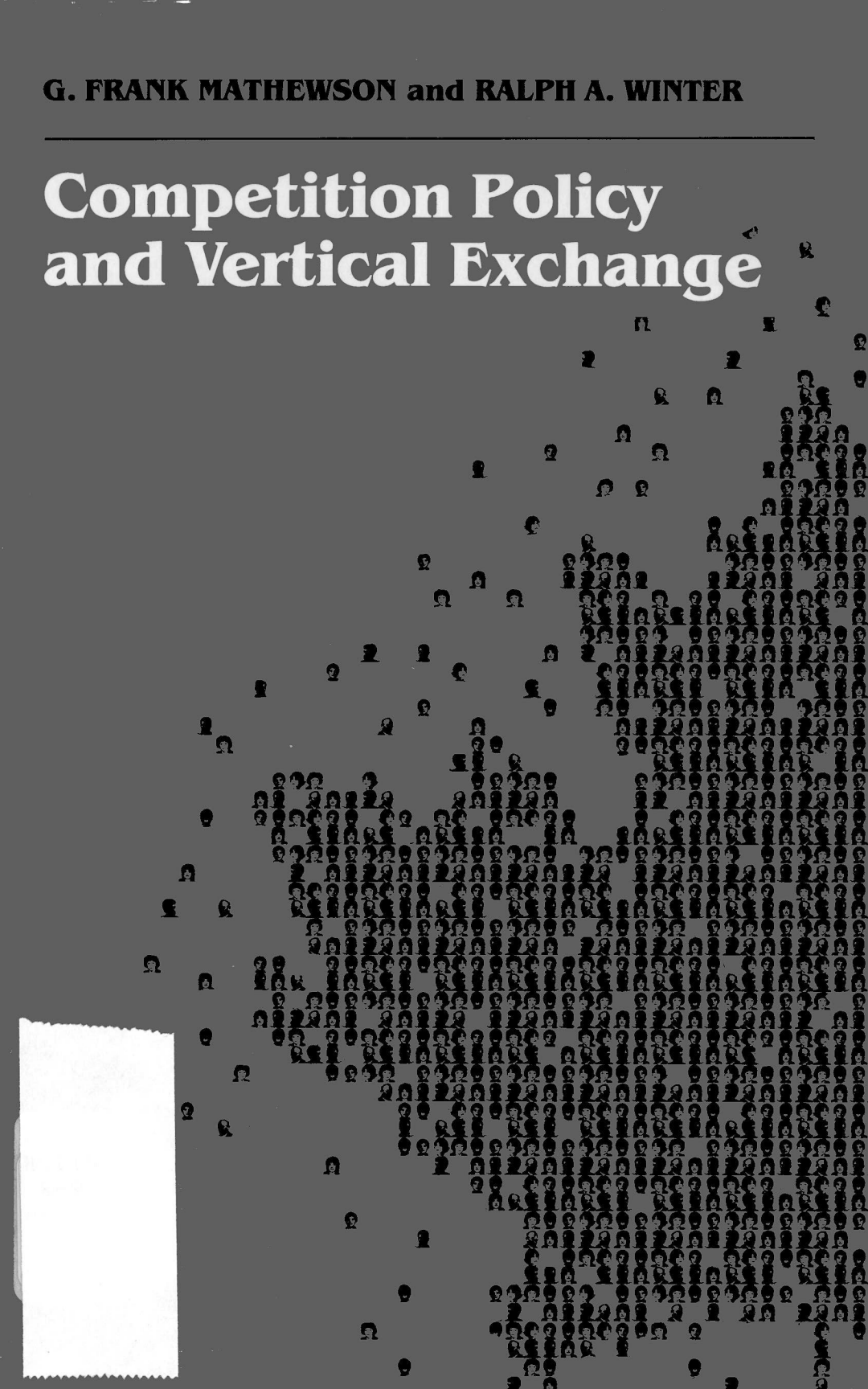
G. FRANK MATHEWSON and RALPH A. WINTER

Competition Policy and Vertical Exchange



Competition Policy and Vertical Exchange

This is Volume 7 in the series of studies commissioned as part of the research program of the Royal Commission on the Economic Union and Development Prospects for Canada.

The views expressed in this volume are those of the authors and do not imply endorsement by the Chairman, the Commissioners, Consumer and Corporate Affairs Canada or the Business Council on National Issues.

Competition Policy and Vertical Exchange

G. Frank Mathewson
and
Ralph A. Winter

Published by the University of Toronto Press in cooperation with the Royal Commission on the Economic Union and Development Prospects for Canada and the Canadian Government Publishing Centre, Supply and Services Canada

University of Toronto Press
Toronto Buffalo London

Grateful acknowledgment is made to the following for permission to reprint previously published and unpublished material: American Bar Association; Harvard University Press; Judge Frank H. Easterbrook.

Printed in Canada
ISBN 0-8020-7248-8
ISSN 0829-2396
Cat. No. Z1-1983/1-41-7E

CANADIAN CATALOGUING IN PUBLICATION DATA

Mathewson, G. Frank, 1942 –
Competition policy and vertical exchange

(*The Collected research studies / Royal Commission on the Economic Union and Development Prospects for Canada,*
ISSN 0829-2396 ; 7)
Includes bibliographical references.
ISBN 0-8020-7248-8

1. Marketing, Vertical — Canada. 2. Competition — Canada. I. Winter, Ralph A. II. Royal Commission on the Economic Union and Development Prospects for Canada. III. Title. IV. Series: The Collected research studies (Royal Commission on the Economic Union and Development Prospects for Canada) ; 7.

