands now considered its equal in quality. This signal of relatively lower quality (presumably combined with reduction of store quality signal services as dealers dropped Florsheim) would switch consumers to other brands, reducing sales in the long run. Thus Posner's test for the social efficiency of prohibiting RPM—do sales rise or fall—is valid for both the free-rider and the quality signalling arguments for RPM.

---

\* There were few exceptions for exceptional local circumstances. Some stores in seasonal resort areas were allowed to set prices higher than list.

If service free-riding or price-quality signalling motivates RPM, then sales should first rise and then fall (the time period before sales fall must be related to purchase frequency). The only element of horizontal collusion is that dealers sometimes informed Florsheim salesmen of below-list sales. There is no evidence on what fraction of RPM violations were detected in this way. But dealer cooperation in enforcing RPM is not evidence that dealers imposed RPM, and there is no evidence of manufacturer collusion in the testimony or literature. If RPM is a result of a dealer cartel, of subgoal optimization by the Florsheim retail division, or simply a mistake, then sales should rise permanently, assuming that other forms of tacit collusion do not replace RPM.

The only way to prove which hypothesis is correct is to abolish RPM, and probably to compel sales to discounters. Since that experiment is not yet complete, we can only review the relevant evidence from smaller scale experiments.

As mentioned above, numerous experimental studies have shown a strong correlation between test subjects' perceptions of product quality and price when price is the only signal of quality. This effect disappears or diminishes when price is combined with other signals.

A significant finding of several studies is that the price-quality relationship is non-linear.<sup>61</sup> For example, in one study using beer, the low and medium price beer were perceived to have the same quality; only the higher price beer showed significantly higher quality ratings.<sup>62</sup> This non-linearity seems to be general.

Another strain of the literature on price-quality relationships relies on intensive surveys in which consumers are asked to name the highest and lowest price which they would purchase the product, or to make a buy/don't buy response when confronted with a series of prices for the product. The most famous and to date ambitious of these projects was a study by two English economists, Thorburn and Granger, in the early sixties.<sup>63</sup> Their a priori hypothesis was that price does signal quality and that because consumers do have a concept of normal price, price can be too low or too high to induce purchase (they

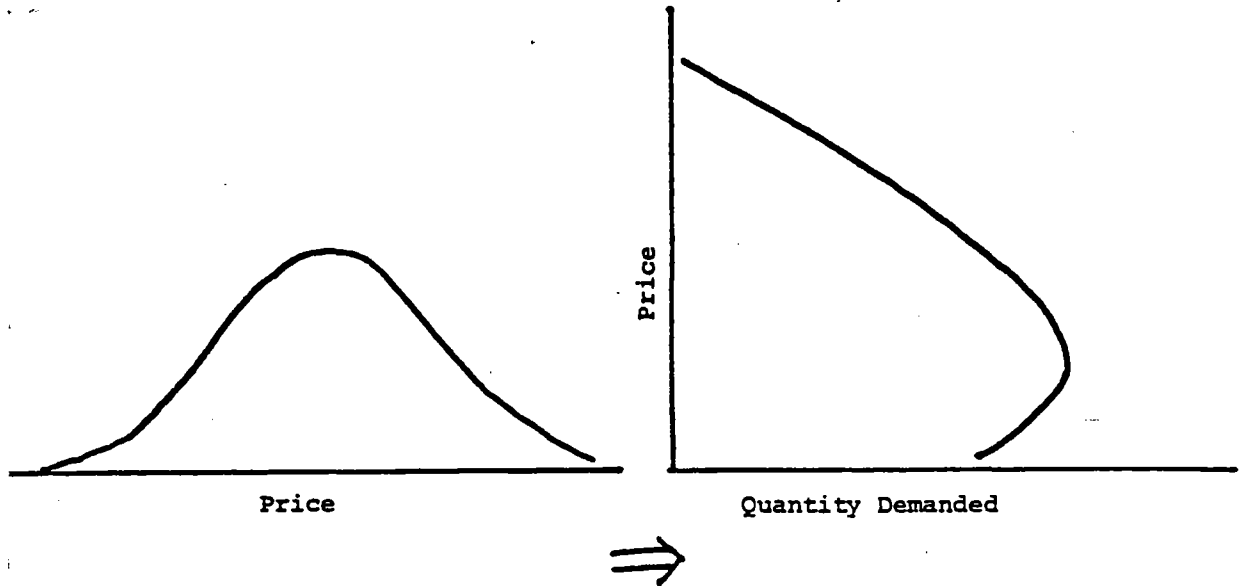


controlled for income effects!). A paragraph of their article is worth quoting at length, since it supports the analysis of this author's preliminary report.

Before we embarked on this survey, some of our colleagues expressed the opinion that especially in view of the present popularity of bargain offers few, if any, consumers would have a lower boundary to their range of price acceptance. We were reluctant to subscribe to this view since we believed that if, say, pork pies weighing a pound were offered for three pence each, this would repel most prospective purchasers even if the pies themselves looked perfectly acceptable. We felt that similar considerations applied to a wide range of other commodities, such as textile products, simply because their quality cannot be ascertained by sight and, owing to constant changes in technology and fashion, past experience is of little use in this respect. The reputation of the manufacturer, the brand and the shop do, of course, matter, but it would be difficult to deny that a reputation for high quality and high price generally go together. And the reputation which most of the retail outlets (and, presumably, all manufacturers) endeavor to build up is precisely that of giving "good value," i.e., providing quality which is at least roughly proportional to their prices. Needless to say, "quality" does not necessarily mean physical properties only; the assurance that the current selection represents the latest fashion is also something for which the consumer may well be prepared to pay.<sup>64</sup>

As anticipated, Gabor and Granger did find that "the typical short-run market demand curve for competitive branded products has a substantial backward sloping portion."<sup>65</sup> This is inferred from the consumer survey evidence on a typical "buy response curve," essentially a plot of the number of people responding with a buy decision at each price for a particular product. Figure 3 is a typical buy response curve. Shape did not vary by income group, but mean did (cf. Filene's analysis!).

FIGURE 3



Gabor and Granger's results have been replicated in a few other surveys, and in experimental settings, and the results of these studies have been incorporated into leading texts on marketing and consumer behavior.<sup>66</sup> Together these facts suggest that manufacturers do have, or at least believe they have, a plausible reason for preventing large price reductions. RPM may be a mistake, but it is not a paradox, for it prevents price reductions large enough to cause the consumer to question the quality of the product. Consumers have some notion, based on previous experience, of what shoes of a certain quality "should" cost; i.e., are most likely to cost. Prices much below that level must be explained, and in the absence of other information the explanation most likely to occur to consumers is that quality has been reduced. As Arthur Leff points out in Swindling and Selling, it is precisely the average person's deep suspicion of "bargains" that makes both swindling and selling difficult.<sup>67</sup> Of course the

price-cutter could present other indicators of quality: evidence of technological breakthroughs (digital watches and calculators are examples), quality certification by government agencies or other third parties, or performance guarantees. But the static nature of shoe production technology, the inability of such groups as Consumers Union to set standards for apparel, and the diffuse nature of shoe "performance," make such offsetting quality signals difficult to offer.

Difficult does not mean impossible. Several clothing manufacturers provide durability guarantees; e.g., Weather Tamer guarantees a year's normal wear for its children's outerwear, Monsanto's "Wear-Dating" program is a guarantee by the fiber manufacturer that the garment will last for one year. Finally, trade associations frequently provide third-party certification of the type of material in a garment; e.g., the woolmark, cottonmark, and Harris Tweed labelling programs. These trademarks are "To Certify Cloth Only" as the Harris Tweed label puts it.

Perhaps shoe manufacturers could offer these additional indicators of quality, making price and store quality less important. Certainly abolition of RPM and the associated non-discount outlet strategy would lead shoe manufacturers to devise new quality signals. However, the appearance of new quality signals in such circumstances does not justify the inference that the supplanted signals were either unnecessary or inferior.

#### IV. Summary and Evaluation of Explanations for RPM

##### A. Alternative Hypotheses and Evidence from the Industry Study

Almost all discussions of RPM and other vertical restraints assume that their purpose is to keep retail prices higher than they would be in the absence of restrictions. The desirability of vertical restraints then depends on whether

not higher retail prices (reduced intra-brand price competition) induce the provision of additional services or other promotional efforts, resulting in more interbrand competition.

The above industry study has shown that this conventional analytical framework is helpful but not entirely adequate for examining Florsheim's distributional restraints. Certainly Florsheim's distribution tactics were intended to reduce intrabrand price competition, thus encouraging provision of adequate promotional efforts. But Florsheim also claimed (and the FTC price survey supports the claim) that it practiced RPM to prevent retailers from raising prices above suggested list, as well as to prevent discounting.

Florsheim's approach to RPM, i.e., its attempt to fix a specific price rather than just a minimum price, strongly suggests that Florsheim regarded retail price as a marketing variable of direct interest. That is, Florsheim wanted to control retail price partly because of its direct impact on demand, not merely to adjust retail margins to ensure adequate promotion.

This should not be surprising. All consumer goods manufacturers have an interest in the price and other conditions of retail sales, for retail sales are the ultimate determinant of profitability. But this concern is not always easily translated into control. Relatively few manufacturers can exercise complete control over distribution through forward integration to the retail level. Integration, either by ownership or franchise, requires a precise match between economies of scale in retailing and manufacturing. Furthermore, the integrated firm must suffer no severe control or capital cost disadvantages. Florsheim could not achieve control over retailing by forward integration, for the capital requirements are too great; or by franchising, for the economies of scale in footwear retailing penalize single brand outlets in Florsheim's market segment.

Much of the literature on RPM overlooks this obvious point that retail price is more than a means to the end of achieving a particular adequate provision of retailing services. Keeping this fundamental point in mind, let us summarize once again the four basic hypotheses, this time evaluating each explanation of Florsheim's RPM with the evidence generated by the industry study.

The four basic hypotheses, previously discussed in detail in Section II.C, "Manufacturer-Retailer Interaction: Alternative Hypotheses on RPM," are summarized in the following table. This table shows the effect on price, sales, welfare and profits predicted by each hypothesis following abolition of Florsheim's vertical restraints.

PREDICTED EFFECTS OF ABOLISHING  
FLORSHEIM'S VERTICAL RESTRAINTS

<u>Hypothesis</u>	<u>Effect on Price</u>	<u>Effect on Sales</u>	<u>Effect on Consumers</u>	<u>Effect on Florsheim</u>
Prevent service or image free-riding	Price falls	Sales fall .	Welfare falls	Profits fall
Use price as quality signal	Price variance increases *	Sales fall	Welfare falls	Profits fall
Protect company stores	Price falls	Total sales rise, company sales fall	Welfare rises	Total profits rise, retail profits fall
Restraints are a mistake	Price falls	Sales rise	Welfare rises	Profits rise

Perhaps the most interesting conclusion to be drawn from this table is that Florsheim is not engaged in the zero-sum game with consumers. In all cases,

\* Mean price constant.

consumer welfare and total corporate profits move in the same direction following abolition of RPM. What's good for Florsheim is good for consumers, though what's good for Florsheim as a whole may not be good for its retail division. This is not to say that Florsheim's present policies are correct in a sense of maximizing either profits or welfare. Abolition of vertical restraints will increase both profits and welfare if either the mistake hypothesis or the retail division protection hypothesis are correct.

The industry study itself produced no evidence on the likelihood that Florsheim's vertical restraints are intended to protect its own stores. Florsheim's testimony that it is reluctant to build stores itself, the apparently sub-MES size of most Florsheim stores, and the probable advertising effects of company stores, all lead to the conclusion that Florsheim may regard its stores as a necessary advertising investment. Therefore, even solid evidence that retail division profits below the cost of capital would not justify the inference that Florsheim was attempting to protect its company stores with vertical restraints on the more efficient independents. Only a survey of Florsheim-owned stores' market share during the consent decree period can test this hypothesis.

This industry study did generate indirect evidence that the mistake hypothesis cannot be dismissed. Some retailers are experimenting with brand-name discount outlets for other types of apparel, and if this experiment is successful it could spread to shoe retailing. Unfortunately these experiments are too new to give a good indication of their success.

The evidence from the industry study on the free-riding hypothesis suggests that the conventional, service free-riding hypothesis can be rejected, but that the new, image free-riding hypothesis should be accepted. The case against the traditional, Telser, service free-riding hypothesis is that there seem to be no

services subject to free-riding. The most important services, inventory and ambience (including room to try on shoes!) are apparently immune to free-riding. However, the image created by high quality stores could be subject to free-riding. The best evidence for this, aside from the Florsheim testimony, is the marketing literature, which indicates that the store itself is a strong signal of quality, and interacts with other quality signals.

Unfortunately there is no experiment which could distinguish the two free-riding hypotheses; the effect of abolishing vertical restraints should be the same when the new equilibrium is reached. One would expect that the position of high-price, high-quality stores would deteriorate faster in the image free-riding case than in the service free-riding case, since some customers will want to use the services (e.g. fitting) in the store which provides them. This should be the case if the consumer's time has any value at all. However, distinguishing such subtleties is undoubtedly beyond our powers of observation.

Finally, the industry study suggests strongly that price is also a signal of quality. While there is no evidence directly related to shoes, numerous consumer surveys and experiments have confirmed the common sense notion that price can serve as a signal of quality. This is not to say that price is the only, the strongest, or even an indispensable signal of quality. But retail price does seem to be a parameter that the manufacturer would like to control. The evidence on the indivisibilities in retailing furthermore suggest that setting wholesale price is not adequate to control retail price, because of variance in retailers' margins. This conclusion from the industry study was dramatically confirmed by the preliminary FTC price survey, taken shortly after the consent decree. The results of that survey are analyzed next.

B. Analysis of the Price Survey

In March 1980, the FTC conducted a survey of the prices charged by Florsheim and independent retailers for four shoes in ten cities.<sup>68</sup> The shoe models covered by the survey were the "Nevada" (Florsheim's most popular model at the time), the "Imperial" wingtip, the "Stewart," and the Stuart Imperial Slip-on #93137 (hereafter 93137). The cities covered were Atlanta, Boston, Chicago, Cleveland, Dallas, Denver, Los Angeles, New York, San Francisco, and Seattle; the survey being conducted by FTC Regional Offices in these cities. The essential results of the survey are displayed in the price distributions for each shoe (see Figures 4-7), and the table below.

SUMMARY OF PRICE SURVEY

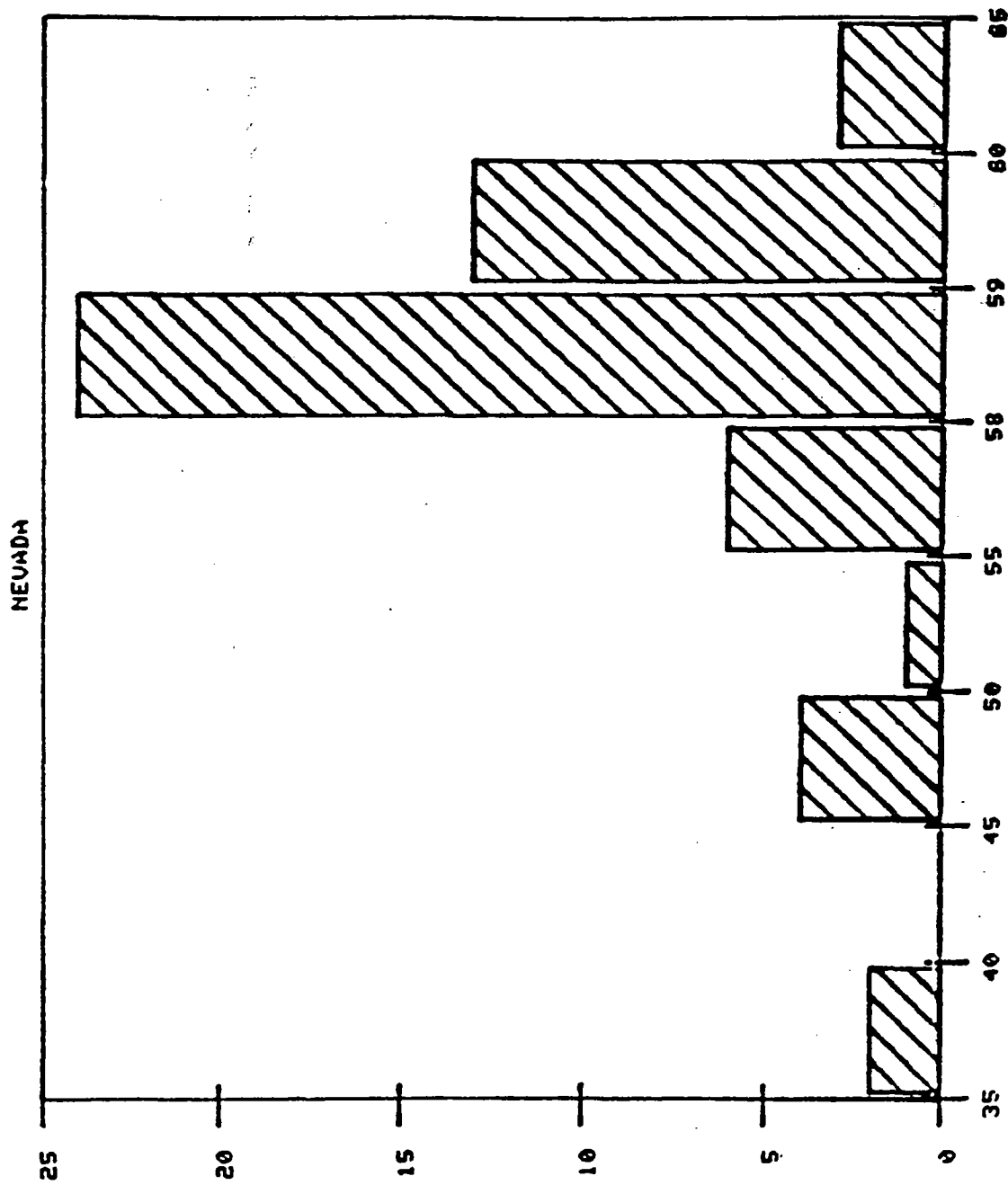
<u>Shoe</u>	<u>List Price</u>	<u>Sample Size</u>	<u>Mean price (% below list)</u>	<u>Standard deviation (% of mean)</u>
Imperial	80.95	48	79.13(-2.2%)*	8.4%
Stewart	69.95	38	69.39(-.8%)	7.3%
93137	62.95	30	62.83(-.2%)	3.5%
Nevada	58.95	51	57.73(-2.1%)*	7.4%

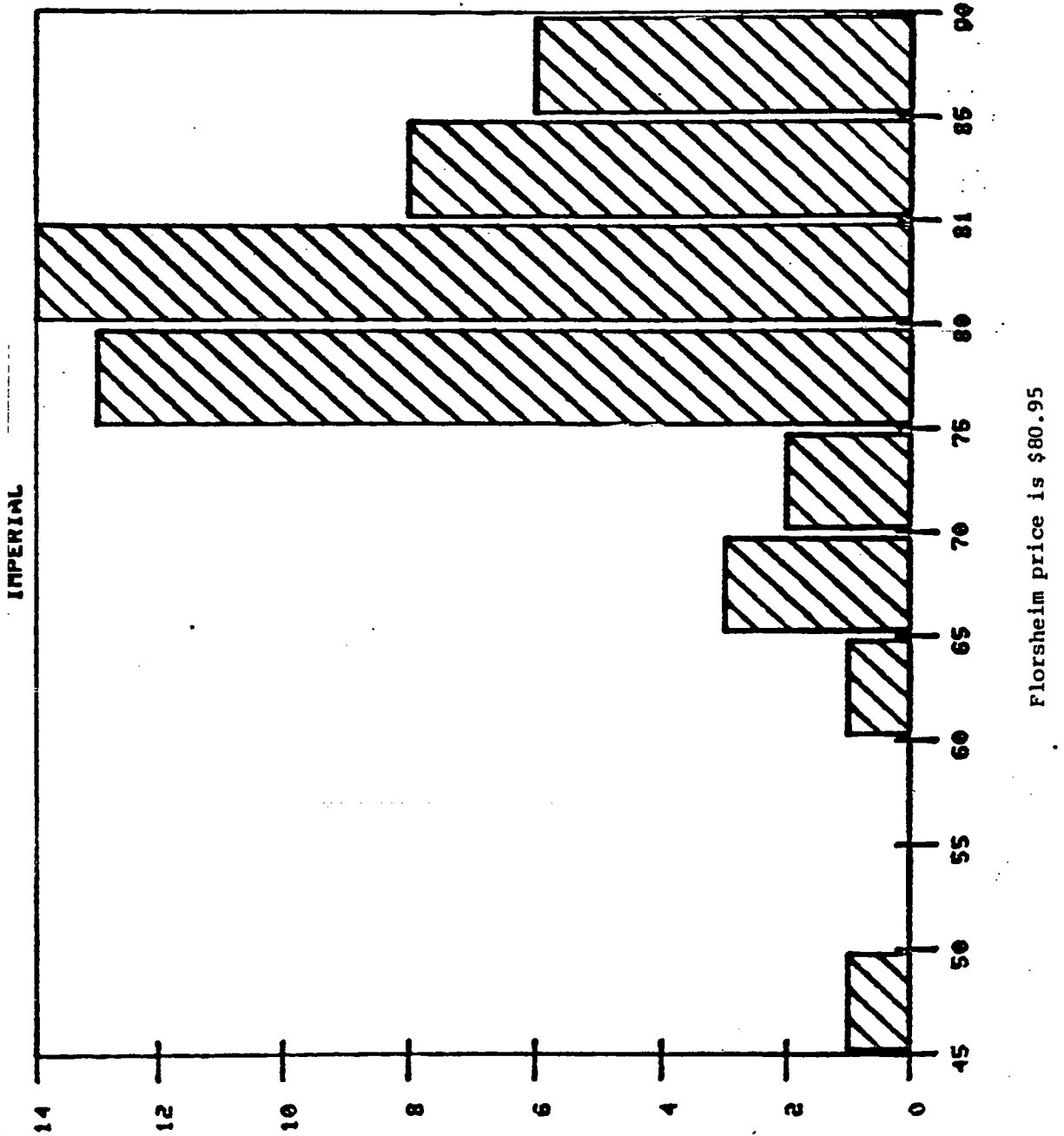
Significant at the 5% level.

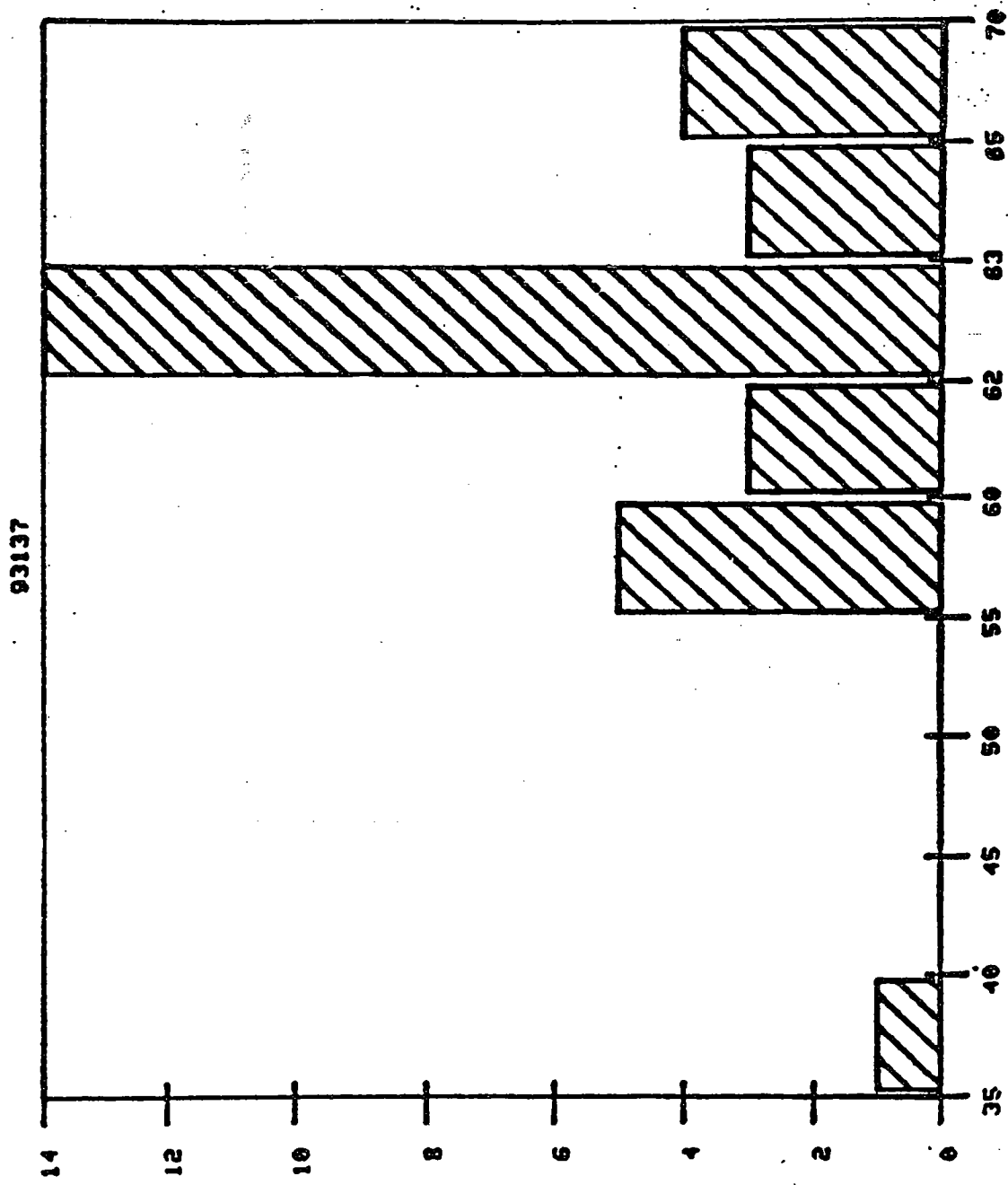
The survey results are quite striking, both in what they reveal and in what they don't reveal. The most surprising and immediately apparent result is the large dispersion of prices; the standard deviation of price is typically about 7%\*. Several conclusions follow immediately. One is that models of RPM

\* The sample of stores within each city is too small to make a formal comparison of variance between cities and between stores within a city. Therefore we cannot say precisely what the standard deviation of price is within a typical city. This problem should be corrected in the next price survey.

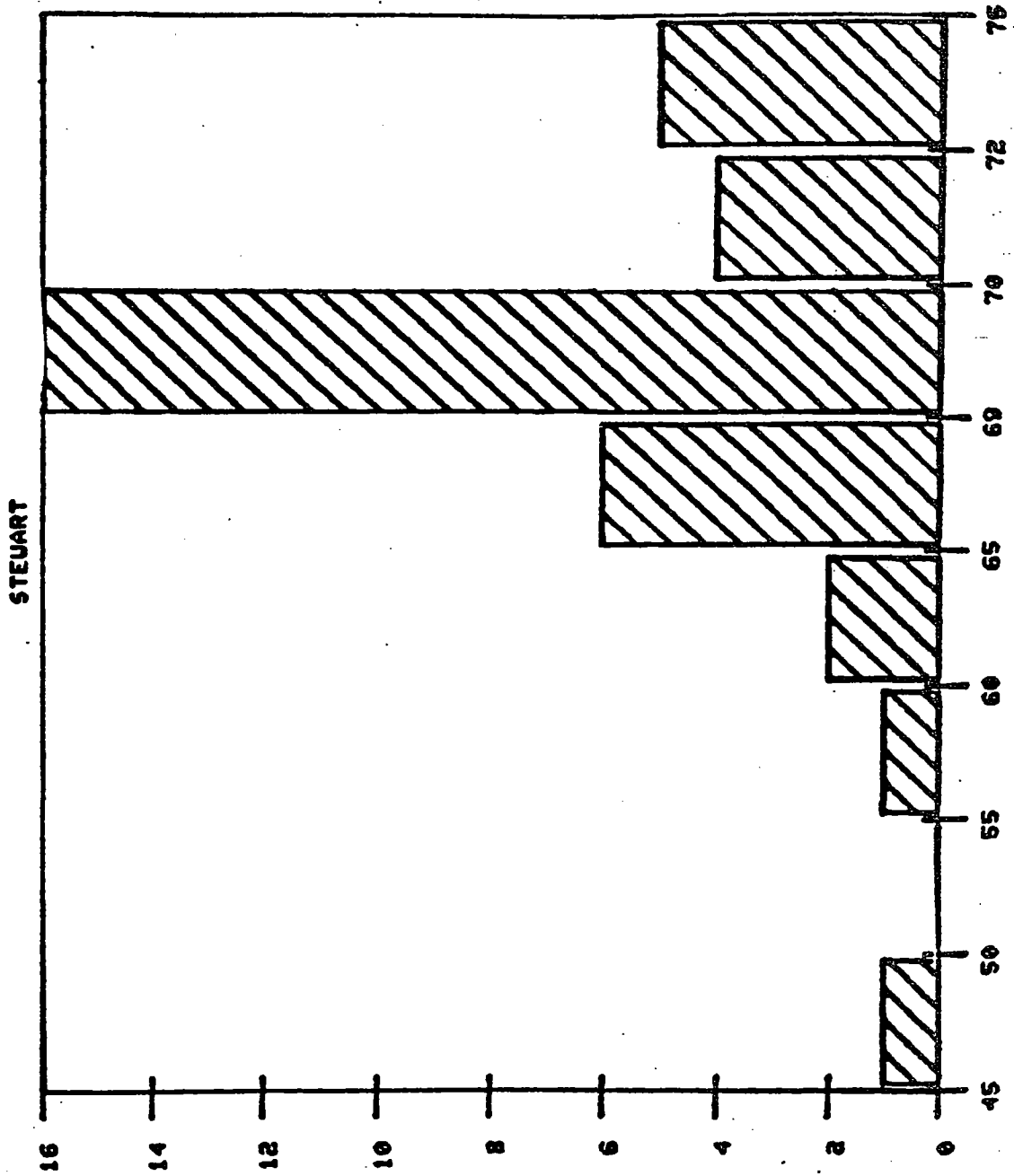








Florsheim price is \$62.95



which assume that retailers all charge the same price in the same market, even in equilibrium, are irrelevant empirically. Counter-intuitive as it may seem, search costs are high enough that different prices for physically identical items can persist within a single city; indeed, within the downtown shopping area.\* One can be quite certain of this conclusion, because the price dispersion discovered by the FTC is typical of such surveys. Thus the dispersion is probably not a disequilibrium phenomenon applying only to the immediate post-consent decree period. A recent survey of this phenomenon of "persistent price distribution" found that the standard deviation ranged from 3.27% to 41.38% of the mean of retail price for 34 items ranging from dandelion tea to black and white TV's.<sup>69</sup>

A second immediate conclusion is that RPM is in fact a price-setting mechanism, not an asymmetrical minimum price-setting mechanism. Almost as many dealers priced above list as below list during the survey period. Unfortunately, we don't know what the variance was before the consent decree, so that we cannot assume the observed variances are an increase from a prior zero variance. For the Imperial, of 48 dealers surveyed, only 14 priced at list price, with 20 cutting prices below list and 14 increasing prices above list. For the popular Nevada model, only 22 of 51 independent dealers priced at list, with 12 cutting prices and 17 raising prices. Ten dealers simply added a dollar to the Florsheim price of \$58.95. For the Stewart, 15 priced at list, 11 cut prices, and 12 raised prices. Finally, for the 93137 model the distribution was 8 above list, 8 below list, and 14 at list. Note that on the most popular model (the Nevada) more stores raised prices than lowered prices.

Before commenting on the significance of these deviations from list price for consumer welfare, let me simply note that this price survey should put an end to suggestions that manufacturers who wish to achieve a certain retail price

\* I personally observed a \$5 difference in the price of a Florsheim Imperial wingtip in Seattle, in stores 2 blocks apart.

eed only set the appropriate wholesale price. Retail margins do vary, even in this competitive market, probably because of indivisibilities in retailing. Therefore the manufacturer who wants to control retail price must do so directly. Recall that manufacturers have an interest in setting retail price in order to present what they regard as the profit maximizing ratio of quality to price, a matter on which the manufacturer is likely to have a longer run view than any individual retailer.

The consumer welfare effects of the consent decree are impossible to judge from the price survey alone, because it contains no information about the sales at each outlet. Ideally, one would compare the sales-weighted mean of the post-decree price distribution with the list price. A mean lower than list indicates an increase in consumers' welfare. While the data do not allow computation of a sales-weighted mean, we can compare the unweighted mean with list price, and test for significant differences. Notice from the table that 91% of the differences are small, ranging from .2% to 2.2%, and that only two differences are significant.\*

Of course one would expect the independent stores to lower prices more over time. And the mean of the independent store price distribution was never above list price, which supports the conventional free-rider hypothesis. Still, this first price survey suggests that Florsheim could have been as interested in reducing the variance of the price distribution as in increasing its mean. Finally, the initial survey indicates that potential increases in consumer welfare from this type of case could be small; i.e., on the order of .3%, unless such a small price cut increases sales significantly.

---

\* I compared the mean of the independent store price distribution with the list price using conventional tests of significance for differences between the means of two populations with the same variance. I used the standard deviation of the independent sample mean as the measure of variance.

### C. Preliminary Conclusions

Unfortunately we cannot conclusively accept or reject any of the four basic hypotheses explaining Florsheim's retailing practices and their effects on consumer welfare until data is collected on quantity as well as price (as described in the Task IV report). However, some progress has been made, for the price survey alone could have proven the price-signalling hypothesis false. If the mean price of every shoe in the survey were significantly below list, the variance were small, and no stores priced above list, then the price-signalling hypothesis could have been rejected. As it is, all four hypotheses remain viable candidates. Just as governments are often formed by coalitions of parties, none of which has a majority, so the "true" explanation of Florsheim's conduct may prove to be comprised of parts of all four hypotheses.

However, my own opinion is that the mistake hypothesis and company-store protection hypothesis will be rejected if the FTC surveys both prices and quantities in sufficient detail to determine the effect of the consent decree on each. Both the store-image free-riding explanation and the quality signalling explanation are analytically plausible, and supported by the evidence available from an industry study.

If the mistake hypothesis is correct, then virtually every major apparel retailer and manufacturer in the country is following an inappropriate marketing strategy. This is not impossible, but it is unlikely. There have been major changes in distribution methods before; e.g., the emergence of the department store and mail order house. But these innovations followed closely upon the equally dramatic changes in manufacturing and communication technology which made them possible, and my research did not reveal any recent dramatic changes in the technology of retailing, in the demand for retailing services, or in the technology of shoe manufacturing.<sup>70</sup>

While we must remain agnostic about the correct explanation for RPM, we can draw lessons for antitrust policy from the analysis thus far. An important finding of this study is that all of the plausible explanations for Florsheim's vertical restraints are intended to maximize long-run sales. Thus Florsheim's producer welfare and consumer welfare are positively correlated. Florsheim may indeed be mistaken in its beliefs that avoiding discounters is necessary to preserving its brand image and that in-store promotional efforts are essential to sales maximization. But such a mistake in judgment presents a very different policy problem than the typical price-fixing or merger case, where the interests of the business firm and the consumer are clearly opposed.

That Florsheim's business judgment on these matters is being questioned by the antitrust authorities is a consequence of the mismatch between economies of scale in shoe manufacturing and retailing. If Florsheim could employ franchising (a legally inoffensive form of exclusive dealing) or complete forward integration, its concern for retail price would not have been brought to the attention of the government.

This suggests that vertical price restrictions imposed by manufacturers can benefit both consumers and producers, unless there is evidence of a horizontal conspiracy at the manufacturer or retailer level in imposing the restrictions. The form of the chain of transactions leading from the manufacturer to the consumer should not dominate their substance in the eyes of the antitrust authorities.

If an industry is competitive, and the firm imposing restrictions lacks discernible market power, the restrictions probably increase rather than decrease interbrand competition and consumer welfare.

In summary, the evidence of the Florsheim case is that a rule of reason approach to vertical price restraints could yield economic benefits.



## APPENDIX 1

Our average customer, then, buys a \$10 hat for everyday wear. But there are times when she wants a hat a little better than ordinary, it may be to wear to an elaborate luncheon or simply because she feels more prosperous than usual. So she wants to pay more, perhaps \$15.<sup>1</sup> Conversely, she may want or be obliged to economize. Under these conditions she pays less, say, \$5.

The exact figures are important in operating our store; but in explaining the method, these arbitrary figures will serve to illustrate the point. Our average customer pays in the main, therefore, three different prices for hats accordingly as she wants something inexpensive, for everyday wear, or for best. She behaves similarly in respect to every class of goods, whether it is shoes at \$5, \$8, and \$12, or cloth coats at \$25, \$40, and \$60.

Our customers are not all of one income class, however. For our more prosperous customer a \$15 hat is for everyday wear, a \$10 hat inexpensive, a \$25 hat best. Our less prosperous customer considers a \$10 hat expensive, a \$5 hat for everyday wear, a \$3 hat cheap.

Let us tabulate this to visualize the demand:

	Inexpensive	Everyday	Best
Low-income customer.....	\$ 3	\$ 5	\$10
Average customer.....	5	10	15
Higher-income customer.....	10	15	25

It is obvious that almost all of our customers buy at \$10 at one time or another. While our average and low-income customers both at times buy at \$5, there is no demand at that price from our higher-income customers. Similarly, there is only a partial demand at \$15. While there is a demand at \$3 and \$25, the demand is limited.

Experience shows that \$5, \$10, and \$15, in this case, are the points at which our full lines would be carried. It shows also that at \$3 and \$25 the demand is insufficient to warrant a full line. The tendency of the customer will be to go for this type of merchandise to a cheaper or to a more exclusive store. We shall meet and profit by this tendency in our bargain basement and in our de luxe departments, which will be described in detail in subsequent chapters.<sup>1</sup>

The three prices, \$5, \$10, and \$15, are the three "full-line prices," and are known respectively as the "cheapest full-line price," "best-selling full-line price," "highest full-line price." The three full lines at those prices are the "cheapest-priced full line," "best-selling full line," and "highest-priced full line."

TABLE 1

## Distribution of Advertising by Medium, Total Industry

	<u>Regular and Casual Shoes</u>	<u>Sport Footwear</u>	<u>Protective and Work Shoes</u>	<u>Total</u>	<u>%</u>
Magazines	7,701.9	8,261.0	275.9	16,238.8	43.1%
Newspapers	--	--	--	2,233.2	5.9%
Newspaper Supplements	334.9	320.3	4.1	659.3	1.8%
Network TV	4,085.4	3,723.9	0	7,809.3	20.7%
Spot TV	8,942.1	1,137.7	486.9	10,566.7	28.1%
Network Radio	0	0	0	0	0
Outdoor	19.4	112.1	.4	131.9	.4%
<b>TOTAL</b>	<b>21,083.7</b>	<b>13,555.0</b>	<b>767.3</b>	<b>37,639.2</b>	

TABLE 2  
 Top 10 TV Advertisers  
 Regular and Casual Shoes, 1978

<u>Company</u>	<u>Total TV</u>	<u>Total Advertising</u>	<u>TV as % of Total Advertising</u>
Tom McAn Shoes (Men and Women)	5,429.8	5,580.4	97.8%
Sh Puppies Shoes (Family)	1,233.4	2,944.6	41.9%
Walter Brown Shoes (Children)	980.3	1,020.9	96.0%
Staturalizer Shoes (Women)	841.0	1,576.8	53.3%
Peeman's Shoes (Men)	778.6	778.6	100%
Wride Rite Shoes (Children)	688.5	751.6	91.6%
Whrooms Shoes (Family)	596.7	596.7	100%
Woll's Sandals (Family)	383.2	973.0	39.4%
Worsheim Shoes (Men and Women)	341.8	1,357.0	25.2%
Wnney's Shoes (Family)	272.6	272.6	100%

(figures are in thousands of dollars)

TABLE 3

## Florsheim Advertising, by Medium

	<u>Florsheim Men's</u>	<u>Florsheim Total</u>	
	\$(000)	\$(000)	%
Magazines	833.8	833.8	61.4%
Newspaper Supplements	58.7	58.7	4.3%
Newspapers	—	123.5	9.1%
Network TV	0	216.9	16.0%
Spot TV	0	124.1	9.1%
Network Radio	0	0	0
Outdoor	0	0	0
		<u>1,357.0</u>	<u>100.0%</u>

TABLE 4

## Advertising Strategies of Florsheim and Rivals

	<u>Florsheim</u> <sup>1</sup>	<u>Freeman</u> <sup>2</sup>	<u>Jarman</u> <sup>3</sup>	<u>Nunn-Bush</u> <sup>4</sup>	<u>Johnston &amp; Murphy</u> <sup>3</sup>
azines	833.8	0	82.2	48.6	228.3
spapers	123.5	0	16.2	0	0
spaper Supplements	58.7	0	0	0	0
work TV	216.9	718.0	0	0	0
t TV	124.1	60.6	0	0	0
work Radio	0	0	0	0	0
door	0	0	0	0	0
<hr/> pany A/S	<hr/> .25%	<hr/> .27%	<hr/> .08%	<hr/> .06%	<hr/> .08%
terco					
Shoe					
nesco					
yenberg Shoe					

TABLE 5

Apparent Consumption and Imports of Leather Footwear

	<u>Pairs in thousands</u>	<u>Value in \$millions</u>	<u>Imports as % of pairs</u>	<u>Imports as % of value</u>
1978	787,734	6,103.7	51.9	41.6
1977	745,710	5,125.0	48.3	35.7
1976	786,507	4,931.1	47.0	29.4

Source: Current Industrial Reports, Footwear 1978, Bureau of the Census, U.S. Department of Commerce, MA-31A(78)-1.

TABLE 6

**Production of Men's Dress and Casual Shoes  
by Price Line, 1976**

<u>Price line (\$)</u>	<u>Pairs</u>	<u>% of Production</u>
<6	6,527,000	10%
6.01 - 10.00	17,976,000	27%
10.01 - 14.00	22,976,000	33%
14.01 - 18.00	9,061,000	14%
>18.00	10,565,000	16%

**Total value: \$810,026,000**

**Total pairs: 66,149,000**

**Average wholesale price/pair: \$12.25**

TABLE 7

**Distribution of Manufacturers' Sales  
by class of customer,  
men's shoes (except athletic), 1978**

	<u>\$ thousands</u>	<u>% of total</u>
Company outlets	322,743	20.3
Independent retailers	500,558	31.5
All other retailers	458,109	28.8
Wholesalers	104,176	6.6
All others, including gov't and exports	57,555	3.6
Shipments not reported by customer class	146,848	9.2
<b>TOTAL</b>	<b>1,589,989</b>	<b>100.0</b>



TABLE 8

## Average Annual Sales/Outlet by Store Type

All retail trade establishments	\$536,686
All shoe stores	225,653
All women's shoe stores	258,875
All men's shoes stores	202,473
All children's shoe stores	157,615
All family shoe stores	223,956

TABLE 9

**Sales and Stores by Sales Size,  
Men's Shoe Stores, 1977**

<u>Annual Sales in \$000</u>	<u>% Sales</u>	<u>% Stores</u>	<u>Payroll as % of sales</u>
5,000	D	.1	D
2,000 - 5,000	D		
1,000 - 2,000	D	.4	D
500 - 1,000	12.4	4.0	13.6
300 - 500	22.7	12.6	14.0
100 - 300	53.4	62.6	14.6
50 - 100	5.8	15.8	17.7
30 - 50	.6	3.1	18.1
20 - 30	.1	.8	20.2
10 - 20	.0	.5	19.5
10	D	.1	D

D denotes not reported to avoid disclosure of confidential data

TABLE 10  
Sales, Firms, Outlets, and Payroll  
by Number of Units

<u>Number of Units</u>	<u>Number of Firms</u>	<u>% Firms</u>	<u>% Outlets</u>	<u>% Sales</u>	<u>Sales/ Outlet</u>	<u>Payroll/ Firm</u>
	871	88.1	26.3	21.6	165,002	15
	55	5.6	3.3	3.7	248,391	16.3
	21	2.1	1.9	3.0	318,190	16.8
	18	1.8	2.3	4.6	400,182	14.7
	7	.7	1.5	1.6	215,620	14.8
25	4	.4	1.7	2.3	278,927	13.6
50	4	.4	3.8	3.7	194,698	12.7
100	9	.9	59.1	59.1	201,181	13.9
	<hr/>				<hr/>	
	989				201,349 all	
					214,351 multiunits	

## NOTES

1. Steiner, Robert, "Implications of Levi Strauss, A New Emphasis," FTC memorandum, June 9, 1980, p. 1.
2. Kotler, Philip, Marketing Management: Analysis, Planning, and Control, 4th ed., (Prentice-Hall, Englewood Cliffs, NJ) 1980, p. 88-89.
3. Suggestion of Ron Lafferty.
4. Kotler, Marketing Management, p. 133.
5. Steiner, "Implications of Levi Strauss"
6. Porter, Michael, Interbrand Choice, Strategy, and Bilateral Market Power, (Harvard University Press, 1976), Ch. 2.
7. Steiner, "Implications of Levi Strauss," p. 1.
8. Hamilton transcript, p. 91.
9. James, Don L., Walker, Bruce J., Etzel, Michael J., Retailing Today: An Introduction, 1975, p. 286.  
Rachman, David, Retailing Strategy and Structure (Prentice-Hall, 1975), p. 205.
10. Hauthakker, H. S. and Taylor, L. D., Consumer Demand in the U.S.: Analyses and Projections, 2nd ed., (Harvard University Press, 1970), p. 67.
11. Kotler, Marketing Management, pp. 144-45.
12. Leibenstein, Harvey, Beyond Economic Man: A New Foundation for Microeconomics (Harvard University Press, 1976).
13. Filene, Edward, A Model Stock Plan, (McGraw-Hill, 1930), p. 131.
14. Kotler, Marketing Management, pp. 196-7.  
James, et al., Retailing Today, pp. 57-58.
15. op. cit.
16. Telephone conversation with Ms. Lois Hemphill of Consumer's Union, July 28, 1980.
17. Leading National Advertisers, Class/Brand YTD (Year to Date), January-December, 1978 edition, pp. 18-24..
18. All information on advertising comes from Class/Brand YTD, 1978 edition; Leading National Advertisers, Leading National Brands, 1979 edition; and Media Records, National Advertising Investments in Newspapers, 1978 edition. All data in the Table is for 1978. Sales data used

to calculate advertising/sales ratio is from Footwear News, July 9, 1979, pp. 20-21, "Dollars and Sense" (an annual survey of 48 publicly held footwear manufacturing and retailing companies).

- . Porter, Interbrand Choice.
- . Kotler, Marketing Management, pp. 198-99.
- . Current Industrial Reports, Footwear, 1978. MA-31A(78)-1, Bureau of the Census.
- . Standard and Poors, "Industrial Survey," April 1980, p. A109.
- . op. cit. See also Salmans, Sandra, "U.S. Shoe Industry vs. Imports," New York Times, June 27, 1981, p. 19.
- . Conversation with local retailer, July 26, 1980.
- . "Shoes and Slippers by Type of Construction and Price Line, 1976." MA-31A(76)-1, Table 6, Bureau of the Census.
- . MA-31A(78)-1, Table 4, Bureau of the Census.
- . MA-31A(78)-1, Table 5, Bureau of the Census.
- . 1977 Census of Retail Trade, Establishment and Firm Size, RC77-S-1. Table 8 from RC77-A-52, Table 3; Table 9 from Table 1, p. 1-19; Table 10 from Table 3, p. 1-71.
- . Calculated from Florsheim's 1980 10-K. Sales/outlet is 25% of Florsheim's footwear sales (their estimate) divided by the beginning of year number of company controlled outlets. These figures are surprisingly small, perhaps because the footwear sales reported by Interco consist of sales at wholesale plus the sales at retail prices made in company stores, with no disaggregation. Since markup is roughly 50%, the \$491,856,000 of footwear sales could represent retail sales of  $.25(491,856) + .75(1.5 \times 491,856) = 676,302,000$ . This would mean that average sales per outlet were about \$195,000 in 1977, essentially the industry average.
- . Filene, Model Stock Plan.
- . Ibid.
- . Ibid.
- . Ibid.
- . Caves, Richard, "Vertical Restraints as Integration by Contract: Evidence and Policy Implications," unpublished paper.
- . Cort, S.G., Diener, B.J., Dominguez, L.V., "An Empirical Analysis of Competitive Structure in Retailing: The Case of Men's Clothing," in Stampfl, R.W. and Hirschmann (eds.) Competitive Structure in Retail Markets: the Department Store Perspective (American Marketing Association, 1980). Hereafter cited as Department Store Perspective.

36. Op. cit.
37. Standard and Poors, Industry Survey, April 1979, p. R118.
38. Wingate, J., Schaller, E., Miller, F., Retail Merchandise Management (Prentice-Hall, 1972), p. 233.
39. Rachman, Retail Strategy and Structure, p. 134.
40. Op. cit.
- 40.1 Scherer, F. M., Industrial Market Structure and Economic Performance (Rand-McNally, 1980), p. 512
42. Rich, Stuart V., Shopping Behavior of Department Store Customers, (GSRA, Harvard University Division of Research, 1963), pp. 86-87.
43. James et al., Retailing Today, p. 258.
44. Wingate et al., Retail Merchandise Management, p. 139.
- 44.1 See Peters transcript, pp. 40-43.
45. James, et al., Retailing Today, p. 307.
- 45.1 King, C.W., Ring, L.J., Tigert, D.J., "Fashion Involvement and Shopping Behavior," p. 96 in Department Store Perspective.
46. Weigand, Robert E., "Fit Products and Channels to your Markets," Harvard Business Review, January-February, 1977, pp. 95-105.
47. Porter, M., "Please Note Location of Nearest Exit: Exit Barriers and Planning," California Management Review, Winter 1976, pp. 21-33.
48. Wall Street Journal, Southwest Edition, August 8, 1980, p. 9.
49. Lambert, Zarrel V., "Product Perception: An Important Variable in Price Strategy," Journal of Marketing, October, 1970, p. 71.
50. For a survey, see Engel, J.F., Kollat, D.T., Blackwell, R.D., Consumer Behavior (2nd ed.), 1973.
51. Gardner, David, "An Experimental Investigation of the Price-Quality Relationship," Journal of Retailing, Fall 1970, pp. 25-41.
52. Monroe, Kent B., "Buyers' Subjective Perceptions of Price," Journal of Marketing Research, February 1973, p. 73.
53. Op. cit.
54. Stafford, James E. and Enis, Ben, "The Price-Quality Relationship: An Extension," Journal of Marketing Research, November 1969, pp. 456-58.
55. Ibid., p. 457.

- 1. Filene, Model Stock Plan, p. 97.
- 1. Woolworth Annual Report, 1979, p. 8.
- 1. Kotler, Marketing Management, pp. 391-2.
- 1. Filene, Model Stock Plan, p. 29.
- 1. Scitovsky, Tibor, "Some Consequences of the Habit of Judging Quality by Price," Review of Economic Studies, 1944-45, pp. 100-105.
- 1. Monroe, "Buyers' Subjective Impressions of Price," pp. 73-74.
- 1. Op. cit.
- 1. Gabor, A., Granger, C.W.J., "Prices as an Indicator of Quality: Report on an Enquiry," Economica, February 1966, pp. 43-70.
- 1. Ibid., p. 50.
- 1. Ibid., p. 66.
- 1. Peterson, Robert, "The Price-Perceived Quality Relationship: Experimental Evidence," Journal of Marketing Research, November 1970, pp. 525-28.
- 1. Leff, Arthur, Swindling and Selling: The Spanish Prisoner and Other Bargains, The Free Press, 1976.
- 1. Danielson, Carole, Memorandum of March 7, 1980 to Chairman Pertschuk and letter of September 15, 1980 to Timothy Greening.
- 1. Carlson, John A. and Pescatrice, Donn R., "Persistent Price Distributions," Journal of Economics and Business, Fall 1980, pp. 21-27.
- 1. Chandler, Alfred, The Visible Hand, Harvard University Press, 1977, Ch. 7.

**Task IV Report: Data Collection Needs**

**Prepared by:**

**Dr. Timothy S. Greening  
as Task IV of Contract L0602**

**October 1, 1981**



**Task IV Report: Specification of Data Collection needs**

**Introduction: Goals and Possibilities for Empirical Work**

- I. Goals for Empirical Work
- II. Possibilities for Testing Hypotheses
- III. Types of Evidence

**Indirect Hypothesis Tests: Evaluating Behavioral Evidence**

- I. Advertising
- II. Company Stores
- III. Initial Margins
- IV. New Accounts and Discarded Accounts

**Direct Hypothesis Tests: Designing and Conducting the Market Survey**

- I. Time Period, Frequency, and Cost
- II. Number and Types of Stores
- III. Other Companies
- IV. Number and Types of Styles
- V. Benchmark Price Levels
- VI. Sources of Error
- VII. Physical Sales Data

## Task IV Report: Specification of Data Collection Needs

### Introduction: Goals and Possibilities for Empirical Work

#### I. Goals for Empirical Work

It is particularly relevant for the Florsheim case that the FTC's specification of Task 4 mentions two reasons for collecting data. First, the data specified by the investigator should suffice "to verify or reject likely alternative explanations for the practices involved in the case." Second, "this data should also enable the investigator to measure the impact of the FTC action on consumers, on competition, and on the particular industry."

These are correctly perceived as two separate tasks, because evidence bearing on the alternative hypotheses may exist independently of the FTC's action, and because it is possible that the FTC's consent decree had no impact on the market (and thus no impact on the industry or consumer welfare).

The available evidence independent of Florsheim's and the market's response to the FTC Consent Decree was included in the Task 3 Final Report. That evidence enabled the investigator to frame hypotheses explaining Florsheim's marketing practices, and to reach tentative conclusions about the relative likelihood of each hypothesis. Assuming that the restrictions imposed on Florsheim by the Consent Decree were effective, the FTC's action should have generated new evidence for testing these hypotheses. This report explains how to make the relevant observations and use them to test the hypotheses. But before undertaking these tasks, we must address the more fundamental question of whether or not it is possible to determine if the FTC's actions had any effect at all. That is, are there any conceivable observations we could make that would establish the FTC's impact? And can we actually make those conceptually appropriate measurements?

## II. Possibilities for Testing Hypotheses

The most serious limitation on the possibilities for determining the C's impact in this case is the FTC's failure to conduct any empirical work before the period of the consent decree. For example, the consent decree aims to prevent resale price maintenance (RPM), which should result in increased variance of prices. If the prohibited RPM practices were effective, pre-decree price variance would have been zero and any observed price variance during or after the consent decree would prove that the decree had some effect. But no price survey was made before the decree was imposed, so that we have no idea what the pre-decree variance of prices was in fact. We cannot assume that pre-decree price variance was zero, both because of conflicting testimony on the subject and because retail price surveys typically find considerable price variance. Therefore we cannot conclude that the FTC decree was effective simply because we now observe some variance in prices. However, increasing price variance over time would indicate that the decree was having some effect.

Another limitation on the possibilities both for determining the effect of the FTC's actions and establishing the correct explanation(s) for Florsheim's conditions is the failure to include other shoe companies in the FTC's initial investigation or the present study. This should not be construed as censure, because of the cost of including other companies. The major cost would be duplicating the collection and analysis of testimony and documentation that comprised the Florsheim case record. Additionally, including other companies in the present study would probably require for each company about half the resources devoted to the Florsheim study to perform tasks 1-4, and equal resources to carry out the empirical tests described in this Task 4 report.

Nonetheless, failure to make the Florsheim case into an industry-wide

Trade practices case means that no rigorous test of such hypotheses as horizontal collusion at the manufacturing level is possible. For example, my field interviews with retailers indicated no difference between Florsheim and other leading manufacturers with respect to enforcing suggested retail prices. At such evidence, based on a limited sample, is almost worthless. A price survey, taken before the consent decree and its attendant publicity, could have established whether or not Florsheim achieved lower retail price variance than its rivals. A finding that Florsheim was unique in achieving zero or insignificant price variance would have allowed one to reject the horizontal conspiracy or oligopolistic coordination hypotheses. A finding of uniformly low or zero price variance would not have proved the collusion hypotheses, since RPM may be optimal in a competitive market, but would have at least confirmed their relevance. But a price survey taken now, after the decree has been in force for two years, could not test the horizontal conspiracy hypotheses even if it included all of Florsheim's rivals. A finding of equal variance for each company could indicate either that Florsheim alone was forced to abandon RPM or that all companies have abandoned effective RPM after observing the FTC's successful case against Florsheim.

Of course, we can carry out hypothesis tests assuming that Florsheim's vertical restrictions were effective before the FTC's actions. But we must keep in mind that this assumption implies that we can only estimate the upper bound of the impact of the FTC's action, not the impact itself. For example, we can estimate the maximum possible increase in price variance resulting from the consent decree: it will be the observed price variance, assuming that pre-decree variance was zero. But the actual impact may be less, since the pre-decree variance may have been greater than zero.

Also, while we have no direct (market survey) evidence for the period

before the consent decree, we do have considerable information about Florsheim's marketing practices before the decree. Since some of the hypotheses imply changes in Florsheim's marketing after enforcement of the decree, those hypotheses can be tested with evidence that such changes have or have not occurred.

In short, while there are limitations, it is possible to define observations which would determine the FTC's impact on Florsheim and the men's shoe market. However, we cannot carry out all of the necessary observations, since some must be made before the consent decree is imposed. Therefore we cannot measure the impact of the FTC's action, although we can make some inferences about the direction of the impact. But in addition to the problem of conceiving tests to determine if the FTC had any impact, there are the problems of carrying out those tests and of determining precisely impacts and their welfare implications. First, is it possible to measure the evidence relevant to the hypotheses? Second, are the hypotheses empirically distinguishable? These problems are best addressed by first reviewing the specific alternative hypotheses and their empirical predictions.

The most important hypotheses explaining Florsheim's behavior are those explaining RPM. We can think of RPM as Florsheim's direct pricing strategy, with refusal to sell through discount outlets as its indirect pricing strategy. These strategies were intended to control both retail price and retail outlet type. The following table (reproduced from page 60 of the Task 3 Final Report) summarizes the principal alternative explanations for Florsheim's behavior and their predictions for the post-RPM market.

PREDICTED EFFECTS OF ABOLISHING  
FLORSHEIM'S VERTICAL RESTRAINTS

<u>Effect</u>	<u>Effect</u>	<u>Effect on</u>	<u>Effect on</u>
<u>on Price</u>	<u>on Sales</u>	<u>Consumers</u>	<u>Florsheim</u>
Price falls	Sales fall	Welfare falls	Profits fall
Price variance increased*	Sales fall	Welfare falls	Profits fall
Price falls	Total sales rise, company sales fall	Welfare rises	Total profits rise, retail profits fall
Price falls	Sales rise	Welfare rises	Profits rise

mean Price Constant.

The empirical measurement problem is the most serious and arises from the unfortunate tendency of the real world to ignore the economist's ceteris paribus assumptions. Since prices and quantities are constantly changing, it is by no means obvious how one is to determine if sales have risen or fallen, compared with what they would be under continued RPM.

The measurement problem is not serious for price; retail price in company stores provides a suitable benchmark since this is the price Florsheim would impose through RPM (assuming that RPM kept mean price at list and variance zero before the decree). Thus we can determine from the mean of the non-company price distribution if price has fallen or risen.

The problem is serious with quantity. Since both the aggregate shoe market and Florsheim's share of the market are changing for reasons other than price (import restrictions, economic conditions, fashion), there is no reliable

---

with one qualification to be discussed below at page 17.

benchmark for the quantity which would have been sold had RPM continued. There is no good solution to this problem. The most that can be done is to collect data on Florsheim's market share, preferably measured in physical rather than dollar volume, and interpret an increase in share to mean "an increase in sales, ceteris paribus." The implicit assumptions in this procedure are the external market conditions (e.g., removal of import quotas) affect all manufacturers equally, and that Florsheim exactly maintains its relative competitive position on parameters not affected by the consent decree (e.g., Florsheim correctly anticipates fashion changes).

The only hypothesis not seriously affected by the problems of measuring quantity is the company-store protection hypothesis. Since external and non-decree parameters should affect company and non-company stores equally, changes in the share of Florsheim's sales going through company-owned stores should suffice to test this hypothesis. A fall in the Florsheim company store share unambiguously indicates that RPM protected the retailing branch of Florsheim to the detriment of the company as a whole.

Even assuming that price and quantity changes are measurable, it may be difficult or impossible to distinguish among the various hypotheses. For example, the first two hypotheses do not have mutually exclusive predictions, since the variance in prices could increase at the same time that the mean of the price distribution falls, and both predict a decline in sales. In fact, for two of the four shoe models in the preliminary survey the FTC observed both lower means and increased variance in price, while for two variance increased with mean price staying constant (assuming that RPM kept mean price at list and variance at zero before the decree). Thus for two models the quality signalling hypothesis is supported and the free-riding hypothesis rejected, but for the other two models (where mean fell) the two hypotheses receive equal support.

However, each is mutually exclusive with the third and fourth hypotheses,

ch each predict an increase in total sales. Furthermore, the store-protection and mistake hypotheses are distinguishable from one another, since the store protection hypotheses involves a change in the company store net share.

While it would be intellectually satisfying to distinguish the free-riding hypothesis from the price signalling hypothesis, that is not necessary welfare analysis since each hypothesis has the same implications for consumer welfare and company profits. In short, there is some problem with hypotheses not being empirically distinguishable, but that problem is not insurmountable from a policy maker's point of view.

This discussion of the possibilities for empirical work in the Florsheim case can be summarized by saying that meaningful empirical work is possible, that many of the possible conclusions from that work will have to be qualified because of the lack of evidence gathered before the consent decree was negotiated.

### III. Types of Evidence

Despite the problems noted above, a great deal of information on the competing models of Florsheim's price and distribution strategies exists. This description of the types of evidence available and the relevance of each to the hypotheses being tested should enable the FTC to estimate the costs and legal potential for gathering each type of information.

The first important distinction between types of information needed is that some information is public, and can be collected without Florsheim's cooperation, while other information can be obtained only from Florsheim. The second important distinction is that some evidence consists of market observations of price and quantity sold, while other evidence consists of information about



Florsheim's behavior. Market observations provide a direct test of the hypotheses listed in Table 1, since each hypothesis includes predictions for price and quantity changes following abolition of RPM. Behavioral observations provide an indirect test of both the hypotheses in Table 1 and the hypotheses about marketing practices other than RPM. In the following taxonomy, the direct market evidence is indicated by an asterisk, \*.

Publicly available information includes the following:

- \* Sales periods--obtained by monitoring a sample of stores.
- \* Florsheim Prices--obtained by sampling.
- \* Competitor Prices--obtained by sampling.

Advertising expenditures by media--available in published sources at nominal cost (about \$200/year).

Number of company outlets, by type--available from SEC Form 10-K's and annual reports at no cost.

Percentage of company sales at retail and wholesale--available on 10-K's and annual reports.

Information available only from Florsheim includes the following:

- \* Shoe sales in pairs, for Florsheim and selected customers and styles--obtained from salesmen's "pairage" reports on each customer twice yearly, at the end of each season (Hamilton tr. p. 44). Not obtained during FTC investigation. Costly for Florsheim to supply at customer level, and perhaps at company level.
- \* Wholesale and retail price lists--successfully subpoenaed during investigation. Low cost for Florsheim to supply.

Customer lists--obtained during investigation as computer printout. Low cost for Florsheim to supply.

Weekly lists of accounts added and dropped--not yet obtained by the FTC. Low cost for Florsheim to supply.

The purpose of collecting each type of information is straightforward.

The next section explains how to use the indirect information to test the various hypotheses, and the final section explains how to make the direct market observations. The significance of the market observations has already been explained, and is reviewed in Table 1.

## Direct Hypothesis Tests: Evaluating Behavioral Evidence

Information on Florsheim's advertising expenditures, company outlets, and sales through company outlets will enable us to determine if Florsheim is changing its distribution strategy in response to prohibitions on RPM, and if a prohibition on RPM is effective. Remember that Florsheim has two methods of maintaining high margins: direct policing via RPM, and simply refusing to sell to discounters. Even if RPM is prohibited, continued refusal to sell to discounters plus retailers' focal point price and sales policies may mean that the present pricing structure continues more or less intact, or changes only slightly. In this case, there would be no reason for Florsheim to alter its advertising strategy or to curtail the operation of its own stores.

### I. Advertising

If abolition of RPM does lead to extensive price cutting and thus lowers the average margin available on Florsheim's, we would anticipate an increase in advertising as Florsheim is compelled to shift from "push" to "pull" promotion. The pull from advertising must replace the push provided by retailers who were previously attracted to Florsheim by relatively high margins, or whose in-store inducements were financed by high margins.

### II. Company Stores

If Florsheim's owned outlets decline in number or market share (relative to independent Florsheim stores), then we can infer that one effect of RPM was to preserve the position of the Florsheim retail division, to the detriment of both consumers and Florsheim as a whole. Assuming that Florsheim-owned stores are relatively inefficient, profit maximization at the corporate level would

require closing at least some Florsheim owned stores if abolition of RPM inspired independent stores to lower prices below Florsheim's list prices, taking sales away from company stores. Of course this may take some time, both because of inertia in the independents' pricing and because of the difficulties most companies face in reducing the scale of unprofitable operations. Nonetheless, if we observe no significant change in the number of Florsheim-owned stores relative to total Florsheim outlets, or in the proportion of Florsheim's sales made through its own outlets, then we can reject the hypothesis that RPM was protecting the retail division.

This test should be made sometime after the consent decree period of 1979-1981, to allow time for the hypothesized withdrawal from retailing to be carried out. While it is difficult to be specific, at least three to five years should be allowed.

### III. Initial Margins

Another indication that not only were some prices falling but also that significant numbers of shoes were being sold at the lower prices would be reductions in the initial margins on Florsheim. Florsheim's price lists show the wholesale price of each style, and the price at which Florsheim sells each style in its own stores. A check of the margins for shoes included in the price survey would be an indication of the degree of pressure on Florsheim's own outlets, and thus of the quantitative significance of the price changes observed in the price survey. This evidence would not be conclusive, but the information is available at very low cost and thus is worth obtaining. Also, wholesale prices are essential for the price survey, as they enable one to determine actual retail margins.

#### IV. New Accounts and Discarded Accounts

Florsheim's weekly list of new accounts and discarded accounts would be very revealing, for it would enable us to determine two things about Florsheim's policy of not selling to discounters. First, the new account list would reveal whether or not the policy was still in force. A sample of new accounts would be visited to determine if discounters were included. Second, if Florsheim is still trying to avoid discounters, the discard list should indicate whether or not the recent decree had any effect on its efforts to avoid discounters. My own guess is that simply prohibiting discussion of pricing policies will have very little effect on Florsheim's ability to detect and refuse to deal with discounters. If that guess is correct, then the frequency of discarding should be unchanged. If Florsheim can no longer screen customers effectively, one would expect increased discards of customers who turned out to be discounters. Of course, I may be overestimating Florsheim's ability to find a legal pretext for dropping an account.

#### Direct Hypothesis Tests: Designing and Conducting the Market Survey

The market survey consists of two types of information: data on price obtained through FTC surveys, and data on quantity sold obtained from Florsheim. Together these sets of data should provide, within the limits described above, direct tests of the hypotheses summarized in Table 1. Most of this section is devoted to explaining the price survey, since the corresponding data on quantity can be obtained only from Florsheim.

The purpose of the price survey is to determine what effect (if any) the FTC had on retail prices of Florsheim. The FTC has already conducted a preliminary

rice survey. A priori we would expect such a survey to show increased variance of prices, and three of the four hypotheses in Table 1 also predict lower average prices than would exist in the absence of the consent decree. The preliminary FTC report shows some variance of prices, which presumably is an increase from zero variance under RPM. The preliminary survey also shows that average independent price was .2% to 2.2% lower than Florsheim company store prices, but that the difference was not significant for two of the four models surveyed.

Unfortunately we have no information about the variance of prices before the consent decree; i.e., we have no solid information about the effectiveness of Florsheim's RPM policies, or about the price cuts needed to trigger Florsheim's attention. As indicated in the Task 1 report (p. 4), Florsheim salesmen testified that they were not concerned about \$2-\$3 cuts, but about 10%, 20%, or greater cuts. Since \$3 is 4.4% of \$68.20, the mean list price of the shoe styles surveyed, it is clear that the mean is not the only parameter of the independents' price distribution that we need to examine in order to determine if the consent decree is having an impact. What follows is my proposal for an adequate survey, and my suggestions for interpreting the results.

In designing the survey, we must consider the time period to be covered, the categories of stores to be covered, the benchmark price level to be used for comparison, the styles to be included, the number of stores to be included, whether or not to include other companies, possible sources of bias in interpreting the results, and the potential for determining the significance of the observations.

#### I. Time period, frequency, and cost

The price survey should begin as soon as possible in order to capture changes in behavior over the period of the consent decree. The consent decree

prohibits price list circulation for three calendar years, 1979-1981, and thus six selling seasons. After the three year ban, Florsheim can circulate price lists but cannot enforce RPM in any other way. The Fall 1981 selling season is the earliest the survey could begin, and it should continue for two years after the expiration of the price list ban; i.e., to the Fall 1983 selling season. The reason for continuing the survey beyond the ban is to determine if any permanent increase in retailers' price competitiveness has been induced as a result of the ban.

The survey should be conducted in traditional non-sale periods; that is, the survey should not take place during the six weeks following January 1 or the six weeks following July 1. Florsheim never attempted RPM during those general clearance periods, so that the variance of prices was always relatively high and the average level of prices always low during those periods. My suggestion is to pick a fixed day of the week in the middle of each shopping season, e.g., the third Tuesday in October and May, and make the survey twice yearly. Thus the survey will have to be conducted five times if we begin in fall of 1981.

Each survey will cost approximately as much as the preliminary price survey already conducted by the FTC. Assuming that the preliminary price survey is a reasonable guide, the survey should take 2 person-days per city-- a total of 20 person-days, with an additional five days needed to tabulate the data.

## II. Number and Types of Stores

The sample size for this survey does not have to be enormous; remember that the rule of thumb for applying the Central Limit Theorem is that samples from practically any population approach the normal distribution as sample size approaches thirty. This rule of thumb should be kept in mind when determining

how many styles and categories of retail store are to be included.

Potentially interesting store categories are Florsheim company stores, department stores, and independent shoe stores. Within the independent category, there are probably important differences in efficiency between single outlet firms and local chains, so that each category should be sampled. If that is not possible, all of the independent shoe stores should be of roughly the same type: the same sales volume, and the same number of outlets. The ideal would be to survey three categories of outlet types: Florsheim company stores; small, single-establishment independents; and local independent chains. Thirty stores in each category should be adequate to ensure a valid test of our hypotheses, and would require very little expansion over the preliminary survey size: 28 Florsheim shops and 68 independent stores.

While the above survey scope would be ideal, it is certainly possible to do an adequate survey within a more limited scope. The distinction between local chains and independents is of secondary interest, especially for policy purposes. While it would be interesting to know which category of firm led any price-cutting which appeared after abolition of RPM, that information is not necessary for determining the welfare effects or testing the hypotheses. An adequate survey could be conducted simply by surveying every retail Florsheim outlet in the ten cities where the FTC has regional offices, as was attempted in the preliminary survey. Florsheim's customer lists should be checked before each survey to ensure that all outlets in each city are included.

### III. Other Companies

Although it would add considerably to costs, a similar price survey should be made for at least one shoe model of each major men's shoe brand. This would help establish the normal variance of a shoe price distribution,

and could determine whether or not Florsheim was now similar to other firms in its retail price variance. As explained above, we cannot tell from present price variance observations whether Florsheim or other companies' pricing policies have changed. If the FTC obtains a parallel sample of prices for other manufacturers, then conventional two-factor analysis of variance will reveal whether the variance of Florsheim prices is greater or less than for the entire sample.

#### IV. Number and Types of Styles

How many styles to include is mainly a matter of what will sound most convincing to the potential readers of the report. Most of the costs of the survey depend on the number of stores visited rather than the number of styles included, so that we should err on the side of too many rather than too few. Styles should be selected on the basis of enduring popularity for two reasons. First, we don't want the style to be discontinued before the price survey is finished. Second, the larger cumulative sales, the larger the potential welfare gains (or losses) from prohibiting RPM. Third, the more popular the style, the more likely it is to be carried by each store in the survey.

I would suggest selecting enough styles to have 3-4 survive the price survey period; perhaps 6-8 initially. These styles should all be Florsheim brand, not other Interco brands such as Weeds, Worthmore, Idlers by Florsheim, City Club, etc. We want to concentrate on styles which incorporate the Florsheim name, since those are the ones most likely to be attractive to discounters, who will want to "free ride" on the Florsheim brand image.

#### V. Benchmark Price Levels

The benchmarks for comparison should be the Florsheim company store price.



and the wholesale price. For each style, a significant difference between the independent price and the Florsheim price would indicate a departure from RPM. However, if the whole price structure begins to erode to competitive levels, the margin maintained at Florsheim stores will also drop. Therefore we could, after two years, observe no statistically significant difference between independent and Florsheim store prices, even though margins in both outlets had fallen dramatically as a result of the consent decree. Thus we need to compare observed retail prices with wholesale prices to determine if margins fall over the survey period.

#### VI. Sources of Error

Actually conducting the survey should be a fairly mechanical procedure which could be accomplished with a minimum effort by the FTC regional offices. Certainly the number of cities covered in the preliminary survey is adequate. The only difficulty I foresee with doing these surveys out of regional offices is that the competitiveness of the shoe market may vary from city to city. For example, New York City has much better prices for cameras, calculators and electronics in general than New Orleans or Seattle, and a similar phenomenon in shoes would introduce another source of variance into the results. Fortunately, conventional analysis of variance can detect significant intercity differences in price.

The only judgment the price surveyors will have to make, and one which may require the cooperation of the retailer or revisiting the store, is to avoid including prices of single styles which are being discontinued only by that store. This type of sale, on a particular shoe, must be distinguished from a regular "clearance" sale which applies to the store's entire stock, or to more than one shoe. Any one store may be discontinuing a single style, even though Florsheim will continue to produce and other retailers will continue to sell that shoe.

us our decision to include only perennial styles will not preclude this problem.

Such sales are a problem because they are not large enough to affect the price structure. When the inventory of a shoe to be discontinued is depleted or nearly depleted of standard sizes, the remainder are drastically reduced to clear space and working capital for its replacement. Leftovers from the clearance sale are not kept around, but are sold to jobbers. Thus the volume and the time period are too limited to significantly affect the market. We would be in serious danger of overestimating the impact of the consent decree if we included such single model clearance sale prices in our data.

This does not mean that we should avoid all sale prices, of course. In fact, one reason for picking a fixed mid-season date is to see if sale periods are well spread throughout the year. But we must determine the reason for any sale, and ignore (or at least note) those which are connected with clearance of a particular style. Sales are much more significant if they represent a permanent price reduction than if they represent correction of an inventory error. There is a little corresponding danger of underestimating the decree's impact, for if a store's clearance sale does affect the local market price for that style, that effect will be picked up by our survey of other stores in the same city. Thus the importance of conducting the survey on fixed dates, with a fixed sample of stores.

Finally, we must be prepared to cope with the possibility that the results of the price survey will differ for the various shoe models. For example, in the preliminary survey, the mean independent price was significantly lower than the Florsheim list price for two models, but insignificantly lower for two others. When the full survey is made, we should ensure that all surveyed stores carry all surveyed shoe models, which will enable us to perform the appropriate analysis

f variance test to determine if in fact pricing behavior varies across models.

If the answer to that question is yes, then we must be prepared to explain why. This may require data on sales, as one a priori hypothesis is that the more popular the shoe, the less likely is the mean independent price to be below Florsheim list.

Significant differences between shoe models may make it difficult to reach firm conclusions about the welfare effects of the Florsheim case, but may provide additional insight into the nature of vertical restrictions.

#### VII. Physical Sales Data

Florsheim is the only source of the physical sales data needed both to conduct a meaningful price survey and to test the hypotheses in Table 1. Florsheim does collect store-level sales data, pairage reports, and Florsheim records of shipments should provide sales by shoe model. This information could be costly for Florsheim to provide, depending on the way Florsheim keeps its records. However, the information is essential and should be obtained if legally possible.

The first use of the quantity information is to construct sales-weighted prices for determining how much the mean price of independent stores differs from the Florsheim company store price. One failing of the preliminary price survey is that prices couldn't be weighted by sales, clearly a necessity both for determining welfare effects and the actual impact on the market.

The second use of the quantity information is to determine the relative market share of Florsheim owned and independent shoe stores for each shoe model, in order to test the company store protection hypothesis.

The third use of the quantity information is to determine if sales have changed in response to the apparent change in price brought about by the abolition of RPM. Here we encounter the ceteris paribus problems explained above. Lacking

rigorous model of Florsheim's equilibrium market share under RPM, the best that can be done is to compare changes in Florsheim volume over the survey period with an industry-wide index of physical volume for comparable shoes. This should be done for Florsheim as a whole, for individual shoe models in the survey, and for the aggregate volume of all shoes included in the price survey. The physical index most comparable to Florsheim's men's shoes is the series "Men's dress and casual shoes," product code 31345 15 in the "Current Industrial Reports: Footwear" prepared by the Bureau of the Census.

If Florsheim's sales grow faster than industry sales as measured by this index (or fall less in recessionary periods), we may interpret that as an increase in quantity sold, ceteris paribus. Similarly, a fall in Florsheim's physical market share would be interpreted as a decline in quantity sold, ceteris paribus. If the study proceeds that far, we would need to consult with the Census Bureau in order to determine how large a difference in growth rates would be significant. As explained above, this procedure assumes that Florsheim exactly maintains its relative competitiveness on all parameters not affected by the FTC consent decree.

C. Audio Components

William A. McEachern and  
Anthony A. Romeo

**VERTICAL RESTRAINTS IN THE AUDIO COMPONENTS INDUSTRY: AN  
ECONOMIC ANALYSIS OF FTC INTERVENTION**

by

**William A. McEachern\***

and

**Anthony A. Romeo\***

**\*Associate Professor of Economics, University of Connecticut. This work was supported under a contract from the Federal Trade Commission. However, the views expressed are the authors and do not necessarily reflect the views of the FTC. The authors thank, without implication, Robert Lande and Ronald Lafferty for their many helpful comments and suggestions. They also benefited from the comments of James Meehan, Don Clark, Dick Craswell, Alan Fisher, Judy Gelman, and Philip Nelson.**

Over the past few years there has been an intensified debate among economists and lawyers about the appropriateness and desirability of vertical restraints on competition. This debate seems to have been fueled in large part by the Sylvania case,<sup>1</sup> in which the Supreme Court abandoned the per se standards implied by the Schwinn decision, and adopted a rule of reason for evaluating non-price vertical restraints.<sup>2</sup> The debate has focused on the extent to which vertical restraints contribute to economic efficiency, for if they make a substantial contribution, the rationale for their per se prohibition loses considerable force.<sup>3</sup>

The arguments in defense of vertical restraints rest largely on the view that these restrictions enhance efficiency by reducing transactions costs between manufacturers and retailers.<sup>4</sup> A formal restrictive agreement may help to reconcile conflicting goals and to discourage exploitative or opportunistic behavior. Where such difficulties are significant, the gains from vertical restrictions could outweigh the losses from a reduction in competition. Of course, arguments against vertical restraints tend to emphasize the possible anticompetitive effects. From this point of view, vertical restraints are tools used to enhance market power or help extract monopolistic rents.

It should be noted in this context that in the Sylvania case the Court distinguished non-price restraints from price fixing restraints and

accepted the possible value of a per se restriction on the latter.<sup>5</sup> However, many authors have suggested that the benefits of vertical restraints logically extend to such vertical price fixing.<sup>6</sup> While this view is perhaps debatable, it is at the same time clear that vertical price fixing is simply one of an array of possible actions available in establishing the manufacturer-retailer relationship.<sup>7</sup>

In terms of public policy, a per se prohibition of resale price maintenance (RPM) rests on an assumption that potential anti-competitive effects of the practice are likely to outweigh any potential efficiency-enhancing benefits, and a rule of reason examination would produce an undue number of litigation errors.<sup>8</sup> Moreover, it is also assumed in those circumstances in which the efficiency-enhancing effects dominate, it may be possible to achieve essentially those same effects while not generating anti-competitive side effects through some so called "less-restrictive-alternative" business relationships.<sup>9</sup>

The potentially anti-competitive effects typically associated with RPM are possible restraints on both interbrand and intrabrand price competition, and the potential dampening effect of RPM on initiative and innovation in the distribution of the product (since more efficient retailers cannot capture a larger share of the market by lowering price). Potential efficiency-enhancing arguments for RPM include the reduction of transactions costs, typically associated with the free-rider problem, and facilitating the entry of new firms by allowing them to reward retailers willing to carry the new (and unfamiliar) brand.

The purpose of this article is to evaluate the arguments about vertical restraints by examining the experience of one industry, audio



ponents. This seems a particularly attractive industry to study for three reasons. First, the industry has a history of using vertical restraints. Notably, for a number of years, the major firms in the industry engaged in vertical price fixing through the imposition of RPM arrangements. Second, the industry is one where conditions seem particularly appropriate for the transactions costs argument. Indeed, the industry often has been cited as an illustration of the argument's conceptual validity.<sup>10</sup> Third, the industry offers a natural experiment to test the consequences of eliminating a vertical restraint. In the mid-1970's the Federal Trade Commission forced six major components manufacturers to sign consent decrees in which they agreed to cease engaging in RPM.

The discussion begins in Section I with the presentation of some background material on the industry and the FTC's actions. Section II then evaluates three alternative explanations of RPM's use in the industry. In Section III the three theories are compared while in Section IV some conclusions are drawn about the validity and value of the FTC's actions.

## The Audio Components Industry and the FTC

### The Industry

This industry possesses unique characteristics, an understanding of which seems critical to any evaluation. For definitional purposes the audio components industry can be viewed as a subset of the broader consumer electronics industry, which consists of two major groupings—television products and audio products—plus various electronic devices such

Important breakthrough in the industry was the development in 1957 of the twin-channelled, stereophonic record. By 1958, major record companies were producing stereo records and this generated demand for the new phonographic equipment required to play these records. Stereo records could still be played on the single channel phonograph, but to capture the effect of stereo, a new system was required.

Another important event in the development of high fidelity was the introduction of frequency modulation (FM) into commercial radio broadcasting after World War II. This method of broadcasting greatly extended the audio range, which meant that most musical tones could be transmitted with greater fidelity. FM transmissions also produced less static than AM. Moreover, in 1961, the system was perfected to transmit stereophonic signal over a single FM station.<sup>11</sup>

The simplest stereo high fidelity system consists of a record player, a receiver, and two speakers. A more sophisticated system might require individual purchases of a turntable, cartridge, stylus, radio tuner, tape deck, preamplifier, main amplifier, equalizer, dynamic range expander, speakers, and headphones. The record player--sometimes broken down separately into a turntable, a stylus, and a cartridge--transfers the recorded signal from the record to the amplifier. The signal is sometimes run through a preamplifier to magnify certain sounds before they go into the main or power amplifier. The pre- and main amplifiers are often combined into an integrated amplifier. Amplifiers serve several functions. Tuners are employed to capture radio signals and feed these signals into the amplifier. Tape decks--reel-to-reel, cartridge, or

as calculators, digital watches, and computer games. Video products encompass black-and-white and color television sets, video tape recorders, and home video cameras. Audio products include tape recorders, console stereos, compact stereos, audio components, and radios (including citizens-band). Although most manufacturers specialize in the production of particular products, some often produce in two or even three of the consumer electronics groupings. Because the technology and the electronic components are often interchangeable across product lines, there are often synergistic interactions which enhance joint production.

Audio components themselves, as the term implies, consist of the various components or parts which together form a system for producing transmitted or recorded sounds. These components include tuners, amplifiers, turntables, loudspeakers, tape player-recorders (including cartridge, cassette, and reel-to-reel), stereo headphones, plus assorted accessories. Compact, single-unit stereo systems are in a strict sense not audio components, but in fact the distinction between such units and compact multi-component systems is often blurred. For the purposes of this study we will view audio components as essentially synonymous with stereo equipment, although our analysis will concentrate on the sale of individual components.

The history of the industry as we know it today is a relatively short one. Its development is perhaps best understood when we recall an alternative name for the industry, one particularly popular in its early years, the high fidelity industry. The word fidelity means faithfulness to the original sound, and a prime objective of advances in the industry has been to convey recorded sounds more clearly. Perhaps the single most

cassette--carry recorded signals on magnetic tape and transfer these signals to the amplifier.<sup>12</sup>

In the early period of high fidelity, audio components were sold primarily to the serious hi-fi enthusiast, who spent much time evaluating specifications and assembling his own system. Far more popular with the average stereo consumer were compact systems and consoles. The basic compact system today contains a record changer, two speakers, and a furniture-styled enclosure, with usually an AM and stereo-FM radio plus a cassette tape deck or eight-track stereo cartridge player. Almost all consoles also include AM and stereo-FM radios plus built-in cartridge tape recorders and players.

Before the industry became dominated by the Japanese, the manufacturing of individual components, particularly speakers, was centered in New England, with such brands as KLH, AR, Bose, Advent, and H. H. Scott. These brands are still recognized today as quality high-end products. With the rise of audio components, a new group of consumers became much more serious purchasers of audio products--young adults. The age group between 18 and 24 appears to represent the major group of consumers of audio components.

It was not until the latter part of the 1960's that the Japanese began to get heavily involved in U.S. audio component sales.<sup>13</sup> Though there is no generally regarded source of industry data, one estimate of the value of phonograph and audio systems imports shows them growing from around \$100 million in 1965 to over \$500 million in 1970. And between 1970 and 1973, the value of imports approximately doubled to

over one billion dollars. These figures include consoles, compact systems, plus various audio components.<sup>14</sup>

In the audio components industry in 1974, the year the major FTC investigations began, the majority of all components were manufactured in the Far East, particularly Japan. Some U.S. firms imported parts for assembly; other U.S. firms, especially Japanese subsidiaries, imported the finished components for distribution. Components were distributed either directly to retail dealers or through regional representatives. Typically the suppliers divided the United States into 10 to 15 regions and appointed independent firms to promote the suppliers' products and to service retailers within a region. There were thousands of retail dealers.

#### The FTC's Intervention

In May of 1970, James B. Lansing Sound, Inc. (JBL), a manufacturer of loud speakers, signed a consent decree tendered by the Federal Trade Commission in which JBL agreed not to fix resale prices in those states without fair trade laws. The decree limited JBL's ability to establish performance standards for sellers of its loud speakers. It could not prevent dealers from freely reselling to other dealers. JBL was still allowed to continue to set prices in fair trade states.<sup>15</sup>

In early 1974, an audio dealer from Kansas charged in a letter to the FTC that several audio component suppliers had either refused to sell to him or had terminated him as a dealer because he discounted the prices of their products. Since Kansas was not a fair trade state, a preliminary investigation was undertaken by the FTC. On July 11, 1974,

the FTC authorized the use of compulsory process. The New York Regional Office requested and subpoenaed documents from the six firms initially investigated. The Office also interviewed retailers in several states and held hearings in the District of Columbia and Kansas City, neither of which was in a fair trade area.

In April of 1975, the New York Regional Office recommended that complaints be issued against Sherwood, Sansui, and TEAC, charging them with violation of Section 5 of the FTC Act prohibiting restraint of trade, in this case, through resale price maintenance and customer restrictions in the sale of high fidelity audio components. FTC investigators argued that efforts to reduce or eliminate intrabrand competition resulted in considerably higher prices to consumers. During the investigation of the audio component industry, dealers interviewed contended that, if allowed to discount, they could make profits at far lower markups than had been required by audio suppliers. The average enforced markup by Sherwood, Sansui, and TEAC was estimated by the investigators to be approximately 40%.<sup>16</sup>

The investigators also noted that although JBL had not violated its 1970 consent order, the industry-wide investigation concluded that there was a lack of intrabrand competition among what are considered "high-end" audio products--and JBL was no exception. Indeed, the investigators charged that complaints against JBL by dealers attempting to discount audio equipment were received as frequently as those against other companies not under order.<sup>17</sup> Hence, there was strong sentiment for making the consent order more binding to include not only free trade

states, but fair trade states as well, and to restrict the use of tools the audio firms employ to detect price cutting and transshipping, tools such as warrantly cards and shoppers.<sup>18</sup>

By July of 1975, the New York Regional Office had secured signed consent agreements from not only Sherwood, Sansui, and TEAC, but also Pioneer, the largest audio component supplier in the United States. The proposed consent orders were virtually identical and contained what one FTC official called "the strongest provisions of any orders heretofore issued by either the FTC or the Justice Department in a resale price maintenance case".<sup>19</sup> The complaints and orders were issued for the four companies by the Commission on October 24, 1975.<sup>20</sup> The complaints alleged that the firms had fixed the resale prices of their products and restricted the customers to whom dealers could resell. The complaints also alleged that these practices had reduced competition among dealers and hereby inflated the prices paid by consumers for the firms' high fidelity audio components. The order prohibited the four firms from (1) fixing the resale prices of their products, (2) fair trading their product for five years (in those states with fair-trade laws), (3) suggesting resale prices for two years, (4) withholding earned advertising allowances from, or refusing to sell to, price-cutting dealers, (5) limiting the class of customers to whom dealers could resell the products, (6) requiring dealers to report price-cutters; additionally, the order forced the firms to (7) reinstate certain dealers they had previously terminated, (8) maintain a file for three years of all records relating to their refusal to sell to dealers, (9) report annually during this three-year period to

the FTC's New York City Regional Office, listing the names and addresses of all dealers with whom the firms have refused to deal and the reasons, and (10) distribute the order to their sales personnel and advertising agencies, terminate the employment or the business relationship with willful violators, and take appropriate disciplinary and corrective action, including termination, for non-willful violators.<sup>21</sup>

The New York Regional Office continued its investigation of the audio industry and in the spring of 1976 recommended that complaints be issued against United Audio Products and Nikko Electric Corporations. The consent orders and complaints<sup>22</sup> were identical to those accepted by the FTC in 1975.

In April of 1978, Lansing Sound (JBL) petitioned the Commission to reopen proceedings on the consent order issued in 1970.<sup>23</sup> JBL lawyers argued that in the Sylvania case the Supreme Court overruled the holding in Schwinn that non-price vertical restraints were per se illegal, and held that such restrictions were governed by the rule of reason. Hence, the consent order should be reconsidered to remove the prohibitions against non-price vertical restraints, particularly in view of the competitive nature of the industry. JBL noted there were a total of 165 different brands of loudspeakers sold in the United States, and JBL's share of the product market was "no more than 7%".<sup>24</sup> They argued that competition was "extremely intense" and it was therefore contrary to public interest to burden them with prohibitions more restrictive than those confronted by JBL's competitors. The petition to reopen the case was denied.



In April of 1981 JBL again petitioned the Commission to modify the consent decree so that it would no longer prohibit JBL from establishing performance standards for sellers of its loudspeakers.<sup>25</sup> JBL claimed that under terms of the order it could not prevent its independent dealers from transshipping JBL components to discounters or resale. This time the Commission found

that JBL has a very small market share and that JBL would likely suffer significant competitive injury unless the order is modified.<sup>26</sup>

the order was modified so that JBL would not be prohibited

from establishing lawful, reasonable, and non-discriminatory minimum standards for its dealers, including standards that relate to promotion and store display, demonstration, inventory levels, service and repair, volume requirements and financial stability; nor shall this order prohibit respondent from requiring its dealers who sell JBL products for resale to make such sales only to dealers who maintain such minimum standards.<sup>27</sup>

Thus for the first time in the decade of intervention in this industry, the FTC accepted an efficiency-enhancing argument in support of vertical restraints. Of course vertical price restraints were still prohibited under the consent decree, but the Commission was much more receptive than it had been in 1978 to possible benefits of non-price vertical restraints.

In September of 1981, the Commission entered into a consent order to cease and desist with Onkyo U.S.A. Corporation,<sup>28</sup> a producer of stereo equipment. The order required Onkyo to refrain from resale price maintenance, but it did not prohibit Onkyo's ability to prohibit transshipping of its products.

In June of 1982 Pioneer petitioned the Commission to reopen proceedings on the 1975 consent order.<sup>29</sup> Citing Sylvania, JBL's relief, and the Onkyo consent order, Pioneer asked that the Order be modified

[s]o that any customer resale restrictions which respondent may wish to include in its agreements with dealers will be governed by the rule of reason, pursuant to Sylvania, and not prohibited per se, as is currently the case under the Order. This would bring the terms of the Order into line with current law as that law is applied to respondent's competitors, the vast majority of whom are not subject to similar restrictions.<sup>30</sup>

The FTC denied the petition, asking Pioneer to show cause.<sup>31</sup> Pioneer was permitted, however, to choose only dealers who would not resell to those dealers not complying with Pioneer's standards.<sup>32</sup> In effect Pioneer was given control over the distribution network to monitor and police transshipping of its components.

To summarize the FTC's actions in this industry, in the 1970's seven firms signed consent decrees agreeing not to fix the retail price of their components. Two of these firms could be viewed as specialists--JBL with speakers and United Audio with its Dual record changer. The other five sold a fuller line of components. The firms under consent decrees were some of the industry leaders at the time. Dual was the leading brand of record changer and Pioneer was the leader in receivers, amplifiers, and tuners. The consent decrees were signed not only by leading firms in the industry but by Nikko, a firm with only one-fourth the sales of the next largest respondent firm.

## II. Three Theories of Resale Price Maintenance in Audio Components

Any assessment of the effects of the consent decrees must rest on an understanding of the reasons for RPM's adoption in this industry. In this section we present three alternative theories and, based on the various structural features of the industry, evaluate their potential relevance. The first theory, a service argument, was initially discussed by Telser and is generally interpreted as an efficiency-enhancing rationale for RPM.<sup>33</sup> As noted earlier, a number of authors have assumed its applicability to this particular industry.<sup>34</sup> The second theory is a collusion theory. Such a theory would suggest that RPM's effects were clearly anticompetitive. The third theory is what we term a life-cycle theory and relates RPM's use to the historical development of the industry. This theory suggests some procompetitive effects from RPM.

### A. The "Service" Theory

Under the service theory, as first discussed by Telser, RPM is viewed as a tool employed by manufacturers to assure that certain special services are provided to customers by retailers.<sup>35</sup> This argument assumes a situation in which manufacturers for some reason feel that retailers can provide such services more effectively or efficiently than manufacturers and see RPM as the means to encourage the services' provision.

Retailers' advantage over manufacturers in providing special services would seem to exist for products that Porter calls nonconvenience goods.<sup>36</sup> These are goods purchased relatively infrequently, perhaps by a fairly small subset of the population possessing limited knowledge about the products' characteristics. Problems in timing and focusing national

advertising may make such promotional activity inferior to direct point of sale promotion or product explanation and demonstration by retailers. Since it would be difficult for retailers to charge customers directly for any informational or other special services provided, manufacturers try to assure the services' provision by using RPM. The role of RPM in this scenario is to prevent a "free-rider" problem. Customers may go to a retailer who provides special services to learn about a product. After acquiring the desired pre-sales information, however, a customer may go on to buy from a retailer who, because he does not provide special services, is able to sell the same product at a lower price. The potential for such customer activity may give retailers strong disincentives for providing special services unless protected from discounting retailers by RPM.

This service argument seems to have particular relevance to the audio components industry. Audio components embody technology that is unfamiliar to a large number of potential purchasers. The products tend to be purchased rather infrequently, at extended intervals of time, and, aside from the audiophiles, consumers have little incentive to devote extensive resources to developing real expertise in this area. As a result retailers take on an important role. They are able at the point of sale to explain and demonstrate personally the features of particular audio products. They may even be able to instill confidence in a consumer confused by a myriad of products and technical features. In short, retailers seem able to provide information and persuasion far superior to what can be accomplished at comparable costs via advertising by manufacturers.

A closer evaluation of this argument, however, suggests that its relevance may vary across classes of components and customers. Note, first, that only certain elements of service or promotion are subject to free-rider problems. Information or advice provided by retailers seem to fall into this category. On the other hand, other elements of service, such as guarantees, liberal return policies, or promises of trade-in privileges, may well be retailer specific. Since retailers can potentially capture the returns from providing such services, RPM would not be required to assure their provision. Nor will RPM necessarily preclude free-riding on these pre-sales services.<sup>37</sup>

Consider the two types of service that are potentially subject to a free-rider problem: pre-sales information provided by the salesperson and pre-sales product demonstration. Some pre-sales information is likely required in the sale of all component lines, although the complexity and perceived importance of this information will vary across component lines. Similarly, the feasibility of product demonstration differs among components. Demonstration appears most feasible for speakers, earphones, cartridges and tape recorders, which can be compared by the customer, albeit in an imperfect way, based on the fidelity of the sound. In contrast, most audio consumers would have real difficulty distinguishing based on fidelity among various brands of turntables, receivers, preamplifiers, amplifiers, and equalizers.<sup>38</sup>

Moreover, among those components that are most suitable for demonstration, the cost of providing that service differs across type. Speakers, tape recorders, and cartridges require that the components

be arranged for comparison as in a sound room, and extra space may be required. Earphones, on the other hand, are self contained and require no special arrangements. Those components requiring special demonstration arrangements impose greater costs on retailers. If this were reflected in price, the incentive to customers' free-riding would be strong.

Overall, it seems that free-riding is a potential problem in the sale of all audio components. However, the problem seems most acute when dealing with products capable of on site demonstration and, within that group, for products requiring special demonstration facilities. Thus, the service argument for RPM may be particularly relevant to this subset of products.

To go much further in assessing the service argument, however, we must consider not only the product lines but the customer base. Just as different component lines have varying special service requirements, different customers also will likely require different services depending on their own familiarity with the equipment. Notably the "first-time buyer" appears unique. This buyer confronts the myriad choices of putting together an audio component system. Because he is less likely than an experienced buyer to understand objective technical information, he may be more likely to be influenced by sales promotion at the retail level. Also, in order to reduce search costs such a buyer may be likely to buy an entire prepackaged system rather than shop around for individual components. If the first-time buyer is indeed more apt to buy a system, there is perhaps less incentive for this buyer to free-ride on the special services provided by the retailer. Consider the sequence of events if

free-riding is to occur. The first-time buyer acquires information, benefits from a demonstration with a full-service retailer, and is thereby able to choose among components for an audio system. This novice then resorts to a no-frills retailer or a mail-order house to make the actual purchase. This scenario appears unlikely for two reasons. First, the buyer will not likely find the preferred combination of audio components available through a specific discounter, particularly since systems often include a house brand.<sup>39</sup> Second, RPM will be less of a binding constraint for the retailer when the component is sold through system sales, in which discounts on individual components can be hidden in the price of a system. Hence it appears more difficult and less necessary for the first-time buyer to free-ride particularly if system sales are involved. The free-rider service argument appears unpersuasive when considering only first-time buyers.

This situation may be different for more experienced buyers. Typically buyers who already own a system are not looking for an entirely new system but rather are selectively upgrading by improving on the quality of particular components. These buyers are able to concentrate on a specific component, and may seek out extensive pre-sales service. Indeed, the true audiophile probably requires much more service than his less experienced fellow buyers. It is here that opportunities for free riding on information and especially on demonstration are more likely to arise.

Yet there are factors that could mitigate the extent of free riding among high-end purchasers. First, if retailers providing little in the

way of pre-sales or free-rider type services also provide less post-sales or retailer-specific services, then customers in upgrading their system may prefer the full-service retailer. Specifically, activities such as trade-in policy, return policy, retailer-specific warranty, component calibration, and repair are not subject to the free-rider problem. Second, often when an individual is upgrading a system, he wants to hear how a new component works in his own system. As a result retailers will sometimes allow the customer to take a component home and try it in his own system. This home demonstration requires no special service facilities by retailers. Although customers could still buy from another retailer, this situation is perhaps less likely to be conducive to free-riding. Finally since the audiophile is a frequent repeat buyer, buyer-dealer relationships have the opportunity to be developed. It may be that such relationship engender loyalty and reduce free-rider problems.

Overall, therefore, the service argument has limited applicability as a rationale for RPM. First-time buyers may be prone to rely on salespersons for pre-sales information and advice. Retailer promotion and puffery may be most effective on this group. Yet because systems sales are the predominant method of purchase, RPM's ability to ensure the provision of such service appears limited. At the audiophile end of the market, systems sales are much less common. Pre-sales information and advice will be sought, but it is likely to be more informative than persuasive, given the experience and expertise of the group of buyers. Such information is still susceptible to free-rider problems. Yet, as



we have noted, there are some factors that mitigate the tendency to free-ride at the high end.

B. The "Collusion" Theory

The "service" argument discussed above is based on an analysis of the motivations of a single manufacturer to impose RPM. Another view of RPM considers the motivations of a group of firms, acting collectively. Under this scenario RPM becomes the tool of a cartel attempting to ensure adherence to a collusive price. This cartel could be composed of either retailers or manufacturers.

To a colluding group of retailers, RPM's attractions seem clear. RPM sets a retail price. If this price generates monopoly profits for retailers, the retailers would be attracted to a mechanism that facilitates maintenance of the price. Of course, one must recognize that profits of this sort might tend to be dissipated by excessive non-price competition among retailers. Even under such conditions, however, retailers might support RPM because of the potential profits during the adjustment period after the initiation of RPM and the potential losses in any adjustment period after RPM's elimination.

Certainly, there are indications in this industry of some retailers' desire for RPM. For example, in the TEAC case file there is evidence cited of retailers' threatening to boycott the manufacturer's product if RPM was not enforced.<sup>40</sup> How widespread such interest was is unclear. A more important issue, however, is whether retailers as a group had the ability to collude on price and the power to draw or coerce manufacturers into assisting in the conspiracy.

Although some retail chains have had large market shares in certain areas, retailer market power nationally is widely dispersed. It seems highly unlikely that such a group could collude effectively on price.<sup>41</sup> This is not to say, however, that retailers are completely powerless. Many have advantages of reputation and location that new entrants could not duplicate without incurring additional costs. These "product differentiation" advantages do confer some power on retailers. Thus while such a group could not unilaterally impose its will on manufacturers, it could approach the bargaining process with much to offer.

Cartelized manufacturers may also see RPM as a means of discouraging price-cutting competition. With a fixed retail price for the product, any price cuts by manufacturers to retailers cannot reduce retail price directly and thus cannot increase sales via a price effect. (This presumes that the cartel is effective in preventing the use of special credit terms, systems sales, liberal trade-in policies, or other devices that allow the RPM price to be circumvented.) Of course, a price cut to a retailer could potentially cause the retailers to favor one brand over another. Exclusive dealing arrangements would prevent such favoritism so they might be expected to accompany RPM under this scenario.<sup>42</sup> For similar reasons, a cartel adopting RPM would also have to inhibit retailers' ability to shift "exclusive" allegiances as price concessions were offered.

Note that the involved set of arrangements described may also have the effect of inhibiting entry. Potential entrants at the manufacturing level would have a choice of establishing new retailers or bidding away

retailers committed to existing manufacturers. If entry were discouraged, any competitive effects of entry on price would not be forthcoming.

A cartel argument must naturally rest on an assumption that a cartel could be effectively formed and policed. This would seem in turn to depend among other things on the existence of a concentrated structure. Does such a structure exist in audio components? To determine this one must first recognize that there are a number of submarkets within the industry. These submarkets correspond essentially to specific components, e.g., speakers, turntables, receivers, etc. Although market-share data are sketchy, fragmentary evidence suggests that the degree of concentration of market power nationally varies considerably across components, with record changers apparently the most concentrated (having a four firm concentration ratio of more than 80 percent) and speakers the least (having a four firm concentration ratio of less than 30 percent).<sup>43</sup>

Interpretation of such figures is complicated by a number of factors. First, some manufacturers such as Pioneer operate in most of these submarkets, while others, such as Koss (a headphone producer) or BSR (a turntable manufacturer) focus on only one. Among the multi-component producers, who have had the largest shares of the overall audio market, there seems some possibility for mutual forbearance to discourage competition. Also, the important role of Japanese manufacturers suggests a possibility for coordination through the good offices of that government.