HF5415.12.C3M37 1985 380.1'3'0971 C85-099288-5

PUBLISHING COORDINATION: Ampersand Communications Services Inc.
COVER DESIGN: Will Rueter
INTERIOR DESIGN: Brant Cowie/Artplus Limited

CONTENTS

FOREWORD

When the members of the Rowell-Sirois Commission began their collective task in 1937, very little was known about the evolution of the Canadian economy. What was known, moreover, had not been extensively analyzed by the slender cadre of social scientists of the day.

When we set out upon our task nearly 50 years later, we enjoyed a substantial advantage over our predecessors; we had a wealth of information. We inherited the work of scholars at universities across Canada and we had the benefit of the work of experts from private research institutes and publicly sponsored organizations such as the Ontario Economic Council and the Economic Council of Canada. Although there were still important gaps, our problem was not a shortage of information; it was to interrelate and integrate — to synthesize — the results of much of the information we already had.

The mandate of this Commission is unusually broad. It encompasses many of the fundamental policy issues expected to confront the people of Canada and their governments for the next several decades. The nature of the mandate also identified, in advance, the subject matter for much of the research and suggested the scope of enquiry and the need for vigorous efforts to interrelate and integrate the research disciplines. The resulting research program, therefore, is particularly noteworthy in three respects: along with original research studies, it includes survey papers which synthesize work already done in specialized fields; it avoids duplication of work which, in the judgment of the Canadian research community, has already been well done; and, considered as a whole, it is the most thorough examination of the Canadian economic, political and legal systems ever undertaken by an independent agency.

The Commission's research program was carried out under the joint direction of three prominent and highly respected Canadian scholars: Dr. Ivan Bernier (*Law and Constitutional Issues*), Dr. Alan Cairns (*Politics and Institutions of Government*) and Dr. David C. Smith (*Economics*).

Dr. Ivan Bernier is Dean of the Faculty of Law at Laval University. Dr. Alan Cairns is former Head of the Department of Political Science at the University of British Columbia and, prior to joining the Commission, was William Lyon Mackenzie King Visiting Professor of Canadian Studies at Harvard University. Dr. David C. Smith, former Head of the Department of Economics at Queen's University in Kingston, is now Principal of that University. When Dr. Smith assumed his new responsibilities at Queen's in September, 1984, he was succeeded by Dr. Kenneth Norrie of the University of Alberta and John Sargent of the federal Department of Finance, who together acted as Co-directors of Research for the concluding phase of the Economics research program.

I am confident that the efforts of the Research Directors, research coordinators and authors whose work appears in this and other volumes, have provided the community of Canadian scholars and policy makers with a series of publications that will continue to be of value for many years to come. And I hope that the value of the research program to Canadian scholarship will be enhanced by the fact that Commission research is being made available to interested readers in both English and French.

I extend my personal thanks, and that of my fellow Commissioners, to the Research Directors and those immediately associated with them in the Commission's research program. I also want to thank the members of the many research advisory groups whose counsel contributed so substantially to this undertaking.

DONALD S. MACDONALD

INTRODUCTION

At its most general level, the Royal Commission's research program has examined how the Canadian political economy can better adapt to change. As a basis of enquiry, this question reflects our belief that the future will always take us partly by surprise. Our political, legal and economic institutions should therefore be flexible enough to accommodate surprises and yet solid enough to ensure that they help us meet our future goals. This theme of an adaptive political economy led us to explore the interdependencies between political, legal and economic systems and drew our research efforts in an interdisciplinary direction.

The sheer magnitude of the research output (more than 280 separate studies in 70+ volumes) as well as its disciplinary and ideological diversity have, however, made complete integration impossible and, we have concluded, undesirable. The research output as a whole brings varying perspectives and methodologies to the study of common problems and we therefore urge readers to look beyond their particular field of interest and to explore topics across disciplines.

The three research areas, — *Law and Constitutional Issues*, under Ivan Bernier; *Politics and Institutions of Government*, under Alan Cairns; and *Economics*, under David C. Smith (co-directed with Kenneth Norrie and John Sargent for the concluding phase of the research program) — were further divided into 19 sections headed by research coordinators.

The area *Law and Constitutional Issues* has been organized into five major sections headed by the research coordinators identified below.

- Law, Society and the Economy — *Ivan Bernier and Andrée Lajoie*
- The International Legal Environment — *John J. Quinn*
- The Canadian Economic Union — *Mark Krasnick*

- Harmonization of Laws in Canada — *Ronald C.C. Cuming*
- Institutional and Constitutional Arrangements — *Clare F. Beckton and A. Wayne MacKay*

Since law in its numerous manifestations is the most fundamental means of implementing state policy, it was necessary to investigate how and when law could be mobilized most effectively to address the problems raised by the Commission's mandate. Adopting a broad perspective, researchers examined Canada's legal system from the standpoint of how law evolves as a result of social, economic and political changes and how, in turn, law brings about changes in our social, economic and political conduct.

Within *Politics and Institutions of Government*, research has been organized into seven major sections.