A further complication arises when one considers that even within a single component, the nature of the customer may vary with manufacturer.

Certain speaker manufacturers, e.g., McIntosh, clearly market to the audiophile while others, e.g., Panasonic and Pioneer, have a broader range of potential customers. Thus, concentration in an "audiophile" submarket may be a bit higher. Overall, while it appears that structural conditions in the industry are such that some limited collusion is a possibility, such collusion would be likely to be incomplete and difficult to maintain. As in the previous section we are left with a rather incomplete rationale for RPM. The next section attempts to remedy this problem.

### C. A Life-Cycle Theory

Although each of the above theories seems to offer some useful insights into the industry's behavior, neither is altogether satisfying as a comprehensive explanation for the practice of RPM in audio components. Given the complexity of the industry and the rapid changes it has undergone, it is perhaps not surprising that a single static theory could not explain what has happened. In this section we offer a dynamic theory, one based on observation of the life-cycle of the industry. This theory suggests why RPM was adopted and then gradually discarded. Later, in Section III below we will offer some comparisons of this theory's predictions with those of the two above-mentioned alternatives.

Following Caves, we take the view here that vertical restraints, including RPM, come about as a result of a bargain between manufacturers and retailers.<sup>44</sup> In this context, the particular form RPM has taken in this industry would be the result of the participants' objectives, their relative bargaining strengths, and the particular features of the market,

and would have to be interpreted in conjunction with other possible vertical restraints. Let's consider these matters and in particular let's view these in a dynamic context, observing changes in the bargain over the life-cycle of the audio component industry.

Both manufacturers and retailers have something to offer in an industry where the product is differentiated at the wholesale level (in terms of characteristics of the product itself) and at the retail level (in terms of the characteristics and conditions of sale). Under these circumstances a manufacturer might find RPM attractive, with this appeal varying according to the manufacturer's stage of development.

In its infancy, the audio component industry was dominated by U.S. manufacturers. The industry essentially grew out of the home electronics industry, in which televisions and phonographs had long been sold through independent retailers. Televisions notably had been subjected to RPM, and it was perhaps not surprising that stereo equipment was introduced on an RPM basis. Indeed, many early stereo sales were in combination television-stereo consoles and were subject to RPM.<sup>45</sup>

Coincident with the emergence of this new industry was the growing importance of foreign manufacturers, particularly from Japan. Consider the perspective of these foreign manufacturers. They were entering an industry where a certain market strategy and a specific manufacturer-retailer relationship had already evolved. They entered with products and with brand names unfamiliar to the mass of consumers. They were at some physical distance from the market, with no established distribution system. In addition, at the time the "made-in-Japan" stamp was in the eyes of the consumer perhaps more of a liability than an asset. Moreover,

RPM was consistent with a Japanese marketing strategy of offering dealers high profit margins to push the product rather than spending heavily on advertising.<sup>46</sup>

At this stage in the industry's life-cycle the foreign manufacturers had little choice but to use the established retail distribution system. The costs for each manufacturer's integration forward to establish its own retail network were apparently prohibitive. Similarly, national advertising to the mass market was an inefficient means of reaching the then-limited audio consumer market. What the established retail system had to offer was the service necessary to introduce and to "push" the unfamiliar product. Retailers also presumably had developed some good will and respectability in their market and could thereby cloak the foreign product in this mantle of respectability and, to some extent, certify product quality. To encourage these special services and to ensure shelf space, foreign manufacturers offered retailers RPM.<sup>47</sup> Indeed since this device was already used in the industry, foreign manufacturers may have been too risk-averse to fail to adopt it.

Thus RPM during the early days of the product life cycle was the quid pro quo, the bribe to secure shelf space and to encourage retailers to acquaint a relatively affluent subset of the consuming public with both an unfamiliar product and an unfamiliar brand. This suggests that there was both a service motive and an entry motive in manufacturers' adoption decisions. Given our arguments in the discussion of service above, the service motive was probably of significance primarily for high-end products, i.e., sophisticated products for the audiophile.

In the next phase of the industry's life cycle the power of the manufacturer had grown relative to that of retailers. The terms of the bargain change. Entry had been accomplished. The manufacturers' brand names had become more established, and the role of retailer re-sales service and promotion had become less important for low-end products since the growth potential of the customer pool had made it feasible to advertise nationally. Indeed, although service still seemed important for high-end products, a mass-marketing approach had become attractive for low-end products.

Although RPM became dispensable for the low-end products of established brands<sup>48</sup> and perhaps even an obstacle to the adoption of newer mass-marketing techniques, RPM's elimination may have been hampered by habit and persistence, or by retailers' pressure on manufacturers not to give it up. Since a number of manufacturers were in the same situation, any one might have felt reluctant to act alone, even though all would gain from its common elimination. Manufacturers may have been in a "prisoners' dilemma". A manufacturer may have feared that unilaterally ending RPM would lead to a deteriorating product image because of ensuing discounting. At the same time retailers may respond by actively discriminating against a product because of the dwindling gross profit margin. There was perhaps a quiet sigh of relief when the FTC, the courts, and Congress acted against RPM.

In summary the life-cycle view sees RPM as part of a bargain between participants whose relative bargaining strengths changed over time. In the first phase manufacturers' desire for service and entry led to the offer of RPM to retailers with localized market power. In the second phase manufacturers with established brand names operating in an expanded market had gained in strength and found RPM dispensable for a wide range of products.

### III. Comparisons of the Theories

On what grounds can one defend this theory over the alternatives? Note that the cartel and service theories are not entirely inconsistent with this life-cycle view. According to the life-cycle theory, in the early years manufacturers did view RPM as a means to encourage service although this service could be broadly interpreted to include access to consumers as well as provision of information.<sup>49</sup> And in the early years there was retailer market power (albeit not a cartel) which extracted RPM in return for service provision. Where the theories part most clearly is in the later stages of development when the life-cycle theory argues that manufacturers no longer feel a pressing need for retailer services for low-end products and retailers are no longer powerful enough to secure RPM. In effect the life-cycle theory suggests that whatever validity the cartel and service theories had tends to dissipate as the industry matures and expands.

It follows perhaps that the best way to test the life-cycle theory's validity is to focus on the changes that occurred over time. Three areas where changes occurred over time -- enforcement, marketing strategy, and pricing--do seem to offer support for our arguments.

One clear implication of the life-cycle view is that as industries mature their attraction to RPM diminishes. Therefore, we would expect that RPM would be voluntarily abandoned or, more likely, as firms increasingly realize that RPM may not be helpful, and may even hurt them, and consequently move toward the goal of abandonment, that RPM would be enforced less and less enthusiastically by established firms. This seems



to have indeed been the situation in audio components. There is evidence of retailers' skepticism during the 1973-1974 period about manufacturers' continued commitment to RPM.<sup>50</sup> In addition, several manufacturers, primarily from the low end, announced plans to drop fair trade in advance of any official government actions.<sup>51</sup>

Note that this does not imply that the service provision supposed to be encouraged by RPM was no longer desirable. Indeed, for the high-end products it still was.<sup>52</sup> However, for the low end, RPM's cost relative to alternatives had become too high. This seems true not only because service was less important for established brands but also because the expanding market made RPM increasingly costly to administer. This occurred for three major reasons. First, as the market grew there was an increasing use of "house" brands. Using a house brand as one component in a system and pricing this component artificially low, a retailer could arrive at a systems price which effectively circumvented RPM.<sup>53</sup> Second, as the market grew a transshipping market evolved with it. Transshipping allowed retailers to obtain and dispose of products without direct contact with manufacturers. It facilitated the avoidance of RPM and subsidiary provisions, such as volume forcing aimed at encouraging retailers to push a product line.<sup>54</sup> Third, the number of brands and models multiplied thus increasing the number of prices that had to be maintained.

The pre-consent decree marketing strategies of manufacturers offer another opportunity for contrasting the two theories. Under the service argument manufacturers choose to market through "non-convenience" stores, which provide pre-sales service. The life-cycle argument suggests that

mature manufacturers may, having established brand identities, choose retailers that don't offer such service. This is consistent with the pre-consent decree decisions of a number of manufacturers to sell their products through mass merchandisers such as Woolco in 1974 and Sears in 1976.<sup>55</sup> Although obviously reputable, such stores don't offer the sorts of pre-sales service (such as sound rooms) envisioned in the service argument.

Note in this regard, however, that the products marketed through mass merchandisers were generally not the "top of the line". Some manufacturers such as Sansui and Fisher even marketed a special lower-end set of products through this means. Thus, it appears some manufacturers viewed the low end as susceptible to brand name exploitation while the high end, with its audiophile market, was not.<sup>56</sup> The purchasers of high-end products were viewed as requiring the services likely to be supplied by conventional audio retailers.

This differential view of high-end and low-end products is further evidenced by events in the post-consent decree period. Consider the situation manufacturers faced. Presumably the manufacturers' marketing objectives were unchanged. The difference was that RPM was no longer available as a strategic tool. Under the life-cycle theory this shouldn't have disturbed firms whose low-end products had established brand names. Of course, to the extent retailers saw their profit margins eroded by RPM's passing, they might have fought to secure other concessions.<sup>57</sup> However, in a market with many competitive retailers such concessions seem unlikely to be significant. Yet concessions did seem to emerge for.

e high-end products. Such movement would be consistent with our argument. Manufacturers seeking to find an alternative to RPM that would ensure the provision of the desired pre-sales service could all seek some constraints.<sup>58</sup>

Finally, consider the post-consent decree movement of prices. If the alternative theories would suggest that retail prices would decline. Under the service argument a decline would result because without RPM, free-rider problems will push prices down. Since the return to services cannot be captured by retailers, the incentive to provide them will be eliminated. Under the cartel argument, prices will fall because the cartel loses an important collusive tool. Under the life-cycle theory prices also fall because services are no longer provided. In this case, however, established manufacturers deem them necessary for low-end products. Because under the latter theory retailers' services are no longer highly desirable, the retailers' bargaining position is weakened. Thus, the life-cycle theory would suggest that retailers would be forced to bear the brunt of the price reductions.

Assessment of price information is problematic both because data are difficult to obtain and because prices are influenced by a wide variety of factors other than RPM. Yet the evidence available supports the view that prices fell<sup>59</sup> and our low-end-high-end hypotheses. At the low end where manufacturers lost interest in RPM we see pressure on retailers and the growth in chain store retailers, which could be expected to have lower costs (and/or greater monopsony power). Yet manufacturers'

prospects seem sufficiently good to have attracted other electronics firms such as Zenith into the field.<sup>60</sup> At the same time at the high end of the product line profit margins remain higher, apparently in part due to techniques such as exclusive dealing, which were employed as somewhat less effective substitutes for RPM. And, of course, under the FTC consent orders, manufacturers were still allowed to select dealers on the basis of quality and service. This part of the market does not appear to have suffered greatly.

Support for our low-end-high-end distinction can also be drawn from Pioneer's request to reopen its consent order.<sup>61</sup> A Pioneer executive in an affidavit supporting the petition notes that problems resulting from the consent decree have not surfaced at the low end of its product line but at the mid and high end:

"... Pioneer's presence as a competitive force in the mid to high end user market has been sharply curtailed and in some product lines is becoming de minimis. . . . Pioneer has determined that the most significant factor in the slackening sales, and especially in the reduced market position of [its] products, is the weakened support of its dealer sales network caused by serious product distribution problems.<sup>62</sup>

The "serious product distribution problems" referred to arise in the executive's view because of Pioneer's inability to keep its product out of the hands of discounters:

These non-authorized dealers, lacking any contractual obligation to Pioneer, have no incentive to provide the education, support, promotion and service which characterize authorized Pioneer dealers. They receive a free ride on the efforts of the authorized dealers and then are able to undersell those dealers within the same market because of this free ride advantage.<sup>63</sup>

Another potential test of the life-cycle theory would focus on the effects of the FTC's intervention on the quantity of audio components sold.

RPM was at the time preventing optimal behavior by manufacturers, its elimination might be expected to increase sales. On the other hand, if RPM was encouraging the provision of otherwise free-rideable services, its elimination could affect sales negatively. Application of such a quantity test is hindered by a number of practical limitations. For one thing, such effects would probably occur only gradually. The market could not be expected to adjust instantaneously. Indeed, in the short run, one might observe effects opposite to those expected in the longer run. For example, although the service argument may be valid, retailers could react to RPM's elimination by shading service and exploiting the good name of their product. In such a case sales may increase, if only temporarily. Second, it would be difficult to sort out quantity changes for a constantly changing variety of models and brands components. Third, many other factors besides the FTC's actions were affecting the market at the time. Notably, technological change clearly affected quality, quantity, and price.

#### 7. Conclusions and Implications

Our analysis of the available evidence suggests that by the time the FTC suits manufacturers were losing interest in RPM for their low-end products. Having established brand identities these firms no longer required the incentives RPM provided. On the other hand, for high-end products, sold to an audiophile market, certain service features offered by traditional retailers still had value. To the extent that RPM encouraged the provision of these services, its elimination stimulated the adoption of alternative procedures such as limited distribution, or more careful selection of high quality or high service dealers.

If one accepts this view of RPM in audio components, what can be concluded about the value of the FTC's intervention? Consider first the low end of the market. If RPM had lost its attractiveness to manufacturers, what did the intervention accomplish? Wouldn't RPM have been expected to die on its own? Certainly, as was noted earlier, manufacturers did exhibit signs consistent with a lack of enthusiasm for RPM. Enforcement efforts were limited and some manufacturers even announced plans to abandon RPM in advance of, albeit perhaps in anticipation of, its legal termination.

Yet it is clear that in the period before the FTC's intervention, RPM was influencing behavior. Those retailers who did violate RPM generally chose to circumvent it rather than challenge it. There was widespread use of devices such as transshipping and systems sales, both techniques which facilitated avoidance of RPM. If RPM no longer meant anything to manufacturers, why use such subterfuges? After the consent decrees there was some movement away from such activities, even though both served purposes beyond the avoidance of RPM.<sup>64</sup>

Thus, it appears that the intervention speeded up the demise of RPM at the low end of the market. To determine the economic value of the intervention, one would need to know how much longer RPM would have survived without intervention as well as the economic costs (or benefits) associated with this increased longevity. As we argued earlier it does seem that RPM's death by natural causes was imminent. A precise quantification of time is not possible given the evidence at hand. Some indication of time might be obtained by considering the factors that helped

keep RPM alive, once its role, according to the life cycle theory, was finished. Such a consideration would also help in the assessment of the economic costs of RPM's continued presence.

According to the life cycle theory, RPM had by the time of the FTC's intervention become dispensable to the manufacturers of established brands. Despite this there are reasons why RPM may have persisted for a period beyond this point. Manufacturers may simply have experienced some inertia in moving to the new optimum position. Or they may have been averse to the risks associated with abandoning a device that had served them well in the past. Any one manufacturer's fear might be enhanced by concerns over what rivals would do. If other manufacturers maintained RPM while one abandoned it, retailers might discriminate against the latter's brand. This presumes some retailer market power, of course. However, a manufacturer could also fear the possibility of losing an image of quality if its products were extensively discounted while others', because of RPM, were not. Concerns of this sort provide a sensible economic rationale for one manufacturer's continued acceptance of RPM, but they suggest that a common decision to cease using RPM need not be made.

If factors such as those just mentioned would have led to RPM's continued use for even a short period beyond the intervention, then the intervention could be judged to have made a positive contribution to economic welfare. Again, since RPM would have eventually and perhaps quite soon have died on its own, these gains may well be rather limited. Furthermore, they must be balanced against any losses due to the dis-

couragement of potential new entrants' use of RPM to attract retailers.<sup>65</sup> However, given the present competitiveness of the industry, such losses are probably minor.

What now can be said about the high end of the market? Here, there was some service rationale for RPM, some economic value to its use. The consent decrees caused an involuntary abandonment of RPM, but it appears that other arrangements have been made.<sup>66</sup> Dealers tend to carry many products on an exclusive basis and profit margins on these lines appear to have held up.<sup>67</sup> These margins may reflect a superior quality of service, but not a situation notably different from the pre-consent decree period.

Since RPM was the method of choice before the consent decrees, the alternative arrangements adopted as substitutes for RPM cannot be assumed to be any more efficient in meeting the manufacturers' objectives of service provision. Forcing manufacturers away from RPM may well have created inefficiencies and economic costs. If so, the effects of the FTC's intervention were negative for the high end of the market.

On balance, although it is difficult to make firm judgments in the face of limited systematic evidence, it appears that the intervention had some positive effects at the low end of the market and some negative effects at the high end. Neither set of effects can be safely viewed as substantial. However, since the low end of the market is the larger, making up 85% to 90% of the component market,<sup>68</sup> one might conclude that the FTC made a positive, albeit probably slight, contribution to economic welfare.

Note, however, that this finding should perhaps not be interpreted as supportive of a per se restriction on price-related vertical restraints.



FTC's actions had both positive and negative effects. Although  
balance the effects in this case were positive, there is no  
warranty that they would be in other RPM cases. Furthermore, if  
the industry is at all indicative, it appears that the impact of RPM  
is quite varied and complex, especially when RPM is interpreted as a  
supplement to other non-price vertical restraints.

Footnotes

1. Continental T.V. Inc. vs. GTE-Sylvania Inc., 433 U.S. 36 (1977).
2. U.S. vs. Arnold Schwinn & Co., 388 U.S. 365 (1967). Under Schwinn an attempt by a manufacturer to prohibit transshipping, that is, sales of goods between retailers, was a per se violation of Section 1 of the Sherman Antitrust Act. But the Sylvania decision upheld that company's imposition of restrictions on the locations from which its franchised dealers could resell Sylvania's products. In overruling the Schwinn holding on vertical customer restrictions, the court noted that "[i]n intent and competitive impact, the retail customer restrictions in Schwinn is indistinguishable from the location restrictions in the present case. . . . The fact that one restriction was addressed to territory and the other to customers is irrelevant to functional antitrust analysis. . ." (433 U.S. at 46).

The court concluded that while particular vertical restraints might well be anticompetitive, non-price vertical restrictions in general should be judged under a rule of reason.

3. This presumes, of course, that efficiency should be the principal criterion for antitrust. For a discussion that advocates this position see Bork, THE ANTITRUST PARADOX (New York: Basic Books, 1978), esp. Chap. 21. See, however, Lande, "The Goals of the Antitrust Laws," 34 HASTINGS L. J., (1982), which asserts that efficiency is only one goal of antitrust laws. Lande argues that Congress cared more about preventing "unfair" transfers of wealth from consumers to firms with market power than about promoting efficiency.

. The Sylvania decision discussed the possible efficiency-enhancing contribution of various vertical restraints:

Economists have identified a number of ways in which manufacturers can use such restrictions to compete more effectively.... Established manufacturers can use them to induce retailers to engage in promotional activities to provide service and repair facilities necessary to the efficient marketing of their products.... The availability and quality of such services affect a manufacturer's goodwill and the competitiveness of his product. Because of market imperfections such as the so-called "free rider" effect, these services might not be provided by retailers in a purely competitive situation, despite the fact that each retailer's benefit would be greater if all provided the services than if none did. 433 U.S. at 54-55.

See also Williamson, "Assessing Vertical Market Restrictions: Antitrust Ramifications of the Transaction Cost Approach," 127 U. PENN. L. REV. 453-93 (1979).

Prohibitions on resale price maintenance were first laid down in Dr. Miles Medical Co. vs. John D. Park & Sons Co., 220 U.S. 373 (1911). In Sylvania the Supreme Court again proscribed resale price maintenance noting "The per se illegality of price restrictions has been established firmly for many years and involves significantly different questions of analysis and policy". See 433 U.S. at 51, n. 18. Though in his concurrence, Mr. Justice White noted that "[t]he effect, if not the intention of the courts opinion is necessarily to call into question the firmly established per se rule against price restraints." Id. at 70.

Most recently the *per se* rule was upheld in *California Retail Liquor Dealers Ass'n v. Midcal Aluminum, Inc.*, 445 U.S. 97 (1980). In 1975 Congress broadened the coverage of RPM prohibitions by repealing the Fair Trade exemption in the Consumer Goods Pricing Act of 1975, Pub. L. No. 94-145, 89 Stat. 801 (1975). Thus as of March, 1976 manufacturers risked a per se violation of the Sherman Act Section 1 if they were found imposing resale price maintenance in interstate commerce.

6. See, for example, Williamson, *supra*, note 4; Meehan and Lerner, "A Proposed Rule of Reason for Vertical Restraints on Competition," 26 THE ANTITRUST BULLETIN, 195-225 (1981); Bork, *supra*, note 3 at chap. 14; Posner, "The Next Step in Antitrust Treatment of Restricted Distribution: Per Se Legality," 48 UCHI. LREV. 6 (1981).
7. Vertical restraints include a wide variety of arrangements that control the condition of product distribution and sales. Resale price maintenance (RPM), territorial confinement, and customer allocation provisions have received the greatest scrutiny in the antitrust literature. RPM sets the price at which a dealer can resell a manufacturer's goods. Territorial confinements require a dealer to solicit business or sell to customers only within a defined geographic area. Customer allocation provisions limit a dealer to a specific class of customers. Several territorial and customer allocation systems exist. For example, "airtight" territorial allocation clauses convey to the dealer an exclusive right to sell or solicit business in a geographic area. "Location" clauses allow the dealer to sell to any class of customer but only from locations approved by the manufacturer. "Primary responsibility" clauses require dealers to spend a specified amount of

of time or money developing sales in a territory or to a class of customers before they are free to sell wherever or to whomever they desire.

Manufacturers may also attempt to control selling conditions by dictating criteria for product display, advertising, service policy, inventory, and dealer training. Dealers may be required to stock the manufacturer's full product line through tying restrictions, or to sell more than some designated amount of the product through volume forcing requirements. Exclusive dealing agreements require the retailer to devote its efforts exclusively to distributing the product line of a particular manufacturer. Other product lines are prohibited.

Vertical restraints may also limit the manufacturer's behavior. For example, under exclusive dealer franchise the manufacturer agrees to appoint only one distributor in a given territory. Under density limitations manufacturers space out retailers to conform with some desired combination of customers per retailer. In the franchise agreement manufacturers may be required to provide a specified amount of advertising support, technical advice and training, dealer credit, return provisions, and the like.

Pitofsky has argued that the rule of reason imposes a heavy burden on the enforcement process:

A standard under which all circumstances are weighed, and violations found only upon demonstration of specific anticompetitive effects, may sound sober and moderate, but in the real world has little deterrent effect, produces trials of inordinate length and expense, and often undermines antitrust enforcement. Business practices

treated under a full rule of reason, with no presumptions based on any set of facts and with the burden of showing anticompetitive effects on the plaintiff will usually turn out to be legal.

Pirofsky, "The Sylvania Case: Antitrust Analysis of Non-Price Vertical Restrictions," 78 COLUM. L. REV. 1, 2 (1978).

Since Sylvania every decision analyzing purely vertical non-price restraints under the rule of reason has found such restraints to be reasonable. For example see *Newberry v. The Washington Post Company*, 438 F. Supp. 470 (D. D. C. 1977); *Cowley v. Braden Industries, Inc.*, 613 F. 2d 751 (9th Cir. 1980); *Donald B. Rice Tire Co. Inc. v. Michelin Tire Corp.*, 483 F. Supp. 750 (D. Md. 1980), *Aff'd* 638 F. 2d 15 (4th Cir.), cert. denied 70 L. Ed. 2d 164 (1981); *A. H. Cox Co. v. Star Machinery Co.*, 653 F. 2d 1302 (9th Cir. 1981); *Sports Center, Inc. v. Riddell Inc.*, 673 F. 2d 786 (5th Cir. 1982); *Krehl v. Baskin Robbins Ice Cream Co.*, 664 F. 2d 1348 (9th Cir. 1982).

Several judicial decision models have been proposed for applying the rule of reason based on the Sylvania case. See Bohling, "A Simplified Rule of Reason for Vertical Restraints: Integrating Social Goals, Economic Analysis, and Sylvania," 64 IOWA L. REV. 461 (1979); Strasser, "Vertical Territorial Restraints After Sylvania: A Policy and Proposed New Rule," DUKE L. J. 775 (1977); Comment, "A Proposed Rule of Reason Analysis for Restraints on Distribution," 47 FORDHAM L. REV. 527 (1979); Posner, supra note 6; Zelek, Stern, and Dunjee, "A Rule of Reason Decision Model After Sylvania," 68 CAL. L. REV. 13 (1980).

9. But whether non-price vertical restraints are always less restrictive than RPM remains an open question. In the Eastern Scientific case,

the First Circuit failed to support the Sylvania distinction between price and non-price restraints. See Eastern Scientific Co. v. Wild Heerbrigg Instruments, Inc., 572 F. 2d 883 (1st Cir.), cert. denied 439 U.S. 833 (1978). In upholding the defendant supplier's right to prohibit a dealer from selling outside of its territory at less than list price, the court noted "[W]e are unable to conceive of how the resale price restrictions used to enforce the assigned territories in the present case can possibly have a greater anti-competitive effect than a pure policy of territorial restrictions." Id. at 885. For a discussion of Eastern Scientific see Posner supra note 6 at 9.

0. See Meehan and Lerner, supra, note 6; Areeda, ANTITRUST ANALYSIS: PROBLEMS, TEXT, CASES (Boston: Little, Brown, 1981), p. 647.  
and White, "Vertical Restraints in Antitrust Law: A Coherent Model," 26 ANTITRUST BULLETIN, 336 (1981).
1. This approach was also "mono-stereo compatible" in that a mono FM radio provided a mono version of the stereo signal, while a stereo FM set received and reproduced both the left and right-hand channel for a stereo presentation. The perfection of FM stereo transmission and reception added another component to the high fidelity system.
2. Thus, the amplifier can receive signals from the record player, the radio, or the tape deck. The radio tuner and the pre- and main amplifier are sometimes combined into a single unit called a receiver. From the amplifier the signal goes to the speaker system or to a set of earphones. Each speaker actually has several speakers designed to reproduce different sounds. Two speakers are required for stereo high fidelity.

13. Of the seven firms under consent decrees, the four Japanese firms established U.S. subsidiaries in the late 1960's; U.S. Pioneer and Sansui were incorporated in New York in 1966; TEAC and Nikko were incorporated a year later in California. In contrast, United Audio was incorporated in 1939 in New York, JBL was incorporated in 1946 in California, and Sherwood was incorporated in 1955 in Illinois.
14. See the Predicasts' Basebook.
15. See James B. Lansing Sound, Inc., Docket No. G-1785, issued August 24, 1970. It was subsequently argued that JBL was thereby able to prevent its product from being sold to discounters in non-fair-trade states. See U.S. Government Memorandum, April 1, 1975, "Extracted from Omnibus File No. 741-0042 -- Unnamed Manufacturers, Distributors and Retailers of Audio Components," p. 39.
16. "Omnibus File," p. 43.
17. "Omnibus File," pp. 39-40.
18. According to the background investigation, warranty cards were used to check the sale price of the audio component. The customer would fill out the card, providing the manufacturer with the dealer, the purchase price, along with the serial number. Hence the manufacturer could discover which retailers were selling below the maintained price. The cards could also be used to trace components that were trans-shipped, or sold by one retailer to another retailer, perhaps one not in the formal distribution chain.

Shoppers were private investigators sent into retail stores posing as customers to observe how rigidly prices were maintained. These shoppers would then provide the manufacturer with a list of violators.



1. As quoted in F.T.C. Memorandum dated July 23, 1975.
2. TEAC Corp. of America, 86 F.T.C. 981 (1975); Sherwood Electronic Laboratories, Inc., 86 F.T.C. 988 (1975); Sansui Electronics Corporation, 86 F.T.C. 995 (1975), and U.S. Pioneer Electronics Corp., 86 F.T.C. 1002 (1975).

TEAC, Sansui, and Pioneer were wholly owned subsidiaries of Japanese manufacturers. TEAC sells tape decks and their accessories, high-end amplifiers and tuners, loudspeakers, and professional recording equipment. It had sales of about \$18 million in 1973. Sherwood, a U.S. company, primarily imports receivers, amplifiers, tuners, and speakers from the Far East. Its sales in 1973 were about \$12 million. Sansui imports and sells a full line of components, with sales of \$21 million in 1973. U.S. Pioneer was the largest audio component supplier in the U.S., with sales of \$45 million in 1973. Based on a 1974 survey of audio sales Pioneer had the leading market share in receivers (with 15%), amplifiers (20%), and tuners (21%). See U.S. Memorandum, July 10, 1975, p. 3.

3. Presumably the firms were still allowed to select dealers on the basis of the quality and kind of services provided and were still free to inspect dealers and cut off dealers who did not meet the manufacturers' standards. The Compliance Division of the Bureau of Competition monitored the requirements of the order. Compliance reports were submitted by the firms for each of the three years. No major issues appeared to arise, aside from the use of "approximate nationally-advertised value" by some of the firms, even though there was a two-year ban on suggesting retail price information.

22. See United Audio Products, Inc., 88 F.T.C. 24 (1976), issued July 12, 1976, and Nikko Electric Corporation of America, 88 F.T.C. 31 (1976), issued July 12, 1976. United Audio Products imported record players from Germany and sold them under the name of Dual. With sales of \$30 million in 1975, it was a leading seller of record players. Based on a 1974 reader survey by HIGH FIDELITY magazine, Dual had the largest market share of record changers with 35 percent of the market. Nikko, a wholly-owned subsidiary of Nikko Electric of Japan, imports amplifiers and tuners from Japan and had sales of only \$5 million in 1975 (\$3 million in 1973).
23. See Petition to Reopen Proceedings and Memorandum of James B. Lansing Sound, Inc. in Support of Petition to Reopen Proceedings, Docket No. C-1785, April 14, 1978.
24. "Affadavit of Irving R. Stern," appended to Memorandum of James B. Lansing Sound, op. cit.
25. See Petition to Reopen Proceedings and Memorandum of James B. Lansing Sound, Inc. in Support of Petition to Reopen Proceedings, Docket No. C-1785, April 10, 1981.
26. James B. Lansing Sound, Inc.: Reopening and Modification of Order, 97 F.T.C. 914 (1981).
27. Id. at 914.
28. In the Matter of Onkyo U.S.A. Corporation, Docket No. C-3092, (August 24, 1982).
29. In the Matter of U.S. Pioneer Electronics Corp., Docket No. C-2755, Petition to Reopen Proceedings and to Modify Consent Order, June 28, 1982.

30. Id. at 4.
31. In the Matter of U.S. Pioneer Electronics Corp., Reopening of Order and Order to Show Cause, Docket No. C-2755, (November 5, 1982).
32. Id. at 2.
33. Telser, "Why Should Manufacturers Want Fair Trade?" 3 J. LAW AND ECON., 86-105 (1960).
34. See supra, note 10.
35. Supra, note 33.
36. Porter, INTERBRAND CHOICE, STRATEGY, AND BILATERAL MARKET POWER (Cambridge, Mass: Harvard University Press, 1976).
37. We note that even under an iron-clad RPM system, retailers may still have an incentive to free-ride on the pre-sales services provided by competitors. Retailers may choose to provide only post-sales or appropriable services, and could thereby provide a more attractive bundle of services. Consider the following example: There are two retailers, both selling the same audio component at the same price under RPM. The first dealer provides a full range of pre- and post-sales services, costing him a total of \$100 per unit sold. Assume this cost is evenly divided between pre- and post-sales services. The second dealer provides only post sales services valued at \$75, yielding the second dealer a net of \$25 per sale more than received by the first dealer. A customer would have an incentive to shop at the first dealer, taking advantage of the pre-sales services, then buy at the second dealer. This strategy would yield the customer a total of \$125 of pre- and post-sales services, compared to only \$100 if the component were purchased from the first dealer. Thus RPM does not necessarily guarantee that all dealers will provide pre-sales services.

38. Comparisons of this sort are of course complicated by the fact that some components must be interconnected for such an evaluation to occur.
39. Indeed, a house brand may be included in the mix by the retailer to prevent free riding of this type.
40. FTC Case File, TEAC Corporation of America, at 26.
41. Furthermore, retailers with market power may choose not to engage in RPM. Before the consent decrees were signed the two most active markets in terms of discounting were Los Angeles and Chicago. Each market was dominated by a major audio chain: Pacific Stereo (with 65 stores, including 14 in Los Angeles) and Playback (with 64 stores throughout Illinois, including 24 in Chicago). Hence in markets where there appeared to be a dominant retailer there also appeared to be open violation of RPM, even though a retailer cartel rationale for RPM would suggest RPM to be strongest where there was retailer market concentration. For evidence of flagrant discounting in these two markets see, Marketplace USA: The Los Angeles Spread, MERCHANDISING, 121 (June 1976).
42. Telser and Posner also suggest that exclusive dealing fits into such a scenario, but Schwartz and Eisenstadt disagree. See Telser, supra note 33 at 97-98; Posner, "The Rule of Reason and the Economic Approach: Reflections on the Sylvania Decision," 45 U.CHI. L. REV. 78 (1977); and Schwartz and Eisenstadt, "Vertical Restraints," Economic Policy Office Discussion Paper, EPO 82-8 (1982), 45.
43. Data on market concentration has been reported in legal proceedings, but is carefully protected and generally not publicly available.

These estimates are based on a 1975 consumer study of approximately 1,000 college students. (See, Time: Students Eager to Buy Hifi, MERCHANDISING WEEK, 9, 11 (March 23, 1975). Although not ideal, the figures seem useful in gaining perspective on this issue. According to the survey the top four brands of record changers (as components) were Garrard (39%), Dual (23%), BSR (22%), and Miracord (4%). (Note, however, that BSR actually manufactures many of others' brands). For speakers, the top four were KLH (9%), AR (7%), Utah (7%), and JBL (4%). For receivers, the order was Pioneer (19%), Kenwood (10%), Sherwood (8%), and Sony (7%). Finally for stereo headphones, Koss led with roughly 33% of the market, followed by Pioneer at 7% and Sennheiser and Sony each at 6%.

44. See Caves, "Research on Vertical Restraints," Report Prepared for the Federal Trade Commission, July 1979.
45. We do not address here the question of why products in the home electronics were sold under RPM. Some ideas are given by Goldberg in his analysis of Magnavox. Magnavox had perhaps the most closely monitored RPM system in the television industry, and half of Magnavox's color television volume in 1966 came from combination television-stereo units. See Goldberg, "Resale Price Maintenance and the Federal Trade Commission: The Lenox and Magnavox Cases," Unpublished manuscript, p. 51.
46. This strategy, according to one industry analyst has also been used with other consumer electronics products such as televisions and microwave ovens. See Particelli, "The Japanese are Coming: Global Strategies Planning in Action," OUTLOOK, 22-30 (Spring 1981).

- . As suggested earlier RPM was often used in conjunction with other vertical restraints. Nevertheless, the key element in the system, the element focused on by the FTC, was RPM.
- . Telser seems to recognize this possibility that manufacturers of established brands will lose interest in RPM. He comments that "... if in the course of time consumers become so won over to a product or so familiar with it that costly special persuasion by retailers becomes an unnecessary inducement to purchase it, the manufacturer will discover that he need not maintain the retail price and will rationally abandon his fair trade policy." Telser, supra note 33 at 92. But note that new entrants might still choose RPM as one means of competing for shelf space with these established brands.
- . Such an interpretation would, of course, be distinct from the Telser view of special services. Telser, supra note 33.
- . For example, a "professional shopper" employed by a manufacturer to check on retailer compliance is quoted as saying that "very few dealers" believed that manufacturers were enforcing RPM. See Zucker, "Shopper: Dealers Don't Believe I Exist," MERCHANDISING WEEK, 8 (March 24, 1975). Also a retailer in Phoenix claimed that Pioneer did not "lift a pinky" to maintain RPM. See McCullaugh, "Audio Profile: Phoenix," MERCHANDISING WEEK, (June 16, 1975). Certainly prior to 1975 there was abundant evidence that brands subject to RPM were being discounted. The most active markets in terms of discounting seemed to be, in order; Los Angeles, Chicago, New York, Boston, and Phoenix. Four of these

cities are in states that at the time had fair trade laws covering both signers and non-signers. Boston was in a fair trade state for signers only.

51. These announcing plans to drop fair trade were Pioneer, GTE Sylvania, TEAC, and 3M. Of this group only TEAC, which manufactures a high quality tape recorder, could be considered a high-end producer. See Zucker, "Audio Turnabout to a Fair Trade," MERCHANDISING WEEK, 1, 6 (June 9, 1975). Of course two of these firms (Pioneer and TEAC) were under investigation by the FTC at the time.
52. Once the product and brand becomes commonly known and respected, a different sort of free-rider problem could emerge. Here a particular retailer might be able to reap short run profits by trading on the good name and good will of the recognized brand. The retailer could sell the product in a way that would diminish the quality and reputation of the component; the loss of good will would be borne primarily by the manufacturer and other dealers. Hence during the mature phase of the product life cycle, RPM could be employed to prevent shading quality on an already-established and respected brand. This would appear especially relevant at the high end.

In this regard consider the statement by a Radio Shack operator presented in an affidavit supporting Pioneer's petition to modify its consent decree:

It is my experience that the continued competitiveness of any manufacturer in the highly competitive stereo products market depends greatly on that manufacturer's success in selling only

through dealers who know the product and promote it aggressively and intelligently. Moreover, the activities of the non-authorized dealers who do not support the product, who advertise and display the product in a "warehouse" fashion next to other products of very cheap quality, and who are unable to service the product after sale if something goes wrong, all serve to cheapen the image of the product itself in the consumer's eyes. Legitimate dealers who carry the same product then have their image tarnished by association with the product that has become cheapened in the eyes of the consumer. Thus authorized dealers of a particular product who promote and fully support the product suffer when that product is transshipped in their market area and sold through low-quality outlets. I have seen this cheapening of its image occur with regard to Pioneer stereo products in the market area serviced by the Radio Shack stores which I run.

U.S. Pioneer Electronics Corp. Affidavit of William Holt in support of Petition to Modify Consent Order, Docket, No. C-2755, at 1-2.

Curiously, FTC investigators viewed the inclusion of a private-label brand in the system as follows:

By discounting the private label component and cartridge which is customarily available below list price, the retailer creates a deceptive image of substantial savings on the fair traded components. It is extremely difficult for the consumer to determine the actual value of such package deals due to the deliberate inclusion of private label equipment which is not evaluated by consumer guides.

See "Extracted from Omnibus File No. 741-0042 -- Unnamed Manufacturers, Distributors and Retailers of Audio Components," U.S. Government Memorandum, April 1, 1975, p. 7.



54. The transshiper was essentially a broker who buys components from one dealer and sells to another -- often to a dealer without a franchise to buy the good directly. Transshippers moved goods all over the country. Dealers appeared to use them much like a small bank might use a larger bank or a Federal Reserve bank -- as a source of liquidity. Cash flow appears to be a problem in audio sales because the business fluctuates so much from month to month and from year to year. Having an alternative sales outlet, even if it is only 5% above dealer's costs, provides a cushion in the system that dealers apparently found attractive. Since on the one hand, retailers were encouraged by distributors to overstock, yet on the other hand, they faced higher costs when goods were in inventory for long, the transshipper could buy this excess stock and reduce the pressure on retailers.

At the same time, transshippers reduced the need for retailers who buy from transshippers to carry as much inventory or to comply with the requirements of a franchise. Dealers who buy goods from a transshipper do not necessarily do so to discount the components, but transshipped goods evidently were often purchased by discounters (since most distributors would not sell knowingly to discounters).

55. The Woolco stores in Phoenix were selling in 1974 such brands as TEAC, Marantz, JVC, Garrard, and Jensen. See McCullaugh, supra note 50. Sears experimented with audio sales in the 1960's but the limited scope of the market at the time doomed the venture and it was dropped. But in 1974 the "Sears-by-Fisher" label was test marketed in five cities. The test evidently proved successful. Akai tape decks, Koss

headphones, B-I-C turntables and Jensen speakers were added as Sears began selling components nationwide in early 1976. See "Sears Blankets Major Markets with Hifi," MERCHANDISING, 122-3 (July 1976).

56. One marketing problem confronted by high-end audio manufacturers was how much to exploit the brand name through sales of mass-marketed, low-end components. The problem was that using the brand name on low-end components could in turn reflect negatively on the reputation at the high end. For example in early 1975 several high-end speaker manufacturers introduced new low-end lines. Most of these new models were marketed under new brand names "to preclude alienating regular line customers," according to one industry specialist. See Zucker, "Prestige Speaker Firms Score at Low End with New Models," MERCHANDISING WEEK, 1 (April 14, 1975). The failure to be sensitive to the customer's perception of the brand reportedly cost one firm, Superscope, its position as a sales leader at the high end. Superscope's decision to use its brand name on a low-end line of components damaged the reputation of its high-end lines. See, "Superscope Seen to Phase Out Imperial Line of Audio Equipment," WALL STREET JOURNAL, 30 (April 2, 1979). There is also some evidence that the same rationale works in the other direction as well. When BSR introduced a computerized turntable in 1976, targeted specifically at sophisticated audio consumers, they marketed it through a subsidiary called ADC to "mask the origins of the component from the true hifi enthusiasts, who equate BSR with low prices". See, "Why BSR Dominates the Record Changer Market," BUSINESS WEEK, 84 (June 7, 1976).

57. One dealer is quoted as saying, "With fair trade on the way out, you have to look for limited distribution". Apparently many others agreed. See Zucker, "Limited Distribution Lines New Hot Target for Audio Merchants," *MERCHANDISING WEEK*, 1, 10 (May 26, 1975). Limited distribution refers here to a situation in which a class of customers or marketing territory is effectively granted to a retailer, but the retailer is not prohibited from carrying the products of rival manufacturers. This is to be distinguished from exclusive dealing in the sense used by Marvel to describe a situation in which retailers agree not to handle competing products. See H ward Marvel, "Exclusive Dealing," 25 *J. LAW AND ECON.*, 1 (1982).

Rather, limited distribution is akin to Posner's restricted distribution, in which intrabrand competition is limited. See Posner, "The Next Step in the Antitrust Treatment of Restricted Distribution: Per Se Legality," *supra* note 6.

58. Efforts to control distribution were evidenced in high-end lines such as McIntosh and Klipsch. See Zucker, "No Holds Barred Now in Hifi," *MERCHANDISING WEEK*, (October 13, 1976) and *idem.*, "Is Hifi Franchising Doomed?" *MERCHANDISING WEEK*, (October 6, 1975).
59. In late 1975 and 1976 there is reference made to "price wars," to "price promotion hysteria," and (for a TEAC product) to prices dropping to a level "considerably lower than list". See, respectively, McCullaugh, "Trendings: Audio/HighFidelity," *MERCHANDISING*, 14 (November 1976); "Los Angeles Market Survey," 125 *MERCHANDISING*, (June 1976); Zucker, "TEAC Move Triggers Upsurge in Open Reel," *MERCHANDISING WEEK*, 1

(June 30, 1975). For further discussion of high end-low end differences see Zucker, "Trendings: Audio/High Fidelity," MERCHANDISING, 14 (March 1976); Zucker, "Hifi Dealers Maintain Profits as Sales Rise 20% and More," MERCHANDISING WEEK, (November 24, 1975); McCullaugh, "Upgrades, Discounts Driving Hifi Speaker Sales Marathon," MERCHANDISING WEEK, (September 15, 1975).

Based on industry data, the average "retail value" of a simple stereo system -- consisting of a receiver, a turntable, and two speakers -- reflected the following year-to-year pattern: 1974, \$685; 1975, \$670; 1976, \$694; 1977, \$722; 1978, \$735; and 1979, \$721. The average retail value of a system increased by a total of five percent between 1974 and 1979 at a time when the C.P.I. increased by 47%. For the individual component data on which the average system value was based see MERCHANDISING, (March 1980).

There is some additional evidence regarding price movements in 1976. In late August and early September of 1976 the FTC's Bureau of Competition telephoned around the country to ten retail dealers of Sansui, Sherwood, TEAC, and Pioneer to survey the trend in audio component prices and to weigh the influence of the FTC consent decrees. Eight of the ten dealers said prices were falling; in most instances this fall began in the spring of 1976. The two instances where prices appeared stable were, as might be expected, in rather isolated markets in Arkansas and Virginia. Six of eight dealers who said prices dropped cited increased retail competition as the reason. The same number also mentioned the demise of fair trade (which ended officially around the

country in March 1976) as a reason for declining prices, though the conviction here was less strong. Other explanations included a "soft market," new models introduced at a lower price than last year's model, increased competition at the manufacturer's level, and "lowering quality to satisfy production for mass marketing techniques". Not one dealer felt that the FTC consent decrees had an effect on prices. One conceded that the FTC activity did "free up" the pricing decision and may have thereby indirectly influenced the price level. It is ironic that the competitive market environment most dealers described was the very objective of the consent decrees, yet the dealers saw no link between the consent decrees and that market environment.

60. Other new entrants included Morse, Sharp, Quasar, Toshiba, and Admiral.
61. U.S. Pioneer Electronics Corp., supra note 52.
62. U.S. Pioneer Electronics Corp., Affidavit of William Matthies in Support of Petition to Modify Consent Order, Docket No. C-2755, at 3.
63. Id. at 4.
64. Systems sales were of course still popular but individual components sales gained in prominence. In part this seems associated with upgrading, moving consumers component by component to better quality systems. See McCullaugh, "Hifi Systems Explode in Unexpected Surge," MERCHANDISING WEEK, (August 25, 1975) and idem., "Upgrades, Discounts Driving Hifi Speaker Sales Marathon," MERCHANDISING WEEK, (September 15, 1975).

65. Nikko, one of the firms challenged by the FTC, was very small and may have seen RPM as a means of facilitating entry. Nikko has apparently met with little success.
66. Note that there was a time limit imposed in the consent decrees.
67. As noted earlier this could be attributed to having limited distribution lines. See Zucker, "Limited Distribution," supra, note 48. Also, according to MERCHANDISING WEEK, in the post consent decree period, established dealers "decided that they will compete in the major brand price arena this fall only under extraordinary circumstances. Many are planning to offer sharply priced systems almost exclusively with private label speakers". See Zucker, "See Fall Ad Emphasis Shift from Price Promotion Base," MERCHANDISING WEEK, 5 (September 8, 1975).
68. Our calculations based on the number and type of components sold in 1974 indicate that about one million low-end audio systems and 100,000 to 150,000 high-end audio systems were sold in that year. Thus in that year the audiophile represented only about 10% to 15% of the component market in terms of units sold. These calculations are based on sales information provided in MERCHANDISING WEEK, (March 1980).

VERTICAL RESTRAINTS IN THE AUDIO  
COMPONENT INDUSTRY:  
POSSIBILITIES FOR FUTURE EMPIRICAL WORK

William A. McEachern  
and  
Anthony A. Romeo

Introduction

Our present report, we feel, raises a number of provocative and important issues. Although we are rather confident of our analysis it obviously cannot be regarded as definitive. We were forced to rely on limited information -- that available from the case files, readily accessible secondary sources, and some informal contacts with industry members.

It seems logical to assume that a more comprehensive effort would teach us more or at least give us more confidence in what we've already tentatively concluded. But how would such an effort proceed? What questions would be asked and how would we go about trying to answer them?

Since our report has generated a theory of resale price maintenance (RPM) in the industry, it seems wise to begin from that base. A future study can be viewed as a test of our theory. Evidence either in support of or in contradiction to the theory would be of value. In the latter case the evidence would be

useful in constructing an alternative theory of RPM in audio components.

The following sections lay out a general structure for possible future work. In section II below we consider some basic questions that might be asked in this work. In section III we suggest some methodological considerations. Section IV then offers two possible projects.

## II. Research Questions

Our report suggests a life-cycle theory of RPM. Events under that theory will be different from events under alternative theories. A constructive approach would be to consider some areas where these differences are most likely to exist. In the following five sections we note some such areas.

### A. Enforcement

Our theory suggests that as brand names became more established RPM became less attractive to manufacturers. Since the enforcement of RPM provisions is costly, we would expect to see some decrease and perhaps even abandonment of enforcement efforts. A follow-up study could usefully examine the nature of enforcement during the late 1960's and the 1970's. One might begin by establishing some baseline evidence on enforcement. In the periods during which RPM was attractive, what resources were devoted to its enforcement? To what extent were professional shoppers, warranty cards, and other devices used to check on



retailer compliance? How often were penalties imposed on violators? Numerical counts or dollars spent would be useful indicators. If we then found that in the early 1970's the extent of enforcement had diminished (when RPM's attractiveness according to our theory had declined), this would lend credence to our theory.

At the same time it would be helpful to examine the mechanisms by which retailers could avoid RPM. If system sales and transshipping were effective avoidance mechanisms, then RPM may not have been truly enforceable. Thus, any decline in enforcement efforts could be interpreted not as support for our theory but as evidence that manufacturers simply learned and accepted this fact.

#### B. Entry

Our life-cycle theory suggests that RPM served some useful function in facilitating manufacturers' entry into the industry. A follow-up study should examine the nature of entry into the industry in the pre- and post-consent decree period. Two basic questions could be asked. First, was there a decline in entry in the latter period? Our theory would suggest that ceteris paribus entry would become more difficult without RPM and thus the rate of entry would decline. Numbers of new entrants or market shares of recent entrants would be quantifiable measures of the degree of entry.

A second question would involve a slightly different approach. Did new entrants in the pre-consent decree period

adopt RPM? Our theory suggests that they saw RPM as an attractive mechanism for entry. Our analysis suggests that many new entrants did but if we were to find that many others chose not to employ RPM, this would tend to create doubts about our theory.

### C. Vertical Arrangements

We've viewed RPM as one of a possible array of vertical arrangements between manufacturer and retailer. When RPM was eliminated from consideration, how did manufacturers and retailers respond? According to our theory manufacturers would for the most part not be distressed. Their efforts to find substitutes for RPM would likely be limited to high end products. If significant alternative arrangements were developed, however, and these extended to dealings with respect to low end products, then our theory would not be supported.

### D. Prices

All of the theories considered, including our favored theory, suggest that RPM's demise would lead to lower prices. However, our theory suggests that retailers will bear more of the burden of these declines. Any follow-up study should try to examine whether prices did indeed decline and whether retailers did suffer relatively more. Indirect evidence of the latter might be found by examining retailer survival patterns since falling profits would lead to many retailers' demise.

### E. High End-Low End Differentials

Our theory suggests that as brand names became established RPM lost its appeal primarily at the "low end" of the audio components market. A follow-up study should examine carefully the differences in the way marketing occurs at the two ends of the market.

Are the low-end products more likely to be mass merchandised? Are high-end products more likely to be sold in specialized audio stores? Did manufacturers adopt vertical restraints to replace RPM for high-end products and not for low-end ones? Have price-cost margins fallen less for high-end than low-end products? Positive answers to all these questions would be consistent with the life-cycle theory.

## I. Methodological Considerations

### A. General Approach

The basic approach of a future study would involve an analysis of changing events over time. For some issues, such as enforcement, we would want to observe the period of the mid- to late-1960's through the early 1970's. For other issues, we would want to compare events in the periods prior to and after the consent decrees.

Any analysis of changes over time will face the difficulty of sorting out the causes of those changes. To what extent are changes due to the consent decrees or to their anticipation?

To what extent are changes due to other circumstances? Our analysis has focused on the former question, but it is clear that the environment in which the industry operates has changed dramatically over time for reasons unrelated to the FTC's activities. Notably, changes in technology have led to considerable improvements in product quality and reductions in cost. Along with this has come an important expansion and increasing sophistication in the market. Certainly many changes would be expected to accompany such developments.

To sort out causes and effects we could proceed in at least two ways. One would be to build a formal quantitative model of behavior. For example, a simple model of supply and demand could provide a useful framework for analyzing price. But specification of such a model would appear particularly difficult for analyzing issues such as enforcement or vertical arrangements.

Another approach would rely on a less formal assessment of changes. One would combine quantitative and qualitative information from a variety of sources and draw inferences from a careful analysis of the information. In essence this would be a slightly more quantitative version of the approach used in our report.

## B. Data

### 1. Choosing a Sample

There would be two basic units of analysis in our study. One would be the firm, either manufacturer or retailer. A second would be the product, audio components. By focusing on the firm

could consider questions of enforcement, entry, and vertical arrangements. By focusing on products we could more clearly assess prices and high end-low end differentials. Needless to say the two approaches would be complementary.

For assessing firm behavior we will want to choose some sample. There are hundreds of manufacturers and thousands of tailors. At the manufacturer level we could choose either the largest firms or a more broadly based sample. Given the significance of the large firms we would opt for the former. For tailors we would choose by geographic market area looking both free trade and fair trade localities.

For products we again face a myriad of choices. Certainly makes little sense to talk of prices in general. We would choose two or three particular products for analysis. We would want a product geared to the high end of the market -- for example, pre-amplifiers or amplifiers -- and one geared primarily to the low end -- for example, receivers. By choosing a few models each we could more easily assess price changes and high end-low end differences.

A problem with this of course is that models and product quality have changed over time. It may be possible to find models or model series that are traceable over time. Alternatively we may be able to construct an hedonic price index to control for quality variations.

## 2. Data Collection

Any empirical work undertaken on this industry would face serious problems of data collection. We would, of course, start with the FTC case files information, but this is not sufficiently detailed to allow for as rigorous an analysis as we would prefer. Since none of the cases resulted in litigation, there are no extensive court documents. Moreover, even the consent decree files provided us are incomplete; they contain no dealer or compliance information on the industry's major firm, U. S. Pioneer. Other published sources of data are also limited, because the audio components industry is just now beginning to be distinguished from radio and TV.

Much of the data would have to be collected by survey or interview. However, our efforts at primary data collection would also face obstacles. We suspect there would be some reluctance, particularly on the part of manufacturers, to cooperate in a study sponsored by the FTC. Even with cooperation, we would have to deal with a large number of manufacturers and retailers. Some of the firms affected by the consent decrees are no longer in business. Other firms have started up after the decrees. And many of the firms in existence over the whole period have seen changes in ownership. J. B. Lansing, the producer of JBL speakers, for example, has had three different owners since 1975. Selecting a representative sample, identifying knowledgeable respondents, and gathering retrospective data from them would seem a formidable task in such a dynamic industry.

## 7. Two Possible Projects

We see two scales at which a further study might be done.

### A. Study One

We envision one study which would rely almost entirely on secondary sources of information. As noted earlier, these sources will have limitations, but we would hope that together they would generate some useful information. For general information on industry activity we would rely on the FTC files (including the New York Regional Office Files not supplied to us for this report), trade journals (e.g., Merchandising, High Fidelity Trade News), Department of Commerce data (particularly on imports), and on any other existing studies of the industry that may be discovered (such as brokerage house reports). Product information could be gleaned from some of these sources, particularly the trade journals, as well as books such as the Orion Marketing Trade-in Guide and the Hi-Fi Trade-In Guide.

For a small number of market areas, say 3 or 4, we would also try to gather price and market entry and exit data. In this effort we would rely on newspaper advertisements and telephone directories. We might, for example, look at Hartford (a fair-trade market), Washington, D. C. (a free-trade market), Milwaukee (a market often cited as "dead"), and the market in some rural area. A careful perusal of newspaper ads we could gather some information on pricing and competition, at least for certain products. It

might also be possible in these markets to obtain copies of some franchise contracts, which could be useful in interpreting any findings.

We would expect this study to cost approximately \$30,000 and to take about one year to complete. Such a study could generate useful information on the industry. We suspect, however, that any conclusions will have to be based largely on our subjective interpretations of the evidence.

#### B. Study Two

This study would involve essentially the same efforts described in Study One, but would supplement the secondary sources of data with the collection of survey data from manufacturers and from retailers in the 3 or 4 selected market areas. We envision a sample of about 25 retailers from each of the market areas plus a manufacturing sample to include the five firms under consent decrees plus about 15 additional firms. A survey would at least in principle enable us to gather better data on pricing, profit margins, and various features of the manufacturer-retailer relationship. However, such data would undoubtedly be quite difficult to collect. The issues under study are complex and sensitive. A survey instrument would have to be constructed very carefully and must be rigorously pre-tested.

Cooperation will certainly be a problem. Manufacturers may distrust us. Retailers may be reluctant to devote any time to filling out a potentially complex questionnaire. Thus the survey would probably have to be by personal interviews rather



an by mail. We envision a study of \$50,000 to \$70,000, with the lower value possible only if a mail survey proves feasible, and a time required of roughly 18 months. Such a study would likely provide more information than Study One (although it would be subject to more risk); it should in particular provide a clear picture of the complexities in the relationship among market participants.

**D. Hearing Aids**

**Howard P. Marvel**

**Vertical Restraints in the Hearing Aids Industry\***

**Howard P. Marvel  
Associate Professor of Economics  
Ohio State University**

**and**

**National Fellow  
Hoover Institution**

**Current address:**

**Hoover Institution  
Stanford, California 94305**

**April 1981**

**\*Report prepared for the Bureau of Competition, Federal Trade Commission, as provided under contract L0605. This final report is intended to satisfy the requirements set forward in the contract as task 3, and includes in addition, a task 4 report.**

## TABLE OF CONTENTS

I.	Introduction.....	1
I.	Hearing Aids Industry Background Material.....	5
1.	Vertical Restraints Challenged by the FTC.....	6
2.	The Hearing Health Care Delivery System.....	10
3.	Economic Consequences of the Medical Aspects of Hearing Impairment.....	20
4.	Pre- and Post-Sale Services Provided by Hearing Aid Dealers.....	27
5.	Technological Progress in the Hearing Aid Industry.....	32
I.	The Economics of Vertical Restraints in the Hearing Aids Industry.....	35
1.	Vertical Restraints and Property Rights to "Leads".....	36
2.	The Pattern of Vertical Restraints.....	42
3.	Ancillary Vertical Restraints: Sales Quotas and Cooperative Advertising.....	49
4.	Suggested List Prices.....	53
5.	Price Discrimination through the Sale of Batteries.....	54
6.	Summary of the Economics of Vertical Restraints in the Hearing Aids Industry.....	55
V.	Anticompetitive Explanations for Vertical Restraints in the Hearing Aids Industry.....	58
1.	Potential Anticompetitive Effects of Vertical Restraints.....	59
2.	Evidence for the Anticompetitive Effects of Vertical Restraints.....	69
V.	Welfare Aspects of the FTC Consent Orders.....	72
1.	Welfare Judgments for the Hearing Aids Market.....	73
2.	Concluding Remarks.....	78
	Abbreviations.....	80
	References.....	82

**Addendum:**

**Task 4 Report -- Empirical Analysis of the Hearing  
Aids Market.....83**

INTRODUCTION

## Introduction

The hearing aids industry presents an archetypal case of manufacturing companies attempting to control the distribution of their products through contractual vertical restraints on their dealers. Prior to FTC actions against a number of leading hearing instrument manufactures, the dominant distribution system employed by the industry involved virtually everyone of the vertical restraints identified in the economics literature. To those who assert that such restraints are inherently anticompetitive, the enormous markup obtained by dealers -- two hundred percent and more -- indicates that actions to promote competition seem warranted. On the other hand, the nature of the industry's clientele -- predominantly the elderly, often institutionalized persons with limited opportunities to compare products or to obtain independent information on product quality -- suggests that a second approach to the interpretation of vertical restraints may have merit. This second approach is a derivative of the (now) standard economic analysis of vertical restraints. It holds that vertical restraints play a constructive role in maintaining the quality of dealer services provided in combination with the hearing instrument. Manufacturers may have wished to protect dealers from "free riding" by rival dealers of the same brand through exploitation of, for example, brand reputation established in part by the efforts of a particular dealer. According to this second interpretation, the net result of a removal of the industry's contractual restraints would have been a change in the composition of the industry's product. The new product may have sold for less, but would have been of appreciably lower overall quality than that provided under the restraints.

Each of these fairly conventional approaches to the analysis of vertical restraints has severe drawbacks when applied to the market for hearing aids.

he monopoly argument appears inconsistent with the behavior of the industry. Manufacturers imposing vertical restraints may have imposed those restraints in order to prevent entry, but if blockaded entry was their goal, they were probably unsuccessful. The chances that dealer margins may have been inflated by monopoly rents seem slim in view of the options other than hearing dealers open to hearing instrument customers, the ease of entry into the hearing dealer profession, and the reasonably substantial number of instrument makers competing for business through hearing aid dealer networks. Entry could occur and, indeed, did occur, both at the manufacturer and dealer levels. But if the monopoly argument is unconvincing, the special services argument is not particularly superior. Brand identification in the hearing instruments market does not appear to have been substantial, and little comparison shopping occurs. To the extent that reputation capital is a factor guiding consumer decisions, that capital appears to be as much dealer-specific as brand-specific and is therefore not susceptible to erosion through free riding. The restraints may have served to enhance dealer quality, but the effect must have been marginal at best, for the observed quality of service provided by dealers of vertical-restraint manufacturers was relatively low in comparison with other marketing channels. The quality aspects of the dealer services explanation for the vertical restraints in hearing aids is essentially untestable, for the counterfactual holds that in comparison with a standard of performance that the FTC's Bureau of Consumer Protection shows to be abysmal, the alternative without the restraints would have had to have been nightmarish.

A third view of the restraints is possible, one which is dependent neither on anticompetitive nor on quality maintenance arguments. This third view derives from the economist's notion that vertical restraints are designed



to protect property rights, but unlike conventional special service formulations, identifies those property rights as residing at the manufacturer level. The approach holds that the restraints are to be interpreted as arising from manufacturer attempts to create property rights to information generated by their own selling expenses but used by dealers to obtain hearing aid sales. Manufacturers advertise in national media to obtain "leads" to potential customers. These leads are assigned to dealers and are charged for by means of an increase in wholesale prices. Exclusive dealing prevents dealers from using the leads while avoiding their tie-in charge. It could be argued that the national advertising is employed to erect entry barriers, but both the industry's structure and its entry experience provide evidence which conflicts with this anticompetitive position. In addition, it is shown that the evidence commonly adduced to support the monopoly approach--primarily a post-c.o. price decline--is also implied by the property rights view. The distinguishing implication of the two explanations of the observed restraints deal primarily with sales, with the monopoly view predicting an increase in sales resulting from the erosion of monopoly prices while the property rights view predicts diminished manufacturer sales efforts and correspondingly reduced sales. The task 3 final report concludes with a brief discussion of the likely impact of the c.o.'s on hearing aid consumers. This section is necessarily preliminary, and consists primarily of caveats that must be entered when converting conclusions about the c.o.'s on the private well being of the impacted firms into assertions about the social costs of benefits of the orders.

Appended to this report is the task 4 report outlining the available data and suggesting how these data could be employed to test the various explanations for the pattern of restraints observed in the hearing aid industry. The primary

focus of the data analysis is on the argument that manufacturers of hearing aids adopted vertical restraints to keep dealers from scrimping on complementary local sales efforts and to rebate to dealers the lead charges on instruments sold solely through dealer-initiated sales efforts. While this last approach does not seem to be represented in the vertical restraints literature, the preliminary data work in the appendix suggests that it explains an important subset of the vertical restraints employed by the hearing aid manufacturers.

This report is divided into several broad sections, each of which contains numerous subsections. The first section contains background material both detailing the vertical restraints to which the FTC objected and outlining the organization of the hearing health care delivery system. Fairly detailed consideration is given to the allegations of poor service provided by hearing aid dealers and the options available to consumers. This material is provided to serve as a basis for an evaluation of the social impact of the FTC consent orders. The second section of the report presents the property rights view of the vertical restraints and includes a detailed discussion of their interrelationships. The third section presents an extensive critique of the aids market. This report also includes a discussion of related information dealing with the efficacy of leads. The conclusion reached is that these ancillary information sources are apt to be misleading and that only direct tests of the impact of the orders on sales can be expected to yield reliable conclusions.

---

**HEARING AIDS INDUSTRY BACKGROUND MATERIAL**

---

## 1. The Vertical Restraints Challenged by FTC

The cases to be analyzed in this report consisted of a series of actions brought against several leading hearing instrument manufacturers, each of which resulted in a negotiated consent order. The companies involved were (listed in order of market share -- 1970 shares in parentheses):

Dahlberg Electronics, Incorporated	(8.0%, ranked 3rd)
Maico Hearing Instruments	(6.6%, ranked 4th)
Sonotone Corporation	(5.9%, ranked 5th)
Radioear Corporation	(4.4%, ranked 8th)

These companies engaged in marketing hearing aids through highly organized dealer distribution systems, systems which were characterized by the Bureau of Competition staff as parallel. A fifth company, Beltone Electronics Corporation, employed and continues to employ a similar distribution system. Beltone was the leader marketer in 1970, with a market share estimated to be 20.4%. An FTC complaint was lodged against Beltone at roughly the same time that the cases listed above were filed, but the Beltone Corporation chose not to enter into a consent order and the case remains in litigation.

The complaint for each case summarizes the vertical restraints typical of dealer contracts employed by firms using the industry's dominant distribution system. The restraints included the following:

1. Exclusive sales territories established for each dealer. This requirement was enforced in part by manufacturers refusing to honor requests for issuance of instrument warranties submitted by dealers for instruments sold to consumers outside of their specified territories, though warranties served a second role as well.

2. Dealers required to deal exclusively in the products of one manufacturer. Exclusive dealing had been challenged by previous FTC hearing aid actions, but was still practiced by each of the respondent firms.

3. Cooperative advertising arrangements. The complaints alleged that the manufacturers provided dealers with the opportunity to participate in manufacturer-subsidized local advertising promotions. Though these cooperative arrangements are interpreted in the complaints as facilitating enforcement of the single-line dealer restrictions imposed by manufacturers, we shall see that while they did aid in this fashion, the real reason for their existence is quite different.

4. Manufacturers engaged in volume-forcing by assigning sales quotas. As Caves (1979) notes, such volume forcing may be designed to force the dealer to operate on an efficient scale, as viewed by the manufacturers. Certainly in the case of hearing aids, it will be necessary to investigate carefully the different incentive structures facing manufacturers and dealers regarding the optimum level of sales-related expenditures.

5. Restrictions on the classes of customers with whom dealers could deal. The price discrimination aspects of this sort of behavior are apparent, though it would be interesting if manufacturers sold to large commercial customers for more than the price levels set for small dealers. This condition would seem to be required if the resale restraint on dealers were to be necessary. That is, it would be odd if the demand schedule of Sears or the VA as faced by a manufacturer were less elastic than that of a small dealer.

6. Required dealers to submit names and addresses of all customers directly to the manufacturer. This rather amazing degree of manufacturer

control over distribution was enforced through a clever arrangement. Manufacturers refused to allow retailers to issue product warranties directly. To make this stricture important, manufacturers further refused to allow dealers to operate service facilities of their own, thus ruling out dealer warranties. Dealer service facilities were impracticable since manufacturers refused to sell spare parts for their instruments.

7. Suggested price lists provided. Several manufacturers provided extensive price lists for instruments and services. These could perhaps have had the effect of resale price maintenance, given the lack of information available to dealers about conditions in the hearing aids market generally. It would be interesting to know how manufacturers managed to obtain information dealing with the price lists of rivals.

8. Insisting on short-duration dealer termination clauses. Dealer agreements were subject to cancellation on thirty days notice. All hearing aids were to be resold to the manufacturer at previously specified prices.

In short, the manufacturers took steps to prevent their own dealers from competing with one another, attempted to control the performance of those dealers, and took great pains to retain control over their customers. The pattern of restrictions is potentially consistent with attempts to control dealers in order to restrict entry, as well as with the alternative explanation that manufacturers were anxious to develop and protect brand-specific reputation capital. But as we shall see, the most likely explanation is that manufacturers wished to protect their rights to profit from sales generated by their own promotional efforts.

While this distribution system characterized a number of the leading firms in the industry, it was not the sole form of distribution used. One of the firms involved in the complaints, Dahlberg, sold instruments to

Sears, Roebuck for Sears private label distribution. The second leading manufacturer (at the time of the orders), Zenith, eschewed restrictive dealer covenants altogether, and chose instead to supply instruments to all dealers it regarded as competent.<sup>1</sup> Imports, a sizeable and growing segment of industry sales were sold via the professional referral market, a separate distribution system (see below). Finally, the VA appears to have been a major consumer of instruments. These separate distribution schemes will permit bench-marking of pre- and post-consent order experience.

---

<sup>1</sup> Beltone debates this assertion, and the evidence demonstrates that Zenetron, Zenith's successor, does refuse to deal on occasion.

## 2. The Hearing Health Care Delivery System

This section provides an introduction to the various participants in the hearing aid market, describes some of the characteristics of hearing loss and the available treatments to mitigate such loss, and sketches the hearing aid dealer's training and techniques. The principal source for this discussion is a very lengthy FTC Bureau of Consumer Protection Staff Report on the hearing aid industry (BCP staff report). The BCP investigation is one of long standing and has paralleled the Bureau of Competition's and has led to several proposed trade regulation rules. Action is still pending at this writing. The staff report produced by BCP is a very extensive description of the industry and hearing loss generally coupled with a lengthy catalog of the sales practices of hearing aid dealers. For detail beyond that provided below, the reader is directed to that report and the extensive references provided therein.

A hearing impaired person has the option of receiving assistance from one of three types of hearing health care professionals: physicians, audiologists, and hearing aid dealers. It is important to understand the nature of the physician-patient and audiologist-consumer relationship in the hearing health care delivery system, for these groups represent clear alternatives to the dominant pre-C.O. system, hearing aid dealers.

Physicians. Physicians dealing with hearing problems are customarily those known as otolaryngologists, or ear, nose, and throat (ENT) specialists. It is not uncommon for their specialties to include eye problems as well. According to the American Council of Otolaryngology, there were approximately 4500 practicing otolaryngologists as of 1978, a not inconsequential number when compared to the approximately 5,000 hearing aid dealers as of



1970.<sup>2</sup> Despite the comparatively large number of specialists, prior to 1976, many hearing aid users purchased their aids without first consulting a physician. Estimates quoted by the BCP staff suggest that of some 14.5 million Americans who have hearing problems, some 10 million have not received medical attention for their hearing difficulties. Moreover, of the portion of the hearing-impaired population that purchased a hearing aid only one-fourth consulted a physician or audiologist prior to the purchase. More recently, FDA requirements that each prospective hearing aid purchaser consult a physician or formally waive such a consultation have most likely changed this situation. Nevertheless, the situation prevailing at the time of the consent order was clearly that physicians were consulted in a minority of cases. Contributing to this omission was the behavior of hearing aid sellers: of those persons with whom a hearing aid seller made initial (as opposed to referral) contact, one estimate suggests that only about three percent were referred to physicians.

Perhaps the principal reason for this low referral rate is the competing nature of medical-surgical and prosthetic (hearing instrument) treatment. Hearing aid dealers are understandably reluctant to refer patients to physicians for examination given that those patients with conductive losses most amenable to mitigation through the use of an instrument are often prime candidates for surgery capable of reducing

---

<sup>2</sup>The otolaryngologist figure is from the BCP staff report, p. 102. The hearing aid dealer figure is from the BCP staff report and is included in the complaints. The number of sales personnel was estimated as approximately 10,000. The BCP report, p. 106, puts the number of dealers at 5,600.

or removing the need for an aid. This problem will be discussed more fully below, but it is worth noting at this point that the referral problem runs in both directions. Hearing aid sellers complain that physicians are remiss in referring patients for purchase of aids. In some cases where conductive loss has been only partially remedied by medical techniques, an aid may be warranted. In addition, the widespread belief that sensorineural loss cannot be treated by an aid appears in many cases to be unfounded. Finally, in cases where surgical techniques are either risky<sup>3</sup> or offer only limited gains in hearing ability, it is not clear that the medical alternative is superior to use of a hearing instrument. The BCP staff suggests that hearing aid dealers are likely to fail to refer in many cases owing to their narrow economic interest; staff does not appear, however, to consider the possibility of parallel physician behavior.<sup>4</sup>

Audiologists. Though the term audiologist has been adopted rather broadly by hearing aid sellers, the remainder of this report will confine its meaning to that used in the BCP staff report. An audiologist will be defined to be "a university trained professional who almost always has at least a master's degree in audiology and who specializes in the rehabilitation of persons with hearing loss and associated communications

---

<sup>3</sup>Surgical techniques designed to ameliorate conductive loss may, through the attendant trauma or infection, induce sensorineural loss.

<sup>4</sup>From the point of view of the hearing-impaired person, medical treatment will dominate a hearing instrument, even if the effects on hearing performance are similar. This is because the medical treatment will often be covered under an insurance plan with a low coinsurance rate. By contrast, hearing aids are not covered by Medicare or Medicaid and are rarely paid for by private plans. The United Auto Workers contract is a major -- and lonely -- exception to this rule. Accordingly, from society's point of view, fully informed consumers will tend to overconsume physician services relative to hearing aids.

problems.<sup>5</sup> Audiologists occasionally sell hearing instruments, sometimes on a "non-profit" basis. There are approximately 3,000 accredited audiologists,<sup>6</sup> presenting a loose lower bound on the number of practicing audiologists. The same sort of conflict observed between physicians and hearing aid dealers is found between audiologists and dealers, and can be expected to intensify as more audiologists enter the business of dispensing hearing aids. Concurrently, hearing aid dealers are attempting to adopt the term "audiologist" for their own purposes: their trade association, the National Hearing Aid Society (NHAS) confers the title "certified hearing aid audiologist" on hearing aid dealers who complete a twenty lesson home study course and who possess some experience in hearing aid sales. Not surprisingly, representatives of the ASHA-certified audiologists and of the otolaryngologists take a dim view of such certification.<sup>7</sup> Hearing aid dealers respond that while audiologists may be better able to diagnose ear problems, they are ill-prepared to fit hearing instruments.

There is little substance at issue in these arguments. Audiologists are almost certainly better trained than hearing aid dealers in the medical aspects of hearing loss, and as they increase sales of hearing aids, their competence in choosing and fitting an appropriate instrument is almost certain to improve. Were it costless to do so, every hearing impaired person would be best served by first consulting with a physician, proceeding

---

ICP staff report, p. 104.

Audiologists may qualify for a Certificate of Clinical Competence in Audiology granted by the American Speech and Hearing Association (ASHA). Requirements for the certificate include a masters degree in audiology, one year apprenticeship, and satisfactory performance on an examination.

ICP report, p. 125ff.

then to an audiologist or dealer according to the referral proposed by the physician if an instrument is warranted, assuming, of course, that the physician provided appropriate guidance.

Of course, a visit to the otolaryngologist is not costless, and therefore an economic appraisal of hearing health care delivery cannot appropriately adopt the tone of the BCP staff report that high quality services -- i.e. physician or audiologist provided services -- are automatically to be preferred to service delivery initiated and carried through by hearing aid sellers. The statistics on the rather low fraction of hearing-impaired persons who consult physicians for relief bear eloquent testimony to the need for an active canvass of hearing impaired persons. Indeed, these data almost certainly underestimate the extent of the problem among the elderly, and it is to precisely that group that the sales efforts of hearing aid sellers are directed.<sup>8</sup>

Hearing Aid Sellers. The companies with which the FTC negotiated consent orders each concentrated heavily on the development and maintenance of extensive dealer networks.<sup>9</sup> Accordingly, considerable effort must be

---

<sup>8</sup>According to the BCP staff report, p. 109, between 50 and 70 percent of hearing aids are sold to persons over 65 years of age. For the leading case-finding marketer, concentration on sales to the elderly is considerably greater than this. Beltone reports that in excess of 85% of its sales are to persons over 55.

<sup>9</sup>The industry's leader, Beltone, is almost totally dependent on its dealer network. Indeed a Beltone brief remarks that "Beltone has been strikingly unsuccessful in obtaining sales from professional referrals." This lack of success is understandable in the context of the property rights argument to follow, for audiologists should resist paying the high price of Beltone aids, a price reflecting the value of leads to new customers that are not provided to audiologists.

devoted to characterizing the qualifications, mode of operations, and performance of such dealers. This section attempts to provide these characterizations. The sources employed include documents entered as evidence in the proceedings terminating in the consent orders, the FTC Bureau of Competition (BC) staff report in that case, FTC and Beltone briefs prepared in April, 1980, and the BCP staff report.<sup>10</sup>

We begin with an outline of hearing aid seller practices that emerges from the BCP staff report. The picture of hearing aid dealers that emerges from that document is uniformly dismal; both in an absolute sense, and more particularly in comparison to the performance of the alternatives, principally dispensing or prescribing audiologists. The BCP staff represents hearing aid dealers as often unsavory high-pressure salesmen much more interested in selling their aids than in the technical aspects of satisfactory instrument performance or the medical consequences of hearing impairment. This uniformly negative picture is certainly drawn in an effort to buttress staff's proposal for a t.r.r., but that does not render it inaccurate. Indeed, support for aspects of BCP staff characterization is forthcoming not only from testimony obtained by BCP, BC, HEW, and congressional investigations, but also from internal company documents. Single line dealers of leading American companies were under considerable manufacturer pressure to sell aids.<sup>11</sup> The training manuals available

---

<sup>10</sup>The Beltone material is relevant because Beltone was named as respondent in the original action, because Beltone has developed its vertical restraint in very interesting ways in response to FTC and FDA proceedings, and because the systems outlawed by the consent orders were very similar to that which Beltone employed and continues to employ.

<sup>11</sup>Each of the companies was charged with imposing sales quotas. Beltone argues that its quotas were not enforced through dealer terminations

From two of the companies are divided relatively equally between the technical and sales aspects of operating a hearing aid dealership. The evidence suggests that hearing aid dealers are predominantly salesmen first and technicians second. This conclusion is compelled both by their training and by the nature of their business.

Several conclusions emerge from the BCP staff report in regard to the technical preparation of hearing aid sellers. These include:

- (a) Hearing aid sellers receive training in hearing testing which is several orders of magnitude below that to which audiologists are exposed. The courses which dealers can take are regarded by physicians and audiologists as being of inferior content, and even those courses are attended by only a portion of the dealers. Individual manufacturers provide training programs of varying strength, but again, these programs fall far short of audiology education."<sup>12</sup>

---

<sup>1</sup>(continued) despite the fact that only about one-half of Beltone's dealers exceeded 75% of their assigned quota. "Of the 159 dealers terminated from 1973 to 1977, only twenty-three were terminated for lack of market penetration." This evidence is not particularly convincing for at least two reasons. First, Beltone dealerships can be valuable properties, as evidenced by the selling prices advertised in Hearing Instruments. The threat of termination for lack of market penetration was real: twenty-three terminations is equivalent to about one of every twenty Beltone dealers. But beyond this point, the arguments to follow will indicate that enforcement of sales quotas is a rational, profit-maximizing technique for a company in Beltone's position. They would be foolish not to impose quotas, and whatever the charges leveled against Beltone, they have not included a lack of business acumen.

<sup>2</sup>Beltone claims to be an industry leader. By the end of 1979 fewer than one-fourth of Beltone's dealers had completed training sufficient to provide them with a complete copy of the Beltone technical training manual. The requisite training amounted to nine days of seminars.

- (b) The task of assessing hearing loss is customarily separated from the problem of fitting an appropriate aid. The disparity between dealer and audiologist is smaller in fitting than in testing less due to the competence and training of the dealer (learning-by-doing or trial-and-error appear common) than to the lack of audiology training in this area.

Hearing aid sellers are not typically skilled, trained professionals but are instead relatively poorly educated (high school graduate or less), poorly trained (formal technical training measured in hours rather than in days) highly motivated sales people. The picture that emerges from the BCP staff report, the Beltone record, and the c.o. evidence is one of dealers whose sales practices are much more finely honed than their technical prowess.

The sales techniques employed by the respondents in the FTC complaint center around various forms of lead generation. As we shall see, the principal result of the FTC orders has been to shift a good portion of the lead generation effort from manufacturers to dealers. In so doing, the efficiency of the lead generation process has thereby been reduced, leading to a substitution away from lead-generating firms toward manufacturers more successful at cultivating professional referrals through detailing audiologists and physicians.

Lead generation at the dealer level quite often involves working the dealer's existing clientele to obtain friends, relatives, etc., of current customers who may be experiencing hearing difficulties. While the BCP staff appears to find such practices remarkably unseemly (p. 142 ff), they would appear to be necessary in order that the rather dispersed

and sometimes isolated potential clientele of hearing aid dealers can be reached. In addition, to the extent that dealers must rely on their existing customers for referrals, those dealers must pay considerable attention to post-sale services designed to promote satisfied customers. Although the BCP staff has demonstrated numerous inadequacies on the part of dealers, these pale beside those which could be anticipated if referrals are unimportant.

Beyond business generated from the dealer's existing clientele, new business is generated through local advertisements from promising everything from free hearing tests to free bibles to free chickens (!), to those who agree to consult with a dealer. The techniques are remarkably imaginative and are often suggested and occasionally supported by manufacturers.<sup>13</sup> Free "clinics" and door-to-door "free hearing tests" are apparently favorite inducements. The companies accused of promoting such tactics are predominantly those listed as respondents in the FTC complaint with the addition of Audiovox.

Perhaps the most remarkable aspect of the BCP staff discussion of lead generating techniques is the absence of references to significant manufacturer efforts to generate leads. With the very significant exception of Beltone, lead generation in the post-consent-order-era appears to be dealer based. This situation can be contrasted to that prevailing prior to the consent orders when the leading domestic manufacturers each engaged in substantial lead generation activities. The FTC orders removed the

---

<sup>13</sup>Some of the techniques are as appropriate to selling aluminum siding as to marketing hearing aids: "... a number of ads [indicate] that one or another hearing aid is being "field tested" and that "volunteers" are needed to participate in these tests." BCP staff report, p. 151.



property rights to such leads that the manufacturers possessed contractually in consequence of their elaborate pattern of vertical restraints. As will be seen below, there is clear evidence that the FTC action resulted in lower prices charged by manufacturers to dealers, but that those lower prices were accompanied by a decline in the "services" provided by the manufacturers, principally leads. But before turning to a direct economic analysis of the vertical restraints, it is necessary to complete the discussion of the environment within which the hearing instrument industry operates, first through consideration of the technical aspects of hearing loss in the next section, and followed by a discussion of the technology of hearing instruments.

### Economic Consequences of the Medical Aspects of Hearing Impairment

The analysis of vertical restraints to be presented below is developed according to the objectives expressed by the BC staff in developing the complaint against the pattern of restraints typifying the industry. These objectives dealt with the competitive advantages possessed by manufacturers involved in lead generation. Our analysis predicts that the consent orders could have acted to impair substantially the ability of these manufacturers to compete, benefiting their competitors (principally importers) and the competitors of hearing aid dealers (principally audiologists) and reducing the ability of hearing aid dealers to reach the hearing-impaired public. From the perspective of the BC's objectives, its actions may well have been unproductive. This conclusion will be based on welfare judgments derived from demand curve for aids. If a consumer receives information from a manufacturer which induces him or her to purchase an aid, it will be assumed that the price the consumer pays is less than or equal to the value of the aid to the consumer. The adoption of this viewpoint is almost a necessary requirement if progress is to be made in an evaluation of the industry's distribution arrangements.<sup>14</sup> It nonetheless ignores a range of problems posed by the special characteristics of the hearing impaired population and the sources and consequences of hearing loss. This section considers briefly the medical aspects of hearing impairment in order to chart the dimensions of the problems to be ignored below.

---

This assumption does not mean improvements in the system are unimaginable. For example the FDA's new requirement of a mandatory physician screening prior to the fitting of an aid could lead to a time-of-sale demand curve which more closely approximated the hearing aid consumer's willingness-to-pay measured after some amount of experience as a user. Presumably that ex-post demand curve is what BCP and FDA implicitly have in mind for use in welfare judgments.

The point of this section is to indicate that the system attacked by BC for competitive reasons was exactly that which was concurrently and continues to be the focus of a BCP effort to obtain a TRR to control deceptive sales practices. That is, BC's action may have had the consequence of furthering BCP's objective of altering service delivery in the hearing health care market. It is therefore of some importance that the BCP's goals be evaluated in order to assess fully the impact of the consent orders. In order to do so it is necessary to consider the nature of hearing loss and the benefits potentially available from hearing instruments. The discussion of technical points which follows is derived from the technical appendix to the BCP staff report, to which the interested reader is referred for a fuller discussion. Our purpose here is simply to note the points at which the medical environment of the hearing aids industry conditions its economic performance.

#### Technical Aspects of Hearing Loss

The BCP report indicates that hearing impairments can be classified as falling into one of five basic categories. Virtually all of the impairments which can be mitigated through the use of a hearing aid fall into one of two of these categories, conductive loss and sensorineural loss. Conductive loss results when some portion of the ear structure devoted to gathering and transmitting sound vibrations fails to perform in an adequate fashion. Conductive losses can result from blockages of the outer ear due to, for example, impacted cerumen (ear wax) or swelling due to infection, or from an impairment of the tissue transmitters of vibrations, the tympanic membrane (ear drum) and the ossicular chain

nes of the middle ear). While the nature of conductive loss is one mechanical failure at some point in this chain, sensorineural loss, as the name indicates, a nervous system, or electrical, disorder. The vibrations reaching the inner ear must be converted to nerve impulses for transmission to the brain. Should the nerve fibers in the inner ear fail to accomplish this conversion satisfactorily, the resulting loss is termed sensorineural. Under this heading is included presbycusis, a generic term used to describe the loss of hearing due to nervous tissue deterioration accompanying the natural aging process. Not surprisingly, sensorineural hearing loss is often found in conjunction with conductive losses, especially among the elderly clients typically identified by the hearing aid dealers.

The two medical aspects of hearing loss bearing most directly on the choice of an appropriate treatment are first, that hearing instruments and medical-surgical treatments are substitutes in the treatment of conductive losses and second, that both conductive and sensorineural losses, as well as central loss (brain or eighth-nerve impairment) may be symptomatic of otherwise hidden but serious and potentially treatable disease conditions. The availability of the substitute treatments is sometimes suggested to pose a conflict of interest dilemma for sellers of aids, for while individuals with conductive losses can generally adjust to a hearing aid with minimal difficulty and can expect the aid's performance to be quite satisfactory, the surgical option often does away with the need for any amplification whatsoever, and falling short of that, reduces the power and cost) of the requisite aid. In view of this possibility, it would indeed be surprising if hearing aid dealers referred all potential customers

to physicians for screening prior to fitting hearing aids in the absence of some legal requirement to do so. The conflicting interests of hearing aid dealers and physicians could thereby lead to some, perhaps many cases of hearing-impaired persons failing to receive treatment for the disease conditions underlying their hearing difficulties.

Some indication of the magnitude of the failure to refer problems is provided by a study conducted by an audiologist of case histories of 2369 individuals who has otosclerosis, a conductive loss correctable through surgery. Of the 1500 individuals who had seen a hearing aid dealer before consulting an otologist, 98.86% had been sold a hearing aid without being told to seek medical attention. Of course, these data need to be interpreted carefully. In the case of individuals with conductive loss, hearing aids often provide satisfactory performance.<sup>15</sup> The BCP staff conclusion based on this sort of evidence is particularly forceful: "The hearing impaired must be seen by a physician before purchasing a hearing aid to make sure that the hearing loss is not treatable by medical and/or surgical means and that it is not a sign of a serious underlying disease" (emphasis added).<sup>16</sup> Is this a correct argument from an economic standpoint? The answer is that it is at a minimum incomplete, for it does not consider the costs involved in such a policy prescription, costs which are likely to be simultaneously subtle and substantial in magnitude.

---

<sup>15</sup>BCP Staff Report, p. 202.

<sup>16</sup>BCP Staff Report, technical appendix, F-12. Of course, given the FDA's rulemaking, the point is moot insofar as FTC policy actions are concerned.

The principal cost of mandated referrals arises from their impact on the profitability of the lead generation system. Leads will be sought as long as the expected net revenue from hearing aid sales generated by a lead exceeds the cost of obtaining a lead. Mandatory referrals reduce the expected profitability of lead first by increasing the probability that the potential hearing aid user will opt for a medical alternative to a hearing instrument and secondly by inserting the physician as a potential source of information about the availability of hearing aids from audiologists or dealers other than the one generating the lead. Not surprisingly, then, the quantity of lead generating expenditures can be expected to fall as a result of the referrals. The problem is to imply that the property rights of the lead's developer are significantly diluted as a result of the policy. Evidence in the Beltone record indicates that companies that continue to emphasize lead generation have become increasingly unsuccessful, losing sales to professional-referred-independent marketers (principally importers) and companies such as Maico that have altered their focus away from lead generation and toward professional referrals.<sup>17</sup>

The BCP staff report clearly finds the increasing reliance on audiologist and physician referrals to be desirable, but the question which must first be answered is: how many potential beneficiaries of hearing instruments (and/or medical attention) will fail to receive any assistance because of the decline in lead generating effort. It is implausible to assume that hearing aid dealers manage to sell instruments to individuals who otherwise would have consulted a physician.

---

See Beltone's "Proposed Findings of Fact of Respondents ...", April 25, 1980, p. 75 ff.

The BCP report properly alludes to the lack of market penetration as a major failing of the industry.<sup>18</sup> Moreover, the very magnitude of the dealers' selling efforts and the difficulties they encounter in inducing persons experiencing hearing difficulties to sample the benefits of an instrument bear witness of the difficulties associated with reaching the impaired population. The choice facing policymakers appears therefore not to be one between comparatively low quality care provided by dealers and the higher quality services of audiologists and physicians, but rather one between low quality care and no care at all. Viewed in this light the case for requiring physician referrals seems hardly so clear cut.<sup>19</sup>

The costs imposed by the operation of the lead generation marketing system are smaller than the apparently illusory foregone opportunity of the hearing impaired to contact high-quality hearing specialists. That is, while physician referrals may be desirable, the choice available to policymakers may instead be between hearing aid dealers and no mitigation at all. They are instead limited to costs of two sorts. First, the BCP report suggests that clear-cut consumer fraud is not uncommon in the hearing aid market. Given the nature of lead generation and the attendant high pressure tactics it would indeed be surprising if some fraud did not exist,

---

<sup>18</sup>Admittedly, BCP regards such allegations of low penetration with considerable, and to some extent warranted skepticism. There appears to be a tendency on the part of dealer and manufacturer spokesmen to regard every hearing-impaired individual as a candidate for a hearing instrument, a gross overstatement. Nevertheless, BCP reports that at least 50-60% of those with hearing impairments can benefit from instruments. (BCP, pp. 96 ff)

<sup>19</sup>BCP Staff's argument is analogous to the arguments in support of licensure. Indeed, BCP's justification for action appears to be that existing state licensure regulations are insufficiently rigorous (BCP Staff Report, pp. 221 ff).

ough the repeat-purchase<sup>20</sup> and customer-supplied-lead motives for maintaining a satisfied clientele will tend to limit such fraud.

A second cost results from the possibility that a hearing instrument may give performance so satisfactory that it obviates the need of the customer to contact a physician by masking hearing-impairment as a symptom of a more serious ailment. But once again, the issue is not whether a physician examination would be preferable to dealer examination, but rather the number of persons who would have consulted physicians had their hearing problems not been mitigated. Moreover this cost must be balanced against any referrals which do occur as a result of the hearing aid dealer encountering ear problems of a serious nature.

---

<sup>20</sup>The evidence on repeat purchases is discussed below.



#### 4. Pre- and Post-Sale Services Provided by Hearing Aid Dealers

As noted in the introduction, one of the principal arguments for allowing manufacturers to impose vertical restraints is that such restraints may encourage dealers to provide a more desirable bundle of ancillary services than that which would be made available in the absence of the restraints. This section considers the nature of the special services provided by dealers in order to assess whether those services require the property rights protection of vertical restraints. The services at issue are complex and are inherently difficult to perform to the customer's full satisfaction, thus accounting for the large number of complaints lodged against sellers of aids. They do not, however, pose substantial property rights or "free rider" problems, as evidenced by the fact that at least the pre-sale services involving testing for hearing loss are available separately from audiologists,<sup>21</sup> while the presale service of fitting an aid is essentially indivisible from the purchase of the aid itself. This section is designed to show that quality-of-service monitoring is quite difficult and that many disgruntled consumers are to be expected even if a dealer is both competent and reputable.

The central characteristic of hearing aid fitting for our purposes is its imprecision. The BCP Staff Report asserts that "no hearing and evaluation procedure even remotely approaches the efficiency or accuracy of analogous procedures for correcting visual defects." The testing procedure must identify the range of signal strength that the hearing-impaired person can hear without discomfort (often a narrow range owing

---

<sup>21</sup>The provision of these services by audiologists is prima facie evidence that property rights are enforceable, and that dealers could, at least in principle, unbundle hearing testing and instruments.

to the nature of sensorineural loss) and must determine the customer's speech discrimination ability. The evaluation is typically carried out by the hearing aid seller through the use of an audiometer (essentially a signal generator) and a master hearing aid.<sup>22</sup> Once the preliminary testing is accomplished, several sample aids are tried. Though it might seem that through this sampling an appropriate decision as to the model prescribed could be reached, the task is not so simple. Hearing aids are in practice experience goods that cannot be evaluated fully until the user has become accustomed to their performance and has encountered difficult hearing situations (restaurants, classrooms, churches). In addition, the performance of the aid as finally fitted will often differ from the trial aid as a result of adjustments made by the dealer (principally "venting" - drilling holes in the earmold).

The net effect of all these variables in the fitting procedure is to render the whole process highly inexact. As a result, there is no agreement as to the appropriate procedure to be employed, nor on whether hearing aid sellers or audiologists provide superior service. What is clear is that the procedure adopted by a particular seller is highly idiosyncratic. Dealers can be expected to differ markedly in their ability to provide satisfactory performance. Moreover, given that hearing instruments are inherently incapable of restoring hearing to "normal" levels, some consumer dissatisfaction is to be expected even by the most

---

<sup>22</sup>Testing practices vary widely within and especially between the various classes of hearing specialists. Dealers tend to use master aids while audiologists and otologists do not. Otologists, on the other hand, often employ tuning forks, devices which appear to be inferior to audiometers.

ethical and capable of sellers. Accordingly, dealer and brand reputation can be expected to provide important signals to hearing aid customers. Manufacturers can be expected to take elaborate precautions to protect their brands' reputations, but can expect to experience difficulty in monitoring dealer performance owing to the difficulty of separating customer complaints due to dealer malfeasance from those due to failure of a properly fitted instrument to meet unrealistic performance expectations.

There can be little doubt that the characteristics of the hearing impaired population, the difficulty of assessing aid performance in the dealer environment, and the imprecise nature of the fitting process have combined to produce a market susceptible to "sharp practices" by dealers. Dealers attempt to represent themselves as hearing professionals and customarily refrain from identifying themselves as sellers. Indeed, many dealers represent themselves as "certified hearing aid audiologists" a practice which the BCP staff report finds questionable at best: "It is important to point out that the amount and quality of the education and training that is required for certification by NHAS (the dealer trade association) does not even begin to approach that required for a graduate degree in audiology from an accredited university or college." Staff's concern with the integrity of the term "audiologist" is no doubt commendable when viewed from the perspective of graduates of audiology programs.

Beyond these attempts to attach real or imagined credentials to themselves, sellers (and manufacturers) tend systematically to promise performance beyond that feasible with any instrument. Such representations include claims that "normal" or "natural" hearing is possible, that usage will retard progressive hearing deterioration, and that "new" aids are

ailable with markedly improved performance. The BCP report documents the care the inflated claims typifying the industry's advertising. markably, the patently false claims made by manufacturers include not ly "experience" characteristics, but also "search" characteristics. ny manufacturers promote their products as "invisible" or "concealed."

is difficult to regard these claims as harmful since they are easily ecked by the customer prior to purchase. They do, however, contribute the low repute of the industry generally and suggest that market or vernmental regulations can be expected to arise to attempt to cope with me aspects of the problem.

Beyond these direct consumer services -- testing and fitting-- and e possibility that local dealers need protection of their dealer-generated t brand-specific reputations, there is one other type of "service" or set which dealers could wish to have protection. Dealer's local pro- tional expenses -- advertising, clinics, and the like -- could lead brand identification by consumers (as opposed to dealer identification) d could therefore motivate manufacturers to establish exclusive territories, ch as Sylvania did for its televisions. This possibility cannot be entirely scouted, but should not be given excessive weight for two reasons. rst, the fear of rival dealer free-riding could explain exclusive terri- ries, but it does not lead readily to an explanation for the remaining nd varied) restraints imposed in this market. Second, a large portion dealer sales effort is, in fact, dealer specific. "Free clinics," ree demonstrations," in-home sales and "prospecting" all lead to private formation. Only local advertising expenditures present a problem, and en then the chances of free riding can be reduced at little cost either

by featuring the dealer, not the brand, or by incorporating a self-addressed mailer in the ad. Some manufacturers have attempted to maintain Sylvania-style exclusive territories in the wake of the consent orders, indicating that free riding may be something of a problem in the hearing aid market. It simply seems not to have been the principal determinant of the pattern of restraints observed.

In summary, this section shows that while manufacturers may wish to monitor dealer quality, the task posed by that desire is difficult indeed. Moreover, though substantial "special services" are required in the provision of hearing aids, in most instances there do not exist free-rider effects. Because hearing aid fitting is an idiosyncratic process not currently amenable to strict formalization, it is unlikely that a hearing aid customer could obtain a fitting from one seller and then purchase an aid separately from another. The explanation of vertical restraint thus does not derive from the special services provided by dealers.

## 5. Technological Progress in the Hearing Aid Industry

Most hearing aids are air conduction, as opposed to bone conduction, devices designed to collect, amplify, and transmit to the tympanic membrane all or part of the sound spectrum. Aids must be designed in such a way to avoid amplification to painful levels, either through peak-clipping or through automatic gain controls. For appearance reasons, small, in-the-ear or easily concealed devices are preferable, but the size of the device is limited by difficulties in controlling feedback in small devices and power source limitations.

The nature of technical progress in the industry has been a pattern of evolutionary, rather than revolutionary development. But while the basic design has not changed markedly over the period under study, advances in miniaturization and feedback control have changed markedly the types of aids sold as well as the attractiveness of aids to the consuming public. [Table 1] reports trends in the sale of various types of aids. It appears that the rapid growth of in the ear aids observed to 1977 has stabilized, suggesting that while considerable changes occurred between 1973 and 1977, the technological improvements which presumably lead to those changes have been exhausted.

The shift in technology which occurred subsequent to the negotiation of the consent orders may tend to confuse inferences concerning the effect of the orders on market shares, particularly if the lead generating companies tended to be slow to adopt new technology.<sup>23</sup> This factor should serve as a caution, but is likely to be impossible to correct for. One might speculate that it is most important as an issue leading to differential experience

---

<sup>23</sup>The FTC "Complaint Counsel's Post Trial Brief" in the Beltone case makes his allegation in regard to Beltone (p. 40).

TABLE 1  
Trends in Hearing Aid Sales

Type of Fitting	Year					
	1963	1973	1975 <sup>1</sup>	1976 <sup>2</sup>	1977 <sup>2,3</sup>	1979 <sup>3</sup>
Body Aids	20.0	8.6	5.6	4.3	3.0	3.3
Eyeglass Aids	34.5	23.5	16.5	15.3	10.0	7.5
Behind-The-Ear Aids	43.4	65.6	65.9	59.4	56.2	58.4
In-The-Ear-Aids	2.1	2.2	15.3	21.0	30.8	30.8
CROS-Type Aids	-	5.6 <sup>4</sup>	3.0 <sup>5,6</sup>	3.1 <sup>5,6</sup>	3.5 <sup>5</sup>	NA

Source: BCP Staff Report, p. F28, except 1979 from Hearing Aid Journal at 6 (November 1979), HIA sales and nonmembers reporting.

1. From Hearing Aid Journal at 6 (November, 1976) HAIC sales only.
2. From Hearing Aid Journal at 6 (November, 1977) HAIC sales only.
3. Refers to first 6 months only.
4. Includes both ear-level and eyeglass versions.
5. Includes CROS and BICROS aids only.
6. Figures extrapolated from ear-level aid data.

of import and new entrants (Starkey, etc.) in comparison to lead generating manufacturers but may have had a smaller impact within the set of lead generating companies.



---

THE ECONOMICS OF VERTICAL RESTRAINTS  
IN THE HEARING AIDS INDUSTRY

---

### 1. Vertical Restraints and Property Rights to "Leads"

The economic explanation for the vertical restraints imposed by the hearing aid manufacturers is straightforward, though it does not seem to have appeared in the literature. Because of the difficulty of targeting local advertising to the hearing impaired, advertising designed to identify potential hearing aid wearers is, at least in part, most efficiently carried out on a national basis. Accordingly, national manufacturers provided local hearing aid dealers with two products, the hearing aid instrument itself and a package of "leads," potential customers obtained as a result of national advertising. The difficulty facing a manufacturing firm was one of determining how to protect its property rights to those potential customers. If a manufacturer does not receive compensation for services provided, it is obvious that the manufacturer will not long continue to provide such services. The purpose of the control exerted by manufacturers over their dealers was simply to ensure that the dealers could not avoid paying manufacturers for customer leads.

Given that the firm is providing these services (leads) to its dealers, the question facing it is how best to charge for them. The most straightforward option is simply to include the cost of the services in the cost to the dealer of the hearing instrument. The logic of this approach is obvious: instruments and the leads facilitating the sales of those instruments are close complements, similar to or perhaps closer than shoes and shoelaces. Selling them in a bundle comes quite naturally, just as shoes and shoelaces are marketed together. The difficulty of charging one price arises when dealers have the option of purchasing

alternative instruments from other manufacturers, instruments whose price reflects the marginal cost of production but not the cost of leads. If the dealer receives lead information irrespective of his/her sales of aids, he/she will have a powerful incentive to substitute alternate (cheaper to the dealer) instruments for those of the manufacturer providing (and charging for) the lead. Accordingly, the manufacturer must contract to prevent such substitution, necessitating the vertical restraints.

Several characteristics of the hearing aids industry are particularly relevant in assessing the manufacturing firm's ability to generate and protect its leads. In order to make it worthwhile to generate the leads at the manufacturer level, as opposed to relying on dealers to develop their own clientele through exclusively local promotions, there must be significant advantages associated with national advertising media. Lead generating advertising is primarily magazine advertising. The advantages of magazines are two. They can be targeted fairly directly at the elderly, with less waste than, say, local newspapers or, to a lesser extent, the electronic media. The second advantage of magazine advertising -- an advantage vis a vis the electronic media, is that a pre-addressed reply card can be included in the ad, to be mailed back directly to the manufacturer. These cards obviate the need for brand recognition by consumers, apparently an unlikely prospect. Evidence of national advertising's importance to Beltone is provided by its advertising budget. Approximately 90 percent of Beltone's advertising budget is devoted to lead advertising. National lead advertising primarily magazines, accounted for 60 percent of this budget, 30 percent was devoted to direct mail, and the remaining

10 percent went to cover local newspaper advertising. Accordingly, by far the largest portion of the advertising budget went to advertising options not available to local dealers.<sup>1</sup>

Once leads were generated, the manufacturers were faced by the problem of protecting their stake to the sales produced by dealers "prospecting" those leads. At this point, a second important characteristic of the hearing instrument industry came into play, namely, the existence of a set of hearing aid manufacturers to whom dealers could turn for "bargain" instruments, i.e., instruments sold without manufacturer services such as leads and priced accordingly. The consent order record indicates that Electone, later, Nu Ear, and a number of bargain imports were available to dealers at prices substantially below those charged by the leading hearing aid manufacturers. These instruments, known in the industry as "Squeal-Tones" were apparently widely available to hearing aid dealers.<sup>2</sup>

Two caveats need to be entered at this point. The first is that while bargain imports were available, such aids should not be confused with imported instruments generally. Leading importers operate through the audiologist/otolaryngologist referral market. These importers "detail" professionals, employing salespersons in a fashion analogous to pharmaceutical detail men. The prices of imported instruments marketed through professional

---

<sup>1</sup> Representative magazines in which Beltone's advertisements appeared included National Enquirer, TV Guide, Reader's Digest, Family Weekly, Catholic Register, Old Farmer's Almanac, 50-Plus, V.F.W. Magazine, National Observer, Baptist Standard, and Saturday Evening Post. See Beltone PTB, p. 44 ff.