- Canada and the International Political Economy — *Denis Stairs and Gilbert Winham*
- State and Society in the Modern Era — *Keith Banting*
- Constitutionalism, Citizenship and Society — *Alan Cairns and Cynthia Williams*
- The Politics of Canadian Federalism — *Richard Simeon*
- Representative Institutions — *Peter Aucoin*
- The Politics of Economic Policy — *G. Bruce Doern*
- Industrial Policy — *André Blais*

This area examines a number of developments which have led Canadians to question their ability to govern themselves wisely and effectively. Many of these developments are not unique to Canada and a number of comparative studies canvass and assess how others have coped with similar problems. Within the context of the Canadian heritage of parliamentary government, federalism, a mixed economy, and a bilingual and multicultural society, the research also explores ways of rearranging the relationships of power and influence among institutions to restore and enhance the fundamental democratic principles of representativeness, responsiveness and accountability.

Economics research was organized into seven major sections.

- Macroeconomics — *John Sargent*
- Federalism and the Economic Union — *Kenneth Norrie*
- Industrial Structure — *Donald G. McFetridge*
- International Trade — *John Whalley*
- Income Distribution and Economic Security — *François Vaillancourt*
- Labour Markets and Labour Relations — *Craig Riddell*
- Economic Ideas and Social Issues — *David Laidler*

Economics research examines the allocation of Canada's human and other resources, the ways in which institutions and policies affect this

allocation, and the distribution of the gains from their use. It also considers the nature of economic development, the forces that shape our regional and industrial structure, and our economic interdependence with other countries. The thrust of the research in economics is to increase our comprehension of what determines our economic potential and how instruments of economic policy may move us closer to our future goals.

One section from each of the three research areas — The Canadian Economic Union, The Politics of Canadian Federalism, and Federalism and the Economic Union — have been blended into one unified research effort. Consequently, the volumes on Federalism and the Economic Union as well as the volume on The North are the results of an interdisciplinary research effort.

We owe a special debt to the research coordinators. Not only did they organize, assemble and analyze the many research studies and combine their major findings in overviews, but they also made substantial contributions to the Final Report. We wish to thank them for their performance, often under heavy pressure.

Unfortunately, space does not permit us to thank all members of the Commission staff individually. However, we are particularly grateful to the Chairman, The Hon. Donald S. Macdonald; the Commission's Executive Director, J. Gerald Godsoe; and the Director of Policy, Alan Nymark, all of whom were closely involved with the Research Program and played key roles in the contribution of Research to the Final Report. We wish to express our appreciation to the Commission's Administrative Advisor, Harry Stewart, for his guidance and advice, and to the Director of Publishing, Ed Matheson, who managed the research publication process. A special thanks to Jamie Benidickson, Policy Coordinator and Special Assistant to the Chairman, who played a valuable liaison role between Research and the Chairman and Commissioners. We are also grateful to our office administrator, Donna Stebbing, and to our secretarial staff, Monique Carpentier, Barbara Cowtan, Tina DeLuca, Françoise Guilbault and Marilyn Sheldon.

Finally, a well deserved thank you to our closest assistants: Jacques J.M. Shore, *Law and Constitutional Issues*; Cynthia Williams and her successor Karen Jackson, *Politics and Institutions of Government*; and I. Lilla Connidis, *Economics*. We appreciate not only their individual contribution to each research area, but also their cooperative contribution to the research program and the Commission.

IVAN BERNIER
ALAN CAIRNS
DAVID C. SMITH

PREFACE

Competition Policy and the Nature of Vertical Exchange is one of three special studies on the economics of industrial structure conducted for the Royal Commission. Financial support for this study was also provided by the Business Council on National Issues and the Department of Consumer and Corporate Affairs.

G. Frank Mathewson and Ralph A. Winter analyze the consequences for economic welfare of four vertical trade practices — resale price maintenance, exclusive territories, tying, and exclusive dealing. While the motivation for and the appropriate public policy response to these practices have been discussed extensively both in Canada and elsewhere, they have never before been subjected to the type of rigorous, integrated welfare analysis provided here.

The existence of these trade practices implies that they are privately beneficial, and the authors detail the sources of these benefits. The crucial question for public policy purposes is whether these practices are also socially beneficial. Mathewson and Winter find that all four practices can be socially beneficial under plausible circumstances and that two of them — resale price maintenance and exclusive territories — are likely to be socially beneficial under most circumstances. The clear implication for public policy is that none of these practices should be prohibited *per se* and indeed that for some of them *per se* legality is not out of the question.

The immediate importance of this study is most apparent in the case of resale price maintenance (RPM). This practice has been prohibited in Canada for over thirty years, subject to limited defences. Mathewson and Winter conclude, correctly in my view, that RPM should be pro-

hibited only in the very rare instances in which it facilitates a cartel arrangement among manufacturers or retailers. Adoption of their approach would virtually eliminate prosecutions for RPM in Canada.

The other practices — exclusive territories, tying and exclusive dealing — are currently reviewable by the Restrictive Trade Practices Commission. The authors' analysis implies that this case-by-case approach is appropriate. It also implies, however, that the criteria which guide the review process may be inappropriate. In particular, these practices may be prohibited if they are deemed to be exclusionary — that is, if they inhibit the entry or expansion of a rival. Mathewson and Winter demonstrate that tying and exclusive dealing can be both exclusionary and welfare-improving. Thus, while freedom of entry is often desirable, it is not always desirable and should not be an end in itself.