<sup>2</sup> Dahlberg testimony, at 18702. Dahlberg characterized these instruments as being "loft product(s) of lesser quality" though his comments did not refer to the above-mentioned manufacturers directly. Neither is it necessary to the argument that they be lower quality than the products of Dahlberg, et al. The BCP staff report does not single out secondary brands such as Electone for criticism.

referrals thereby must reflect such selling expenses that detailing induces audiologists and physicians to prescribe by brand or model, the property rights problems of lead generating producers are avoided and the need for vertical restraints by importers on dealers is removed. The importers choosing to detail physicians and audiologists should be expected to prefer multiline, directly competitive dealers over any sort of restricted distribution network.

The second caveat concerns the success of Electone and similar firms in the post-order environment. Though Electone assisted the Commission staff by providing testimony and price data, the company would not necessarily benefit in the wake of orders. Prior to the orders, Electone was in the position of benefiting from marketing efforts that it had not paid for. Had that marketing effort continued unabated, the increased access of Electone would clearly have led to an increase in its sales. In fact, the prospect of that very sales growth should have led to reduced marketing efforts and concomitant price reductions by consent order firms. The Beltone record suggests that this is precisely what did happen in the case of Dahlberg. Accordingly, one would expect any benefits accruing to Electone as a result of the consent orders to have been of short duration.

Other evidence from the records of the consent orders and of the Beltone case supports the view that manufacturers faced a difficult task in safeguarding their property rights to the leads generated by their advertising. The consent order includes a number of instances of dealers terminated for carrying a bargain line of aids -- principally Electone, and later, Nu Ear. Given that a single-line dealership was a valuable economic asset, dealers had a substantial incentive to conceal from

manufacturers their dealings with bargain instrument suppliers. Moreover, since the sales of hearing aids by dealers were primarily in-home, there is reason to expect that such concealment would not be particularly difficult. Corroborating evidence is provided by Beltone's post-trial brief, wherein Beltone argues that it did not and could not require Beltone dealers to handle Beltone products exclusively.<sup>3</sup> Beltone's complaints are no doubt overstated on this point.<sup>4</sup> The evidence suggests that chiseling on the property rights to leads was a serious problem, requiring other measures -- additional restraints -- to allow those rights to be enforced.

One final characteristic of the hearing aid industry is relevant to this assessment of the difficulty of enforcing property rights to leads. Both BC and the BCP staff reports emphasize that there is little possibility of comparison shopping by the elderly hearing-impaired persons typical of the clientele of hearing aid dealers. For their initial purchase, branding is probably not nearly so important as the recommendation of the hearing aid dealer. There is little in the record to suggest that hearing aid dealers would be compelled by customer pressure to provide the brand of instrument named in the advertisement generating the initial lead.

---

<sup>3</sup>See Beltone PTB at 6 ff. Beltone's evidence consists of information concerning significant sales by rival firms to Beltone dealers. In several cases, the sales were probably generated by referrals, and so are not directly relevant to the lead argument. Starkey, Oticon, Siemens, and others sold aids to Beltone dealers, but as the prices charged by these companies should have reflected the value of the detailing-generated referrals, theirs were hardly the sort of instruments that a Beltone dealer would want to substitute, were he free to do so. Only the Nu Ear sales are directly relevant.

<sup>4</sup>Complaint counsel's response to Beltone is compelling on this point (BIA, p. 16 ff). Beltone should have (by our argument) and did (according to complaint counsel) seek to enforce its exclusive dealing arrangements. They were perhaps not fully successful in doing so, but certainly Beltone overstated its case. Electone would not have cooperated so vigorously in the development of FTC cases had not exclusive dealing been reasonably effective.

In summary, the evidence from both the pre- and post-consent order experience suggests that dealers of lead generating hearing aid manufacturers had both the incentive and the opportunity to avoid compensating the manufacturers for leads by substituting bargain brands for those priced to reflect the lead value. By preventing manufacturers from enforcing vertical restraints designed to minimize this substitution, the FTC's consent orders impaired the ability of lead generating firms to compete in the marketplace. This analysis predicts that in the wake of those orders,

- a) Market penetration of hearing instruments generally should have fallen as lead generating activity declined.
- b) Even allowing for the smaller overall sales of hearing aids, the share of lead generating companies should have fallen.
- c) The wholesale prices of lead generating companies should have fallen relative to those of other companies, reflecting the reduced services. The effect on retail prices is ambiguous.
- d) Advertising expenditures by such companies should have declined, especially elderly-targeted national media advertising.

These predictions follow from the assertion that the FTC challenged vertical restraints were essential to the enforcement of manufacturer property rights to leads, and that those leads were significant enough for their absence to have affected sales appreciably. The next section considers the property rights protection provided by the restraints. Whether the leads themselves were an important contributor to sales is fundamentally an empirical question turning directly on the sales figures, though some indirect evidence in the record suggests that leads were not

of central importance. This evidence is discussed in the accompanying task four report in conjunction with a discussion of direct tests of the argument presented above using sales figures.

## 2. The Pattern of Vertical Restraints

The argument presented above begs at least two questions. The first question is why lead-generating manufacturers did not simply opt for an alternative system of charging for leads. The most obvious system would involve simply billing dealers for each lead provided, negating the property rights problem inherent in the tie-in sales. The second question is why the pattern of vertical restraints chosen was as complex as the one observed. The argument above suggests exclusive dealing restrictions but does not seem to imply either the exclusive territories or the warranty restriction employed by the manufacturers. Though these two questions are seemingly unrelated, the answer to each stems from a common source, and they accordingly are both considered in this section.

Both the BCP report and the Beltone case brief suggest that leads provided to dealers often do not result directly in sales, but instead place the dealer in a position to identify an expanded set of potential hearing aid users. The BCP discussion of industry sales practices is particularly graphic in its depiction of how this "prospecting" occurs (BCP report at 142 ff). Moreover, the return to a successful hearing aid lead, one resulting in a sale, accrues not only at the time of that sale, but also when repeat sales are made to the same customer or referrals to hearing aid friends and relatives are productive. Repeat sales are indeed an important consideration: though the working life of an aid may approach 10 years, its effective life, according to the Hearing Aid Journal (November



1979 at 6) is closer to 3.5 years.<sup>5</sup> By charging a fixed price for each aid and by providing leads free of charge, i.e., charging for the lead as a part of the instrument price, the manufacturer assumes the risk associated with the leads provided.

The problem with supplying leads to dealers not under strict control is one of monitoring the actions of those dealers to ensure that they do not misappropriate the leads for their own use. Were the leads to be sold directly, the monitoring problem would still exist, but in reverse, for then the dealers would be required to monitor the manufacturers with whom they dealt. Moreover, the risk of a series of leads not resulting in sales would be transferred by means of a fixed price lead contract from manufacturers to dealers, almost certainly a suboptimal move. Manufacturers are in a position to diversify the risk of unproductive leads across dealers. Therefore even were the attitudes toward risk of dealers and manufacturer identical, the risks of failed leads would best be borne by the manufacturer. It is important to note that the risk associated with the purchase of a particular lead would be substantial. The lead price would need to reflect the expected present value of not only current sales generated by the lead, but also of the replacement sales occurring in future years. Clearly, the variance of the outcome associated with a lead would be substantial. In addition to the need to assume this risk, dealers would need to monitor lead quality to ensure

---

<sup>5</sup>Effective life is shorter than mechanical durability particularly among users suffering from presbycuses, a progressive hearing loss suffered by large numbers of the elderly customers so favored by hearing aid dealers.

that the leads were generated in ways likely to yield the intended benefits, a task of considerably less importance if leads were charged for as part of the instrument price.<sup>6</sup>

It appears, therefore, that the long payout period and uncertainty attached to leads will make it considerably more efficient for manufacturers to bear the risks associated with leads than for dealers to acquire that risk through a fixed price lead contract. This same argument explains why manufacturers entered into elaborate warranty restrictions in an effort to acquire names of the customers of their hearing instruments. The manufacturer's investment in leads yielded dividends not only on the initial sale but also on each repeat sale. If the manufacturer did not obtain access to the names of customers, there would be a substantial dealer temptation to appropriate those returns by first establishing a clientele through use of a manufacturer's leads, and then either switching to a competing manufacturer's products (e.g., Electone) or selling the customer list to a competing dealer. The manufacturer's retention of a client list reduces the value of such an action and thereby reduces both the charge for an initial lead and the incentive to price discriminate on initial versus replacement sales.

---

<sup>6</sup>Consider two magazines, one reaching moderately well-informed, well-educated persons curious about the source of hearing loss but informed enough to comparison shop before purchasing an instrument. Let the second reach customers who though generally unlikely to acquire information in any fashion -- including mailing for booklets -- are amenable to hearing and sale when identified. Advertisements in the first magazine will generate numbers of generally unproductive leads while ads in the second will yield fewer but more promising leads. To monitor a manufacturer's leads, a dealer therefore needs to monitor that manufacturer's advertising. This point should not be overemphasized since any manufacturer who attempts to charge a premium lead price for low yield leads will soon find his dealer organization deteriorating. Nevertheless, dealers would likely find it necessary to do some monitoring, a task they can avoid if charges for leads are tied to sales.

The explanation of the manufacturers' willingness to provide dealers with exclusive territorial rights is somewhat more complex. The reason for this practice does not lie in some perceived necessity on the part of manufacturers to offer their dealers a quid pro quo for the dealer's willingness to handle only a single line.<sup>7</sup> Dealers receive valuable services (leads) in return for their exclusive dealing. Any compensation to a dealer for agreeing to deal exclusively can therefore be provided directly through a downward adjustment of the wholesale price of the hearing instrument. This direct method of compensation avoids dealer monopoly problems caused by exclusive territories and would therefore seem clearly to dominate as a means of dealer compensation. Accordingly, the explanation of exclusive territories must lie elsewhere.

The most likely source of the exclusive territorial restrictions is, once again, the need to define and protect property rights to customers. The Telser "special services" argument applies. A considerable portion of repeat purchases are, as noted above, a substantial incentive to provide satisfactory initial instrument performance. This incentive will be stronger for a dealer to the extent that the dealer can be guaranteed that the repeat purchases will accrue to him/her. The likelihood of this happening is greatly enhanced if the dealer possesses exclusive rights to a marketing territory.

An even more important reason to maintain a satisfied clientele is that those customers are available for "prospecting" for further leads to

---

<sup>7</sup>See the conflicting view in the FTC Beltone PTB at 33. See also the discussion of the anticompetitive theory of the leads below.

potential hearing aid customers. Here the free rider problem is particularly important for, if an unscrupulous dealer sells unsatisfactory instruments to large numbers of customers in an area, the hearing impaired in that area will become increasingly resistant to hearing aid dealers generally and in particular to those selling the brand marketed by the offending dealer. It is the referral element of the hearing aid dealer's business that sets up the opportunity for a "free rider" problem and leads therefore to the adoption of exclusive territories.

Note that the "special services" in this case are "services" only under a very broad definition. For the sake of this analysis, let us adopt the view of a typical hearing aid customer put forth in the BCP staff report.<sup>8</sup> Such customers are characterized by

- a) "Reluctance to Acknowledge Loss and Seek Assistance,; (BCR at 37)
- b) "Ignorance About Hearing Loss, Hearing Aids, and Members of the Hearing Health Delivery System" (BCP at 40),
- c) "Reliance Upon Seller Expertise" (BCP at 44),
- d) "The desire to regain normal hearing" (BCP at 45),
- e) "Lack of Sales Resistance" (BCP at 46), and
- f) "Inability to engage in careful comparison shopping in an attempt to secure the best possible amplification at the lowest available price." (BCP at 47)

These characteristics, according to BCP staff, produce "an extremely vulnerable consumer." (at 50) Granting this view, it becomes apparent that

---

<sup>8</sup>These characteristics "are typical of hearing-impaired individuals... [H]earing aid sellers often take advantage of these traits..in generating and finalizing hearing aid sales. BCP staff report at 37. The list of traits follows immediately.

the dealers have an enormous incentive to milk such consumers and therefore the "special services" in this case are nothing more nor less than the dealer's forbearance. Dealers who do not choose to sell an aid to customers quite willing to pay for the false promise of hearing improvement must do so not because of ethical standards or common decency, but rather because it is not in their long run interest to do so. A dealer of a hearing aid manufacturer possessing exclusive rights to a territory experiences an increase in that long run interest.

This argument is extremely difficult to pose in a testable fashion. It holds that the sales practices of hearing aid dealers possessing exclusive territories are more ethical than they would have been in the absence of the territorial restriction. The counterfactual is therefore hard to frame. In the wake of the c.o.'s, dealers losing exclusive territorial rights but continuing to sell in the home should have reacted by engaging in less desirable selling practices. This development should have led to a reduction in home sales generally as soon as word spread that average customer satisfaction was declining. The problem with testing is that it is impossible to separate the effects of increasingly shady sales practices from reduced leads. One prediction that could possibly be tested is that rising customer dissatisfaction should have led to an increased demand for certification of dealer competence and so to a growth in the professional referrals market.

Perhaps more important from an empirical standpoint is a catalog of potential tests that do not bear on the issue:

- a) Evidence that hearing aid dealers provide service inferior to that offered by audiologists does not address the proper issue. This

sort of argument merely shows that hearing aid dealer performance could be improved at a cost. It does not mean that hearing aid dealers provide the worst service imaginable. The BCP staff characterized the performance of dealers as being quite poor.<sup>9</sup>

But the issue is one of changes at the margin. That is, one can employ the territorial restraints argument to predict that further deterioration in performance would occur in the absence of those restraints.

- b) A failure to identify tangible "special services" offered either pre- or post-sale is not evidence that territorial restraints are induced by considerations other than spillover effects of poor dealer performance. The "services" here are not directly observable. They are composed merely of dealer restraint in selling aids to persons whose likely benefits from those instruments are limited. One prediction of this analysis which could be tested in principle is that complaints against dealers should be more common among isolated customers, say those elderly living with their families, than among retirement community dwellers where performance information is more readily available.

The exclusive territories argument, unlike that for exclusive dealing, is familiar from the literature, but one nevertheless suspects that it is less centrally related to the operation of the hearing aid market than the lead investment argument for exclusive dealing. Had the consent orders

---

The BCP report provides compelling evidence to this effect. It is clear from their findings that the hearing aid dealers include some who choose to engage in a wide variety of unscrupulous practices.

simply ruled out exclusive territories (Areas of Primary Marketing Responsibility, in Beltone's terminology), the quality of hearing aid dealer performance might have declined somewhat from its already low level. Given the isolated nature of potential customers, this quality decline seems unlikely to have yielded substantial changes in marketing. If quality deterioration turned out to be a severe problem, other avenues to deal with service quality could have been explored, including, for example, various sorts of regulation such as state licensing and FDA rulemaking.

In summary, two separate property rights explanations have been offered to explain the principal vertical restraints imposed by lead generating hearing instrument manufacturers or their dealers. Exclusive dealing is required to protect manufacturer rights to leads, while exclusive territories are a device to promote improved dealer performance. These restrictions are separable and the arguments concerning each can be considered independently. Each sort of restriction induces a series of ancillary restrictions. Warranty restrictions flowing from the single line rules have already been discussed. The next section considers sales quotas and cooperative advertising arrangements, the former necessitated by exclusive territories and the latter arising from the tie-in sale of leads and instruments. The economic analysis concludes with a discussion of an unrelated restriction -- the use of battery sales to facilitate price discrimination.

### 3. Ancillary Vertical Restraints: Sales Quotas and Cooperative Advertising

Once a manufacturing firm agrees to provide its dealers with exclusive sales territories, it must confront the problem of coping with the perverse incentives provided to the dealer by his/her newly acquired monopoly power. The problem from the manufacturer's point of view is that dealers will

underprovide selling effort, attempting to substitute leads (for which they are not charged directly) for sales effort in the generation of retail sales. Dealers will choose to set selling expenses so that the value of marginal product of an additional unit of sales effort (the dealer's margin times the additional sales generated) equals the cost of that sales effort. So long as sales effort is subject to diminishing returns, the dealer will provide less sales effort than the amount consistent with zero economic profit, that is, sales effort such that the cost of an additional unit of effort equals the value of average product of that effort. In order to prevent such monopoly rent extraction by dealers, manufacturers will need to resort to sales quotas.

The computation of a sales quota for a particular dealer is apt to be straightforward. Manufacturers know the number of leads they have provided to their dealers. Their overall sales experience suggests to them the proportion of leads which can realistically be expected to result in sales. Therefore their problem is one of terminating those dealers whose sales have fallen short of levels predicted by reasonable sales effort combined with leads for a time interval sufficient to convince the manufacturer that the source of the shortfall is insufficient effort, not simply chance. Naturally quotas will be lower relative to leads in new territories (those with little opportunity for repeat business) and higher relative to leads in close-knit retirement communities where each lead is apt to generate multiple referrals for the dealer. The conclusion from this discussion is that if dealers are to be granted exclusive territories, manufacturer efforts to enforce quotas are efficiency enhancing since they limit dealer monopoly rent extractions. That is, if exclusive



territories are permitted by law, sales quotas ought also to be allowed.<sup>10</sup>

Cooperative advertising arrangements under which manufacturers agree to "subsidize" the local advertising efforts of dealers also appear to result from manufacturer concerns about dealer underprovision of inputs. However, the explanation for these subsidies is somewhat different than

---

<sup>10</sup>It is worth noting at this point that our explanation for sales quotas provides the reconciliation for a seeming paradox in the FTC's Beltone post trial brief outlined in Beltone's reply memorandum. To quote the Beltone RM,

"complaint counsel cannot make up their minds whether Beltone "coerces its dealers, 'combines' with them or offers them a 'quid pro quo.' For example, complaint counsel argue throughout their PTB that Beltone 'pays' its dealers for product exclusivity by granting them territory exclusivity, or provides a 'quid pro quo' of exclusive dealing in exchange for territorial and customer restrictions.... At the same time complaint counsel argue with as much conviction that 'Beltone has not let up on its policy of coercion and intimidation of dealers who do not adhere to company restrictions.'

...Elsewhere, complaint counsel assert that 'Beltone and its dealers have long recognized the reciprocal advantages to exclusive dealing in exchange for territorial exclusivity.' If this is so, why has it been necessary for Beltone to engage in the 'coercion' repeatedly alleged by complaint counsel?"

Though this argument may at first appear convincing, on reflection it is not. Beltone and its dealers may indeed recognize the advantages to each other of exclusivity and customer restrictions. It is clearly in Beltone's best interest to cultivate a strong dealer network. To do so it must endow dealerships with rights at least as great as those the prospective dealers could obtain elsewhere. Beltone dealerships were and are valuable assets. Nevertheless, within this cooperative framework, strains between Beltone and its dealers are inevitable given the divergence in incentives between manufacturer and dealers. Beltone dealers will always attempt to behave in monopolistic fashion while it is clearly in Beltone's interest that they behave as if faced by competitive pressures. Moreover, Beltone's dealers will always be prepared to violate Beltone's property rights to leads should Beltone relax its vigilance. Hence Beltone dealers will profess (truthfully) to be pleased with their lot, while continually conniving to better it. Each dealer's behavior will be exactly analogous to that of a cartel member who receives monopoly rents while simultaneously scheming to cheat on the agreement generating such rents.

Ironically, the PTB argues that had Beltone not coerced its dealers, no violation would have been recorded. (See RM quotation at 2.) Clearly, given that the exclusive dealerships were granted, Beltone's restraints are to be judged as clearly beneficial from society's point of view by the PTB standard since they served to increase dealer efficiency.

at applying to sales quotas. Recall that dealers are charged for leads through the price of the hearing instruments. Note, however, that this charge is applied whether the sale of a hearing aid results from a dealer initiated lead or whether the lead was supplied by the manufacturer. Hence a dealer who undertakes his own advertising campaign will end up incurring the expense of the campaign directly while simultaneously paying the manufacturer for a portion of the returns generated by the dealer's own efforts. Accordingly the dealer incentive to advertise is reduced and both dealer and manufacturer suffer. One possible solution would be for the manufacturer to rebate a portion of the purchase price of an aid when the sale of that aid is derived from the dealer's own efforts. The drawback to this approach is the obvious monitoring problem of determining the source of the sale. It is therefore considerably more direct for the manufacturing firm to rebate its leads fees in advance through the input subsidy. Of course, from this argument, it is clear that the cooperative advertising arrangements are not, in fact, subsidies but rather represent an attempt to avoid overcharges to dealers for their local advertising.<sup>11</sup>

The FTC's complaints against each of the lead generating manufacturers alleged that the purpose of the cooperative advertising programs was to enforce exclusive dealing arrangements. Only dealers following the required single-line policy were allowed to participate in the cooperative schemes. The complaints were correct in recognizing the linkage between exclusive dealing and cooperative advertising, but they reversed the direction of causation. Rather than cooperative advertising inducing dealers to handle

---

<sup>11</sup>The cooperative payments for which dealers were eligible were tied to sales. One topic that could be investigated is whether the payment scale was sliding. For example, could firms which exceeded their quotas, presumably in part through local, not lead-generated, efforts qualify for larger payments?

only a single line, the exclusive dealing requirements and their accompanying package price for leads and instruments forced the cooperative schemes on the manufacturer as a method to allow provision of an appropriate amount of advertising. Dealers would have been willing to maintain a single line policy in the absence of cooperative advertising simply because the inducement they received for so doing derived from the leads, not the subsidized advertising.

#### 4. Suggested List Prices

Most companies issued elaborate lists of suggested list prices for instruments, batteries, dealer services, and so forth, and such lists are available in the exhibits on file at the FTC. Curiously, Beltone appears not to have provided its dealers with such a list. The ID at 32 includes the following passage (references deleted):

The retail prices at which new Beltone hearing aids are sold is set by the authorized dealers. Although Beltone had issued suggested retail prices sometimes during the 1950s, it hasn't had such suggested retail prices since then.

Given that Beltone chose not to maintain resale price maintenance (RPM), it seems likely that the price lists provided by rival manufacturers were unsuccessful. Moreover, any attempt to impose RPM contrary to dealer wishes could easily have been evaded by dealers. It would have been exceedingly difficult for manufacturers to have policed RPM by contacting all customers, and any customer obtaining an aid from a dealer at a discount from suggested list would not have had much of an incentive to disclose that discount to the manufacturer. Accordingly, RPM is not taken to be an important issue in this analysis.

### Price Discrimination through the Sale of Batteries

One minor restraint imposed by manufacturers of aids was the requirement that dealers purchase replacement batteries directly from the manufacturer.<sup>12</sup> Manufacturers contracted directly with battery suppliers to provide batteries of a brand-specific design in order to enforce customer (and dealer dependence). Batteries appear to have been resold at prices well in excess of cost to the manufacturer, and well in excess of the prices of batteries of similar performance available for general use. What purpose did this restriction serve?

The answer is provided by Aaron Director's analysis of IBM's decision to tie the purchase of IBM cards to use of IBM card tabulating equipment.<sup>13</sup> Just as in the case of hearing aid batteries, the IBM cards were priced well in excess of marginal production cost. These tie-ins are adopted to facilitate price discrimination. Users of hearing aids who experience satisfactory performance from those aids are willing to pay higher instrument prices than those who are dissatisfied. Satisfied customers are also apt to use their aids more consistently and as a result will need more batteries. The difference between the competitive price of a battery and the price charged by a hearing aid dealer becomes a surcharge applied to consistent, therefore presumably satisfied hearing aid users.

---

This "minor" restraint appears to have been a major irritant to many hearing instrument customers. The batteries used by hearing instruments are designed to prevent substitution by much cheaper but basically identical mass market calculator or watch batteries. The restraint is here termed "minor" because it does not relate directly to the lead generation argument except to the extent that manufacturers could use battery sales to estimate repeat purchases and thereby adjust sales quotas.

See Aaron Director and Edward H. Levi, "Law and the Future: Trade Regulation," 51, Northwestern University Law Review, 281 (1956).

If manufacturers were not allowed to tie-in in this fashion, the likely consequence would be an attempt to increase initial purchase prices, though it could be argued that the effect would be small. Moreover, the incentive to provide continuing satisfactory service would be reduced. Obviously, these negative effects have to be measured against a direct reduction in battery prices paid by consumers. Economists have concluded that this sort of price discrimination improves resource allocation, though it may lead to a redistribution of wealth from consumers to producers which could be viewed as undesirable. The exceptions to the resource allocation result occur when it is difficult to prevent resales to certain classes of customers -- certainly not a problem in this case.<sup>14</sup> If the hearing aid manufacturers are competitive, the income distribution consequences are not a serious problem. The battery charges (the excess over the cost of an equivalent general-purpose battery) can be regarded as deferred payments increasing the price of hearing aid services, but, of course, under competition, the higher prices simply serve to induce additional sales efforts by dealers and manufacturers, hence more potential users of aids reached by suppliers.<sup>15</sup>

#### 6. Summary of the Economics of Vertical Restraints in the Hearing Aids Industry

As Caves (1979) emphasizes in his protocol for the vertical restraint investigation, such restraints cannot appropriately be considered in isolation,

---

<sup>14</sup>For a discussion, see B.S. Yamey "Monopolistic Price Discrimination and Economic Welfare," 17, The Journal of Law and Economics, 377 (1974), and the references cited there.

<sup>15</sup>Again, this conclusion can be challenged if one does not accept the premise that purchasers of aids are better off as a result of their acquisition of the instruments.

It rather are closely interrelated. The discussion of vertical restraints in the hearing aids market demonstrates the nature of these relations. Each of the restraints is at least in some measure an attempt to facilitate the definition and enforcement of property rights. The most fundamental restraint is the requirement that dealers handle only the products of a single manufacturer. This restraint stemmed from an attempt by manufacturers to charge for leads provided to dealers. The tie-in between instruments and leads accomplished through incorporating the lead charge into the instrument price is possible only if dealers are prohibited from purchasing the instruments separately, as from alternate suppliers. But the tie-in also implies that dealers are overcharged for leads generated through their own efforts. As a result, a second "restraint" in the form of cooperative advertising is required. As pointed out above, these cooperative programs were really rebates to dealers for sales generated locally, that is, without leads. The only restraint involved in the programs is that they were available only to single line dealers, that is, only to dealers who agreed to pay for sales generated by the manufacturer's promotional efforts. The tie-in of lead and instrument compensation for the manufacturers offers a portion of their return to lead generation to repeat sales, requiring that they take steps to protect that compensation. This was accomplished through the requirement that warranty cards be filed with the manufacturer, a restraint enforced through companion restraints on service and parts. The presence of repeat sales and the usefulness of satisfied customers as a course of further leads induced manufacturers to offer exclusive territorial rights to dealers to minimize "free rider" problems. But the territorial restraints spawned their own offspring, namely, sales quotas to limit the dealers' ability to derive monopoly rents from their territories. Finally,

the manufacturers sold batteries to dealers and required exclusive dealing in order to permit price discrimination. Satisfied customers were charged more than dissatisfied ones by pricing batteries substantially in excess of marginal cost.

The FTC attack on this distribution system challenged all of these practices, forcing a major restructuring of the industry's distribution system. The commission could have restricted itself to freeing the sales of batteries from manufacturer control. The effects of this action would have been to reduce the price of batteries, to increase the selling price of an instrument, and to reduce somewhat the incentives to dealers and manufacturers to undertake services designed to maintain a pool of satisfied customers. This step would have been fairly minor, however, and probably would not have had an appreciable impact on the industry. The next possible action would have been to attack the territorial restriction without challenging the single line requirements. This intermediate course was perhaps legally untenable, and moreover would prove an administrative nightmare since the commission would need to ensure that all single line dealers in an area were apportioned a "fair share" of leads. By challenging the territorial restrictions, the FTC would have done away with the need for sales quotas.

The line of attack chosen by FTC was probably the only one available which was simultaneously feasible and likely to have an appreciable impact. The challenge to single-line dealers went to the heart of the restraints, and accordingly, the impact of the consent orders should have been substantial. Lead generation should no longer have been a profitable option for manufacturers, since compensation for leads became difficult to ensure when the restraints were removed. Manufacturers should have stopped

tempting to obtain leads, evidenced by marked cuts in their national media advertising. Since leads would no longer be provided to dealers, wholesale instrument prices would no longer reflect the value of the leads and would therefore decline. Though manufacturers would dispense with cooperative advertising programs, local dealer advertising would not be expected to decline as a result. Finally, the decline in lead generation could have been accompanied by an overall decline in industry sales, one borne virtually in its entirety by the lead-generating manufacturers.

If this analysis obtains empirical support, the FTC Bureau of Competition actions against the vertical restraints imposed by hearing aid manufacturers must clearly be regarded as a failure when measured against the objective of promoting competition.<sup>16</sup> The consent orders impaired substantially the ability of an important segment of the industry to compete. Viewed more broadly, it is not as clear that the cases were harmful in their impact, since the distribution system they outlawed was the source of most of the consumer abuses cataloged by BCP. But even when viewed from this latter perspective, the BC cases can be defended only if one adopts the (licensure) argument that persons sold hearing aids through lead generation would have been better off had they never been contacted by a hearing aid seller.

---

See also the section on welfare effects below. The hearing aid market may have remained competitive following the orders, but it is impossible to argue that their effect was to enhance competition. The goal of enhancing competition through removing entry barriers appears to be the exclusion of all others in the staff reports preceding the orders. More recently, in the Beltone case, the BC objectives appear to have been broadened. It is clearly beyond the scope of this analysis to argue whether that broadened objective is appropriate.



---

**ANTICOMPETITIVE EXPLANATIONS FOR VERTICAL RESTRAINTS  
IN THE HEARING AIDS INDUSTRY**

---

Potential Anticompetitive Effects of Vertical Restraints

The Supreme Court's 1977 ruling in Continental TV, Inc. v. GTE-Sylvania, Inc.<sup>1</sup> requiring a rule of reason analysis in vertical restraint cases implied more than simply an increase in the difficulty of obtaining judgments against firms employing vertical restraints. The per se rule against vertical restraints overturned by the Sylvania decision had implied that sophisticated economic analysis was unnecessary baggage in restraint cases. The move to a rule of reason forced the FTC to buttress its position with much more careful arguments than those of pre-Sylvania days. Accordingly, the complaint counsels' post-trial brief in the Beltone case (on remand in consequence of Sylvania) presents an analysis which is markedly superior to that in the BC staff report on the hearing aids industry which generated the initial series of complaints. The arguments presented in the Beltone brief and in related sources<sup>2</sup> are analyzed in this section since they represent the strongest case for regarding the effect of restraints to be anticompetitive, and therefore comprise the most cogently stated alternative to the analysis presented above. The complaint counsel's arguments include a restatement of the arguments which buttressed Schwinn,<sup>3</sup> and which retain popularity despite their abandonment by the author of the FTC's Schwinn brief, Richard

---

<sup>1</sup>443, U.S. 36 (1977).

<sup>2</sup>For example, Abbott (1980), Caves (1979), and the closely related FTC briefing material on vertical restraints.

<sup>3</sup>388 U.S. 365 (1967).

Posner,<sup>4</sup> and by the Supreme Court in Sylvania. The argument holds that "Belton's motive for the intrabrand restraints is to induce its dealers to carry only the Belton line, itself a restraint on interbrand competition... Belton's territorial restriction, which is ancillary to and exists for the purpose of promoting unlawful exclusive dealing, should also be per se unlawful once it is established that the exclusive dealing is a restraint of trade." (PTB at 69-70). Interestingly enough, the economic expert retained by Belton, Professor Victor Goldberg, testified that this line of argument was flawed because it failed to indicate how Belton might have gained by restricting competition among its dealers. Complaint counsel responded that "[w]e should immediately be suspicious of any system of vertical restraints which is defended on the grounds that ... the restraints are not anticompetitive because a manufacturer knows best how to compete, and should therefore be left alone. This is the sum and substance of (Professor Goldberg's) economic argument." It is also the sum and substance of the Posner argument adopted by the court in Sylvania.

Complaint counsel have a point. It is not difficult to conceive of circumstances wherein vertical restraints might be anticompetitive. Telser's classic article on vertical restraints contains one such possibility: manufacturers may want their actions to be reflected clearly in easily monitored dealer behavior in order to facilitate manufacturer collusion.<sup>5</sup> That particular argument does not apply in hearing aids,

---

<sup>4</sup>Posner, The Rule of Reason and the Economic Approach: Reflections on the Sylvania Decision, 45 U. Chi. L. Rev. 1 (1977).

<sup>5</sup>Telser (1960) at 96 ff.

or if it had explained industry behavior, Beltone would not have proved recalcitrant once its rivals entered into their consent orders. It is nevertheless true that those arguing that vertical restraints are in general induced by considerations of efficiency ought to be under some obligation to specify those efficiencies in a reasonable number of cases. Such a specification is the goal of the preceding analysis. While a judgment of the success of the arguments developed above await empirical analysis, it is clear that economic efficiency considerations present a viable potential explanation of the vertical restraints employed in the hearing aid market.

Moving to more specific considerations, complaint counsel also argue (PTB 5-11) that the lack of comparison shopping alleged to typify persons obtaining hearing instruments from door-to-door salesmen implies that hearing aid dealers possess market power. "Because the hearing impaired do not have the opportunity to make an informed choice, they are particularly vulnerable to the effects of restraints on the intrabrand and interbrand competition" (PTB at 6). This is, of course, an incorrect statement. A person purchasing a hearing aid without comparison shopping will not be protected by competition of either sort, no matter how vigorous that competition.<sup>6</sup> By assumption he/she knows fully of the offerings of the particular dealer who arrives on the

---

<sup>6</sup>Uninformed consumers may benefit from multiline versus single line dealers if those dealers are assumed to be ethical. The dealer can serve as the consumer's agent for information gathering, choosing the most suitable product from an array of devices offered by various manufacturers, much as occurs in the market for insurance. (I owe this point to John B. Kirkwood.) The usefulness of this consumer defense is limited by the requirement those consumers pick a competent agent. If consumers are unable or unwilling to compare the offerings of various agents, there is little market pressure to improve the agency function.

doorstep. Vigorous competition may result in more dealers seeking the custom of the hearing impaired, but cannot prevent the first seller reaching a customer ignorant of the options to that dealer's offerings from extracting a sum well in excess of the amount a well informed customer would pay. The simple point is that the number and quality of options available to a consumer are irrelevant to a consumer ignorant of those options.<sup>7</sup>

As a result of consumer ignorance, multiline-hearing aid dealers possess precisely the same amount of "power" versus their potential customers as do single line dealers.<sup>8</sup> Given that single line dealers have the option of switching to other product lines, a manufacturer imposing restraints cannot extract any dealer rents without losing its dealers. There is no "quid" for the quid pro quo. Therefore, another explanation for the single line requirement and other vertical restraints is required. That explanation is provided by the property rights analysis.

The anticompetitive argument for vertical restraints is so popular among lawyers and economists that a more extended discussion of its potential applicability to the hearing aids cases seems warranted. One

---

<sup>7</sup>Note that this argument implies that an individual consumer will not be protected by competition only if one accepts the premise of complaint counsel that potential hearing aid users are totally uninformed and are thereby ripe targets for unscrupulous hearing aid dealers. If a somewhat more optimistic view of the elderly is adopted, the market can be expected to provide the consumer with those defenses characteristic of the workings of competition.

<sup>8</sup>In dealing with uninformed, relatively price insensitive customers, dealers will compete through non-price dimensions. In this case that competition will occur through selling effort designed to identify such price insensitive customers. Such competition can be as effective (or more effective) in bidding away supra-competitive profits as price competition. See Stigler on "Price and Non-Price Competition," in Stigler's The Organization of Industry (1968) at 23-28.

of the more common variants of the argument holds that the manufacturer-dealer relation is one of bilateral monopoly, a symbiotic relation in which each party is willing to enhance the other's position vis-à-vis consumers in order to consolidate its own market power. Dealers enter into such an arrangement to protect themselves from other dealer competition, while manufacturers "pay off" their dealers with monopoly margins to blockade entry from rival manufacturers. Variants of this argument place more or less bargaining power at one or the other level, but all forms of the argument require that existing monopoly power present on at least one level of the distribution system be enhanced by the restraints. The potential for monopoly rent extraction at each level needs therefore to be considered.

Hearing aid dealers would seem at first glance to be ill-suited to acquire and maintain rents of any sort. Dealers do not undergo rigorous training programs, nor are there any special qualifications for the job. A representative dealership is a small operation consisting of the dealer and perhaps one or two other salespersons. Were it not for the need to establish a referral base, a clientele of satisfied customers willing to direct the dealer to other hearing impaired persons, entry would be trivially easy. Therefore, the only significant bargaining chip available to dealers is their set of contacts and referral network. The importance of this asset is attested to by the efforts of the respondent manufacturers to check dealer power through their warranty registration requirements.

The existence of referral rents does not imply that significant market power is possessed by the dealers. That is, the rents are not

monopoly rents. More importantly, their existence does not imply that dealers would be willing to provide protection to associated manufacturers by means of exclusive dealing contracts. Many examples of markets with reputation or referral rents are available to suggest that the exclusive dealing requirement imposed by hearing aid manufacturers is certainly not necessitated and perhaps not even typical of such markets. To take an obvious example, Sylvania conferred exclusive territories on its dealers without requiring exclusive dealing in return. Even closer to the point is the insurance market where a mix of contractual restraints persists--exclusive dealing without exclusive territories (State Farm, Allstate) and multiline agents (so-called independents) with or without territorial protection.<sup>9</sup>

The quid pro quo argument based on dealer-possessed rents also stumbles when confronted by the other practices employed by manufacturers. If the dealers have market power deriving from their customer connections, a first priority in any dealings with manufacturers ought to be to consolidate those rents by protecting their customer lists. They should

---

<sup>9</sup>The argument is sometimes made that no manufacturer could unilaterally move to drop exclusive territories, but that manufacturers might benefit generally from a reduction in dealer power resulting from an across-the-board move to multiline dealers with overlapping territories. This does not seem valid for markets in general or hearing aids in particular. In general, other industries have single line and multiline dealers co-existing (insurance again comes to mind). The argument for hearing aids is weakened by Beltone's reluctance to drop its territorial restrictions in the wake of the consent orders. In the Beltone record, other companies, including Zenetron, expressed reluctance to establish new dealerships in areas served by existing firms. This experience makes it difficult to credit this "domino effect" analysis of the exclusive territory restraints.

therefore be expected to resist strenuously any contractual provision forcing them to supply lists to manufacturers, and given the presumption of a strong bargaining position, they could be expected to win such contract arguments. The existence of the warranty and service provisions of the dealer contracts provides evidence to the contrary.

Upon turning to the possibility that the manufacturers employed vertical restraints to enhance their own market power, one sees that this argument requires several conditions. First, the notion that a firm must enter the market with a full-fledged, nationwide dealer network requires that there be substantial economies of scale on either the production or the marketing of hearing instruments. Since the record suggests that the production economies were not substantial, one is left only with the argument that nationwide promotion campaigns are an effective and important complement to whatever local sales effort generated by either dealers or the manufacturer. Ironically, if one accepts that these economies are present, one thereby grants an important underpinning of the lead generation theory.

A second condition of this analysis takes the form of a prediction. If the purpose of the practice of maintaining exclusive dealers was to blockade entry by rivals, the practice should have been abandoned by all firms once an appreciable number of accessible multiline dealers arose.



Belton's reluctance to settle and the continuance by Dahlberg and Zenetron of limited dealer networks casts doubt on the accuracy of this prediction.

Finally, the argument that both dealers and manufacturers gained by means of a mutual exploitation of contractually shared monopoly rents cannot deal with the range of entry options available. A new manufacturer, by accepting a competitive margin, would be in a position to undercut monopoly-rent-inflated wholesale prices charged by existing firms. The new firm could provide any and all related services such as advertising displays, training, instrumentation, and still price below the existing firms if those firms continued to attempt to recover rents in their prices. There is no obvious candidate for a missing factor, a left out ingredient for the success of entry that would prevent new firms from bidding for dealers. More specifically, there was an important pre-c.o. entrant--Starkey Labs.<sup>10</sup> Of course, Starkey benefited from a new product--custom earmolds from dealer-provided impressions--but were the entry barriers substantial enough to blockade entry, Starkey would have been better advised to market through an existing firm and distribution system, that is, through acquisition of a Radioear or Sonotone, or through licensing. Not only Starkey's success, but also the way in which that success was achieved argues against the efficacy of established dealer networks as an entry blockading device.<sup>11</sup>

---

<sup>10</sup>According to Kenneth Dahlberg, Starkey entered by purchasing a small service station that repaired a variety of hearing aids. In so doing, they acquired a list of dealers and set of connections with those dealers useful in introducing their aids. Starkey sold partly through its own exclusive dealers and partly via multiline dealers. (Dahlberg testimony, p. 18680 ff.)

<sup>11</sup>There is some controversy in the record over whether Starkey's successful entry depended centrally on the 1974-1975 consent orders. See, in particular, BIA at 26. Starkey might not have been successful

In summary, the quid pro quo argument fails to fit the facts of the hearing aid industry. Dealers stood little to gain from agreeing to exclusive dealing if they possessed prior market power. In an industry with limited brand name recognition, their options were of considerable scope. The stability of dealer networks attests to the likelihood that dealers received valuable considerations from their suppliers. Any supplier attempting to incorporate a supra-competitive return into its wholesale price was vulnerable to an erosion of its dealer network. Production scale economies do not appear to have been formidable, and even had they been important, potential marketers could have purchased foreign instruments much as Sonotone has chosen to do more recently. Marketing scale economies may have existed, but the firms were small enough and did little enough advertising that the capital requirements for a competitive advertising campaign were trivial. The relatively low scale of advertising,<sup>12</sup> is evidenced by the absence of all manufacturers except Beltone and Maico from the listing of leading

---

<sup>11</sup> (continued) as a de novo entrant attempting to emulate Beltone, etc. Its innovation -- custom earmolds -- was not a particularly new development, having been tried in the 1960's, but possessed a major advantage insofar as distribution was concerned. Dealers marketing Starkey aids were not required to carry inventories. All they were to do was take an ear impression, measure the extent of hearing loss in order to compute the parameters of the desired instrument, and send the impression and specifications to Starkey. With no inventory on hand, a single-line dealer of a rival manufacturer could have concealed its dealings with Starkey from its supplier fairly easily, and could have shifted primarily or entirely to Starkey if consumers appeared to prefer Starkey devices. Accordingly, Starkey's entry (prior to the orders) and its success (difficult to measure without firm sales data, but probably starting pre-c.o.) appear not to have been crucially dependent on the orders.

<sup>12</sup> Relative to other industries, not to sales.

advertisers in National Advertising Investments. This combination of characteristics of the hearing instruments market renders the task of an analyst desiring to explain industry arrangements using a monopoly model a difficult one indeed.

This analysis suggests that a solid argument supporting the possibility that the restraints are anticompetitive is lacking. But without evidence that the restraints serve some other purpose related to economic efficiency, one ought not automatically conclude that the restraints are beneficial.<sup>13</sup> Accordingly, this report concludes with a discussion of the ways in which the property rights argument can be tested. Before turning to that discussion, however, it is useful to consider the evidence adduced to support the view that the vertical restraints are anticompetitive.

## 2. Evidence for the Anticompetitive Effects of Vertical Restraints

The evidence cited in support of the FTC argument that manufacturers imposed restraints for anticompetitive purposes fails to provide strong support for that argument. That evidence includes:

- (i) Dahlberg, Maico, et al. sold hearing aids at prices substantially in excess of the prices charged by rivals, e.g., Electone. Subsequent to the consent order, their (wholesale) prices fell. Beltone maintains its price above all of its rivals. "The fact that respondents have set their prices substantially above those of other manufacturers, (in camera material) shows Beltone's real market power and its ability to exploit it." (CRB at 13).
- (ii) Beltone was less innovative than its rivals (PTB at 71).

---

<sup>13</sup>This is an economic conclusion, not a legal one. A per se approach may be preferable in law even if some desirable conduct is prescribed or if some inefficient or anticompetitive behavior is tolerated.

- (iii) The restrictive distribution system served as an entry barrier to new manufacturers of instruments. Indeed the entry which occurred (Starkey and others) was facilitated by the c.o.'s against Dahlberg, et al.

Though some additional snippets of evidence are cited, the above appear to constitute the most substantial empirical support for the anticompetitive position. Unfortunately, this support is unconvincing. Item (i) does not serve to distinguish the anticompetitive theory from the vertical restraints for property-protection theory. The prices of the respondent firms should have been higher than those of Electone and NuEar, reflecting the value of additional services, principally leads, provided by the respondents to their dealers. Accordingly, wholesale prices should have, and apparently did fall subsequent to the c.o.'s. Were retail prices available, the task of delineating the predictions of the two approaches would be somewhat easier. The anticompetitive theory suggests that any wholesale price reductions should have been passed on more fully than if dealers were forced to compensate for the absence of national promotions with more local promotions of their own.<sup>14</sup>

Item (ii) deals only with the actions of a single firm and may in any case be characteristic of manufacturing in general. That is, some economists argue that R&D breakthroughs are more likely to occur at smaller firms anxious to share in the market leader's success than

---

<sup>14</sup> Local promotion should have risen markedly only if national and local promotion expenditures were fairly close substitutes. If the absence of national promotions did not increase the productivity of local efforts, no change in dealer behavior should have been observed in the short run, and dealer numbers should have declined in the longer term. Markup data would not, therefore, tend to discriminate clearly between the two views.

within the leading firm itself. Indeed, in the industry, the major advance appears to have been made by a de novo entrant, Starkey. Finally, though the data are unclear, it may be that entry into the industry was fairly easy before the c.o.'s, as suggested by the rapid growth of imports. The difficulties experienced by bargain firms (first Electone, later Nu-Ear) in penetrating established dealer organizations are predicted by the property rights argument and in that context are not necessarily something worthy of public policy concern.

There is only one reasonably conclusive test of the effect of the restraints on the market for hearing instruments. That test derives from the distinguishing predictions of the property rights and anti-competitive approaches regarding the change between pre-c.o. and post-c.o. period sales. The monopoly argument predicts that erosion of the wholesale price and retail margin resulting from increased competition in the wake of the orders should have increased sales of the vertical restraint firms and should have encouraged new entry. Sales of domestic firms should have increased relative to those of foreign firms, an increase induced by a decline in the relative price of domestic aids. The property rights approach also implies a fall in the relative price of the domestic aids, but as this price decline (at least at wholesale) would be accompanied by a more than offsetting decline in promotional services -- principally leads -- sales should have fallen. Though the evidence currently available supports the property rights view, it is sketchy at best. Accordingly, the development of industry and firm sales figures should receive top priority in the empirical analysis.

WELFARE ASPECTS OF THE FTC CONSENT ORDERS

## 1. Welfare Judgments for the Hearing Aids Market

If the analysis of vertical restraints in the hearing aids industry developed above is correct, the clear result of the FTC consent orders against Dahlberg, Maico, et al. should have been to impair substantially their ability to compete. By placing these companies at a disadvantage vis a vis the firms employing alternative distribution systems, the order should have strengthened rivals -- primarily importers, secondarily Starkey<sup>1</sup> -- while increasing the role of audiologists and physicians -- relative to that of hearing aid dealers. The orders certainly should not have been interpreted as promoting competition -- domestic hearing aid manufacturers were retreating in the face of an onslaught of foreign competition and the orders increased the pace of that retreat. Radioear and Sonotone both essentially failed, with Sonotone converting from a domestic manufacturer to a marketer of foreign aids. Sales at Dahlberg and Maico slumped. These developments hardly seem consistent with the view that the orders fostered competition. Since competition is generally viewed as being socially desirable, lowering prices and promoting efficient distribution and production, on these grounds the c.o.'s seem to have been socially undesirable.

It is important to stress at this point that the issue in a welfare evaluation is not whether the consent orders harmed a particular group of competitors. As is well known, it is possible, indeed likely that

---

<sup>1</sup>Starkey should have benefitted by increased access to hearing aid dealers, but those benefits are expected to be attenuated by a decline in dealers relative to audiologists. Other domestic firms such as Electone and Nu-Ear may also have benefitted in the short term but not in the longer run. As instrument prices set by c.o. firms fell, any price advantage (unrelated to quality) enjoyed by the second-line firms should have vanished.

measures to increase competition will harm firms which have previously benefitted from an insulated environment. Had the consent orders freed rivals of inappropriate restrictions on their ability to compete, the decline of the market leaders could be viewed as a healthy sign of renewed competitive vigor. However, our analysis indicates that such was not the case in the hearing aids market. Entry was possible prior to the consent orders and did, in fact, occur. Beltone's unwillingness to dispense with its exclusive dealing in the wake of the consent orders' effect of markedly increasing the available multiline dealers strongly suggests that the purpose of exclusive dealing was other than simply to serve as a barrier to entry. The harm done to the lead generation manufacturers seems unlikely to have yielded a significant increase in competition.

The most likely outcome of the orders was that they neither decreased nor increased significantly the rigor of competition in the hearing aids market. In the post-consent order world, the relative strength of the professional referral segment of the industry should have increased, but it is unlikely that these orders would have conferred any monopoly rents on this segment. Entry is too easy and import supply schedules too elastic to permit monopolization. The effect of the orders was instead to effectively outlaw a distribution system which had proven successful under competition. Given that competitive success, one can presume that the effect of the orders was to reduce the efficiency of the distribution of hearing instruments. This conclusion deserves restatement: If one asks whether the consent orders promoted competition in the hearing aids market, the answer is a resounding no.



Unfortunately for the purposes of evaluation, the hearing aids industry is not so simply analyzed. The problem is that the quality of information which many hearing aids customers choose to obtain is apparently miniscule, leading to the possibility of market failures up to and including fraud. The segment of the industry placed at a disadvantage by these orders was by general agreement that consisting of firms and dealers providing the lowest quality package of services to hearing aid consumers, certainly lower than the import-dominated audiologist- and physician-referral markets. Hearing aid dealers sold aids in a low volume, high price fashion, and because of single line restrictions, may not have had access in some cases to an aid of optimum performance for a particular patient, even assuming the dealer were able to ascertain the appropriate aid. The catalog of abuses compiled by BCP is lengthy and troubling, certainly the kind of thing to stir the latent reformer in most outside observers. By placing the lead generating firms at a disadvantage, the FTC's c.o.'s almost certainly increased the average quality of services received by those consumers who obtained help for their hearing impairments. But this limited group is not the appropriate one for evaluation from a social welfare point of view. The question is whether the population of hearing-impaired persons as a whole was benefitted or harmed by the FTC actions, and as before, that is a much more difficult question than asking what happened to the group receiving services.

If the hearing aids market were one in which tolerably complete information were available to consumers at a trivial cost, it would be enough to equate the outcome of the competitive process with the most desirable allocation attainable from the point of view of consumer welfare. Unfortunately, though, the hearing aid market is radically different from the

perfect information ideal. Fraud is possible, and may indeed be a common outcome in the dealer-supplied segment of the industry. Competitive hearing aid dealers will continue to enter the marketplace so long as the gains to them are greater than or equal to the opportunity costs of the resources they employ. Their private returns will exceed society's return from the operation of the market if a portion of their sales result from the exploitation of a particularly vulnerable set of consumers. In such cases, a BCP order forbidding dealers to sell to consumers could, in principle, benefit society even while it impaired competition. The consent orders had the same effect as a very stringent BCP trade regulation rule and as a result could be evaluated under the same sort of standard that would be applicable to a BCP action.

An evaluation of this sort poses a substantial set of challenges for an economist. Foremost among these challenges is the requirement that one make interpersonal comparisons of utility between those persons receiving better hearing aid service in consequence of the FTC orders and those who were deprived by those same orders of assistance they might otherwise have obtained. Since such comparisons are beyond the range of the economist's tool kit, the best which can be done with the aid of economic analysis is a careful formulation of the issues, one which permits value judgments to enter the evaluation only when the gains and losses to various affected groups have been catalogued. With this disclaimer in mind, one can summarize those gains and losses of the consent orders as follows. On the plus side, one could include the reduction in fraud and abuse visited on those individuals approached by hearing aid dealers. Since, however, this is virtually impossible to measure in any objective way

due to placebo effects and other differences in perceived hearing improvement, this effect will not weigh heavily on any evaluation. Perhaps the best measure of the benefit of the orders concerns the increased success of the audiologist distribution system. Assume that because of the decline of c.o. firms, audiologists were able to see and refer more hearing-impaired persons than they would otherwise have seen. Let us overstate the case by assuming that this effect is a clear-cut benefit of the orders.<sup>2</sup>

Against this must be placed the customers who, because of the attenuation of lead-generating activities no longer receive any assistance whatsoever. That is, any improvement in average quality must be balanced against the decline in market penetration expected to result.

This study will permit one to compute the weights that would be required to make the consent orders appear socially desirable. That is, it will indicate the increase in audiologist sales and the decrease in overall market penetration. It is then simply a value judgment whether the benefits to receiving improved service offset the losses to those not served at all.<sup>3</sup>

---

<sup>2</sup>It is an overstatement first because audiologists are not costless, and second because one must incorporate any time lags between the time an impaired person would have been approached by a dealer and the time that person actually sought assistance.

<sup>3</sup>Casting the problem in this form, complex though it may seem, nevertheless abstracts from a number of extremely difficult issues. For instance, while audiologists may capture some sales which previously went to single line dealers, the hearing improvement is likely to reach consumers with some delay. One should discount the enhanced quality of the audiologist's operation against the earlier receipt of assistance from dealers. As a second example, the attack on exclusive territories contained in the orders may have reduced the quality of dealer-provided service in the post-order world, biasing the case in favor of finding a positive effect of the orders. The range of possibilities is so large that any sort of definitive conclusion is impossible unless one ignores quality change altogether and concentrates on market penetration.

Before leaving this topic, it seems appropriate to comment on one aspect of industry performance cited time and again as evidence of the inadequacy of competitive pressures in this industry. It is time to put to rest the notion that the very high retail margins earned by hearing aid dealers serve as an indicator of poor performance. This notion seems to derive from the idea that somehow the margin that a dealer obtains for a sale depends crucially on the amount of time and effort spent on that customer. In fact, a successful sale may "cost" the dealer much less than it yields. What is relevant is not simply the time devoted to a successful sale but also the amount of time spent searching down blind alleys. The records in this case show that most leads -- an expense in themselves -- do not yield sales when followed up. Just as the cost of a successful oil well includes the failures along the way, so the markup obtained from a successful hearing aid contact reflects the many unsuccessful activities of that dealer. Markups cannot be judged excessive simply by inspection.<sup>4</sup> Indeed, given the insignificant limits on dealer entry, excessive returns to dealers are very implausible in the hearing aids market.

## 2. Concluding Remarks

The chief goals of this investigation have been positive, not normative. The lesson of the analyses of vertical restraints provided by

---

<sup>4</sup>This is a very crude discussion from an economist's point of view. Historical costs are never directly relevant to current value. One successful (or lucky) dealer might experience very few false leads per success while another might have a reverse experience. Ceteris paribus, each will charge the same price. The only issue in determining whether the dealer margins are excessive is whether other potential dealers would like to emulate the existing dealers but are somehow artificially prevented from doing so. In the absence of entry barriers, and, especially given the interest of manufacturers in preventing "excessive" retail margins, there is little reason to regard the existing margins as excessive.

Lester Telser and Richard Posner is that such restraints should be analyzed to identify the purposes they serve for both suppliers and retailers. Once those purposes are identified, one can determine whether or not they are justified by competitive considerations. In the case of hearing aids, the elaborate pattern of restraints which evolved developed primarily to protect manufacturer property rights to valuable information provided to dealers. The FTC consent orders destroyed this protection and in so doing removed the incentive to manufacturers to invest in such information, thereby impairing substantially their ability to compete. In most cases, this positive analyses of the restraints would be enough -- they arose not to limit competition but to promote an efficient provision of information. Clearly, assessed in terms of the goal of promoting competition, the preceeding was counterproductive.

The question of whether society benefitted is much more difficult, as the preceeding discussion shows, but one must remember that if society did benefit, it was a serendipitous event. The BC action certainly aided BCP in its own goal achievement, and indeed, was probably more effective than anything the BCP would have been able to do even if its initial TRR had been adopted. Whether this "benefit" is substantial enough to offset the decreased market penetration by hearing instruments is in the final analysis beyond the scope of this report.

- J - Administrative Law Judge
- SHA - American Speech and Hearing Association (primarily audiologists)
- ;
- CP - Federal Trade Commission, Bureau of Competition
- CP - Federal Trade Commission, Bureau of Consumer Protection
- CP staff report - BCP Hearing Aid Industry Staff Report, 2 volumes: Report with Appendices A and B; Appendices C through F, September 1978
- IA - Beltone case, Complaint Counsel's Brief in Answer to Respondent's Proposed Findings of Fact and Legal Argument
- .o.'s - Consent orders negotiated by BC against Dahlberg, Maico, Radioear, and Sonotone
- JA - Food and Drug Administration, promulgators of a rule governing hearing aids as a medical device. The most important aspect of the rule is its requirement for a physician examination of prospective instrument users
- AIC - Hearing Aids Industry Conference, later HIA, Hearing Industries Association. Manufacturers' trade association.
- AJ - Hearing Aid Journal, one of two industry publications serving (among others) the lead-generating segment
- EW - (former) Department of Health, Education, and Welfare. HEW carried out a parallel (to FDA, BCP) study of the hearing aids delivery system.
- D - Initial decision in the Beltone case by the ALJ, remanded by the Commission in light of Sylvania.
- DF - ID finding

- NHAS - National Hearing Aid Society - dealer trade association, parallel to ASHA.
- PFF - Beltone case respondents' "Proposed Findings of Fact and Conclusions of Law..."
- PTB - Beltone case complaint counsel's Post-Trial Brief
- RPM - Resale price maintenance
- tr. - transcript page
- VA - Veterans Administration. A major purchaser of aids and a source for instrument performance ratios.

## REFERENCES

- bbott, Alden, "Paradox Regained: Towards a 'New Economic Approach' to Vertical Restraints Policy," processed, no date.
- aves, Richard, "Vertical Restraints as Integration by Contract: Evidence and Policy Implications," J. Industrial Econ., forthcoming.
- \_\_\_\_\_, Protocol on "Research on Vertical Restraints," processed, July 5, 1979.
- irector, Aaron, and E.J. Levi, "Law and the Future: Trade Regulation," 51 Nw.U. L. Rev., 281 (1956).
- itofsky, Robert, "The Sylvania Case: Antitrust Analysis of Non-Price Vertical Restraints," 78, Colum. L. Rev., 1, (1978).
- osner, Richard A., "The Rule of Reason and the Economic Approach: Reflections on the Sylvania Decision," 45, U. Chi. L. Rev. 1 (1977).
- \_\_\_\_\_, Antitrust Law: An Economic Perspective, Chicago: Univ. Chi. Press, 1976.
- elser, Lester G., "Why Should Manufacturers Want Fair Trade?" 3 J.L. & Econ. 86, (1960).
- \_\_\_\_\_, "Abusive Trade Practices," 30, Law and Contemporary Problems 488 (1965).



---

**EMPIRICAL ANALYSIS OF THE HEARING AIDS MARKET:**  
**TASK 4 REPORT**

---

### roduction

The final task 3 report stressed the importance of sales figures in assessing the accuracy of the property rights argument and in delineating the predictions of that theory from those of the anticompetitive view. This report considers in some detail the possibilities for obtaining these sales figures from the Beltone record and other trade and governmental sources. In addition, ancillary data needed to frame an appropriate counterfactual are also considered. Before turning to consideration of that material, it will be useful to consider briefly some direct evidence on the importance of leads in generating hearing aid sales.

The Beltone record contains quite varied estimates of the sales generated by leads. The direct sales resulting from leads are estimated to be from 1% to 14% of sales. The low-end estimate comes from a company other than Beltone which may have chosen to emphasize an alternative marketing strategy. It seems much too low to be representative of the leading lead-generating companies, especially in light of their substantial expenditures on national advertising. The source of the high-end figure is Beltone, and as such may be inflated. One may infer that the true value is somewhere in between these extremes.

Estimates of the direct sales resulting from manufacturer-provided ads fail to provide a valid guide to the importance of such leads in generating dealer sales, for several reasons. First, there will be a multiplier attached to leads representing the number of additional prospects developed on referral from the initial customer. Sales manuals of the c.o. companies emphasize the need to "prospect" leads. When one considers the large retailing margins earned by dealers on each instrument sale, it should not be surprising to find that those sales are the result

of a lengthy process of contacting potential buyers. A sale resulting very indirectly from a lead should nevertheless be counted, in part, as derivative from that lead. In addition, repeat sales based on lead-generated original sales should also be counted, though certainly dealers would be ill-suited to compute a reasonable guess as to the proportion of repeat sales in some way dependent on leads.

One other statistic of note regarding the efficacy of leads derives from a Beltone survey summarized in Complaint Counsel's Brief in Answer:

Dealers themselves recognize that Beltone's leads are worth less to them than their own leads. In a survey conducted by Beltone in 1976, it was found that Beltone dealers sent the material requested to the lead in only 56% of the cases, and as to those persons to whom the material was sent, the dealer or his consultant made the follow-up call on 79% of them in order to attempt to sell the person a hearing aid. Follow-up calls by dealers was (sic) therefore only 45% of all factory leads. (BIA, at 53.)

If anything, this evidence is too strong an argument for the uselessness of leads. Had leads in fact been regarded by dealers as worthless, the lead-generating manufacturers could have dispensed with their national lead advertising and thereby increased profitability. Even if the motive for exclusive dealing were simply to exclude rivals from a significant share of the market, that exclusive dealing could still have been required in the absence of leads. In addition to the basic implausibility of the argument for the valuelessness of leads, there are reasons to expect that dealers could judge the potential productivity of pursuing particular leads, and could therefore have ignored unproductive leads based on prior information. Leads may apply to persons or groups with whom the dealer has previously had contact, may have come from persons in particularly poor (or wealthy) areas, or may have applied to institutionalized persons with access to subsidized and controlled hearing health care. The 45%

leads that were aggressively pursued would then represent those leads which represented new and promising information.

The difficulties of the interpretation of these data suggest that the significance of national lead generation cannot be judged by introspection. It is uncontroversial that national leads are themselves responsible for only a small proportion of a dealer's sales. The direct evidence on the usefulness of the leads supports this conclusion. More importantly, the Dahlberg testimony indicates that the drop in wholesale instrument prices accompanying the consent orders was only about \$10, or roughly a 10% decline. Compared to the dealer margin of several hundred dollars -- a margin which apparently covered primarily selling expenses -- it is clear that lead generation did not contribute much to dealer sales.

The real question, though, is whether the "pump-priming" effect of national lead generation is central to the operation of the lead-generation-priming aid dealer network. Much as the water used for priming a pump is trivial in comparison to the volume of water that is then attainable, the informational content of the leads provided by manufacturers to dealers may be quite small in comparison to the followup information generated by dealers. Obviously, the question is not whether lead generation yields directly an important portion of a dealer's sales, but rather whether the national leads are a necessary input to initiate the dealer search process.

These considerations suggest that only direct sales estimates will survive to test the lead generation argument. The following material describes the available data and sketches some of the problems associated with its use. This material is in the form of an outline of the empirical

work to be done, rather than a careful statement of how the appropriate controls might be implemented. Most of the testing should be expected to be quite sensitive to the choice of time period, as other influences, such as the FDA's rule making, may have altered the success of various segments of the industry. These sorts of problems are not emphasized in this analysis, simply because the tests are apt to be governed by the data which actually became available. Once the data are obtained, appropriate caveats will need to be entered concerning these outside influences.

#### Data Sources and Methods

##### 1. Industry sales figures

Industry quantity and value sales figures are important for this analysis for several reasons. It is important to be able to infer whether the reduced efficiency of lead generation activities has led to a decline in overall industry sales. In addition, since most of the individual company sales figures available appear to be expressed in terms of shares, some benchmark will be required.

Industry quantity figures are available from two closely related sources. Members of HAIC, the Hearing Aid Industry Conference (since 1977 known as HIA, Hearing Industries Association) submitted to Price Waterhouse & Co., the HAIC's accounting firm, records of their unit sales for purposes of dues assessment. Price Waterhouse did not undertake a review of the records based on company documents and assumes no responsibility for their accuracy. Nevertheless, the member sales estimates are apt to be far superior to nonmember estimates. Table 1 contains a list of HIA members as of June 30, 1977 with a notation

regarding several significant changes in membership. The most noteworthy change was the departure of Oticon in 1976. Oticon is a leading importer of hearing aids. Also notable is the absence of Sonotone from the membership list. The remaining respondents are members.

During the early 1970's the HAIC sales estimates are likely to have been reasonably accurate. Nonmember sales were estimated based on confidential reports to HAIC from a leading component manufacturer able to infer units produced from its component sales. In approximately 1975, the information that component manufacturer was providing data on nonmember operations was leaked to nonmember firms, resulting in an irritated component manufacturer and the need for a new source of data. HAIC terminated to rely on estimates provided by its own members, a most satisfactory technique as indicated in Table 2. Examples of confusion in these estimates include disagreement on whether Adcomold's instruments were imported, of domestic manufacture, or both; disagreement as to whether or not Amplevox was out of business; and disagreement as to whether Audium manufactured instruments. An especially serious problem in the HAIC estimates is the status change of Oticon in 1976. Given that Oticon was estimated to have sold between 12,500 and 55,000 instruments in the U.S. during only the first six months of 1976, the loss of Oticon's figures could easily have accounted for the drop in industry sales reported by HAIC.

Dissatisfaction with HIA/HAIC figures led the Hearing Aid Journal to construct its own estimates beginning in 1974. The HAI figures are reported in the November issues. They appear to exceed the comparable HAIC figures by a significant margin. It is difficult to evaluate these

figures, though they appear somewhat more plausible than those of HAIC. Mr. Milton Bolstein, editor of the Hearing Aid Journal, has proven to be very cooperative and well informed, and has promised to provide further information.

More recently, HIA has agreed to provide nonmember firms with portions of its statistical output in return for their sales figures submitted confidentially. Apparently this initiative has been a success. Attempts will be made to date the change in procedure in order to assess the accuracy of the data.

Value of product shipment figures from Bureau of the Census sources will allow a rough check on the accuracy at least of broad movements in the HAIC/HIA data. Sales figures are available from the Census of manufactures for census years and from the Annual Survey of Manufactures for intervening years.<sup>1</sup>

## 2. Foreign Trade

Data on imports (quantity and value) are available from Department of Commerce data. While Schedule A breakdowns seem to lump together aids and parts, TSUSA classified data include separate figures for instruments. The following caveats apply, according to HIA:

Implicit prices computed from data reported by Customs may appear low for a number of reasons. These figures do not include a 6% tariff and they are only at wholesale cost or at nearly manufacturing level. The actual retail cost may include a 100% mark-up. In addition,

---

<sup>1</sup>The 1972 Census of Manufactures reports a quantity figure as well with an intriguing footnote indicating that the datum is from unpublished material collected in conjunction with the ASM. Correspondence with the Bureau indicates that the material ceased to be collected in 1975. It may however, provide at least limited guidance as to the accuracy of the HAIC figure.

1) Hearing aid units are included under this classification if they are assembled or unassembled, are complete or incomplete. No figures are available for the amount in each sub-classification. Future classification in this fashion could be accomplished by an administrative order; and

2) The basis for determining the actual dollar value is the actual cost to the manufacturer upon arrival.

An interesting loophole, that may lead to a lower unit price, is Provision 807. Under this provision, parts may be manufactured in the United States and exported for assembly to another country. Upon re-entry to the United States only the added value (i.e., labor cost) is declared to the customs agent. Therefore, some hearing aids, upon importation to the United States, are only declared at a fraction of their value. A lower unit cost is the end result of this process.

port data would be very useful to obtain. Unfortunately, quantity data not appear to be available from Department of Commerce publications. would be very enlightening to find that export-import price relatives varied differently from domestic-import relatives. If lead generation expenditures declined, export-domestic relatives should have risen.

#### Prices

Ideally, price data from Dahlberg, Beltone, Maico, Sonotone, Radioear, Arkley, Zenetron, Siemens, and Oticon would be solicited. Perhaps some of this data might be on file with COWPS. Complete lists would be desirable, both to allow within-type comparisons across companies and over-time comparisons within companies. The Beltone record suggests that Dahlberg cut prices immediately on completing the consent order negotiations. Some data to back this assertion would be exceedingly useful.



Implicit prices for domestic producers and imports can be constructed from the available quantity and value data. The primary purpose of obtaining these data would be to check whether the apparent sales decline suffered after the orders were issued was due to an increased import price advantage. Evidence for the hypotheses we have advanced concerning FTC impacts on lead generation would be provided by an increase in the relative price of imported aids observed in spite of an increase in their market share.

One final note on prices. Sears markets Dahlberg aids, Montgomery Ward markets aids from RCI. These prices are to be investigated for availability and divergent movement post-1975.

#### 4. Individual firm sales experience

Data on individual firm sales obviously would be of great importance to a clear resolution to the issues involved. Beltone could be taken as a control (in a very rough sense) against which Sonotone, Radioear, and Dahlberg would be measured. Maico is somewhat more difficult given the evidence suggesting that Maico moved aggressively into the professional referrals market. The market share data are clearly part of the Beltone record, but have been afforded in camera treatment. Some of this material may appear in the ALJ's findings. Since in camera treatment expires on the date of the Commission's decision (see Attachment A) it may be possible to proceed further at that point.

If these data do not become part of the Beltone public record at some point, it would probably not be worth substantial efforts to obtain the figures via subpoena or negotiations with the impacted companies.

There are two reasons for this conclusion. First, since only Beltone remains as a rather tenuous control, formal statistical inference will be impossible no matter how extensive the data obtained. Second, it appears that it will be possible to derive sufficient information from trade association and published data to permit reasonable conclusions to be reached. The role of the firm data then becomes one of increasing one's confidence in the inferences drawn, rather than serving as a necessary link in any such inferences. The secondary nature of this role argues against expending a substantial amount of energy and money on the task of coercing the companies involved to part with their data. Moreover, the data presumably would remain unavailable for any publishable versions of the final report. In particular, it is difficult to imagine how one could refer to Beltone data without revealing Beltone's identity.

The tone of this section has perhaps been overly pessimistic in comparison to the potential for obtaining data from the Beltone record. The data most useful for this analysis include company data from Dahlberg and Maico that are in the Beltone record, and which are presumably available if disguised. In particular, the Beltone ALJ, Judge Brown, noted in regard to Dahlberg data that "...the Commission may use these statistics in the tabulation of certain market data."<sup>2</sup> It should be possible to construct overall measures of c.o. company performance without revealing individual company data.

This sort of information is important not only in regard to the investigation of the effects of the earlier consent orders, but also

---

Dahlberg tr at 18614.

with respect to the ongoing Beltone case. In that connection, the findings of fact of the ALJ do not appear to provide much guidance, and, indeed do not appear to accord with the Beltone record. The problem is posed by Judge Brown's findings that market shares of the companies which signed consent orders have not declined appreciably and that their sales fell by about 5%, much less than the decline suffered by Beltone. Compare this with the experience of these companies: Sonotone was sold by Gould, ceased producing hearing aids, and now has been reorganized as a marketer of imports. Radioear also ran into considerable difficulties and was sold by its parent to a company formed to market aids through the old Radioear dealer network. Dahlberg testified that sales fell markedly as a result of the abandonment of its lead program (Dahlberg tr at 18702). After the consent order, Dahlberg doubled the number of its dealers, but the new dealers were "casual dealers" selling "maybe one to two hearing aids a year" (Dahlberg tr. at 18610). Sales per (existing) Dahlberg dealer declined "substantially." Dahlberg's sales held up because of an aggressive move to professional referrals. Dahlberg sales and profits apparently collapsed soon after the orders, and have recovered slowly (tr p. 1872 ff.). The evidence is even sketchier for Maico, but, again, the fact that the company was sold may indicate that it encountered substantial difficulties in the post c.o. argument.

Another problem posed by the judge's findings is the seeming inconsistency with the market share data in the record. Beltone's share fell from 22 to 15% of the market during the seventies. Starkey rose from nowhere to probably number 2. The other leaders are probably imports,

that Maico and Dahlberg have almost certainly been displaced from their positions as leading firms. Perhaps the shares are of domestic sales, an inappropriate measure from the point of view of this analysis. In any case, it is clear that further work is needed in order to derive internally consistent share estimates.

#### The universe of hearing-impaired persons

In order to assess the BCP arguments dealing with the usefulness of a case-finding distribution system (as opposed to a professional referral system), industry sales need to be normalized with reference to growth in the hearing impaired population. To do so, it will be necessary to construct a time series on the number of Americans with hearing problems for the 1970-1978 interval. The procedure for constructing this series is still under exploration. The simplest approach would be to obtain estimates of the fraction of various components of the population beset by hearing problems and then to project those fractions over the period using CPS population data. The two sources of hearing problem incidence data are:

- (1) National Center for Health Statistics, Health Resources Administration, results of 1971 survey of the hearing impaired;
- (2) Data presented as part of U.S. Senate hearings into problems of the hearing impaired (1973).

data on hearing problems among the institutionalized population will need to be inferred from V.A. experience.

## 6. Profits

No attempt will be made to derive inferences from hearing aid firm profit data. There are two reasons for this decision. First, it is likely that reasonable profits data are unlikely to be available and that for several of the owner-manager firms, e.g., Beltone and Dahlberg, owner withdrawals will be larger in order to permit avoidance of corporate income taxes on a substantial portion of corporate profits. Second, and more important, the profit data will be biased sharply by the mere existence of leads themselves. It was argued above at length that lead generation expenditures are properly regarded as capital investments yielding multiyear return streams. This implies that sales expenditures of hearing aid manufacturers, especially those for advertising, ought properly to be depreciated rather than expensed. If the company is in a steady state, so that its current expenses for advertising equal the appropriate charge for depreciation, the numerator of the profit rate expressed as a rate of return on assets is unbiased. The denominator is understated because of the omission of intangible capital from the firm's assets. In the case of an industry as promotional as hearing aids, the degree of understatement is likely to be substantial. Though this source of bias is familiar from the debates over advertising generally, no one familiar with those debates is likely to be prepared to compute the corrections necessary in hearing aids.

## 7. Advertising

Advertising data would obviously be useful, but it appears that those data will have to be gleaned from the Beltone record, if that

record becomes public. Beltone advertising is recorded in the 1972 edition National Advertising Investments, a publication of Leading National Advertisers, Inc., but except for Maico (Textron) the c.o. companies are not included in the list and Maico figures are not credible.

#### B. Large buyers

The role of large buyers -- V.A., Sears, Marcor, etc., -- has not been emphasized in the analysis of the hearing aids market. This omission stems from the expectation that, with the exception of the V.A., data will not be available. Sears and Marcor each appear to have purchased their aids from Dahlberg. Given the low likelihood of obtaining individual company data combined with the long term Dahlberg connection, it does not seem useful to pursue analysis in this potentially interesting area.

#### 1. Other data

Data from HIA/HAIC indicate hearing aid sales by state. These data will be combined with Hearing Aid Journal figures on the extent and stringency of state licensure requirements of hearing aid dealers to see if there exists a relation between licensure and sales. Preliminary investigations along these lines have not been promising.

One remaining information source is classified advertising of hearing aid dealerships. Ads for 1979 have been investigated which give a Beltone dealership price of \$20,000-\$25,000, similar to the price of a multiline dealership. Beltone dealerships should have declined in price relative to other dealerships beginning in 1977. Dahlberg dealerships may have

appreciated slightly at the time of the consent order, though the likely effect is unclear and will be worked out only if sufficient data appear to be available.

\* \* \* \*

Once these various data have been amassed, the empirical work should be straightforward. The analysis in the accompanying report predicts that the removal of vertical restrictions imposed by the hearing aid manufacturers should have placed the case-finding dealers at a competitive disadvantage. Their prices should have fallen reflecting the decline in their advertising expenditures and the concomitant reduction in "services" (leads) provided to dealers. Their sales should have declined both through losses to professional referral manufacturers and through foregone customers not reached by any hearing professionals. The decline in sales should occur after the price decline, though the data may not permit this inference. Import shares should increase despite an increase in the relative price of imports, but the overall increase in import sales should fall short of compensating for the domestic sales slackening. Companies like Starkey and perhaps Maico should grow relative to Beltone while Dahlberg, Radioear, and Sonotone should fade, both absolutely and in comparison to Beltone. Finally, were data available for the post-1977 FDA rule experience, Beltone's position should worsen and its experience should approach that of Sonotone, Dahlberg, and Radioear.

TABLE 1

MEMBERSHIP IN HIA, June 30, 1977

Audiotone	Qualitone
Audivox, Inc.	Radioear Corporation
Beltone Electronics Corporation	RCI, Inc.
Bahlberg Electronics, Inc.	Shalako Group
Canavox, Inc.	Siemens Corporation
Electone, Inc.	Starkey Laboratories, Inc.
Dehr Instrument Corp.	Telex Communications Division
Edgerton Hearing Aid Corp.	Unitron Industries, Inc.
Galco Hearing Instruments	Vanco Industries, Inc.
Goldentone Corporation	Widex/Hal Hen Company
North American Philips Company, Inc.	

Source: Price Waterhouse memo to HIA dated September 29, 1977.

The companies listed are those members of HIA who reported sales to Price Waterhouse. Given the nature of the dues assessment process, it is taken to be complete.

Changes in HIA/HAIC membership (incomplete)

Additions	Effective	Deletions	Effective
Electone, Inc.	1975 (second half)	Vicon	1975 (second half)
Goldentone, Inc. <sup>1</sup>	1976 (first half)	Oticon	1976 (first half)

Goldentone appears neither as a 1977 member nor in the nonmember sales estimates of HIA.



Other Regulation. The industry has been subject to a great deal of government intervention beyond that contained in the Bureau of Competition consent orders. The Bureau of Consumer Protection has prepared a lengthy staff report on the industry and has proposed a t.r.r. The FDA, after considerable study, has issued rules governing the devices themselves, which could have impacted competition through their relative effects on U.S. versus foreign and large versus small manufacturers. Finally, at the same time one might have expected quality of dealer performance to deteriorate as a result of FTC actions, state moves toward licensure may possibly operate in the opposite direction.

For purposes of the empirical analysis, the BCP and HEW investigations will be ignored. While industry sources attribute a portion of the 1976-1977 sales decline to bad publicity generated by these proceedings, there is little evidence to support this inference. In particular, the industry received as much or more bad publicity during the early 1970's as a result of Senate hearings conducted under the auspices of Senator Charles Percy. There does not appear to have been a corresponding sales decline consequence to those hearings.

The most important regulation imposed on the industry during the 1970's was almost certainly the medical examination requirement promulgated by the FDA in 1977. Indeed, it is likely to have been significant enough to require that the samples be terminated in 1976. Should more recent data be employed, it will be imperative to check for discontinuities in the various series occurring in 1977. The post-FDA rule experience can be useful

in testing the property rights explanation (cf. "The Hearing Health Care Delivery System" above) but will certainly involve a serious confusion of c.o. and FDA effects.

TABLE 2

STATISTICS UNDERLYING HIA ESTIMATES OF NONMEMBER SALES  
SIX MONTH PERIOD ENDING JUNE 30, 1976

Company	Country	Number of Respondents	Average of Estimates	Range of Estimates	Standard Deviation (6+ responses)
Abco Electronics Co., Ill.	U.S.	2	250	200-300	-
Acyltone)	U.S.	9	411	100-900	257
Acold, Colo.	U.S.	9	411	100-900	257
Alivox	England	5	340	100-600	-
Allog (Computer), Minn.	U.S.	7	429	200-1,000	262
Alidium	Holland	5	220	100-300	-
Alrex, Ill.	U.S.	7	350	100-1,000	292
Alrnaphone	Switz.	4	213	100-300	-
Alrtiton	Japan	2	225	200-250	-
Alrelity-Interton	Germany	11	5,355	900-8,000	3,630
Alrelity-Viennatone	Austria				
Alres	Spain	4	600	100-1,500	-
Alc. Electronics, Calif.	U.S.	9	4,583	1,000-12,000	3,625
Alnke	Germany	2	350	200-500	-
Alngnatone, Fla.	U.S.	8	938	200-3,000	825
Alncroson	Spain	1	1,500	1,500	-
Alntaphon	Switz.	2	800	100-1,500	-
Alnikron	Switz.	7	1,371	600-2,000	620
Alnarion, N.Y.	U.S.	3	1,700	100-3,000	-
Alnicon, N.J.	U.S.	9	27,167	12,500-55,000	12,640
Alnivox	Spain	1	1,500	1,500	-
Alnon	Japan	4	613	250-1,500	-
Alnotone, N.Y.	U.S.	8	3,813	2,000-9,000	2,135
Alnoundfinder, N.Y.	U.S.	1	500	500	-
Alnlevox, Calif.	U.S.	2	200	200	-
Alnexas Hearing, Texas	U.S.	5	1,040	200-3,000	-
Alnutone, Texas	U.S.	1	100	100	-
Alntima, Fla.	U.S.	4	575	300-1,000	-
Alnco, Fla.	U.S.	8	1,900	1,000-4,000	939
Alnicon, Colo.	U.S.	9	5,067	3,000-11,000	2,259

Source: Worksheets provided by HIA.

5. Comparisons of the Property Rights Theory With Other Efficiency Explanations for Vertical Restraints on Hearing Aid Dealers

Attempts to explain vertical restraints as efficiency enhancing devices seem generally to have concentrated on promotional activities of dealers. Following Telser (1960), most investigators have concentrated on uncovering "special services" provided by retailers designed to promote the product in question. For example, a dealer selling personal computers might be expected to provide customers with some introduction to the capabilities and applications of the equipment. If the equipment were sold widely, some dealers might be tempted to "free ride" on the services provided by rivals, reducing prices and attracting customers who have decided which machine to purchase based on information obtained from a full service firm. This free-riding leads, of course, to underprovision of these special services, and thereby to inadequate promotion of the products in question. The difference between the special services argument and the property rights to leads is simply whose rights are being protected. The special services argument treats vertical restraints such as territorial restrictions as devices to define and protect dealer rights, while the leads analysis treats the restraints as designed to protect manufacturer rights. The two approaches are in no way inconsistent, and indeed, the restraints observed may be governed by elements of each. Nevertheless, when the vertical restraints are taken as a package, the manufacturer rights appear to provide a better explanation for the contractual conditions settled on than does the special services argument.

The principal obstacle faced by the special services argument is provided by the manufacturer's insistence on exclusive dealing. As has already been indicated, lead generation requires exclusive dealing. In

contrast, were the goal only to protect dealer rights, exclusive dealing would not be necessary. To see this, consider the following arguments:

A multi-line dealer isn't likely to spend time and money promoting one of his brands if the only effect is to take an equivalent amount of business away from another of his brands (on which he obtains an equivalent mark-up or other return). Yet the manufacturer of the first brand would prefer the dealer to do so, if everything else was equal. Thus, one important rationale for exclusive dealing seems to be its ability to remove conflicting or competing incentives from a dealer's promotional decisions.

This argument seems plausible, but fails because it does not explain why the dealer and the manufacturer interests diverge. In a market with little brand recognition, a dealer would not choose to carry a second product line unless that second line proved complementary to the first. If the second line proved to be complementary, a manufacturer could only force the dealer to forego that line by offering a higher markup on his own line -- clearly a counterproductive move.<sup>3</sup> Indeed, the thrust of the special services argument generally is that manufacturers attempt to protect a dealer's rights to profit from the dealer's own promotion in order to ensure an efficient provision of that promotion. This exclusive dealing argument is quite the opposite. It says that manufacturers would wish to enforce upon their dealers a second-best solution. There is no solid reason why they would wish to do so. Some restraints may be designed to protect dealers, but protection of manufacturer rights must be an important part of the explanation for the pattern of restraints observed.

---

<sup>3</sup>The argument is similar to the anticompetitive argument and fails for the same reasons. As in the case of those restraints, comparisons can be made to the insurance market. Companies which advertise heavily and so have well identified trade names protect their rights to those brands by requiring their agents to be single-line. When brand identification, i.e., supplier rights, are not at issue, exclusive dealing is not required.

**Vertical Restraints in the Hearing Aids Industry:  
A Proposal for Further Research**

**Howard P. Marvel  
Associate Professor of Economics  
Ohio State University  
1775 S. College Rd.  
Columbus, Ohio 43210**

**January 1982**

### roduction

This proposal deals with an extension of the economic analysis of the hearing aids industry reported in the final report of Federal Trade Commission Contract L0605. The goal of the work outlined below is to develop a publishable paper based on the theory already developed combined with empirical analysis as permitted by the available data. I thus propose to link the theory developed in the Task 3 report with the empirical analysis contemplated in the Task 4 report. The work to be done on the theory section consists generally of the preparation of a more concise presentation, but will be supplemented by increased attention to the effect of changing the standard under which antitrust actions against hearing instrument manufacturers are to be judged. In particular, the consumer welfare standard supported by Bork and others as a justification for applying antitrust on economic efficiency grounds does not fully support an efficiency test in the hearing aids market. This disparity arises in consequence of the significant amount of fraud which is alleged to occur in the hearing aids market. Clearly, the efficient exploitation of gullible or poorly informed elderly persons is inconsistent with consumer welfare maximization. The modifications of the theory that are contemplated should not prove to be substantial, however, so that the bulk of the effort will be concentrated on developing the empirical analysis. Accordingly, the remainder of this proposal is devoted to consideration of the empirical issues of the Task 4 report in light of my current understanding of data availability.

### Empirical Analysis of the Hearing Aids Market: The Company Focus

Federal Trade Commission Contract L0605 required that I analyze the effects of FTC-negotiated consent orders against Sonotone Corporation, Radioear Corporation, Dahlberg Electronics, and Maico Hearing Instruments. These orders

forced each of the companies to abandon a broad range of vertical restraints on their dealers, practices which ranged from control over warranties and spare parts to exclusive dealing and exclusive territories. Upon reviewing the compliance information obtained by the FTC for these orders, it became clear that something very dramatic, and, indeed, catastrophic had occurred in the hearing aids market. Sonotone Corporation had been a significant domestic manufacturer of hearing instruments; in the wake of its consent order it virtually disappeared, reemerging as a marketer of imported aids without any manufacturing interest of its own. Radioear was also rescued at the last moment when it was sold to a consortium of its dealers. It appears that these firms have continued to exist in name only.

The remaining two firms had a different experience. Maico apparently suffered a very substantial sales decline. This decline resulted from a dramatic change in marketing strategy: the company simply gave up on sales through its dealer network and switched to professional referrals. Like Radioear and Sonotone, Maico was sold, and the company now operates in a very different fashion than did its predecessor. The most curious experience of the four companies was that of Dahlberg Electronics. Like Maico, it switched aggressively into the professional referrals market, but unlike Maico, it retained, and indeed expanded its dealer network. As a result, Dahlberg's sales apparently held up reasonably well, though its profits may have suffered. Dahlberg's sales experience is therefore a mixture of the inhibiting effect, if any, of the FTC's consent order (and other factors) with the stimulation effect of its efforts in the professional referrals market. Clearly, for our purposes, the relevant sales are those made by Dahlberg to hearing aids dealers. These have apparently declined substantially.



Between the preparation of my Task 3 and 4 reports and this proposal, some additional information on sales appeared in highly processed form as part of the Beltone litigation. This information is interesting, but far from conclusive, especially given the censored form in which it appeared. It appears that Beltone, the leading exponent of vertical restraints in hearing aid distribution, experienced sales declines comparable to those of its rivals. Another important firm, Zenith, also found its sales in decline and, following the example of Sico, Sonotone, and Radioear, was sold. It is clear that sales difficulties are not limited to the firm's whose distribution systems were restructured by the consent orders.

The problem with all of these figures is one of an appropriate standard for comparison against which the sales experience of these companies can be measured. The industry was buffeted at this time not only by the consent orders, but also by the negative publicity generated by an FTC BCP study and proposed trade regulation rule and by an FDA proceeding which finally resulted in a physician waiver rule. Each of these factors should have had an adverse impact on the hearing aids market. While it appears that the rapid growth in hearing aid sales ended in 1973, roughly coincident with the FTC action, this sales slowdown may well have been due to factors totally separate from the consent orders.

How good are non-consent-order firms likely to be as standards for comparison? Beltone seems to be the best candidate, and the evidence of its poor performance certainly calls into question some of the task 3 report's predictions. It should be recalled, however, that Beltone has been under FTC attack for pursuing the same set of practices enjoined by the consent orders. Its defense is based on a claim that Beltone abandoned the enjoined practices some time ago, but it would like to readopt them in the future. Beltone's claim is less than

totally credible, but to the extent that Beltone reduced dealer terminations or otherwise scaled back efforts to police exclusive dealing, its worth as a test standard is diminished.<sup>1</sup>

The considerations are rendered moot by the black veil of secrecy that envelops the Beltone litigation. Without access to the Beltone record, it is not possible to imagine a successful empirical analysis of the hearing aids industry using the company as a unit of analysis. As a result, the rest of this proposal deals with the data analysis which is feasible, analysis of industry trends.

## 2. Empirical Analysis of the Hearing Aids Market: The Industry Focus

I propose to collect price data by computing deflators. Data on value of products shipped are available from the Annual Surveys of Manufactures and from the manufacturing censuses. Collection of these data apparently ceased after 1977. Implicit prices come from dividing these data by shipments figures. There are three related sources of such figures, two of which are referred to in my Task 4 report. The third is part of the Beltone Record (see Docket No. 8928, Answer to Respondent's Motion to Supplement the Record). The resulting prices are expected to indicate a price decline for domestic aids resulting from the severing of the tie-in between leads and instruments.

Once these prices have been interpreted, they can also be used to see if increasing price competitiveness of foreign aids accounted for the success of these products--success which occurred even in the slumping post con-

<sup>1</sup>It is worth noting that the sales figures which are available provide less than overwhelming support for the argument that hearing aids vertical restraints served as an effective anticompetitive device. Imports managed to increase their share of the U.S. market both before and after the consent orders. Imported aids are marketed through audiologists rather than hearing aids dealers. Is one to interpret the attachment of hearing aids manufacturers as akin to increasing the strength of a Maginot line of entry barriers even as imports were outflanking their position?

order market. Since hearing aid brand names do not appear to have wide consumer recognition, there is little reason to expect that the effect of "other factors"--the BCP and FDA actions--should have affected imports less than sales of domestic firms.<sup>2</sup> Hence, if the foreign/domestic price relative did not decline as during the mid 1970's, the results of the analysis will suggest that U.S. marketing was less competitive than before.

The central focus of the data section will be on the analysis of industry data such as these. They are available and are not difficult to interpret, though a limited number of observations means that the results will have to be interpreted impressionistically rather than statistically. Nevertheless there seems to be an opportunity to go well beyond the typical vertical restraints analysis, here one eschews data entirely to concentrate on theorizing.

#### Auxiliary Tests

A number of auxiliary tests are proposed in the Task 4 report including one involving advertising and larger buyers. One additional test that could be of great interest concerns the number of hearing aids dealers. While this number is difficult to come by nationally, several states have had licensing boards in place since the early 1970's. For those states, it should be possible to trace the number of dealers before and after the consent orders. If vertical restraints had an anticompetitive effect, removing them should have increased access to dealers while lowering manufacturer prices, thereby making the dealer

---

his needs to be qualified, because the FDA and BCP investigations may have increased consumer demand for certification and shifted sales from dealers to audiologists and otolaryngologists. The consent order firms approached the professional referrals market only after the consent orders suggesting strongly that the relative attractiveness of the two channels was directly affected by the orders.

an attractive distribution outlet. My analysis predicts the reverse. Hence it may be possible to discriminate between the two for at least some states.

If data from several states were available, the set of auxiliary tests would be correspondingly enhanced. The largest decline in the dealer network should have occurred for customers who were relatively inaccessible through dealer sponsored advertising or other direct dealer approaches. This may characterize potential hearing aid customers in rural areas or states with low population density. This is consistent with the little we know about the location of Beltone and other single line dealers.

#### 5. Summary

This proposal is intended as a supplement to the Task 3 and 4 reports already available to the FTC. I now believe that the industry focus is adequate to provide some support for the theories advanced previously. Clearly, it is not ideal, but neither is the company level alternative. The industry level approach has the advantage of being eminently feasible and, when combined with the auxiliary tests, has the potential to enhance considerably our understanding of vertical restraints in the hearing aids market. It also permits the analysis to be divorced entirely from the Beltone litigation. The results obtained would apply solely to the consent order cases.

**E. Industrial Gases**

**Gerald Brock**

## VERTICAL RESTRAINTS IN INDUSTRIAL GASES

Gerald Brock  
August 21, 1980

Final Report prepared for the Federal Trade Commission Bureau  
of Competition in fulfillment of Task 3 of Contract L0601

### Summary of Report

Prior to the late 1960's, the most profitable segment of the industrial gas business was the production and distribution of the gas to large direct customers. Smaller customers were left to independent distributors who purchased gas in bulk from the manufacturers and resold it in welding supply stores. New entrants and changing technology during the 1960's produced a situation of increased competition and excess capacity at the gas manufacturing level. The result of the increased competition was a reduction in the profitability of direct sales to large customers and an increase in the profitability of sales to small customers who were less able to seek competitive bids for their gas needs. In the existing environment of independent distributors, the net result was a decrease in the profitability of gas manufacturers and an increase in the profitability of independent distributors. The two largest manufacturers, the Linde Division of Union Carbide and Airco, responded to the increased manufacturer level competition by imposing restrictive contracts (requiring the purchase of a package of all industrial gases and welding equipment as a condition to purchasing anything) with their distributors and beginning vertical integration into

the distribution stage. The vertical restraints allowed the manufacturers to reap the advantages of being a full line producer and having customers and distributors dependent upon branded welding equipment. The vertical restraints transferred profits from the distributors to the manufacturers, increased consumer prices, and reduced distribution flexibility. The removal of the vertical restraints as a result of the FTC action will increase distributor profitability, decrease manufacturer profitability, reduce prices, and increase distribution flexibility but the effects will take several years to develop completely.

#### Production and Use of Industrial Gases

In order to understand the use of vertical restraints in industrial gas, knowledge of the production technology and demand conditions is useful. Oxygen, nitrogen, and argon are derived from the liquefaction of air (78% nitrogen, 21% oxygen, and 1% argon). The production process consists of cooling air to the point of liquefaction, then raising the temperature slightly to boil off the three gases separately. The different boiling points (-320 F. for nitrogen, -303 for argon, - 297 for oxygen) allow the recovery of the individual gases. After separation, the gases are either moved to the final user in gaseous form through a pipeline or cooled to liquid form again for storage and delivery. The process is technically complex because of the extremely low temperatures required, but is a well understood and long established production process. Plants are highly automated and operate with very few personnel. The only significant purchased input for the production stage is electric power.

Acetylene is used as a welding fuel gas and as a chemical feedstock. It has been a dominant welding fuel since the invention of the oxy-

acetylene torch in 1901 because of its 6000° flame, the hottest of all flames in commercial use. Welding acetylene accounts for 21% of the total acetylene market. In 1974, welding acetylene was produced in 275 small calcium carbide plants. Calcium carbide is brought into contact with water resulting in a chemical reaction in which acetylene gas is released. The gas is then purified, compressed, and dissolved in acetone in special cylinders. Acetylene cylinders are of different design than other compressed gas cylinders because pure compressed acetylene is subject to violent explosions.<sup>1</sup> The other 79% of the total acetylene market in 1974 was for use as a chemical feedstock, primarily for the production of vinyl chloride and acrylates. Most chemical feedstock acetylene is produced in nine large plants by the thermal cracking of hydrocarbons.<sup>2</sup> Although fuel gas acetylene and chemical feedstock acetylene are chemically identical, the markets are sharply differentiated on both the supply and demand sides. The "acetylene market" for purposes of the FTC vertical restraints action refers only to the 21% of the total acetylene market used as a fuel gas.

Helium is present only in minute quantities in the atmosphere (5.3 ppm). It is consequently possible but generally uneconomical to recover helium along with the air liquefaction processes used for oxygen, nitrogen, and argon. The standard source of helium is from natural gas deposits. Helium is often purchased and resold by the industrial gas companies rather than being produced directly by them. The primary welding related use of helium is as an inert protective atmosphere to allow high quality welds without contamination from atmospheric gases.



Hydrogen is used as a low heat welding fuel (4000° flame with oxygen) for aluminum, magnesium, and lead processes and for the annealing and heat treating of metal products. It is commonly produced from the electrolysis of water, the electrolysis of sodium chloride, or the decomposition of hydrocarbons.

Of the six industrial gases, oxygen, nitrogen, and acetylene are by far the dominant ones, with hydrogen, helium, and argon sold in much smaller quantities by the same distributors. Thus significant competitive issues can generally be confined to oxygen, nitrogen, and acetylene.

The dominant use for oxygen is the basic oxygen process of steel production. In 1977, steel companies accounted for over half of the total oxygen demanded.<sup>3</sup> A second industry which uses large quantities of oxygen is chemical plants. The third major use of oxygen (and the one most relevant to the FTC's vertical restraints case) is to speed the combustion and raise the temperature of gas torch flames. Oxygen is used in conjunction with acetylene and other fuel gases in welding, cutting, and treating of metals by gas flames. Individual use quantities range from very substantial in high volume steel foundries to miniscule for individual welders.

The primary useage of nitrogen is to displace air and provide a protective inert atmosphere. Argon and helium provide the same function at higher cost and generally higher quality and are used under conditions which make nitrogen inadequate. Major users of nitrogen shielding include steel, chemical, electronics, and welding industries. A separate market for nitrogen in its liquid state consists of using liquid

nitrogen as a very low temperature coolant for super-fast freezing of foods and other very low temperature processes.<sup>4</sup> Liquid nitrogen food freezing is more expensive than other methods but also faster resulting in higher frozen food quality.

Market Power in Industrial Gas Production

Table 1 shows the concentration in industrial acetylene production. The four firm concentration ratio is 70%, with a long tail of small companies. Thirty-seven percent of the plants and 17% of the capacity are accounted for by independent producers who are not among the eight major industrial gas suppliers.

Table 1  
Industrial Acetylene Market Shares (Calcium Carbide Plants Only)

<u>Company</u>	<u>Number of Plants</u>	<u>Share of Plants</u>	<u>Share of Capacity</u>
Union Carbide	67	24%	37%
Arco	25	9	21
Chemetron	18	7	7
Air Products & Chemicals	15	5	5
Liquid Air	19	7	4
Liquid Carbonic	13	5	3
Big Three	11	4	3
Cardette	5	2	2
Others	102	37	17

Source: John J. Par Report, March 29, 1976 (Chemetron Corp.)  
in Docket 2990, Box 16.

Barriers to entry into acetylene production are low. Capital costs are miniscule by industrial plant standards - on the order of \$100,000

for machinery and equipment. A 1976 Chemetron proposal to rebuild an acetylene plant in Euclid, Ohio which had been destroyed by fire showed total capital expenditures of \$267,000 of which \$198,000 was for the building and \$69,000 was for the machinery and equipment. Operating costs were projected at \$36,000 per month of which \$27,000 was for raw material and \$5,000 was for labor.<sup>5</sup> Similar costs were given in Chemetron's proposed sale of its Jackson, Mississippi acetylene plant to Chemetron's largest distributor in Jackson. The plant was housed in a leased building and had a book value of \$8,970 and a proposed selling price of \$60,000 for machinery, equipment, and office furniture. The incentive for selling the plant was the threat of the distributor to build his own plant and Chemetron's belief that the distributor was capable of doing so and taking away the acetylene business from Chemetron's plant.<sup>6</sup>

The low capital costs, easy availability of equipment and technology, and standardized nature of acetylene make barriers to entry into acetylene production itself practically non-existent. The low capital costs and low economies of scale make it feasible for individual welding supply companies to produce their own acetylene rather than purchasing it from the major industrial gas suppliers. Any profits above the normal competitive level in acetylene come from control of the raw material calcium carbide or distribution restrictions. Calcium carbide is a concentrated market with only four producers, two of which are integrated industrial gas suppliers. Shares of 1975 calcium carbide production capacity were 48% for Union Carbide, 31% for Airco, 17% for Midwest Carbide, and 4% for Pacific Carbide and Alloys.<sup>7</sup> Distributor requirements contracts which required the purchase

acetylene from Union Carbide or Airco in order to purchase other  
 ses or welding equipment (prior to the FTC Consent Decrees) prevented  
 distributors from supplying their own acetylene requirements.

Table 2 shows the market shares of liquid air capacity for the  
 ited States as a whole and for major regions. Regional concentration  
 important because of the high transportation cost and the local nature  
 most sales. The three largest producers (Union Carbide, Air Products,

Table 2  
 Air Separation Capacity in 1978

Company	U.S.	Northeast	North Central	South Atlantic	Texas	California
Union Carbide	34%	37%	45%	27%	25%	36%
Air Products	19	21	14	37	4	28
Airco	15	16	21	13	0	11
Gas Three	11	0	0	6	56	13
Chemetron	8	8	9	2	8	0
Liquid Air	5	0	0	7	7	10
AG	3	12	5	0	0	0
Ordox	1	3	1	4	0	0
	79	86	89	84	96	88
	95	97	95	96	100	98

Liquid Air acquired Chemetron's Industrial Gas Division in June, 1978.  
 In September, 1979, the FTC required divestiture of some competing plants.

Source: Liquid Air Submission to the FTC of June 6, 1978,  
 Section II, Schedule B, Docket 2990, Box 3.

and Airco) produce on a national basis and have market shares roughly  
 equal across the various regional markets. Union Carbide is the largest  
 producer in four of the five largest regional markets and the second  
 producer in the fifth. The three national producers accounted for

68% of the total U.S. capacity in 1978. The second tier of companies (Big Three, Chemetron, and Liquid Air) have much more significant regional specialization. The merger of Chemetron and Liquid Air in June, 1978 made the company a national producer and the fourth largest in the industry.

The market for liquid air products is essentially local in nature because of the high transportation cost of the product. Typical direct product prices include free delivery within fifty to one hundred miles of the producing plant and significant transportation charges after that. In the Union Carbide schedule of April, 1978, the transportation surcharge for each fifty miles beyond the first fifty was approximately 10% of the product price.<sup>8</sup> Thus the delivered price to a user over 500 miles from the producing plant would be double the delivered price within fifty miles of the plant. A Liquid Air report showed that eighty-nine percent of liquid oxygen and nitrogen was shipped less than 150 miles from the producing plant.<sup>9</sup> The concentration of shipments close to the producing plants would give each company local monopoly power around its plants if it were not for the practice of trading product. Because the product is an undifferentiated commodity (except for standard grading differences such as purity specification), the customer is unconcerned with which company actually produced the product. Thus it is common practice for the companies to trade products among themselves so that each may supply its own customers from a nearby plant even if that plant is owned by a competitor. The trades are designed to balance out and cash settlement of net purchases is discouraged. The exchange agreements among the companies specify a settlement price for imbalances in the exchange, but considerable efforts are made to equalize the actual product trades rather than settle for cash. For example, the

record of trades with Air Products for the years 1967 through 1972 shows that Air Products received a total of 2622 million cubic feet of oxygen and nitrogen, shipped a total of 2774 million cubic feet for other companies, and made a cash settlement for 131 million cubic feet.<sup>10</sup>

Barriers to entry into the production of oxygen and nitrogen are substantially greater than for acetylene, but still modest by industrial standards. Efficient sized plants are generally listed as about 300 tons per day of air separation capacity, with an investment cost of approximately \$10 million in 1976 dollars. An additional investment of up to \$10 million in distribution facilities is necessary for effective competition in the bulk liquid market.<sup>11</sup> Because total industry air separation capacity in 1978 in the U.S. was 30,855 tons per day,<sup>12</sup> the efficient size of 300 tons per day is only one percent of the total market. The significance of economies of scale as a barrier to entry depends upon the significance of trading possibilities and consequently upon the significance of regional markets. Within the effective competitive distribution distance (100 - 150 miles), a 300 tons per day plant would supply a large proportion of the demand in most areas of the country and thus economies of scale would be considered a major barrier to entry. If the firm is able to establish trading agreements with other producers in order to allow it to consider its addition to capacity in addition to national capacity, then economies of scale as a barrier to entry are quite small. Economies of scale of one percent of the national market would be less than all but four of Bain's benchmark twenty industries.<sup>13</sup> Market growth rates between 1971 and 1976 were 3.5%/year in pipeline oxygen, 13.1%/year in pipeline nitrogen, 5%/year in liquid oxygen, and 9%/year in liquid nitrogen.<sup>14</sup> Thus several new plants of efficient scale were needed each year to satisfy growing demand. This

market growth made entry much more feasible than it would have been in a static or declining market.