The importance of this study goes beyond its immediate policy relevance. It will have an enduring influence on the manner in which competition policy measures are analyzed both in Canada and elsewhere. It incorporates the best of the "new industrial economics" both in the analytical techniques it employs and in its use of market realities rather than a textbook ideal as a benchmark. In particular, there is a recognition that the information which facilitates market operation is costly to provide and that the appropriate method of ensuring that it is provided depends on the characteristics of the market.

D.G. MCFETRIDGE

ACKNOWLEDGMENTS

Funding for this project was received from the Business Council on National Issues, Consumer and Corporate Affairs Canada and the Royal Commission on the Economic Union and Development Prospects for Canada. We further acknowledge helpful comments from Chris Green, Shyam Khemani, Don McFetridge, the Law and Economics seminar at the University of Toronto, and the anonymous referees and the Research Advisory Group in Industrial Policy of the Royal Commission.

FRANK MATHEWSON
RALPH WINTER

Introduction

In recent years, the appropriate legal status for vertical restraints in contracts between manufacturers and distributors of their products has been a contentious issue. This debate represents the latest installment in the history of disagreement on the nature of these contractual restraints, a history reflected in the erratic and contradictory competition policies on vertical restraints in various countries. On one side of the debate are those (Baxter, 1982; Bork, 1978; Easterbrook and Posner, 1981) calling for the removal of legal prohibitions against most vertical agreements. This position flows from the belief that the most efficient distribution system prevails in unregulated retail and wholesale markets, and that efficiency may well require vertical restrictions. This position has carried the day recently in the U.S. Department of Justice. On the other side of the debate are those (Comanor and Frech, 1985; Pitofsky, 1978) who argue that current antitrust policies relaxing prohibitions against vertical restraints are excessively laissez-faire. These restraints are, in this view, anticompetitive devices of monopolistic control or cartel coordination.

The purpose of this study is to analyze vertical restraints in distribution and ultimately to delineate policy guidelines and assess Canadian competition policy on restricted distribution in light of recent economic analysis of these restraints and developments in policy in Britain and the United States. In contrast to the U.S. trend towards a more liberal policy on vertical restrictions, Canada's competition law has been and still remains oriented toward restrictions on conduct. Does Canada's current competition policy on vertical issues maximize economic efficiency?

We discuss and analyze four vertical practices: resale price maintenance (RPM), exclusive territory, tying, and exclusive dealing. Each of the subsequent sections first describes the current legal status of the

practice in the United Kingdom, in the United States, and in Canada. Then we present the competing positive theories to explain the practice. An understanding and evaluation of each of these theories is important for the obvious reason that subscription to one will determine a policy position. These positions vary widely, ranging from per se legal to per se illegal. When the practice signals potential cartel behaviour, we endeavor to indicate, the likelihood of this event and the differentiating features of the cartel case from the vertical efficiency case. Finally, we discuss the welfare implications for legal restrictions on each practice.

Chapter 1

Resale Price Maintenance (RPM)

In terms of number of cases alone, the most single important vertical restraint is resale price maintenance (RPM). Defined broadly, RPM is the influence by an upstream firm such as a manufacturer over the prices set by the downstream distribution or retail sectors. This general definition includes price ceilings established by the manufacturer, but RPM is often defined more narrowly as a vertical price floor. RPM is currently illegal in most countries, but when the practice was permitted it was used in a wide range of retail markets. Estimates of the proportion of retail sales subject to RPM in the United States during the 1950s run from 4 percent to 10 percent (Scherer, 1980, p. 594; Overstreet, 1983, p. 6). The practice was more popular in the United Kingdom and in Canada than in the United States. In 1960, some 25 percent of goods and services were subject to RPM in the United Kingdom. In Canada, before the 1951 law prohibiting RPM, an estimated 20 percent of goods sold through grocery stores and 60 percent sold through drugstores were fair-traded (Overstreet, 1983, pp. 153, 155).

Canadian RPM cases have arisen in markets as diverse as records, clothing, cosmetics, greeting cards, and appliances, as well as jeans and stereo equipment. (These cases are listed in the Appendix.) Evidence from Federal Trade Commission studies of RPM in the United States suggests that the use of RPM is not correlated strongly with market structure (Overstreet, 1983, p. 71), the practice being observed approximately as often in unconcentrated as in concentrated markets. Nothing in the available evidence on Canadian cases (see Skeoch, 1966) suggests that the Canadian pattern is different.

RPM is used by both established firms and new entrants into markets. Casual empiricism suggests, however, that the relative frequency of RPM among new entrants is higher. An entrant into a consumer-good market may invoke RPM throughout the early, expansionary part of its product's life cycle, when the establishment of an extensive distribution system is necessary. Examples of the use of RPM as a tool in the establishment of a distribution network — that is, as an instrument to establish a relatively new product in a market — are discussed later in this chapter in the section on RPM cases in Canada. (See also the discussion in Overstreet, 1983, p. 123.)