Product differentiation and raw material or patent control are irrelevant in the production side of atmospheric gases. The gases are standardized products. Some attempts have been made to differentiate them by selling large systems (such as Liquid Air's nitrogen food freezing system), but this has little effect on the overall market. Raw materials consist of air and electricity, both available on equal terms to all competitors. The technology is well developed with no significant patent control. There are differences in the technological sophistication of the various companies according to how much research they do on developing new applications and engineering improvements to the production process. While skilled technical personnel are needed to compete in the industrial gas business, there is no evidence that such personnel would not be available to a new entrant.

The only barrier to entry besides economies of scale is capital cost. The \$10 to \$20 million required for an efficient plant and the necessary distribution equipment is clearly beyond the range of many small businesses but is not high in comparison with the costs of building production facilities in many other industries. In terms of Bain's four categories of capital requirements as a barrier to entry, air liquefaction plants would rank in Category III ("moderate capital requirements - \$2.5 to \$10. million 1951 dollars")<sup>15</sup> along with such industries as fountain pens, metal containers, gypsum products, and canned fruits and vegetables. Although the existence of some economies of scale and moderate capital requirements prevent free entry into air liquefaction, no substantial market power accrues from the production barriers to entry.

Competition has been increasing in industrial gases. Union Carbide's dominance of the industry has declined as the smaller companies have been aggressive about building new capacity and price cutting to attract customers. A period of over capacity in the late 1960's led to increased price competition among the industrial gas suppliers. Technological changes have allowed economical operation of small specialized plants dedicated to individual users. This has given additional bargaining power to large users relative to the gas suppliers because it is feasible for the large users to produce their own requirements. More widespread knowledge of cryogenic technology has made users less dependent upon the package of services provided by industrial gas suppliers. The overall effect of these changes has been a greater competition and reduced profitability in the bulk supply of gases to large users. The changes had less impact on small users who could not consider building their own facilities or even seriously consider competitive bids from different suppliers. Increased competition in the production level consequently increased the profitability of serving small customers relative to the profitability of serving large customers.

#### Distribution of Industrial Gas

The distribution cost of industrial gas is an important part of the total delivered cost to the customer. A central feature of the distribution cost function is strong economies of scale. Three basic modes of distribution exist: (1) pipeline, (2) bulk liquid, and (3) high pressure cylinders. Gas is distributed through pipelines over short distance to very high volume customers. Pipeline customers



(known as the "tonnage market") generally take a substantial fraction of a plant's capacity and purchase on long term contracts (10-25 years) with cost escalation provisions. The pipeline customer essentially rents a plant or a portion of a plant rather than purchasing gas from an existing plant. The availability of a pipeline customer often determines the siting of a plant. Because of the economies of scale in building pipelines and right of way problems for pipelines of any length, pipeline gas is only delivered to very close customers. In some cases, the air liquefaction plant is built on the property of the pipeline customer.

The second method of distribution is the delivery of liquid in bulk by truck or railroad. Economies of scale arise both in the actual delivery process and in the storage facilities at the customer's site. The unit cost of storing liquid gases in cryogenic form decreases with the volume stored. Delivery costs are minimized if delivery takes place in truckload or carload lots. In addition, some costs of dealing with customers (salesmen's calls, inspection of facilities) are essentially independent of volume used and thus contribute to distribution economies of scale. Because of the significant economies of scale in distribution, all industrial gas suppliers have steep volume discounts. The price for a small volume of gas is typically several times the price for large volumes.

The third and most expensive (per unit of gas) method is via compressed gas in cylinders. Cylinder gas is the most efficient distribution method for small scale users because it eliminates the need for cryogenic transportation and storage facilities. It also eliminates the "boil-off" that occurs from liquid gas held without usage for a long period of time and allows long term storage for

occasional use. The dominant (but not universal) mode of distributing cylinder gas is through stores or distributors. Rather than having salesmen make direct contacts with potential users and supply them directly from the producing plant, a store carrying welding supplies typically stocks cylinder gas for walk-in customers. The two level distribution system reduces the costs of dealing with small scale customers because salesman's calls and direct delivery from the manufacturer are not required. The manufacturer can deliver in bulk to the store and the store can resell to individual customers. Additional costs are imposed because of the store operating cost but the economies of scale are reduced because of the ease of dealing with large numbers of customers in a store.

The economies of scale in direct distribution to customers mean that many potential customers will not be supplied if direct distribution is the only method available. Consequently, there is an incentive for entrepreneurs to purchase from the manufacturers and sell at retail that is not prohibited by the manufacturer. In general, the manufacturers encouraged independent distributors as a superior method to vertically integrated retail outlets for placing gases with small users. Small quantities of gases are generally purchased in conjunction with welding supplies. Welding supply stores typically carry a wide range of goods produced by various manufacturers as well as branded welding equipment and industrial gases. Prior to 1970, the gas manufacturers perceived a small customer as the least profitable segment of the market and were willing to leave that segment to independent distributors rather than controlling it directly. Allowing independent distributors to retail gases economized on capital outlays and managerial resources while allowing widespread coverage of potential small customers. The

distributors for Airco and Union Carbide developed a close relationship with the manufacturer because they purchased both gases and welding equipment from the same manufacturer. Even in the absence of formal contractual requirements to do so, distributors typically purchased all of their requirements of all industrial gases from the same manufacturer. The manufacturers also developed ties with the distributors through capital assistance and advice provision. Distribution of industrial gases to small scale users is very capital intensive because of the expense of the gas cylinders. Users typically rent cylinders from the distributor rather than owning their own. A distributor may have an inventory of \$250,000 or more worth of cylinders. The manufacturers often assist the distributor in financing the necessary cylinder inventory through direct capital investments, assistance in finding outside financing, or rental of cylinders to the distributor. So long as the manufacturer assists in financing the cylinder inventory, the cylinders are generally restricted to being used for the gases produced by that manufacturer, thus restricting the distributor's freedom to seek competitive bids for gas supplies.

Increased competition at the production level during the 1960's reduced the dependence of distributors upon a single supplier. At least in the case of Airco, increased distributor ownership of the cylinder inventory also gave the distributors greater freedom to seek competitive suppliers. The increased competition also reduced the profitability of serving competitive bulk accounts and focused manufacturer attention on the now relatively more profitable small user segment of the market. A 1972 Union Carbide analysis summarized the change in market conditions as follows:<sup>16</sup>

Slowly over the past decade, profitability in the industrial gas business has shifted from the manufacturing to the marketing activity. In the late 1940's when Linde first began strengthening its distributor organization, the profitability which could be derived from small accounts was less than that from major accounts and a concerted effort was made to put in the hands of distributors product supply to and servicing of small users. Today, the situation is reversed and a typical distributor organization is more profitable than a bulk producer. We have, therefore, established an objective to participate to a greater degree in the small user market. Unfortunately, past reliance on distributors has left the division without either the marketing or the distribution capability of supplying such small users on a direct basis. Continued reliance on distributors to provide penetration in this market is becoming more tenuous for several reasons:

1. Other welding supply manufacturers have broadened their product line so that it now includes many of the specialty items which were Linde's forte. Since some have a broader product line than we (notably stick electrodes), competitive inroads into distributors are increasing as other manufacturers emphasize a complete package.
2. Gas supplies to a distributor (either cylinder or bulk) are progressively more available from both local and national suppliers and price pressures are severe. The importance of the "Linde package" is becoming less as a distributor increases his dominance in his own marketplace.
3. Increased ownership of fixed assets - notably cylinders, liquid storage tanks and filling facilities - makes a distributor less dependent on a gas supplier.

.....

It is most probable that outright ownership of distributors in selected market areas will be a desirable strategy, both because of the potential high returns and the knowledge of the marketplace it would provide to the division.....

Union Carbide and Airco both responded to the changed market conditions by strengthening and formalizing the ties between manufacturer and distributor. Both companies imposed formal contractual requirements that all gases used by a distributor must be purchased from the franchising manufacturer. In addition, informal but implicit ties between the sale of gases and the sale of welding equipment were imposed.

Union Carbide also embarked on a program to acquire selected distributors.

Airco executives testified that very little opposition was raised to the new contracts requiring Airco distributors to purchase gases exclusively from Airco. Most distributors had been purchasing all requirements from Airco in the absence of contractual requirements and thus saw little change. A few distributors signed the new contracts but continued to purchase from other companies when better prices were available. They were subsequently terminated as distributors for both gases and welding equipment. The threat of termination of welding equipment franchises was more significant than the threat of termination of gas franchises because of the brand name loyalty in welding equipment and the significance of repeat business for supplies and service. Roy Stears, president of Midwest Welding Supply, gave the following explanation for finally signing the Airco requirements contract after initially objecting to it:<sup>17</sup>

Q Mr. Stears, what were the reasons that you did not wish to have your distributorship contract cancelled by Airco when you signed the total requirements contract in 1973?

A I think there were two primary reasons. One is in the purchasing of our cylinders, if we were cancelled out from being Airco distributors, we would immediately become due and payable to C.C.I.C., three to four hundred thousand dollars worth of payments that would become due. The second reason would be that we have built over since 1949, a lot of customers that are using Airco products, and this is capital investment for them, and they were concerned about a supply of parts, and so forth, and we would have been in jeopardy at that point, as far as being this type of business, and Airco equipment constitutes maybe 75 percent of our hard gas business.

Q Were you concerned that some of your customers would have opted to continue to purchase Airco welding equipment and supplies in the event that you had been forced to discontinue your purchase of Airco equipment from Airco?

A Yes. They would have gone to other sources to purchase Airco equipment.

Q Why is that?

A This capital investment of parts and all that, they readily don't discontinue and put in the junk heap. They will want to keep and utilize its total life.

Q Will they also purchase Airco consumable items?

A Yes. There are certain consumable items that would go right along with Airco equipment, and they would have to purchase this without destroying their capital investment.

.....

Q Were you concerned that it might be possible that if a customer determined to go to another distributor to buy his welding equipment that you might lose also that customer's gas volume?

A Yes. In the majority of cases, I think it usually works this way. They normally go to one distributor to buy their total requirement unless it is a particular application on hard gas. They normally buy them together.

The vertical restraints reduced the freedom of the distributors to seek competitive bids from various suppliers for gases or to construct their own acetylene plants. Many of the conflicts between distributors and the manufacturer centered on the distributor's desire to build an acetylene plant and the manufacturer's insistence that all gases be purchased. With vertical restraints in place, the manufacturers were able to discriminate in price between distributors and direct customers. Richard Giordano, president of Airco, testified that prices to distributors were set by analyzing the local market conditions to determine the price a distributor could charge and then setting a distributor price which would give the distributor "an adequate margin in which to run his business, make a profit on his investment, and grow."<sup>18</sup> Giordano also testified that sales to distributors had been more profitable than sales to direct accounts because:<sup>19</sup>

...the competitive atmosphere in the large bulk industrial gas market has been such that the prices have not risen as fast as the costs, and the profits have not provided an adequate return on investment. The market in which distributors do business is one that has traditionally been less competitive because it is

populated by hundreds of thousands of small customers, and as a consequence, both we and distributors have been able to enjoy a higher return in that business.

In 1975 the FTC began an investigation into the vertical restraints and distributor complaints that the manufacturers used predatory pricing to drive distributors who switched suppliers out of business. The Commission decided to take no action on the predatory pricing complaints but to challenge the vertical restraints. The FTC prepared a draft complaint against Union Carbide and entered into settlement negotiations with the company. The complaint charged that the tying arrangements, exclusive dealing arrangements, and requirements contracts violated Section 3 of the Clayton Act and Section 5 of the Federal Trade Commission Act because the arrangements reduced competition for the sale of industrial gases to distributors, reduced competition for the sale of industrial gases to consumers, and increased entry barriers into the sale of industrial gases. The complaint also charged that Union Carbide's acquisition of majority control of twenty-two distributors between 1969 and 1977 was a violation of Section 7 of the Clayton Act and Section 5 of the Federal Trade Commission Act.

A settlement agreement was reached in February, 1977. After public comment, a formal complaint and order embodying the agreement was issued on September 28, 1977. In the settlement, Union Carbide agreed not to:

- (1) impose requirements contracts with more than one year duration upon its distributors
- (2) tie the purchase of one gas to the purchase of another gas
- (3) tie the purchase of gas to the purchase of welding products

(4) purchase additional distributors except to compensate for distributors sold and for certain other specified reasons. As part of the settlement, the Commission agreed to challenge the vertical restraints imposed by Airco and to release Union Carbide from any restrictions more severe than those imposed upon Airco at the settlement of that case.

The FTC issued a complaint against Airco in May, 1977 with similar allegations to those contained in the Union Carbide complaint. Airco denied the charges and refused a settlement agreement on the Union Carbide terms. Preparations were begun for a trial before an administrative law judge including wide ranging document demands from manufacturers and distributors of industrial gases. In January, 1979, just before the trial was to begin, a settlement on essentially the Union Carbide terms was reached and the matter was withdrawn from litigation. After public comment, a final order incorporating the agreement was issued on July 31, 1979.

#### Analysis of Vertical Restraints

The questions raised by the above historical account of the imposition and removal of vertical restraints include:

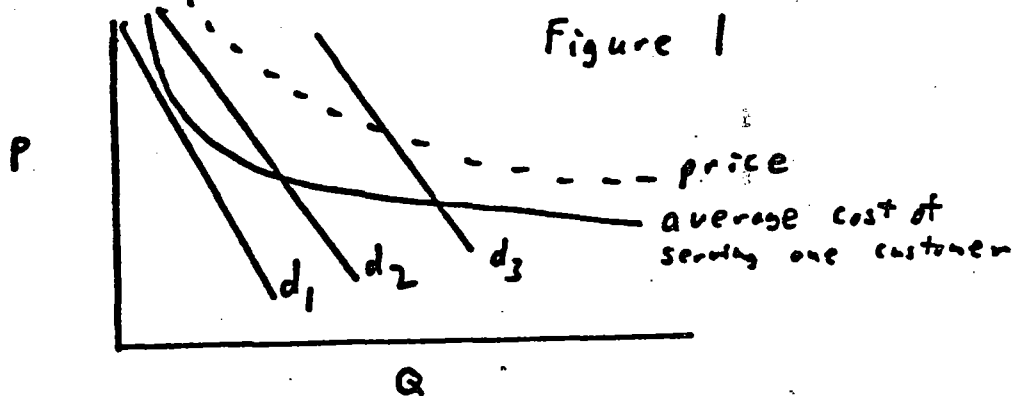
- 1) Why were vertical restraints imposed only after competition intensified?
- 2) What effect did the vertical restraints have on the distribution of profits between the dealer and manufacturer and on the final consumer price?
- 3) What changes can be expected from the FTC action?

In order to answer the questions, a stylized model of the events is presented below in which the increasing competition is represented as a switch from pure monopoly to pure competition. A more precise statement



of the assumptions and their implications is contained in the appendix.

Assume initially that there is a monopolist manufacturer of industrial gas with a constant average and marginal cost of production,  $c$  per unit. There is a fixed cost of serving each customer directly by the manufacturer given by  $F$  per month independent of the volume of purchases by that customer. Under those cost conditions, the profit maximizing pricing scheme will be a schedule of volume discounts computed from marking up the fixed cost  $F$  and the marginal cost  $c$  by a factor computed from the demand function. Figure 1 illustrates the cost and pricing scheme from the point of view of a single customer.



Three individual customer demand curves are shown on the diagram, representative of the various conditions which can occur. Customers with demand curves such as  $d_1$  (which do not touch the average cost curve) will not be served under either competition or monopoly because there is no price and quantity combination which they are willing to accept which covers the cost of serving them. Customers with demand curves such as  $d_2$  (which pass through the average cost curve but not the price curve) would be served under competition at the manufacturer level but not under monopoly. Customers with

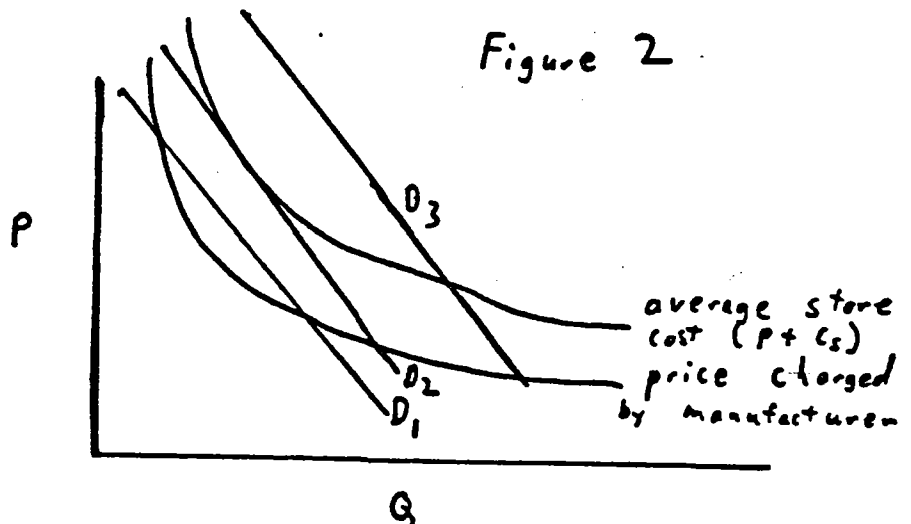
demand curves such as  $d_3$  (above some portion of the price curve) will be served under either competition or monopoly.

The situation depicted in Figure 1 is not an ordinary economies of scale situation because the fixed cost applies to each customer rather than to each production plant. Thus the manufacturer cannot aggregate several customers with demand curves such as  $d_1$  to get a viable market demand curve. However, because the fixed costs are a function of the distribution mode, they may be eliminated with an alternative method of distribution such as a store.

Assume that a store can provide service to its customers for the cost of gas to it plus a constant unit charge  $c_s$  to cover the costs of operating the store. Assume further that the costs to the manufacturer of serving a store are the same as the costs of serving any other direct customer,  $F$  per month plus  $c$  per unit of gas provided. The store will then have economies of scale but will be able to effectively serve small scale customers if there are enough of them within a given geographic market. Thus an isolated potential customer with a demand curve such as  $d_1$  will continue to be unserved but an area with many such customers will serve them through one or more stores.

The market demand curve seen by any one store depends upon the pricing policy of the manufacturer, the demand curves of individual potential customers in the geographical area, and the availability and pricing policy of other stores in the geographical area. Assuming no barriers to entry to the establishment of stores (other than the economies of scale generated by the manufacturer's pricing scheme) and no manufacturer restrictions on resale, stores will be established anytime the market allows the owner to cover the costs. Figure 2

illustrates the situation from the point of view of an individual store.



The store's average cost curve is declining because of the volume discounts offered by the manufacturer. Three possible market demand curves are shown. A store with market demand curve  $D_2$  is making zero profits and is in normal competitive equilibrium. A store with demand curve  $D_3$  is making excess profits. This will induce additional entry if the market is large enough to allow the new entrant to make at least normal profits in spite of the economies of scale. However, if the potential entrant computed his demand curve as  $D_1$  (below average cost at all points) he will not enter and the excess profits of a  $D_3$  demand curve will be an equilibrium. Thus we would expect the equilibrium situation for stores to be zero profits for some and excess profits for others.

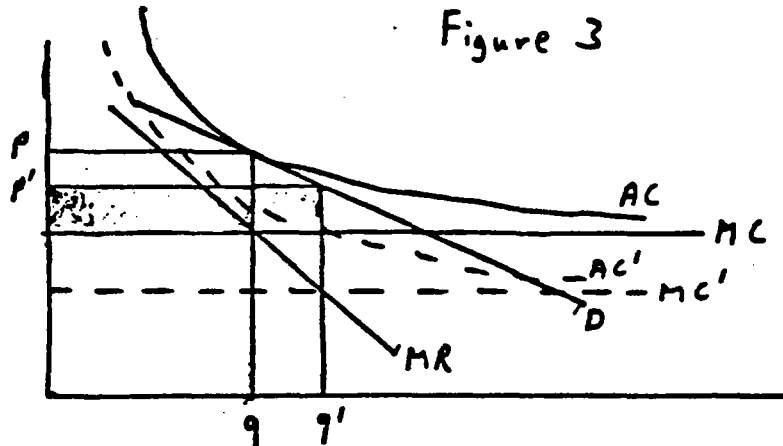
In the situation described above, there is no incentive for the monopoly manufacturer to impose vertical restraints because it is the only source of supply. If the monopolist can distinguish stores making zero profits from those making excess profits, it has an

incentive to price discriminate against those making excess profits and attempt to capture the profits. However, in general the stores will be making near zero profits and the monopolist will increase its profits through selling to the stores. In the actual case of limited competition at the manufacturer level, there was little incentive to impose formal vertical restraints so long as prices were equal across manufacturers and profits at the retail level were limited. The two potential benefits to the manufacturer of vertical restraints were to maintain stores as customers (increasing profits from sales to stores) and to capture retail profits. In an era of limited competition, the advantages to a retailer from remaining a loyal customer and obtaining rights to purchase gas in times of shortage outweighed any small advantage of temporarily better prices from another manufacturer. Consequently, little dealer switching among suppliers occurred even without formal restraints.<sup>20</sup>

With free entry into the retail sector (other than economies of scale barriers to entry), retailing net profits will be near zero and the final retail price will be close to the price which would occur under vertically integrated monopoly pricing. In that case, the producer has no incentive to vertically integrate because it can achieve all the potential profits at the wholesale level without making the effort to set up a retail network. Even if there are some positive net profits in the retail sector, the monopolist has many reasons for avoiding it. The retail sector will have a lower return on assets than the manufacturing sector and thus may be judged a poor investment even if the expected return is greater than the opportunity cost of funds. The retail sector poses considerable risk of miscalculation because of the need to find enough low volume potential customers to meet the

fixed costs of a store. If the manufacturer is more risk averse or less knowledgeable of local conditions than potential entrepreneurs, it may find it worthwhile to leave the retail sector to independents. And finally, there are various managerial reasons such as better community relations with an independently owned retailer, problems in motivating and supervising a local store manager, etc. which may lead the manufacturer to allow the retail sector to exist independently even if there are some excess profits left for retailers. Thus we would not expect to find a vertically integrated retail sector under the monopoly conditions assumed. It is to the manufacturer's advantage to have as many retailers as possible selling at as low a price as possible because the product is a commodity requiring no image differentiation or extensive sales efforts.

After the equilibrium is established with the monopoly producer and independent retail stores, assume that barriers to entry at the producer level are eliminated causing that sector to become purely competitive. The price will drop to the level of producer costs. Volume discounts will remain because of the real costs of serving customers but the monopoly mark-up on both the fixed cost and the unit cost will be competed away. After the change to competition at the producer level, store owners will see their marginal costs drop to  $c + c_g$ . The store owner will maintain the same percentage mark-up applied to a reduced marginal cost. Figure 3 illustrates the change from the point of view of the store owner. Under producer monopoly conditions, the store owner sees a demand curve (D), marginal revenue curve (MR), average cost curve (AC), and marginal cost curve (MC).



His maximum profit point is determined by the intersection of MR and MC yielding a price  $p$  and a quantity  $q$  which just allows him to cover his fixed costs and earn zero net profits. The change to competition at the producer level drops his marginal cost curve to  $MC'$  and his average cost curve to  $AC'$  while leaving his demand and marginal revenue curves unchanged. The new maximum profit position is given by a price of  $p'$  and a quantity of  $q'$  yielding a net profit equal to the shaded region.

There will be additional changes from the switch to competition such as some marginal customers switching between distributors and direct purchases and some new entry into the distribution sector. However, it is likely that in many cases, the excess profits made by the distributors as a result of the reduced marginal cost will not be enough to induce new entry because of the fixed costs of setting up a new store. Thus the final result of the switch from monopoly to competition is a reduction in profits at the manufacturer level,

an increase in profits at the distributor level, and a reduction in the final consumer price. The manufacturer will now perceive that his most profitable customers are the indirect customers served by the retailers rather than the direct customers and will have an incentive to seek methods of vertical integration or vertical restraints to capture the retail level profits.

One possible response by the manufacturer is a policy of purchasing existing distributors or establishing new ones. If the manufacturer perceives the changing market conditions more rapidly than the distributors, it may be able to purchase distributors for a price based on past profits rather than on potential future profits. However, if the distributors understand the significance of increased manufacturer competition, they will only sell for a price which includes the capitalized value of future above normal profits and thus the manufacturer cannot benefit by the purchase. The establishment of new manufacturer owned dealers will not in general be an attractive method of capturing the potential excess profits because the new dealers will incur fixed costs and competition from established independent dealers. Only if the manufacturer has some control over the distributors other than as a competitive supplier of gas can it recapture the profits lost to competition at the manufacturer level.

In the welding gas case, the tie which allows the manufacturer to recapture part of the profits is branded welding equipment and full line provision of gases. Because of parts and service considerations on branded welding machinery, the distributor cannot easily switch to a new brand and retain its old customers. The threat to establish a competing branded dealer in welding equipment is a significant threat

to the individual dealer's market control. Because the gases are sold along with the equipment, a distributor who loses access to welding equipment is likely to lose enough gas customers to reduce his profits to the normal level or below.

The purpose of the vertical restraint (requiring full line dealing in gases and welding equipment from one manufacturer) is to allow the manufacturer to fully exploit its market power in welding equipment. It is a tying arrangement between a bundle of goods. The manufacturer has an incentive to maintain low prices on welding equipment in order to continue providing a market for supplies and gases rather than putting all profits on the welding equipment. With vertical restraints, the manufacturer can assess the profitability of the distributorship as a whole rather than providing competitive prices for each item purchased by the distributor. If the distributorship is charged higher than competitive prices for some gases but chooses to remain a distributorship, the manufacturer can capture some of the potential retailer monopoly profits.

Under monopoly conditions at the manufacturer level, the distributor earns a normal profit level on both welding equipment and gases. Immediately after the switch to competition, the distributor continues to make a normal profit on welding equipment and makes an excess profit on gases because of the reduction in the cost of the gas to him. If the manufacturer simply raised the price of gases without any vertical restraints, the distributor would purchase his gases elsewhere. If the manufacturer raises the price of gases and makes the continued provision of welding equipment subject to the purchase of gas, the distributor will have to make a choice between being a more competitive



gas supplier without welding equipment and a combination seller of gas and welding equipment. If he believes that stocks of welding equipment are an important incentive for gas customers to come into his store, he will find it worthwhile to continue the relationship and accept the vertical restraints.<sup>21</sup>

The requirement to purchase all gases as a condition for purchasing any helps develop a close relationship between the distributor and the manufacturer. It prevents the use of a new supplier for easily available or more competitive gases while continuing to rely on the original supplier for less available gases. Because distributors need access to the rarer gases as well as to acetylene, oxygen, and nitrogen and because capacity constraints sometimes require allocation of gases to customers, the full line purchase requirement switches competition from a narrow one time price basis to a broad view of manufacturer capability to provide all needs over an extended period of time. It thus benefits established manufacturers at the expense of new entrants who are perceived as less reliable for long run supplies and who may not produce a full set of gases. The vertical restraints thus contribute to barriers to entry at the manufacturer level.

The FTC action to remove the vertical restraints should increase consumer welfare by reducing the retail price of gas closer to the competitive level, increasing distributor choice of gas suppliers, and reducing barriers to entry into the manufacture of gas. In addition, the action should reduce the profitability of manufacturers and increase the profitability of dealers. None of the effects should be expected to be of large magnitude and could be masked by other changes in

the industry in an empirical analysis. No detrimental welfare effects are foreseen from the removal of vertical restraints in this case. There are no information or free rider problems of the kind that can potentially justify vertical restraints in other industries. Insofar as it is efficient for distributors to deal exclusively with one manufacturer, they may continue to do so in the absence of vertical restraints. It is likely that many distributors will continue to purchase all of their requirements from a single manufacturer because of real efficiencies, force of habit, or a belief that they will obtain better service from remaining a loyal distributor. However, the action allows distributors who wish the freedom to purchase from multiple manufacturers and provides greater opportunities for new manufacturers to sell to established dealers. It is thus likely that the action contributed to consumer welfare in spite of the fact that only minor changes in the industry can be expected to result.

Little information is available in the existing record regarding changes in distributor-manufacturer relationships subsequent to the FTC actions. It is likely that little change has occurred to date. Because the 1977 Union Carbide order was subject to modification if Airco settled on different terms, neither case can be considered settled until the July, 1979 final Airco agreement. The small number of distributors who protested the imposition of vertical restraints and the number of manufacturer-dealer ties other than the formal requirements contract for gases suggests that the expected changes to the distribution relationship will come slowly.

Hypotheses on the Effect of the FTC Action

The basic effect of the vertical restraints is an income redistribution between manufacturer and distributor. The distributor is reduced to normal profits as in the monopoly period. The manufacturer regains part of the profits lost to increased competition. The vertical restraints do not affect in any significant way the amount of service provided with the product. The general effect of reducing the vertical restraints via the FTC action should be greater dealer profitability and lower manufacturer profitability. Specific hypotheses can be identified as follows:

- 1) There will be reduced price discrimination between dealers and direct customers. The price schedules for dealers will converge toward those offered to direct customers.
- 2) Distributor profits will increase.
- 3) Manufacturer profits on dealer sales will decrease.
- 4) Final consumer prices will be reduced as a result of removing the vertical restraints.
- 5) Distributors will change gas suppliers more frequently than in the past.

No radical change in prices or competitive relationships should be expected from the FTC action. Although the action increases the bargaining power of the dealers relative to the manufacturers, the manufacturers still have a great deal of power over the distributors. The large number of quality variables in the manufacturer - distributor relationship (speed of deliveries, sales assistance and promotional allowances, allocations in times of shortage, etc.) make the maintenance of goodwill on the part of the manufacturer an important distributor

consideration. The knowledge that manufacturers prefer loyal distributors who sell only that manufacturer's gases will prevent many distributors for selling competitive gases if the price advantages are not too large. Consequently, the effects of the removal of the restraints are likely to show up only over a significant period of time and be limited to marginal changes in the profitability and competitive relationships in the industry.

APPENDIX

Assumptions Used in the Model

- (1) The marginal and average cost of production is  $c$ , a constant.
- (2) The fixed cost of serving each customer via direct manufacturer service is  $F$  per month.
- (3) The cost to a manufacturer of serving a store is the same as the cost of serving any other direct account,  $F$  per month plus  $c$  per unit.
- (4) The cost to a store of serving an individual customer is proportional to the volume purchased, and is given by  $c_s$  (the store cost of service) plus  $p$  (the price paid by the store for the product).
- (5) Demand is given by a log-linear function of price and income (or sales volume of the customer's products) with constant elasticities of demand. The income (sales) of potential customers is distributed log-linear. The price elasticity of demand is given by  $\epsilon_p$  and the average income elasticity of demand of the marginal customer is given by  $\epsilon_y$ . Individual customer elasticities are not known.
- (6) Initially the manufacturer is a pure monopolist.

Result 1: The Direct Sale Monopoly Price

With a fixed cost of  $F$  per customer and a unit cost of  $c$  per unit, the cost structure is similar to that of a telephone company or electric utility in which a fixed cost is incurred for attachment to the system in addition to the cost of providing the actual unit of service (telephone calls or kilowatt hours). We can therefore draw on the telephone pricing literature for derivation of the optimal two part pricing scheme. The profit maximizing price schedule is in general quite complex but the demand assumptions made above (Assumption 5) allow us to use the simplified result of Littlechild that the optimal pricing scheme is given by<sup>22</sup>

$$(1) \quad \frac{f - F}{f} = \frac{p - c}{p} = -\epsilon_y / \beta \epsilon_p$$

where  $f$  is the fixed charge imposed on each customer,  $p_v$  is the price per unit of gas imposed on each customer, and  $\beta$  is the elasticity system size (total number of direct customers) with respect to the income level which just induces a customer to join the system and pay the fixed charge.

Equation (1) says that the profit maximizing pricing scheme is a fixed charge plus product charge with an equal percentage profit margin on the fixed cost of serving customers and the variable cost of providing products. If  $\epsilon_y = 1$  (the marginal customer increases gas purchases proportionately to his income or sales increases) and  $\beta = 1$ , then the result reduces to charging a profit margin equal to the inverse of the price elasticity of demand as in the ordinary case without fixed costs of serving the customers. If we denote  $1/(1 - \epsilon_y/\beta\epsilon_p)$  by  $\alpha$ , then we can rewrite the price per unit to customer  $i$  as a function of customer  $i$ 's purchases as follows:

$$(2) \quad p(q_i) = \alpha(F/q_i + c)$$

Equation (2) gives the profit maximizing price as a schedule of volume discounts based on marking up the actual cost of serving the customer by the factor  $\alpha$  computed from the appropriate elasticities.

#### Result 2: Indirect customers with no resale restrictions

The price given in equation (2) will leave potential customers with low volume demand unserved. If it is possible to resell the gas through a store to walk-in customers at a handling cost of  $s$  (store cost) per unit and the manufacturer imposes no resale restrictions, the total costs of a store selling  $q_i$  units will be:

$$(3) \quad TC(q_1) = p(q_1)q_1 + c_s q_1 = a(F/q_1 + c)q_1 + c_s q_1 = aF + q_1(ac + c_s)$$

The store owner sees declining average costs with fixed costs of  $aF$  and constant marginal costs of  $ac + c_s$ . The store owner is a local monopolist because of the fixed costs of setting up a store. He is constrained by the presence of other stores and by the ability of customers to buy direct from the manufacturer. He must achieve enough mark-up over his marginal costs to cover the fixed costs in order to be viable. If  $F$  is very low or  $c_s$  is very high, the store owner will not be viable because he cannot compete with direct distribution.

The store owner will maximize profits by estimating the elasticity of demand for his products (presumably higher than the price elasticity of demand seen by the manufacturer because of the competition of the manufacturer and other store owners some distance away) and using that elasticity to compute the optimal mark-up over marginal cost. If the store elasticity of demand is  $\eta$ , then the optimal store price is given by

$$(4) \quad p_s = MC_s(\eta/\eta-1) = \delta(ac + c_s) \quad \text{where } \delta = \eta/\eta-1$$

The store profit will be given by

$$(5) \quad \pi_s(q_1) = -aF + (\delta-1)q_1(ac + c_s)$$

At a sales level below  $q_1 = aF/((\delta-1)(ac + c_s))$  the store will lose money and above that level it will make a profit.

Any customer consuming less than  $q_1 = aF/((\delta-1)ac + \delta c_s)$  will find it cheaper to purchase from the store than direct from the manufacturer. Assuming there are no barriers to entry other than economies of scale into retailing gases, stores will enter anywhere there is a sufficient concentration of potential low volume customers

allow the store to recoup its fixed costs. In equilibrium, stores will be distributed so that it is impossible to add another store and obtain at least normal profits. Some of the stores will be making zero (normal) profits and some will be making excess profits.



References

1. Liquid Air, Inc., Gas Product Manual (November 30, 1972), Docket 2990, File Box 15.
2. John J. Par (Chemetron Corp.), "Acetylene Market" (March 29, 1976), Docket 2990, Box 16.
3. "Airco, Inc.", information provided by Airco to First Boston Corporation for consideration of an offer to acquire Airco (January 28, 1978), Docket 2990, Box 10.
4. Liquid Air Inc, Gas Product Manual, op. cit.
5. Chemetron Corp., "Capital Projects for Board Approval - May, 1976 - Rebuild Euclid Acetylene Plant," Docket 2990, Box 16.
6. G. B. Alexander (Chemetron Corp.) memo re Jackson Acetylene Plant (May 22, 1978), Docket 2990, Box 16.
7. John J. Par, op. cit.
8. Union Carbide Corp., "Revised Price Schedule," (April 7, 1978), Docket 2990, Box 10.
9. Liquid Air Corp., "Response to the FTC Regarding the Acquisition of the Industrial Gases Division of Chemetron Corporation," (December 14, 1978), Specification 2-5, Exhibit 2-1, Docket 2990, Box 2.
10. "Industrial Gas Exchange Statement," (November 6, 1973), in Volume 741-0005-2-72, Docket 8955, Box 8.
11. Liquid Air Corp., "Submission to the FTC Regarding the Acquisition of the Industrial Gases Division of Chemetron Corporation," (June 20, 1978), Docket 2990, Box 3 gives capital costs of \$10 million for a plant and \$5 million for distribution equipment; "Airco, Inc.", op. cit. gives capital costs of \$20 million for 300 tons per day plant and distribution equipment and \$15 million for 1000 tons per day oxygen plant for pipeline distribution only.
12. Liquid Air Corp., "Submission to the FTC," (June 6, 1978), Section II, Schedule B, Docket 2990, Box 3.
13. Joe S. Bain, Barriers to New Competition (Cambridge, Mass: Harvard University Press, 1956), p. 72.
14. "Airco, Inc.," op. cit., pp. V-2, V-3.

- . Bain, op cit., p. 158.
- . Union Carbide Corp., "Memo of J.G. Benson to Operating Committee," (March 29, 1972), in Volume 741-0005-2-74, pp. 95-97, Docket 55, Box 7.
- . "Testimony of Ray J. Stears, May 11, 1977," Docket 751-0010, 14-16.
- . "Testimony of Richard V. Giordano, October 14, 1975." Docket 1-0010, p. 70.
- . Ibid., p. 72.
- . Moreover, the overall perspective as to changes in industry dynamics possessed by the manufacturers may have been superior to that of the distributors. Because the manufacturers saw that their market was declining before this was perceived by the distributors, they have been able to impose the restraints before the distributors perceived that the increasingly competitive environment enhanced their bargaining power relative to that of the manufacturers.
- . This analysis treats gases and welding equipment as products tied together from the final consumer's perspective. The tie is not formally imposed by the retailer but is a matter of convenience for the customer. The customer prefers to purchase welding equipment and gases at the same store because they are used together. The tie is a matter of convenience rather than requirement. The store that only gases can compete by offering enough discount to induce a customer to purchase gases at a different place than he purchases welding equipment and supplies.
- . Stephen C. Littlechild, "Two-part Tariffs and Consumption Externalities," The Bell Journal of Economics, Volume 6 (Autumn, 1975), 661-670.

## VERTICAL RESTRAINTS IN INDUSTRIAL GASES

Gerald Brock  
May 12, 1980

Specification of data to verify or reject hypotheses in fulfillment of Task 4 of Federal Trade Commission Bureau of Competition Contract L0601.

Five hypotheses were stated in the Task 2 report. The data necessary to verify or reject each hypothesis is specific to that hypothesis. In general, the testing of the hypotheses would be quite difficult because of the short period of time which has elapsed since the final Airco settlement and the expected marginal effects of the FTC action. Testing for small effects is much more difficult than testing for large effects because the small effects are more likely to be masked by other changes in the industry from unrelated causes. It is unlikely that useful tests could be carried out without access to internal data from the manufacturers and distributors. The actual costs of writing and sending out a questionnaire to collect the necessary data would be relatively trivial. The significant costs of data collection would come from the companies' efforts to comply and any legal costs (to either the FTC or the companies) related to the necessity of collecting the data. Because I am not in a position to estimate the companies' costs of providing the data or the legal costs which might be involved, no cost estimates are given in this report.

hypothesis 1: There will be reduced price discrimination between distributors and direct customers.

Data needed: (1) Price schedules for direct customers and departures in the price schedule, (2) price advice sheets for dealers, (3) volumes sold to dealers.

Source of Data: Union Carbide and Airco internal records

The data is needed from 1973 through 1980 or beyond. The information for earlier years is already contained in the records collected for the various industrial gas cases. Data on the volume of gas sold to individual distributors is necessary to reconcile the distributor price (generally stated as a flat price or a price with a single volume break) with the direct customer price schedule (stated as a series of prices for differing volumes). This data is expected to show a convergence of prices charged to dealers and direct customers after the cases. It is unlikely that the full price effect will have occurred by the end of 1980, but the process of convergence should be observable in 1980 data.

hypothesis 2: Distributor profits will increase.

Data needed: Distributor survey of financial records including (1) prices paid for gases, (2) prices received for gases, (3) financial statements.

This data could be quite difficult to assemble and process because of the number of distributors and the expected wide variation in accounting methods and data available from individual distributors. Because many distributors are small businesses managed by their owners, bookkeeping is likely to be quite informal in many cases. Variation in reported manager's compensation and other tax related items is

likely to be significant. It would consequently be necessary to have a series of prices paid and received for gases so that the changing profit margin could be compared against average cost changes as a check on the financial statements.

Hypothesis 3: Manufacturer profits on dealer sales will decrease.

Data needed: Manufacturer studies of the profitability of distributor sales vs. direct sales from 1973 forward.

The manufacturers' seem to have definite opinions on which kind of business is the most profitable from the testimony and documents in the existing record. However I have found very little quantitative evidence in the record showing how much variation there is in profitability. Information on the relative profitability of distributor vs. direct sales would have to come from special studies because that level of detail would generally not be maintained in standard accounting records. While it is quite likely that such studies exist based on evidence in the current record, it would be difficult to specify the appropriate documents with precision if the manufacturers asserted that such studies did not exist or could not be located.

Hypothesis 4: There will be no change in final consumer prices as a result of removing the vertical restraints.

Data needed: Same as the data used in Hypotheses 2 and 3.

The combination of information on distributor profitability and manufacturer profitability would provide insight into the effect on final consumer prices. A rigorous test of this hypothesis would require the construction of a very complete cost index for the entire production and distribution function. The amount of data needed and

The large number of factors potentially affecting final prices make this a difficult hypothesis to test rigorously. Only if the hypothesis is wildly wrong and very large changes in consumer prices resulted from the removal of vertical restraints is a test likely to yield definitive results. It would be difficult to construct a test to discriminate between small changes in consumer prices as a result of the removal of vertical restraints and no change in consumer prices as a result of the removal of vertical restraints.

Hypothesis 5: Distributors will change gas suppliers more frequently than they did while vertical restraints were in place.

Data needed: Distributor survey requesting information on the identity of their gas supplier now and in past years along with reasons for switching suppliers.

This is a relatively straightforward hypothesis to test but may be too early for the effects to show up in the data. Because the final decree allowed one year requirements contracts for individual cases, a minimum of one year and preferably three or four years is necessary for the distributors to have adequate opportunity to switch suppliers.

### **III. The Vertical Restraints Protocols**

A. Vertical Restraints as Integration by  
Contract: Evidence and Policy Implications

Richard E. Caves



**VERTICAL RESTRAINTS AS INTEGRATION  
BY CONTRACT: EVIDENCE AND  
POLICY IMPLICATIONS**

**by**

**Richard E. Caves**

**Discussion Paper Number 754  
April 1980**

**Harvard Institute of Economic Research  
Harvard University  
Cambridge, Massachusetts**

VERTICAL RESTRAINTS AS INTEGRATION BY CONTRACT: EVIDENCE AND POLICY IMPLICATIONS\*

Richard E. Caves  
Harvard University

We have come to realize that contractual relations between manufacturers and distributors should be viewed as forms of quasi-integration, lying along a continuum of market relationships that runs from full vertical integration at one end to the anonymous spot transaction at the other. Economists have followed two independent lines of inquiry in their efforts to explain where and why these contractual terms appear. These arrangements between manufacturer and distributor may embody the market's response to certain informational and contractual failures that would occur in their absence. And they may comprise the bargain struck between manufacturer and retailer, when the two parties' interests are intertwined and each wields some leverage on the bargain. These "market failure" and "market power" approaches (as I shall call them) supply partially conflicting although potentially additive explanations of where and why vertical restraints occur. But the relation between the two models has not been explored, nor has their explanatory power been tested.

The standard concern of economics with the normative significance of vertical restraints has been heightened by revisions and extensions of competition policy in several industrial countries. Exclusive dealing, full-time forcing, resale price maintenance, and territorial and customer restrictions on distributors are all subject to some restraint under the

\* I am indebted to the General Electric Foundation for support of this research and to Daniel C. Esty for assistance. The paper has benefitted from communications with Donald F. Turner, Benjamin Klein, Victor P. Goldberg, and members of the Federal Trade Commission staff, and from extensive comments by Richard Schmalensee.

antitrust laws of the United States, and in most other industrial countries at least some of these practices are restricted. The U.S. Supreme Court's decision in Continental T.V. v. GTE Sylvania (1976) <sup>1/</sup> changed the status of territorial restrictions from being illegal per se to make them illegal only where they unreasonably restrain trade. Applying a rule of reason requires that the enforcement agencies and courts understand the full consequences of these restraints. Those consequences will be hard to pin down, because (as I shall argue) deleting one restraint from an ongoing contractual relation between manufacturer and distributor can shift the bargaining power between the two parties and cause them to revise the other terms of their relation.

This essay approaches the normative problem of deducing the consequences of vertical restraints indirectly by attempting to explain why they occur where they do. One strategy for inferring their effects is to explore what conditions cause parties to adopt them, because the logic of empirically established causes may allow us to deduce effects. The first section attempts the large task of integrating the market-failure and market-power explanations of vertical restraints for the purpose of predicting the market environments in which vertical restraints will occur. In the second section I present what may risibly be called a literary multivariate analysis to test these predictions. Policy conclusions are set forth in the final section.

#### Predicting the Incidence of Vertical Restraints

Why does a manufacturer not simply set the profit maximizing price for his product at the factory gate and sell to all comers? The lumber dealer cares not what articles are made from his boards or what price they are sold for. If the retailing sector were perfectly competitive and homogeneous,

<sup>1/</sup>433 U.S. 36 (1976).

the manufacturer would not need to concern himself with the policies followed by individual retailers who resell his product. The market-failure and market-power approaches to vertical restraints both help to explain the manufacturer's involvement, and both models are needed to explain the overall bargain struck between manufacturer and distributor and thus the incidence of vertical restraints.

#### The market-failure approach

The market-failure approach supplies a critical component of the answer by showing that the manufacturer's expected profit may depend on policies followed by the retailer who distributes it, and that the set of policies that the retailer selects to maximize his own profits does not simultaneously maximize them for the manufacturer. This slippage occurs when the retailer's policies create rents that are not captured by that retailer but by the manufacturer or other retailers of the product.<sup>2/</sup> The retailer rationally underprovides policies that contribute to this shared intangible asset, and the manufacturer has an incentive to bargain for a corrective shift in the retailer's activities.

The prototype source of this free-rider problem is the provision of pre-sales information to the prospective customer (Telser [33]). The retailer who provides information must set a mark-up that covers its cost; however, the customer has an incentive to absorb the information and then to decamp for the nearest discount store and purchase the same article at a price not incorporating its cost of provision. The example of pre-sales information, however, tends to understate the generality of this problem. As Porter [28] points out, if the customer selects among competing brands

<sup>2/</sup> The discrepancy may also stem from factors not involving externality, such as differences in time horizons.

on the basis of signals and incomplete information, many parameters influencing a brand's perceived qualities will be within the retailer's control. These include not only the tailoring of information to the customer's needs but also providing an ambience that has a significant value as a signal, extending guarantees and providing facilities for prompt after-sales service that cannot always be priced at its full cost, etc. When the retailer provides services to his own customers or to who have bought the same brand from other retailers, revenue that he takes in may reflect less than the services' full contribution to the shared goodwill asset. Porter shows that this problem of intangible assets and free-rider incentives particularly afflicts so-called "non-convenience goods"—those commodities for which the final buyer shops comparatively and seeks auxiliary information and services from the retailer. The retailer's premises, once cloaked in the identity of the manufacturer, themselves become an advertisement for the good and convey an advertising message even to those who do not patronize them. The neat gasoline station, the ubiquitous soft-drink vending machine is thus a billboard as well as a retail outlet.

The manufacturer encountering this free-rider problem can employ various strategies to resolve it. Potentially the most efficient approach is to pay the retailer directly for implementing the preferred policies, and such payments appear as subsidies to retail advertising, below-cost provision of signs and displays, and the like. However, many of the services that the retailer provides are difficult for the manufacturer to meter and verify to final buyers. Information supplied to prospective customers, repairs carried out so as to raise the chances of a repeat purchase are heterogeneous and intangible services. Therefore, as Telser [33]

points out, the manufacturer's second-best strategy may be to elevate the retailer's profit on sales of his product above a level that would yield the retailer a normal rate of return when he follows policies that maximize his own profits. His inflated profit margin induces the retailer to increase the level of activities that raise the expected sales of the manufacturer's product, although perhaps not to the level that the manufacturer would choose if he were vertically integrated into retailing. Telser was concerned with resale price maintenance (RPM) as an instrument available to inflate the retailer's margin. Bork [3] and Posner [29] subsequently argued that other vertical restraints, such as the assignment of an exclusive territory to each retailer, serve the same purpose; this equivalence will be considered below. Caves and Murphy [5] noted that franchising systems adopt various policies in order to avert free-rider behavior. Restrictions that manufacturers impose on their distributors may serve to limit market failures due to various forms of free-riding. Some authors conclude that these restraints, even when they limit competition among retailers, are presumptively in society's interest because that interest is congruent with maximum profit for the manufacturer when his market remains "almost" perfectly competitive.

Be that as it may, the market-failure approach both explains the occurrence of certain vertical restraints and indicates why the relation between manufacturer and distributor takes the form of an ongoing contract. The two parties share an intangible asset: buyers' goodwill for the manufacturer's brand, representing their willingness to pay more per unit for the branded good than for a physically equivalent product that is unbranded or carries an unfamiliar brand. The asset derives its value from investment-type outlays by both parties and yields quasi-rents over time to both. But

the market-power approach also contributed importantly to explaining why the manufacturer finds himself in a specific bargaining relation with individual retailers, and how the agreements explainable by the market-failure approach also hold significance for bargained relations among heterogeneous and impurely competitive parties.

The market-power approach

A manufacturer might regard his retail distributors as imperfect competitors for two reasons. Retailers may in fact possess and exercise some long-run bargaining power. And they may be able to appropriate quasi-rents in the short run, as a form of contractual failure, even if they are purely competitive in the long run (i.e. when one retailer can be substituted costlessly for another).

An assumption that retailers possess any long-run market power flies in the face of one's casual sense of the large number of retail enterprises and apparently easy entry. Nonetheless, certain considerations make the assumption plausible for some sectors. Chain stores may have advanced far enough in some lines of retailing to lift national-market buyer concentration into a range that affords some recognition of mutual interdependence. More significantly, because retail sales markets are localized, what matters for the manufacturer is the number of outlets through which he can place his product before final buyers in a given shopping area. Specialized types of retail outlets can be few in number, even in relatively large metropolitan areas. Porter [28, pp. 30-35] points out that this problem is particularly likely to arise for manufacturers of nonconvenience goods because of the skilled and specialized services often proffered by the retail establishment. Entry barriers may arise from scarcities of these skills, or from scale economies that are substantial in the relevant local market. Even with no entry barriers retail establishments that are particularly fortunate in management,

location, or some other unique feature may command rents that can be taken partly in policy commitments secured in the bargain with the manufacturer. Retailers can also acquire market power--and use it to secure valued vertical restraints--by means of cartels in the relevant local market. A retail cartel able to discourage non-cartel retail entrants can force the manufacturer to hand over concessions. A natural concession is to implement some vertical restraint that will assist the retailers in maintaining their own cartel (such as resale price maintenance).

Even if no long-term rents accrue in the retail sector, the duration and complexity of his contractual bargain with the manufacturer may place quasi-rents within the retailer's reach. Costs of contracting and monitoring make it infeasible for the manufacturer to draw a contract that denies the retailer all chances to appropriate some surplus through opportunistic behavior. The fruits of this behavior can be consumed in various forms, one of which is policy commitments akin to vertical restraints.<sup>3/</sup> The manufacturer may be willing to pay off with vertical restraints that benefit the retailer to avoid the costs of haggling over contractual terms that prove incomplete ex post or costs of terminating a given retailer and switching to another.