Legal Status

United Kingdom

Resale price maintenance was rendered prima facie illegal in the United Kingdom by the 1964 Resale Prices Act, which was influenced by Canada's 1960 resale price maintenance legislation (discussed below). That is, any firm in the United Kingdom wanting to maintain resale price floors has the burden of proving that doing so would be in the public interest. In practice, this law and its revision, the 1976 Act, have meant that RPM is effectively illegal except in the marketing of two products, pharmaceuticals and books. Suppliers in these industries argued successfully that unrestrained competition would harm the distribution of the products. In 1970, for example, the Restrictive Trade Practices Court of the United Kingdom judged that competition resulting from the elimination of RPM in the pharmaceutical industry would reduce the stocks carried by retailers, hindering the ability of retailers to fill difficult prescriptions at short notice. In the judgment of the court, therefore, the elimination of RPM in this case would have produced a cost that would have exceeded the benefits of lower prices.

The basis for the abolition of resale price maintenance in Britain, as in Canada, was the belief that the practice is anticompetitive — that consumers should receive the benefits of competition among retailers once the product has left the manufacturer's hands. The law has not been the sole factor, however, in determining the markets in which RPM will be implemented effectively. On the one hand, RPM agreements in the pharmaceutical industry have been repeatedly breached (see Monopolies and Mergers Commission, U.K., 1981c). On the other hand, various practices have arisen to substitute for RPM in some industries (Sharpe, 1982, p. 7). Suggested list prices have been legal in Britain since the repeal of the 1977 Price Commission Act. These suggested list prices in some instances become effective price restraints, because manufacturers can legally make their product guarantees to final consumers contingent upon the product's having been bought at list price. In addition, the 1976 RPM Act "appears to permit refusal of supply in the

face of price-cutting from a recommended resale price, for as long as the price cutting is accompanied by some other consideration which if taken by itself would justify the refusal to supply" (ibid., p. 9). Such refusals to supply are the main means of enforcing RPM agreements.

In sum, the view held by some U.S. antitrust authorities that legal prohibition against RPM should be relaxed is currently not influential in Britain (judging from interviews with the Office of Fair Trading and the Monopolies and Mergers Commission). The British laws against RPM are not, however, completely prohibitive.

United States

In contrast to the United Kingdom and Canada, the United States has no specific RPM legislation. RPM per se is currently illegal in the United States as a restraint against competition, in violation of section 1 of the Sherman Act [*Dr. Miles Medical Co. v. John D. Park Sons Co.*, 220 U.S. 373 (1911)]. This prohibition of RPM has not been continuous since the *Dr. Miles* case, however. As a consequence of the fair trade movement, Congress passed an act in 1937 which amended section 1 of the Sherman Act to allow vertical price floors (the Miller-Tydings Resale Price Maintenance Act). In 1952, this act was extended to allow manufacturers to enforce RPM on all retailers if at least one retailer signed an RPM agreement (the McGuire Act). In 1975, these two acts were repealed, and the status of RPM as a per se violation of section 1 was reestablished.

The legal status of RPM in the United States has become a very contentious issue. The Antitrust Division of the U.S. Department of Justice under the direction of W. Baxter (until recently assistant attorney general) filed a number of *amicus curae* briefs in 1981–1983 urging the courts to reassess the per se ruling on RPM. An anti-RPM lobby, led by discount retailers, exerted pressure on the U.S. Congress to prevent the Department of Justice from influencing any change in the RPM law, and in 1983, the U.S. administration obtained a court order prohibiting the Justice Department from filing additional *amicus curae*. The most important amicus brief filed by the Department of Justice was in the case of *Monsanto v. Spray-Rite Service Corp.*, [52 U.S.L.W. 4341 (U.S. Mar. 20, 1984)] which was decided in March of 1984. In this case, Spray-Rite, a wholesaler of herbicides, had had its distribution contract terminated by Monsanto, a manufacturer of herbicides, after cutting resale prices below suggested levels.

The Court declined the important invitation to reassess *Dr. Miles* in the *Monsanto* decision. Both the plaintiff and the defendant had agreed to the per se instructions given to the jury, and the Court said that it consequently had no occasion to consider the merits of the arguments against the per se rule. Instead it accepted the law and focussed on the question of whether Monsanto was part of a group with a "conscious

commitment to a common scheme designed to achieve an unlawful objective [RPM]" (*Monsanto*: 4345).

Justice Brennan of the Court did file a concurring opinion, however, that the *Dr. Miles* precedent should be reaffirmed:

> As the Court notes, the Solicitor General has filed a brief in this Court as amicus curae urging us to overrule the Court's decision in *Dr. Miles Medical Co. v. John D. Park and Sons Co.*, 220 U.S. 373 (1911). That decision has stood for 73 years, and Congress has certainly been aware of its existence throughout that time. Yet Congress has never enacted legislation to overrule the interpretation of the Sherman Act adopted in that case. Under these circumstances, I see no reason for us to depart from our longstanding interpretation of the Act. Because the Court adheres to that rule and, in my view, properly applies *Dr. Miles* to this case, I join the opinion and judgement of the Court. [Monsanto: 15]

Easterbrook (1984, p. 51) interprets the decision by the majority of the Court not to address the issue of per se illegality as leaving the door open for future challenges to *Dr. Miles*: "The days of *Dr. Miles* may be limited."

Apart from the basic legal status of the practice, there are two important questions in the U.S. law on RPM. First, what constitutes RPM? In particular, are suggested list prices legal? Second, what constitutes evidence in RPM cases of a combination in restraint of trade sufficient to render the practice a violation of section 1 of the Sherman Act? Regarding the first question, suggested list prices are legal in the United States, as they are elsewhere. The communication of a pricing policy which is then followed by the downstream distributor does not, in itself, constitute a conspiracy to maintain prices.

Court decisions on the second question are much more involved. Here the concept of a combination includes the unwilling compliance by one party to an agreement (Silberman, 1983, p. 206). The crux of the issue, which is relevant to the law on all vertical restraints, is the standard by which the courts decide whether a particular communication is coercive. Various U.S. courts have applied the standard that a communication is coercive if a failure to comply with it would lead to sanctions, e.g., "making a meaningful event depend on compliance or non-compliance with the 'suggested' or stated price" *Butera v. Sun Oil Co.*, 496 F. 2d 434, 437 (1st Cir. 1974), (quoted in Silberman, 1983, p. 306).

An explicit agreement placing control of pricing in the hands of the manufacturer is not necessary evidence for an RPM case. A combination may be inferred from observation of other activities such as policing (monitoring), threats or coercion followed by unwilling compliance, or collusion with others at the retail level or in the distribution system generally. The most important recent court decisions on this question have addressed the issue of whether action taken by a manufacturer

against a downstream distributor following complaints by the distributor's competitors constitutes prima facie evidence of an implicit agreement or combination. The answer to this question was no in the First, Second and Third Circuit Courts prior to the Supreme Court's review of the Seventh Circuit's yes decision in *Monsanto*.

In their amicus brief on the *Monsanto* case, the U.S. Justice Department argued against the Seventh Circuit Court's ruling that termination of a distributor following a competing distributor's complaints signifies a combination.

> The court of appeals erred in holding that evidence of distributor complaints, followed by termination, sufficed to prove concerted action between *Monsanto* and distributors other than Spray-Rite. This decision undermines the crucial distinction in Section 1 of the Sherman Act, 15, U.S.C. 1, between collective and unilateral conduct. Any manufacturer faces numerous choices in deciding how its product can be marketed in the manner most likely to assure success against rival products. For these companies that choose to sell through distributors, it is the distributors who may have the best perception of how marketing policies fare in practice. Accordingly, the flow of information from distributors to manufacturers can be highly beneficial in devising strategies for interbrand competition. By using such communications as the lever for finding a *per se* violation, the court of appeals would place in jeopardy all manufacturers who follow the helpful, and other procompetitive, practice of listening to their distributors. (U.S. Department of Justice, 1982, p. 5)

The Supreme Court, in the *Monsanto* case, established a stronger standard for evidence of an implicit combination than the Seventh Circuit Court was willing to accept. The court thus weakened the U.S. law on RPM without addressing the basic issue of the appropriateness of per se illegality. Termination of a dealer in response to complaints from competing dealers does not, under *Monsanto*, constitute evidence for a combination. Evidence must "exclude the possibility that the manufacturer and nonterminated distributors were acting independently" (*Monsanto*: 4344) showing "a conscious commitment to a common scheme designed to achieve an unlawful objective" (*Monsanto*: 4345). Under this strengthened standard of evidence, the Supreme Court found against *Monsanto*.

Easterbrook (1984, p.50) offers four comments on the Supreme Court's decision in *Monsanto*: First, the Court

> unanimously recognized the value of restricted dealing. . . . The Court rejected Spray-Rite's argument that restrictions on dealers are 'suspect' because they depart from the model of atomistic competition. The Court implicitly rejected the common notion that antitrust offers dealers a "right to make independent decisions"; to the contrary, the Court saw the value of coordination between dealer and manufacturer in designing the full package of attributes (product and service) that will be offered to customers. It saw

why manufacturers have a "legitimate" interest in dealers' prices — because prices influence dealers' ability and incentive to supply special services. The Court's recognition of the value of restricted dealing supports many of the arguments offered in the main body of this essay.

Monsanto thus answered the question whether *Dr. Miles* is the rule or the exception. Its per se approach is an exception to the principle that manufacturers and dealers have a legitimate, joint interest in establishing optimal arrangements for the sale of their product. *Dr. Miles* is the exception because restricted dealing ordinarily is beneficial. The Court not only approved discussions about price but also fortified the *Colgate* rule, which allows manufacturers to demand that retailers charge particular prices. The decision to endorse *Colgate* in strong terms must reflect substantial dissatisfaction with *Dr. Miles*.

Second, the Court recognized more clearly than ever before that all restricted dealing is of a piece, that the legal distinctions are artifical. It wrote: "[T]he economic effect of all of the conduct described above — unilateral and concerted vertical price-setting, agreements on price and nonprice restrictions — is in many, but not all, cases similar or identical."

Third, the Court described the objection to RPM in an economic manner. Instead of saying that RPM is unlawful because it interferes with "the central nervous system of the economy" or some other rhetorical, but empty, formulation, the Court portrayed RPM as a practice that may facilitate cartels. The *Monsanto* opinion largely reads as if the Court has adopted the economic approach to restricted distribution.

Fourth, these positions, taken together, call *Dr. Miles* and the per se rule into question. If restricted dealing and price arrangements are ordinarily procompetitive, if there is no real difference between the effects of price and nonprice restraints, and if the objection to RPM is the same as that to other vertical restraints, then it follows that per se condemnation of RPM is anomalous.

While Easterbrook, a strong proponent of the procompetitive view of vertical restraints, may be offering an overly optimistic view of the *Monsanto* decision, one can conclude that the decision has increased the likelihood of further relaxation of the U.S. laws against resale price maintenance.