In assessing the natural harmony between manufacturer and retailer, and thus the scope for bargaining between them, one should also recall that most retailers do not handle the products of only a single manufacturer. The retailer's profit depends on pricing and promotional strategies applied to a range of products. Optimal allocations for the retailer therefore depend on elements of specific jointness in shoppers' demands for the collection of

<sup>3/</sup> For a careful discussion of these quasi-rents, See Klein, Alchian and Crawford [19]; also Williamson [39, chap. 5-7] and Goldberg [13].



goods he offers as well as on jointness in the capacities (display, service, etc.) that he provides. Therefore, it is not sensible to equate an essentially purely competitive distribution sector with a unique supply curve of retailers' services faced by the manufacturer. A retailer's effort to increase sales of the product of manufacturer A, and thus A's profits, could have a negative effect on the retailer's own overall profits because of these interdependencies with other products, and scope for bargaining therefore exists.

The effect of jointness is underlined by the distinction found in the literature on retailing between "types" and "classes" of retail outlets. Different types of outlets are distinguished by the general sort of goods sold, but, within a given type, classes can often be distinguished by the particular mix of goods sold and the ancillary services supplied with them (Porter [28, pp. 38-42]). Retailers in differing classes experience different interdependences affecting the goods of a given manufacturer. The manufacturer is likely to deal with several classes that are diverse in their willingness to meet various terms and conditions associated with handling his product.

#### Vertical restraints in the manufacturer-retailer contract

We are now ready to consider vertical restraints as part of a contract between manufacturer and retailer, which should contain contractual terms that aim to harmonize their interests in the face of the free-rider problem and that reflect the relative bargaining power of the two sides. The terms that potentially restrain competition can be divided into those that can be conferred by the manufacturer and increase rents or restrict competition for the retailer, and those that can be conferred by the retailer and increase rents or restrict competition for the manufacturer. Whatever set of terms

appears in a particular market bargain is assumed to reflect a mutual accord determined by the parties' preferences and relative bargaining power, and it presumably could not be changed so as to make both better off. Furthermore, which vertical restraints are included in the contract will depend on the going state of legal restrictions upon them. If the law is changed to delete some restraint from the bargain, the remaining contractual terms presumably no longer exactly reflect the parties' relative bargaining strength. In the long run, therefore, one expects other terms (including vertical restraints) to be added, dropped, or modified to push the bargain back into equilibrium. In addition, making some one vertical restraint illegal may permanently change the effective relative bargaining power of the two parties, so that the bargain (as recast) becomes relatively more favorable to one party than it was before the legal change.

We can now list these vertical restraints and show their interdependence in the manufacturer-retailer bargain.<sup>4/</sup> The following vertical restraints, on their face, constrain the retailer and give some advantage to the manufacturer:

1. Exclusive dealing refers to a variety of practices by which the manufacturer may preclude a retailer from carrying other manufacturers' brands, commit him to obtain all his requirements from the manufacturer, or require him to carry the manufacturer's full product line. The particular terms normally can be resolved into some combination of a tying arrangement and an all-or-nothing offer. The manufacturer's motives therefore may be various, and we need not run through all the possibilities here. One typical

<sup>4/</sup> Precedents for this approach include Lewis [21, pp. 280-287] and Porter [28, pp. 53-68].

motive for the manufacturer may be to cloak the retail outlet in the manufacturer's brand identity, discouraging on-the-spot comparison of his product to others and facilitating its differentiation. Another motive may be to carry out price discrimination by using exclusive dealing in its tying-arrangement capacity. <sup>5/</sup> Other motives may involve reducing transaction or contracting costs, facilitating scheduling and the like— motives identified in the literature on vertical integration.

2. Customer restrictions usually preclude the retailer from seeking the business of certain large customers who are then pursued by the direct selling efforts of the manufacturer. The usual objective of the manufacturer is to maintain price discrimination among various markets and to preclude intrabrand rivalry for certain strategic classes of customers. Customer restrictions on wholesalers are used to implement whatever preferences the manufacturer has about the retailers who handle his product.

3. Territorial restrictions preclude a distributor from soliciting business outside of an assigned territory. The point of these is both to restrain dealers from seeking customers served more efficiently (from the manufacturer's viewpoint) by other of his dealers and to protect dealers from incursions into their territory. Given the cost function of the distributive outlet, denial of the option of competing in another retailer's territory can lead the retailer to expand his efforts to contact customers at the intensive margin within his own territory—customers who are less cost-effective to contact because they are smaller or involve higher costs for servicing the account (Travers and Wright [36, p. 811]; Preston [30]). This consideration can be modeled formally in several ways, but generally it implies that the retailer is induced to undertake price discrimination, charging different customers different prices net of the direct costs of serving them (Comanor [6, pp. 1430-32]).

<sup>5/</sup> See Telser [24, p. 492]; Adams and Yellen [1].

4. Volume requirements are functionally similar to territorial restrictions, but act more directly to induce the dealer to cover his territory primary responsibility more intensively (Travers and Wright [36, 796-7, 808]). White [38, chap. 9] points out that they amount to an all-or-nothing quantity offer by the manufacturer that makes sense on the assumption that the retailer faces a downward-sloping demand curve in his local market. The retailer then sets a margin (and distributes a quantity) that leaves him operating at a scale smaller than what would minimize his average unit operating cost. This is the equilibrium structure of the retailer if entry is free (Gould and Preston [14]). The effect of the manufacturer's volume requirement is (or may be) to impel the retailer to operate at a scale large enough to minimize these costs.

A corresponding list indicates the restraints that can be given by the manufacturer for the putative benefit of the retailer:

1. Resale price maintenance directly protects the retailer's price-cost margin from competition. It has puzzled economists because the manufacturer who restricts retail competition among his distributors does not thereby minimize the retail price (given his factory price), and therefore seemingly hurts his own sales. Telser [33] pointed out correctly that this concession could be for the manufacturer a rational if second-best way to get around the free-rider problem and induce the optimal amount of pre-sale services. Earlier, however, Bowman [4] had urged that resale price maintenance could enter into the bargain between manufacturer and retailer as a reflection of the retailer's bargaining power—his ability to withhold sales-promotion efforts on behalf of a manufacturer's product when the manufacturer's own sales-promotion efforts aimed directly at the final buyer are not sufficient to make this tactic unprofitable for the retailer.

2. Exclusive territories guarantee that the manufacturer will franchise no other dealers to supply a given territory or set of customers. This local monopoly obviously does not by itself serve the interest of the manufacturer, but it can be used to purchase commitments desired by the manufacturer or as a pay-off to bargaining power possessed by the dealer. In fact exclusive territories and territorial restrictions are close to being equivalent, and territorial restrictions simply serve to implement exclusive territories. Exclusive territories (plus territorial restrictions) are functionally similar to resale price maintenance (equivalent, however, only under certain narrow circumstances). They share with resale price maintenance the capacity to restrict free-riding in presale services and other activities carried on by the retailer. They may also reward retailers who enjoy some bargaining power but cannot act directly to stifle competition among themselves.

3. Limitation on the density of retailers is a practice similar in its effects to exclusive territories, and probably fills the same function in the case of products whose buyers are anonymous, mobile, or otherwise cannot be clearly demarcated and assigned to retailer sellers.

This list does not necessarily cover all terms of manufacturer-retailer agreements that are relevant to effective competition, and it certainly does not cover all the types of terms included. The manufacturer may require the retailer to carry out a certain amount of advertising, provide a certain quantity and quality of display space, maintain service facilities, etc. The retailer may seek advertising allowances, privileges of returning merchandise, training of salespersons, etc. The bargain may be balanced with a variety of features, some serving the manufacturer, some the retailer-- features of potential significance for antitrust policy and features that hold purely private private significance.

The classification of vertical restraints by the party whose interests are served seems generally straightforward, but a restraint's relation to the parties' bargaining power may vary from case to case. Territorial restrictions, for example, may on balance benefit the distributor, the manufacturer, or both. The market-failure approach adds a further caution: a party might agree to a restraint apparently not in his self-interest in order to avert an outcome that is still more inferior. If the manufacturer has no way to predict which applicant will be a "good distributor," he may pick the one who offers to accept a minimum-volume restriction, unfavorable cancellation terms, or other provisions that give hostage to the candidate's belief in his own ability. Such self-restraints then serve as a way around market-failure (that is, the good distributor not selected) due to impacted information.

We can now see the form taken by predictions from our two models about the incidence of vertical restraints. Any particular restraint may appear where it helps the manufacturer and distributor to share the jointly produced stream of goodwill accruing to a product, or where it proves the most profitable exercise of bargaining power possessed by one party. The interrelated character of vertical restraints implies that the set observed in any particular bilateral market between manufacturers and distributors jointly reflects their relative bargaining power and the specific usefulness of individual restraints to one party or the other.

## II. Incidence of Vertical Restraints: Empirical Evidence

It would be highly desirable to undertake a statistical investigation of how the incidence of vertical restraints varies from sector to sector, in order to weigh the relative explanatory power of the market-failure and

market-power models where they offer competing explanations, and to test for the interactions among restraints predicted by the market-power approach. The research design requires data on the proportions of manufacturers' sales to distributors (in each of a number of manufacturing industries) that are subject to each type of vertical restraint. These frequencies would become the system of dependent variables to be explained by structural traits of the manufacturing industry, structural traits of the distributive markets (with retail outlet classes taken into account and geographic submarkets appropriately identified and aggregated), and the informational structure of the final buyer's process of searching and choosing among brands. Alas, the dependent variables for this design are not available; they could be secured only through survey methods capable of coaxing information from potentially reluctant respondents.

"If it's worth doing, it's worth doing badly." The hypotheses developed above hold great importance for competition policy, and policy decisions that implicitly accept or reject them will be made with or without good scientific evidence. Therefore it seems worthwhile pulling together what empirical evidence can be casually assembled to approximate the correct but infeasible research design just described. In fact a good deal of casual evidence does exist on the incidence of vertical restraints in the United States economy. <sup>6/</sup> Some of it comes from previous studies of selected consumer goods markets or descriptive investigations of the various vertical restraints. A good deal can be found in court decisions, which often (though

<sup>6/</sup> Evidence will be drawn from countries other than the United States where it appears that a sector's distributional arrangements are closely similar to those of its United States counterpart. That similarity itself offers support for certain of the hypotheses.

not always) report enough information to indicate the structure of the manufacturer-distributor bargain that contained the challenged vertical restraint. In the following paragraphs I pose a series of questions based on the analysis of the preceding section and describe the evidence that has turned up in these sources.

1. Are some vertical restraints clearly responsive to free-rider problems? There is no doubt that some vertical restraints have sought to combat free-riding in cases where it would otherwise lead to a market failure. In certain of the older antitrust cases refusals to deal were employed apparently for the exclusive purpose of punishing parties who sought to free-ride on a shared intangible asset. In one instance dress designers and textile producers jointly refused to deal with retailers who sold dresses that were copies of the designers' originals; in another case a cooperative news-gathering organization prevented its members from reselling news material to nonmembers who had not contributed to the organization's operating costs.<sup>7/</sup> The Coors brewery, whose beer required special handling because it was unpasteurized, employed an extensive set of restrictions on distributors and a network of regional company representatives in order to prevent opportunistic short-cuts by distributors from the costly distribution processes mandated by the company. Territorial protection and some degree of resale price maintenance were used to reward distributors for adherence to these policies, and the length of the queue of applicants for distributorships suggested that the reward was generous.<sup>8/</sup> Similar patterns appear in soft-drink and other franchise systems of distribution, where territorial protection reduces the

<sup>7/</sup> Fashion Originators' Guild v. Federal Trade Commission, 312 U.S. 457 (1941); Associated Press et al. v. U.S., 326 U.S. 1 (1945); Groenke [15].

<sup>8/</sup> Adolph Coors Company v. Federal Trade Commission, 497 F.2d 1178 (1974).



temptation of franchisees to debase the quality of the good they produce using inputs supplied by the franchisor. <sup>9/</sup> At least some resale price maintenance has been for complex consumer durables (cameras, stereo equipment) for which pre-sales information would be an important consideration, <sup>10/</sup> and some outbursts of efforts to enforce resale price maintenance have occurred in response to the rise of discount outlets offering low prices and little effort to advance a brand's goodwill value (Corey [7]). It is clear that manufacturers of products needing repair services assume that retailers will free-ride, and that this motivates exclusive territories and territorial restrictions. <sup>11/</sup> Customer restrictions are sometimes placed on wholesalers in order to effect some limitation on retailers that itself is caused by free-rider problem. <sup>12/</sup> There are also examples of restraints that blunt an incentive for the manufacturer to underprovide some service; less training would be offered to mechanics employed by franchised auto dealers if the resulting skills could be freely used on other manufacturers' vehicles (Federal Trade Commission [37, pp. 34-35]),

<sup>9/</sup>Katz [17]; Caves and Murphy [5].

<sup>10/</sup>See, for example, Interphoto Corp. v. Minolta, 295 F.Supp. 711 (1969); Dictograph Products v. Federal Trade Commission, 217 F.2d 821 (1954).

<sup>11/</sup>Travers and Wright [36, p. 812]. There seem to be several economic reasons for this, despite one's general expectation that no externalities would be involved. Repairs under warranty cannot always be compensated fully by the manufacturer. The dealer may trade on the final buyer's inability to tell whether poor performance of the product is due to faulty repairs or to faults of the product that are blamed on the manufacturer. Finally, the price of repairs may not ration demand to supply in the short run, in which case the dealer has an incentive not shared by the manufacturer to look after his regular customers first. These factors seem consistent with United States v. General Motors, 384 U.S. 127 (1966).

2. Do vertical restraints aim to protect goodwill assets that may have greater private than social value? This paper is not the place to settle what forms of sales promotion may be normatively objectionable because they exploit impacted information or increase information costs for the final buyer. Nor can one exclude the possibility that some goodwill assets have greater social than private value. I shall simply assert that goodwill assets may be overprotected in some market settings, and that vertical restraints do appear in markets with these informational structures. Exclusive dealing arrangements, whatever other factors may explain them, sometimes serve to differentiate a hard-to-differentiate product (such as gasoline) by associating the manufacturer's brand with a distinctive object (the individual retail outlet) and raising the cost of direct comparison with other brands.<sup>13/</sup> Some manufacturers have used resale price maintenance as a conscious device for increasing the number of retail outlets willing to handle and display their product, in the belief that the sight of the product is itself an advertisement, or that total consumption would be increased if potential buyers can locate the product more readily when the whim strikes them, even if on average they must pay a higher price.<sup>14/</sup> For an important class of products RPM or restricted distributorships have been used in order to maintain snob appeal for items frequently sold as gifts (fine dinnerware, silverware, fountain pens) or for which the final buyer is ill-equipped to evaluate the product's quality (pharmaceuticals).<sup>15/</sup> The vertical

<sup>13/</sup> Pass and Hawkins [25, pp. 574-591]; Dixon [9].

<sup>14/</sup> Corey [7] suggests this pattern for small appliances, as an explanation why resale price maintenance should have prevailed for them and not for large appliances (where pre-sale information would seem more important). Hollander [16, pp. 92-93] associates the use of RPM with efforts of makers of nonprescription drugs to get their goods displayed in supermarkets and discount stores.

15/ The case of Lenox china is discussed by Goldberg [12]. Also see Lee [20] on pens and silverware; Corey [7] on small appliances; United States v. Bausch & Lomb Optical Co. et. al., 321 U.S. 707 (1943) on lenses; Dr. Miles Medical Co. v. Park & Sons, 220 U.S. 373 (1911) on pharmaceuticals.

restraints are then designed to implement a signalling equilibrium.

3. Do vertical restraints assist the manufacturer to impose price discrimination? Price discrimination requires that the manufacturer's product possess some distinctiveness. Although discrimination may be consistent with Cournot-Nash equilibrium among differentiated oligopolists, the prevalence of discrimination as a basis for vertical restraints sheds important light on the role of imperfect competition at the manufacturer's level. Territorial protection is associated with at least two forms of discrimination. Coupled with some protection of retail prices it induces distributors to price-discriminate by incurring higher transaction costs to seek out and serve small or remotely located customers. This pattern, which accords with Preston's [30] model, is documented in soft drinks, tools sold to auto mechanics and other mechanical trades, and trucks.<sup>16/</sup> Price discrimination is related to territorial protection or resale price maintenance in another way when exclusive territories reward distributors for a customer restriction that keeps them from competing with the manufacturer for selected accounts that will be subject to price discrimination. These elements have been present in the mechanics'-tools and truck markets, in passenger automobiles, drugs and

<sup>16/</sup> See Katz [17] and Posner [29] on soft drinks; Snap-On Tools Corporation v. Federal Trade Commission, 321 F.2d 825 (1963), p. 829, on mechanics' tools; and White Motor Co. v. United States, 372 U.S. 253 (1963), pp. 256-257, on trucks. This mechanism may explain the full-line forcing of tires, batteries, and accessories with service stations (Baker [2]).

lightbulbs. <sup>17/</sup> In a slightly different context vertical restraints allow the franchisor to extract the maximum rents from individual franchisees through a buying arrangement that allows the manufacturer to meter the surplus accruing to each franchisee (Caves and Murphy [5]). Finally, some vertical restraints facilitate discrimination through the bundling of services together with the good sold (Adams and Yellen [1]). Williamson [40, pp. 974-985], analyzing the Schwinn case, argues that this bicycle manufacturer used a controlled distribution system to offer a package of a bicycle, guaranteed quality control, quality assembly at the time of sale, and guaranteed availability of service; this would segment buyer groups with high values of time or low aptitudes for making their own repairs.<sup>18/</sup>

4. Are vertical restraints a response to bargaining power in the hands of retailers? The market-failure and market-power approaches to vertical restraints predict different structural traits for the sectors in which a given vertical restraint appears. The former model predicts that restraints will prevail in sectors where the retailer provides an important service and does not capture all the rents for it; the vertical restraints serve the profit-seeking interests of the manufacturer. The market-power model notes the possibility that the restraints are associated with the bargaining power of retailers (as individuals or as collusive groups) and might have nothing to do with problems of intangible assets. When resale price maintenance was

<sup>17/</sup> See the cases cited in n. 16; White [38, p. 169] on automobiles; Bowman [4] on lightbulbs; and United States v. Parke, Davis & Co., 362 U.S. 29 (1960) on drugs.

<sup>18/</sup> An important part of this mechanism is the existence of fixed costs of maintaining the distribution network. Schwinn may have rejected discount stores as dealers in order to preclude the erosion of rents that might threaten the coverage of the repair facilities' fixed costs.

widely legal in the United States, surveys found it especially prevalent among pharmacists' items (drugs and medicines, sundries, cosmetics and perfumes). It was also common among tobacco products and accessories, cameras and photographic supplies, and inexpensive clocks and watches--also sold in part by drug stores. These pharmacy items seemingly require little or no positive contribution by the retailer to the product's goodwill. Therefore they broadly confirm Bowman's [4] hypothesis that collusive behavior in this retail sector was directed against manufacturers who could not differentiate their products strongly through advertising. <sup>19/</sup> It is also well established that groups of retailers such as the pharmacists were highly influential in lobbying for legislation that legalized RPM (Palamountain [24, chap. 8]). Restraints are common in some sectors for which retailers are highly concentrated in the relevant local market; eye-glass lenses supply an example (Bowman [43]). Among durable-goods manufacturers the incidence of RPM seems to be explained poorly by the market-failure model. They have apparently been less prevalent among major appliances than among small, simple appliances, which would seem to require less participation of the retailer in establishing and maintaining the manufacturer's goodwill (Corey [7]). Within lines of durable goods the manufacturers employing vertical restraints (all types) are those with small market shares or weak positions, and who may find restraints more effective than outright price discounts for bidding the services of the available retailers away from the makers of more successful brands of goods. <sup>20/</sup>

<sup>19/</sup> Bowman [4] places retail liquor dealers in the same situation. Also see Hollander [16, pp. 79-81].

<sup>20/</sup> See Lewis [21, p. 299] on TV manufacturers; Sandura Co. v. F.T.C., 339 F. 2d 847 (1964) on floor coverings; Hollander [16, p. 85] on small appliances.

It seems clear that "good dealers" capable of earning rents often collect them in the form of exclusive territories or other policies that confer some monopoly power on them (Travers and Wright [36, pp. 803, 805]). Among complex durables for which the free-rider problem might be important there is also some suggestion that exclusive dealing arrangements build entry barriers. <sup>21/</sup> The fact that RPM has frequently been dropped at the same time by a number of rival manufacturers is at least consistent with the possibility that it served to abet tacit collusion in pricing at the manufacturer's level. <sup>22/</sup> Investigations of the small-appliance industry (Corey [7]) and of gasoline distribution confirm the use of controls on competition among retailers in order to prevent the destabilization of manufacturers' prices by the spread of competitive price adjustments from the retail level. For RPM, at least, it is difficult to find evidence that the market-failure model explains much of the practice's historic distribution.

5. Do vertical restraints display the interdependence predicted by the market-power approach? Before addressing this question we should note that it is one thing to confirm interdependence, another to show that it springs from bargaining on the basis of market power. A vertical restraint imposed on purely competitive retailers in order to avert a market failure must leave them capable of earning normal profits, that could be (but need not be) accomplished by another vertical restraint. In any case the evidence of interdependence is quite compelling. Exclusive dealing imposes

<sup>21/</sup> Outboard motors are discussed by Freishtat et al. [11]; on farm equipment see United States v. J. I. Case Co., 101 F.Supp. 856 (1951).

<sup>22/</sup> Lee [20] lists photographic apparatus and small appliances as examples.

a particularly severe restraint and risk on the distributor, and it appears to be compensated by requirements contracts (guaranteeing supplies) as well as pecuniary concessions such as loans and preferential discounts.<sup>23/</sup> Restrictions on customers to whom distributors can sell are commonly compensated by RPM or territorial restrictions on competition among the dealers.<sup>24/</sup> Conversely, RPM and exclusive territories give the manufacturer an opportunity to make all-or-nothing quantity offers and force the protected retailer to discriminate within his territory.<sup>25/</sup> The Schwinn decision, making territorial protection illegal per se, provided a laboratory test of the hypothesis that restraints can substitute for one another, and indeed industries that had used territorial restrictions came up with a variety of substitutes in the following years (Timberg [35]; McLaren [22]). Similarly, a 1948 pronouncement by the Department of Justice that it believed territorial and customer restrictions to be illegal led to the substitution of "areas of primary responsibility" within which the dealer had to fulfill a sales quota (Travers and Wright [35, pp. 796-97]). A manufacturer may place territorial restrictions on his wholesalers while limiting competition among his retailers by clauses that confine their establishments to specified locations; the restraints are functionally equivalent and merely take account of the fact that the wholesaler goes

<sup>23/</sup> Much of the evidence pertains to gasoline distribution. See Curran [8]; Pass and Hawkins [25].

<sup>24/</sup> Bowman [4] on light bulbs; White Motor Co. v. United States, p. 257, on trucks; Snap-On Tools Corporation v. Federal Trade Commission, pp. 833, 835-836.

<sup>25/</sup> White [38, pp. 137-151] on automobiles; Hollander [16, p. 84] on small appliances; Katz [17] on soft-drinks; Travers and Wright [36]. In one case involving newspapers a maximum resale price was imposed on territorially protected distributors; see Albrecht v. Herald Co., 350 U.S. 145 (1968).



looking for customers while the retailer awaits the arrival of customers at his premises (Lewis [21]). Similarly, whether exclusive territories need to be buttressed with territorial restrictions depends on the mobility of customers; if they are immobile between distributors of the same brand, an exclusive territory may itself give the distributor an adequate local monopoly (Travers and Wright [36, pp. 809-11]).

6. Are vertical restraints a substitute for vertical integration? The problems with spot or casual market relations identified in the market-failure approach imply that vertical restraints and vertical integration are alternative remedies for the difficulty, and vertical integration in turn has been examined as a method of evading the costs and uncertainties of long-term contracts of the sort that implement vertical restraints.<sup>26/</sup> The force of the market-failure approach is generally supported if we find that vertical restraints and vertical integration trade off closely against one another. Much evidence is indeed apparent. Franchising systems typically include a number of franchisor-owned outlets alongside those operating under contractual franchises, and one can get some distance explaining why the franchisor-controlled proportions vary as they do from sector to sector (Caves and Murphy [5]). DeWinn, precluded by the Supreme Court from imposing territorial restrictions on its franchised wholesale distributors, moved toward company-owned sales subsidiaries instead (Keck, [18]). And in gasoline marketing the use of company-owned stations has clearly supplied an alternative to franchised retail outlets, one used more heavily (in the U.K., at least) by petroleum refiners with small shares of the market (Pass and Hawkins, [25, esp. pp. 589-91]).

<sup>26/</sup> Williamson [38, chaps. 5-7]; Klein, Crawford, and Alchian [19].

7. Does the empirical incidence of vertical restraints suggest any systematic explanations not covered by the market-failure and market-power models? Some evidence indicates the importance of transaction costs (Williamson, [40] in situations where no free-rider problems are involved. Restrictions on total numbers of distributors are rational if the manufacturer incurs a fixed cost of dealing with the individual distributor that is not compensated directly by the distributor. The same effect occurs if there are scale economies in deliveries of supplies to the individual retailer. A fixed and controlled list of retail customers may be an advantage to a pharmaceutical producer if timely efforts must occasionally be made to retrieve a defective batch of a drug. A requirements contract may economize on transactions costs by reducing the need for continual spot transactions as well as allowing for trade in risk-bearing between the parties.<sup>27/</sup> It can be argued that these transactions-cost considerations are simply part of the market-failure approach to vertical restraints; they have not, however, been traditionally discussed in that context.

### III. Selected Policy Implications

Although a full normative evaluation of vertical restraints is far beyond the scope of this paper, a few points serve to bring out the welfare significance of the preceding behavioral analysis.

First, the market-failure and market-power approaches to vertical restraints tend to differ in their normative implications as well as in their behavioral mechanisms. Our empirical survey suggested that neither approach

<sup>27/</sup> Travers and Wright [36, passim]; Pass and Hawkins [25] on gasoline, for which exclusive dealing reduces the total cost of storage tanks at retail facilities; Luria Brothers and Co., Inc. v. Federal Trade Commission, 389 F.2d 847 (1968) on requirements contracts.

is a monopoly on truth, and so there is little hope of providing a strong justification for simple legal rules (that particular restraints are either legal per se or illegal per se). Either restraints must be left subject to a rule of reason, with all its uncertainties and enforcement costs, or judgment must be made that a preponderance of evidence calls for a per se status that will not be optimal in every setting. The policy conclusions to be developed here are indeed pessimistic, in that they stress the prevalence of complex normative and behavioral issues surrounding the net welfare significance of any given vertical restraint. Nonetheless, if the world is complicated, it is best that we not make policy on the assumption that it is simple.

That face of our conclusions appears immediately when we draw together the empirical findings on the free-rider justification of vertical restraints: they are more numerous than proponents of the market-failure approach may have appreciated, but vertical restraints are not obviously the best remedies for the problems that the restraints address. Some vertical restraints evidently do seek to affect the amount of pre-sale information provided by the distributor--the classic (Telser [33]) justification for restraints. Pre-sale services indeed encompass not just the costly provision of specific data needed by the potential buyer but the more general use of the dealer's premises as an advertising message or signal about the quality of the product. Such signals may be better than nothing. Those impressed with the social value of advertising (Nelson [23] have recently revived the classic theory of the trademark (Plant [27, chap. 10]) to argue that the public understands that no producer would incur costs to advertise or place his mark on a product unless he thought that the good's quality would satisfy the buyer's expectations, so that his purchase would be repeated. Schmalensee [31], however, has shown the imperfect character of this signalling equilibrium: if a low-quality product can be produced cheaply enough, it pays a seller to produce low quality but to advertise high quality even though buyers will be disappointed and not repeat.

Another potential imperfection lies in the ability of some vertical restraints to raise buyers' costs of making interbrand comparisons or reduce their expected payouts from making such comparisons. The extreme example of this may be the use of vertical restraints to foster an upward-sloping "snob" demand curve for a product. The welfare economics of this case are not simple, but one can entertain doubts about the superiority of a situation in which the imposition of vertical restraints has (by assumption) turned a normal demand curve into one that is upward sloping over an appreciable range of price and increased the profit-maximizing price of the product (or the relevant group of similar products).

Another form of free-rider problem emerges with certain post-sale services provided by the retailer, associated with conditioning or repairing the article purchased by the customer. The retailer has scope for opportunism whenever the buyer cannot determine with full accuracy whether substandard performance of the good is the fault of the distributor or the manufacturer. Vertical restraints can combat this opportunism by increasing the retailer's expected profitability of a satisfied customer, but one can imagine vertically integrated systems or guarantee arrangements that would come closer to first-best. Still another free-rider problem emerges with the retailer or wholesaler whose plant can be costlessly switched to handle the output of manufacturers other than the one currently served. Consider the wholesaler whose establishment can serve to distribute a wide range of products and whose operation is not identified to the public with the brand name of the manufacturer whose goods he distributes. Assume that manufacturers have imperfect knowledge about the past opportunistic behavior of going wholesalers who are taken into their distribution networks. The wholesaler has an incentive to behave opportunistically and then switch manufacturers when he is found out—a temptation

that can be curbed (in second-best fashion) by some vertical restraints. A related problem does not involve free-riding at all but does supply a motive for the use of vertical restraints. The typical retailer sells the products of many manufacturers, and so his profits depend on policies (pricing, service, etc.) that affect his whole line of goods. Policies optimal for the retailer in respect of a particular branded good need not coincide with those seen as optimal by its manufacturer, because the manufacturer does not take account of the jointness observed by the retailer in the facilities he provides and customers' demands for his line of goods. There is room for mutually profitable bargaining between the parties in such situations, but vertical restraints that are used to divert the retailer's policies may have real social costs of their own.

Elsewhere in the behavioral evidence on vertical restraints we encounter this same mixture: a restraint may respond to some social cost, but the solution is or may be second-best. Exclusive dealing and the wide spacing of distributors may reduce transaction costs for the manufacturer, but they also facilitate differentiation of the manufacturer's product, increase consumers' costs of making intrabrand comparisons, and (in the case of exclusive dealing) may raise barriers to entry into manufacturing. Exclusive territories and territorial restrictions promote price discrimination at retail by inducing distributors to serve (at the same nominal price) customers with higher contact transaction costs. Although the discrimination has some social cost, this policy may allow manufacturers of various competing varieties more nearly to extract equal proportions of the surpluses under their respective demand curves; this would offset a market failure in that the selection of varieties to be produced (when some fixed costs are present) tends to be biased against those with low elasticities of demand (Spence, [32]).

Another major policy implication comes from the interdependence of vertical restraints revealed by the market-power approach. The empirical evidence extensively supports that model's assumption that the manufacturer and retailer often will both possess some bargaining power in the relation--each will lack perfect alternatives to the contract at hand, in the short run if not in the long run. Each contract therefore is expected to contain a balance of terms, including vertical restraints but also others of only private concern, reflecting the bargaining power of the two parties. As we pointed out in the first section of this paper, legal action to restrict any given vertical restraint then has two potential effects on these ongoing bargains. Because each restraint takes the form of a concession conferred on one party by the other, deleting one restraint upsets the equity of the bargain, and is expected to force its renegotiation. Substitute restraints may then replace the one that has become illegal. Or restraints making concessions in the other direction may be dropped to restore balance. The point is that the net effect of changing the legal status of any one restraint must include an estimate of the welfare significance of any induced changes in the incidence of other restraints.

Making one restraint illegal should not only shift the incidence of other restraints but also change the net bargaining power of the two sides. As the legality of RPM has receded in the United States, the bargaining power of retail druggists against manufacturers of items they sell has probably been reduced, there being no other vertical restraint that is an obvious substitute for RPM in this context. <sup>28/</sup> That change in bargaining power may have various

<sup>28/</sup> Evidence consistent with this proposition (although not directly proving it) comes from the finding that RPM generally raised and narrowed the price ranges of branded goods and its removal had the opposite effect. See Frankel [10]; Pickering [26].

cial consequences that will not be considered here.<sup>29/</sup>

The market-power approach to vertical restraints also sheds important light on the degree to which alternative restraints are equivalent to one another. We can illustrate this by reference to the question of whether an economic basis exists for giving different legal treatment to RPM and territorial restrictions. Bork [3] and Posner [29] have argued that they are equivalent, so that the Supreme Court's newfound tolerance for territorial restrictions should by implication be extended to RPM as well. Indeed, if retailers were purely competitive, the effects of territorial restrictions and resale price maintenance would not differ, in the sense that any given resale price could alternatively be achieved by some restriction of the total number of retailers or their territorial spacing. However, if one drops the assumption that the retailers are purely competitive, this conclusion changes abruptly. Consider the following cases:

1. As we mentioned above, volume requirements imposed by automobile manufacturers and others is an adjunct of territorial protection given to dealers, and a method of keeping monopolistically competitive retailers from restricting their output below a level that minimizes average unit costs. A maximum resale price could achieve this same effect, but the conventional minimum resale price could not avert this inefficiency.

<sup>29/</sup> Struggles between manufacturer and distributor over the distribution of rents and quasi-rents do not by themselves hold great normative significance for overall resource allocation. They may, however, affect welfare both by distorting the relative prices paid by final buyers and creating or preserving various forms of technical inefficiency--especially in the distribution system.

2. The theorem of the equivalence between territorial protection and resale price maintenance implicitly assumes that price is the only dimension in which the retailer can vary his offer to the final buyer. However, the retailer may be able to offer trading stamps, free alterations, free delivery, credit, elaborate premises, and many other features that affect the quantity sold even if nominal price is not permitted to vary. Raising the resale price and imposing territorial restrictions will generally have different effects on these nonprice dimensions of the offer. One cannot be dogmatic about which result is preferred on welfare grounds, but one can note that some nonprice dimensions of competition involve significant commitments of resources. One example is the maintenance of excess capacity in the retail outlet's personnel and facilities, to assure that randomly arriving customers are not put off by queues.

3. The effects of territorial protection and RPM on interbrand competition may differ, apart from the symmetry or asymmetry in regard to intrabrand competition. Assume that competing manufacturers of the product line recognize enough mutual interdependence to collude fairly effectively on price, but that their more numerous retail distributors do not collude with distributors of competing products (or collude less effectively than the manufacturers). Retail price competition, if it occurs, probably prompts the brand's retailers to apply pressure for the manufacturer to make a price cut and stay the erosion of their margins. Territorial protection, provided as a check on intrabrand competition, does nothing to dampen this form of intrabrand rivalry at the retail level. RPM, however, blocks this form of retail rivalry and channels retail competition into dimensions less likely to transmit pressure back to the manufacturer.



The point of this comparison has not been to show that RPM is more objectionable socially than territorial protection--although the winds clearly blow in that direction--but rather to illustrate the subtle context in which the effects of alternative bargains between manufacturer and retailer are determined. A policy change that induces a shift from one to the other will have consequences for both intrabrand and interbrand competition--consequences that vary from product to product depending on the cost structures of the retailers, the dimensions of nonprice rivalry available to them, and all structural conditions of the manufacturers' market that determine the extent and character of interbrand competition.

## REFERENCES

- Adams, W. J., and J. L. Yellen. "Commodity Bundling and the Burden of Monopoly," Quarterly Journal of Economics, 90 (August 1976), 475-98.
- Baker, D. I. "Another Look at Franchise Tie-ins after Texaco and Fortner," Antitrust Bulletin, 14 (Winter 1969), 767-83.
- Bork, R. H. "The Rule of Reason and the Per Se Concept: Price Fixing and Market Division," Yale Law Journal, 75 (Jan. 1966), 373-475.
- Bowman, W. S., Jr. "Resale Price Maintenance--A Monopoly Problem," Journal of Business, 25 (July 1952), 141-55.
- Caves, R. E., and W. F. Murphy. "Franchising: Firms, Markets, and Intangible Assets," Southern Economic Journal, 42 (April 1976), 572-86.
- Comanor, W. S. "Vertical Territorial and Customer Restrictions: White Motor and Its Aftermath," Harvard Law Review, 81 (May 1968), 1419-38.
- Corey, E. R. "Fair Trade Pricing: A Reappraisal," Harvard Business Review, 30 (September-October 1952), 47-62.
- Curran, K. J. "Exclusive Dealing and Public Policy," Journal of Marketing, 15 (October 1950), 133-44.
- Dixon, D. F. "Some Competitive Effects of Vertical Relationships in Australian Petrol Distribution," Antitrust Bulletin, 17 (Fall 1972), 791-809.
- Frankel, M. "The Effects of Fair Trade: Fact and Fiction in the Statistical Findings," Journal of Business, 28 (July 1955), 182-94.
- Freishtat, D., et al. "The Arrogance of Monopoly Power: Product Differentiation and Exclusive Dealing in the Outboard-Motor Industry," Antitrust Law and Economics Review, 7 (No. 4, 1974), 55-78.
- Goldberg, V. P. "Resale Price Maintenance and the Federal Trade Commission: the Lenox and Magnavox Cases," unpublished manuscript.
- [13] \_\_\_\_\_ "The Law and Economics of Vertical Restrictions: A Relational Perspective," Texas Law Review, 58 (February 1980).

- 4] Gould, J. R., and L. E. Preston. "Resale Price Maintenance and Retail Outlets," Economica, 32 (August 1965), 302-312.
- 5] Groenke, T. A. "What's New in the Antitrust Aspects of Selecting and Terminating Distributors," Antitrust Bulletin, 13 (Spring 1968), 131-59.
- 6] Hollander, S. C. "United States of America," Resale Price Maintenance, ed. B. S. Yamey (Chicago: Aldine, 1966), chap. 3.
- 7] Katz, B. G. "Territorial Exclusivity in the Soft Drink Industry," Journal of Industrial Economics, 27 (September 1978), 85-96.
- 8] Keck, R. C. "Alternative Distribution Techniques--Franchising, Consignment, Agency, and Licensing," Antitrust Bulletin, 13 (Spring 1968), 177-91.
- 9] Klein, B., R. G. Crawford, and A. A. Alchian. "Vertical Integration, Appropriable Rents, and the Competitive Contracting Process," Journal of Law and Economics, 21 (October 1978), 297-326.
- 10] Lee, S. M. "Problems of Resale Price Maintenance," Journal of Marketing, 23 (January 1959), 274-91.
- 11] Lewis, M. B. "Restraints under Schwinn and Sylvania: An Argument for the Continued Use of a Partial Per Se Approach," University of Michigan Law Review, 75 (December 1976), 275-310.
- 12] McLaren, R. W. "Marketing Limitations on Independent Distributors and Dealers," Antitrust Bulletin, 13 (Spring 1968), 161-75.
- 13] Nelson, P. "Advertising as Information," Journal of Political Economy, 81 (July/August 1974), 729-54.
- 14] Palamountain, J. C., Jr. The Politics of Distribution (Harvard University Press, Cambridge, 1955).
- 15] Pass, C. L., and K. H. Hawkins. "Exclusive Dealing, Supplier Ownership of Outlets and the Public Interest: the Petrol Case," Antitrust Bulletin, 17 (Summer 1972), 567-95.

- 1] Fickering, J. F. "The Abolition of Resale Price Maintenance in Great Britain," Oxford Economic Papers, 26 (March 1975), 120-46.
- 2] Plant, A. Selected Economic Essays and Addresses (London: Routledge & Kegan Paul, 1974).
- 3] Porter, M. E. Interbrand Choice, Strategy, and Bilateral Market Power (Harvard University Press, Cambridge, 1976).
- 4] Posner, R. A. "The Rule of Reason and the Economic Approach: Reflections on the Sylvania Decision," University of Chicago Law Review, 45 (Fall 1977), 1-20.
- 5] Preston, L. E. "Restrictive Distribution Arrangements: Economic Analysis and Public Policy Standards," Law & Contemporary Problems, 30 (Summer 1965), 506-29.
- 6] Schmalensee, R. "A Model of Advertising and Product Quality," Journal of Political Economy, 86 (June 1978), 485-504.
- 7] Spence, M. "Product Differentiation and Welfare," American Economic Review, 66 (May 1976), 407-14.
- 8] Telser, L. G. "Why Should Manufacturers Want Fair Trade?" Journal of Law and Economics, 3 (October 1960), 86-105.
- 9] \_\_\_\_\_ . "Abusive Trade Practices: An Economic Analysis," Law and Contemporary Problems, 30 (Summer 1965), 488-505.
- 10] Timburg, S. "Territorial Restrictions on Franchisees: Post-Schwinn Developments," Antitrust Bulletin, 19 (Summer 1974), 205-16.
- 11] Travers, A. H., Jr., and T. D. Wright. "Restricted Channels of Distribution under the Sherman Act," Harvard Law Review, 75 (February 1962), 795-834.
- 12] U.S. Federal Trade Commission, Bureau of Competition and Regional Offices. Report of the Vertical Restraints Task Force (mimeo.; Federal Trade Commission, Washington, 1978).

- 38] White, L. J. The Automobile Industry since 1945 (Cambridge, Mass.: Harvard University Press, 1971).
- 39] Williamson, O. E. Markets and Hierarchies: Analysis and Antitrust Implications (New York: Free Press, 1975).
- 40] \_\_\_\_\_ . "Assessing Vertical Market Restrictions: Antitrust Ramifications of the Transaction Cost Approach," University of Pennsylvania Law Review, 127 (April 1979), 953-93.

**B. Study Protocol for Design of the  
Vertical Restraints Research Project**

**Benjamin Klein**

19 August 1979

Prepared for Bureau of Competition,  
Federal Trade Commission in response  
to FTC Task Order Statement of  
April 5, 1979 (contract no. L0534)

STUDY PROTOCOL FOR DESIGN  
OF THE VERTICAL RESTRAINTS RESEARCH PROJECT

by Benjamin Klein

The proposed FTC study of the economic effects of vertical restraints is both timely and laudable. The recent controversy in the wake of the GTE Sylvania decision has left this area of antitrust in a state of confusion. If a "rule of reason" is to be employed, it is now more important than ever to attempt to understand the purpose of particular restraints under particular conditions rather than to merely assert that vertical restraints should always or should never be attacked. The stated purpose of the project is laudable because it represents an attempt to obtain some empirical knowledge in this area. While much theoretical work has been done, very little empirical knowledge now exists regarding the actual effects of these practices or of the actual effects of successful FTC litigation against these practices. A properly designed and completed research project should be able to supply us with useful information regarding the likely purpose and effects of particular practices. It should therefore also provide some assistance regarding what information should be collected and considered when deciding which particular cases should be prosecuted in this area. This protocol is

written to assist in the design of such a research project on vertical restraints and will explicitly answer three questions (the three tasks in the Task Order Statement), namely: (a) what are the basic dimensions of economic impact? (b) what is the proper scope of the study? and (c) what is the most appropriate study methodology? It will be useful to consider the questions in reverse order.

1. Appropriate Study Methodology

I believe the most appropriate methodology that can be used to evaluate the effects of vertical restraints would consist of a detailed analysis of FTC cases and decisions involving such practices. Since the same practice can be used to accomplish different goals in different situations (and different practices are often employed to achieve the same goal) the only reasonable way to begin to understand what is going on is to study the use of particular practices in particular cases. What we can optimistically hope to obtain with this detailed case study approach is a set of conditions to look for when examining future cases that would provide a short cut determination of the economic purpose and effects of the practice in the particular case.

I do not think that the broad cross-section empirical approach advocated by Caves (see his June 19, 1979 memo "Research on Vertical Restraints") would be a very productive way to attack this area. Although the data that may be obtained regarding the likely presence of particular marketing arrangements in different industries by the construction of the



giant correlation matrix he advocates may be potentially useful for the future development of a theory in this area, it is much too expensive an undertaking for the very broad gauge incidence information that is likely to be derived at this state of our knowledge. For example, there would appear to be only limited economic value from a general (hypothetical) observation that resale price maintenance is more likely in concentrated, durable, consumer goods industries. Such knowledge would be unlikely to provide much insight into the nature and purpose of a particular practice in a particular case and the likely effects of legally attacking that particular instance rather than some other instance. If concentration is an indication of something "bad" it may be quite efficient to use, for example, the presence of resale price maintenance as an excuse or legal lever for attacking the industry rather than attacking the concentration more directly. But such an exercise would add little to our economic knowledge.

Given the limited resources potentially available for this project it is highly unlikely that a research project such as outlined by Caves could be funded at a level that would supply us with more than the crudest economic intelligence in this general form. The possibility of attempting both approaches of case study and a broad empirical cross section survey therefore would be even less likely to produce anything of significant value.

Assuming that an evaluation of particular cases and decisions will be employed in the study, one criterion that should be used to select cases

should be the presence of a large investigation and litigation file. Since it will be crucial in order to develop a theory of the case to know what, in fact, was actually going on, cases that consist of a limited FTC investigation and a rapidly reached consent agreement should be avoided. The public and non-public case record should be considered the primary source of information for this study and cases with the greatest amount of such information should receive priority. While it is unlikely that all of the information necessary to build a reasonable economic theory will be contained in the Commission files, these files will serve as the essential (and probably sole) basis of the initial theoretical work. It is, I think, overly optimistic to believe that compulsory process will be used and additional facts obtained in sufficient time to influence the course of the study.

It will also be useful to select cases which the Commission won. Post-decision empirical analysis could therefore provide some possible tests of the alternative theoretical explanations for the practice. For example, the alternative marketing arrangement adopted by the firm may provide useful evidence regarding the original purpose of the outlawed practice. This will also throw light upon the likely effect of alternative remedies in these cases. Unfortunately, however, little evidence is likely to be found in the files that will be useful for this post-decision analysis since apparently little compliance monitoring effort is made by the FTC. This post-decision data will therefore have to come from other sources (such as industry publications) which can, at best, be obtained with a time lag.

Hence in order to evaluate the effects of a decision very recent cases should probably be avoided. (This consideration can, of course, be outweighed by competing considerations such as the fact that analysis of a very recent case is much more likely to have an impact on policy because of current interest.)

Finally, I think it is crucial to limit the number of cases to be studied. As a member of the team of economic consultants that recently examined and analyzed a group of vertical restraint cases for the Commission, I now fully appreciate the amount of effort that is necessary to study and understand a single case sufficiently well to develop a theoretical model or set of alternative models to represent what is likely to be going on. In that earlier study the Commission staff originally bit off much too much in terms of the number of cases they planned to analyze and the research effort was therefore spread much too thinly. (Since no empirical testing or post-decision analysis was accomplished in that previous study and, in fact, because the litigative history of those cases were reviewed only cursorily, the cases could reasonably be included in this new study.) Potentially much more useful information could be obtained if the study were focused on a single or a couple of related cases for each primary investigator.

## 2. Proper Scope of the Study

In a similar spirit of focusing on a small number of cases, it will probably be most productive to focus primarily on one particular practice.

Given our limited resources, this is I think the only way we can hope to obtain a great deal of useful economic knowledge. Resale price maintenance is an obvious candidate for study since that was a practice explicitly mentioned in the original request by Senator Kennedy to the FTC for a study of the economic effects of vertical restraints. It will, however, not be possible strictly to limit the study to only one practice because they often (almost always) appear in particular cases in combination. However, if we concentrate our efforts on the practice of resale price maintenance this observed combination (say, with exclusive territories) will be beneficial. Since resale price maintenance is per se illegal, cases where such a practice appears along would be highly unlikely to contain a detailed investigation and litigation file, but rather contain merely a copy of the complaint and the consent order.

The way to proceed is, I think, not to choose a particular set of practices to be studied but to work backwards in a sense and choose a particular group of cases all of which have a common element (such as the presence of retail price maintenance). These cases would then be studied in detail, which would require an examination of the interaction of resale price maintenance with the other vertical practices present in the particular case. This would require a theoretical examination of the particular interaction and perhaps some theoretical generalization could be made once all the particular cases are brought together at the end of the study. Some vertical case issues (such as tying or exclusive dealing) are likely not to be covered in great detail in the analysis, but other practices (such as

exclusive territories) are likely to be analyzed in those cases where it is an integral part of the marketing scheme which includes resale price maintenance. Empirical analysis (especially of a post-decision nature) may indicate the substitutability and complementarity of these other practices with resale price maintenance. Inferences may possibly be made to the use of these other vertical practices in contexts where resale price maintenance is not present, but our goals at this stage should be limited--explaining the arrangements in the particular case chosen for analysis.

### 3. Basic Dimensions of Economic Impact

The central research issue of the study should be a determination of the economic rationale for the vertical practice in question and thereby a determination of the likely effect of restricting its use in the particular case. The basic assumption of economic analysis is that the practice has been adopted by the firm to maximize its wealth. The important economic policy question is whether wealth has been increased by the use of the practice via some collusion (i.e., a decrease in output) or via a decrease in costs (and therefore an increase in output). By definition, a vertical "restraint" reduces competition in some direction. But the question is whether such a restraint is anti-competitive in a collusive sense or whether it is an efficient (cost-reducing) way of supplying the particular product and services. The legal distinction between a "horizontal" and a "vertical" restraint while aiming at this economic distinction sometime misses the point, (as in the Sealy case). The distinction between a restraint on inter-

brand compared to one on intra-brand competition is closer to the economic distinction. More generally, some forms of competition are destructive of the brand, i.e., "contrabrand competition," and legally should be permitted to be restrained.

The most obvious (i.e., recognized) form of this contra-brand competition is the Telser "special service" free rider problem, where a retailer together with the consumer free rides on the provision of a special service provided by another retailer. This force is analytically correct but does not, I think, fit the great majority of resale price maintenance cases brought by the Commission. Examining the cases under study in detail should indicate whether the special services problem is present and what the effect of litigation is likely to be (an alternative arrangement for providing these services or a change in the nature of the product). A much more general form of "free riding" is the free riding by a retailer on the brand name of the group (and therefore on the manufacturer and the other retailers) via the supply of a product of quality less than anticipated. In this case the consumer is "fooled" and does not capture any of the gains from the free ride. Resale price maintenance (together with limited entry on the retail level), by supplying the retailer a price (profit) premium and therefore creating a cost to the retailer if he is terminated, may be an important element in an efficient method of enforcing an implicit quality contract.

In any event, either of these "quality control" reasons for resale price maintenance must be distinguished from the possible "collusive"

reason for resale price maintenance. We may want to look at the effect of outlawing the practice on consumer prices, but this is misleading. Even after controlling for other factors in the industry that may have changed in the interval and looking at long-run as opposed to very short-run price changes, such an effect does not consider quality changes that may have been induced by the legal action. A decrease in quality (for example, a decrease in the level of special services supplied) will shift down the demand curve for the physical product and thereby decrease price. A more meaningful test would be to look at output effects of the policy change. If prohibiting the practice decreases output, we can say that the purpose of the practice was efficiency related. If, however, output increases after the practice is eliminated, the next question that must be asked is whether quality has fallen. This entails measurement of various elements of quality that may be important in the various cases and determining if a change has occurred. Has there been a change in the method of distribution, including a decrease in the number of retailers? Has there been a change in the direct quality policing effort of the firm in question? If quantity has increased and quality has not been substantially altered, this suggests that the practice served some collusive purpose and an examination of some structural conditions of the industry (such as concentration and entry barriers would be called for).

Throughout this discussion I am assuming that we will be primarily concerned about the impact of the practice on consumers. Although much anti-trust litigation (especially private litigation) is initiated to protect

distributors (for example, distributors terminated "unfairly" by a manufacturer) we will be concerned with any of these side effects only as they throw light upon the fundamental nature of the practice in question.

To sum up then, the stages of the work should basically consist of:

(1) a modeling step, where a theory of the use of the particular combination of vertical restraints employed in the case will be developed. The investigator will have to read and study the Commission files and development of his model should interact with the particular facts of the case. (For example, how important are special services and therefore how relevant are they for inclusion in the model);

(2) an empirical implication step, where hypotheses for the likely effect on particular variables of outlawing the practice are derived from the model;

(3) a data collection step, where the data necessary to test the particular hypotheses are precisely defined and collected;

(4) an empirical testing step, where an empirical model is specified and is estimated using the collected data. These tests should verify the model and reject the likely alternative explanations for the practices in the particular case.