Canada

Resale price maintenance has been prohibited in Canada since 1952, when Canada became the first country to impose an outright ban on the practice. Between 1952 and 1960, the practice was effectively per se illegal. In 1960 the Conservative government, which as the opposition party had argued against the 1952 law, amended the relevant section of the Combines Investigation Act to allow for a defence against the charge of RPM — the "loss-leader" defence.

The current Canadian law on RPM is section 38 of the Combines Investigation Act:

38(1) No person who is engaged in the business of . . . supplying a product shall directly or indirectly
(a) . . . attempt to influence upward, or to discourage the reduction of, the price at which any other person engaged in business in Canada supplies or offers to supply or advertises a product within Canada; or
(b) refuse to supply a product to or otherwise discriminate against any other person engaged in business because of the low pricing policy of that other person.

The loss-leader defence is provided for in subsection 9 of section 38:

38(9) Where . . . it is proved that the person charged refused . . . to supply a product to any other person, no inference unfavourable shall be drawn from such evidence if he satisfies the court that he . . . had reasonable cause to believe . . .
(a) that the other person was making a practice of using products as loss-leaders, that is to say, not for the purpose of making a profit thereon but for purposes of advertising; [or for]
(b) . . . the purpose of attracting customers to his store in the hope of selling them other products;
(c) that the other was . . . engaging in misleading advertising;
(d) that the other person made a practice of not providing the level of servicing that purchasers of such products might reasonably expect from such other person.

In addition, suggested list prices are not prohibited providing that it is made clear to the retailer that "he was under no obligation to accept the suggestion and would in no way suffer in his business relations . . . if he failed to accept the suggestion . . ." [subsection 38(3)] and " . . . unless the price is so expressed as to make it clear to any person to whose attention the advertisement comes that the product may be sold at a lower price" [subsection 38(4)].

A number of issues have arisen in the courts' interpretation of this law. Among them are the following:

- Does a conviction of RPM require that intent be demonstrated to control actual retail prices, or is an attempt to influence advertised prices sufficient for conviction?
- What is the scope of the "loss-leader" amendment of 1960? Can it be used to justify the ex ante establishment of resale price floors at levels based on estimates by the manufacturer of the average retailing costs of selling the product, on the grounds that any lower prices would signal the sale of the product for purposes other than "making a profit thereon"? Or can the loss-leader defence be used only ex post to justify the refusal to supply a particular dealer who has sold the product at below retail cost?

- What is the specific test of a product being sold as a loss leader? The intent of the law is apparently that a loss leader is a product sold at a price that is below the marginal or average retailing cost of the product, but how are these costs estimated?

An examination of the courts' decisions on these issues is required to define more precisely the Canadian law on RPM. Here we discuss court cases in order to arrive at this more precise definition of the law. The analysis of the economic efficiency of the Canadian law on RPM will be discussed later in its own section.

The first of the legal issues outlined was addressed by the Ontario Court of Appeals in the *Moffat* case (1957). Moffat, a manufacturer or appliances, had entered a cooperative advertising agreement with a retailer, George's Appliances, under which Moffat would pay half of the cost of cooperative advertisements providing that the prices advertised were at or above the list prices stipulated by Moffat. The retail dealer was free to advertise at lower prices, but had to incur the entire cost of advertisements that included the lower prices. In addition, the dealer was free to sell at prices below the manufacturer's stipulated prices, and in fact frequently did so.

Moffat argued in the appellate court that because it had made no attempt to coerce the dealer or even to influence directly the dealer's actual retail prices, the Crown prosecution had failed to show intent to influence retail prices. The Ontario Court of Appeals found that the influence of advertised prices was itself evidence of such intent. A manufacturer cannot, under *Moffat*, enter agreements with a retailer that encourage higher advertised prices, even with no explicit intervention in the prices actually set by the retailer.

The second issue, the scope of the loss-leader defence, was first addressed in the *Sunbeam* case (1967). As a direct response to the 1960 amendment allowing the loss-leader defence, Sunbeam established "minimum profitable resale" prices on its electric shavers. These prices, Sunbeam claimed in a letter to dealers, were based on evidence of "the operating costs of a variety of dealers who sell appliances and are efficiently organized to merchandize effectively and provide reasonable service" (*Regina v. Sunbeam*, S.C. Ontario 3/18/1966: 3). Sunbeam stated in the letter to dealers that "the offering of our products below these prices will be investigated as cases of loss-leading. It is our intention to withhold supply . . . from persons who make a practice of loss-leading" (*Sunbeam*: 3).

The Supreme Court of Canada held that Sunbeam was guilty of an unlawful act under the relevant section of the Combines Investigation Act (upholding a judgment of the Court of Appeal for Ontario that allowed an appeal by the Crown from the acquittal of Sunbeam on certain counts of RPM). The Court "made clear that the loss-leader

amendment only comes into force after the product is loss-leadered, at which point the supplier can 'refuse to deal.' The loss-leader proviso does not apply to intimations of refusal to deal if resale price is below a stipulated level" (Green, 1980, p. 193). Thus the loss-leader amendment cannot be used to justify a prescribed list of minimum prices, even if the prices (supposedly) reflect levels below which products would be sold at a loss.

That the loss-leader defence can apply, ex post, to refusals to supply is demonstrated by the *Coutts* (1967) case. In this case, Coutts refused to supply its product (greeting cards) to a retailer that had sold the product at approximately half-price as part of a grand opening. The promotion lasted only a week, but Coutts' defence — that the product price was less than the delivered wholesale cost, indicating the practice of loss-leader selling — was accepted by the court. The loss-leader defence legally does justify refusal to supply a dealer who has sold a product at a price below delivered wholesale cost.

On the third issue, the legal definition of loss-leader pricing, the legal interpretation of the required condition is that the retail price be below the wholesale invoiced price [*Phillips Appliance* (1966), *H.D. Lee of Canada* (1980)] plus, where applicable, delivery costs incurred by the retailer [*Coutts* (1967)]. For example, in the *H.D. Lee* case, a retailer sold the product (jeans) for $7.99, above the wholesale price of $6.00 but below the manufacturer's recommended list price. The Court disallowed the loss-leader defence, making no attempt to assess operating costs attributable to jeans other than the wholesale price.

In sum, the current Canadian law on RPM prohibits the practice, the only exception of practical importance being the situation of a retailer selling below wholesale price. This situation can justify ex post refusal to supply, but cannot justify ex ante a list of minimum prices prescribed by the manufacturer. The Canadian law against RPM is stronger than the British law in that there are no industries exempted from the RPM prohibition in Canada. On the other hand, the Canadian law differs from the current U.S. laws in allowing explicitly the loss-leader defence of the practice.

Economic Analysis of RPM

Should RPM be per se legal, per se illegal, or subject to a rule of reason? If a rule of reason, then what rule? The current opinions on the social desirability of RPM fall between two extremes:

- *RPM is undesirable.* The maintenance of any price above the constrained, competitive level is an undesirable manifestation of monopoly power. RPM allows a manufacturer to maintain retail prices at monopoly levels or facilitates the coordination of price setting by a

cartel of manufacturers or retailers. A per se prohibition of RPM increases competition among retailers, which benefits consumers by reducing prices and, in particular, by allowing consumers the option of buying at low-service discount houses.

- *RPM is efficient.* A manufacturer maintains resale prices only as part of an efficient overall distribution system. Maintained price floors can stimulate nonprice competition among retailers — in dimensions such as sales effort or post-sales service — and thereby increase the demand for the manufacturer's product. A manufacturer will maintain resale prices only if the impact is an increase in demand. In other words, a manufacturer is guided by consumer demand (consumers' interests) in choosing whether to maintain prices. Just as the law does not dictate the design of a distribution system of a vertically integrated manufacturer, nor should it constrain arm's-length contracts between a manufacturer and independent retailers. Just as the law does not constrain manufacturers against increases in direct advertising or offering consumers more service in return for a higher price, nor should it constrain firms against indirectly effecting the same trade-off.

The purpose of this section of the report is to synthesize and evaluate the economic arguments for and against RPM. The normative or policy analysis is necessarily tied closely to the positive analysis of why manufacturers find RPM profitable. Indeed, one of our themes is that current policy has suffered from the failure to address the positive question head on. Why does a manufacturer impose RPM? Unless this question is addressed, one cannot identify the effects of prohibiting RPM, and the impact on social welfare is therefore also left unanswered.

The natural starting point for a synthesis of the economic explanations of RPM, or vertical restraints in general, is the well-known proposition that if product markets and retail markets were both perfectly competitive, no incentive for vertical control would exist (Warren-Boulton, 1978). A manufacturer can do no better than to set a price for its product and sell to all who are willing to buy, without restrictions on their reselling strategies. The observation of RPM therefore signals some market "imperfection" such as monopoly power. (This does not imply, of course, that RPM should be banned — eliminating a signal of monopoly power does not remove the source of the power.)

Monopoly power alone on the part of the manufacturer is not sufficient, however, for vertical controls such as price restraints to dominate a simple spot market contract without restrictions. A manufacturer with monopoly power, selling to a competitive market that uses the manufacturer's product in fixed proportion with other inputs in the production of some final good, has no incentive for vertical control (Warren-Boulton, 1978). Again, the manufacturer can achieve maximum profits through the choice of optimal wholesale price alone. The production of retail goods

does satisfy the condition of fixed factor proportions: one unit of a retail good requires one unit of the good at the wholesale level. To explain and evaluate observed vertical restraints, therefore, one must identify the market conditions that make the restraints profitable. These conditions must extend beyond simple monopoly power.

Resale price maintenance can refer to vertical price ceilings or vertical price floors. While both of these restraints are illegal in the United States, only vertical price floors are prohibited by section 38 of Canada's Combines Investigation Act. For the sake of completeness, we examine both kinds of vertical price restraints. We begin with an explanation of vertical price ceilings, since these are simple to analyze and have relatively clear welfare effects.

Vertical Price Ceilings

Why would a manufacturer impose a ceiling on the prices charged by retailers? Market power at both the retail and the manufacturing level can explain vertical price ceilings imposed by a manufacturer on retailers. Consider a market in which a monopolist manufacturer sells a product to a retailer with market power, for example, a complete monopoly in some market. We compare the joint profits achieved by the manufacturer and the retailer under two contracts — a simple uniform price contract which specifies only the wholesale price, leaving the retailer free to set the downstream, retail price in his individual best interests; and a contract that specifies both a wholesale price and a ceiling on the retail price. To explain why the latter achieves higher joint profits (and will therefore be observed, assuming the extra profits can be shared), we must show that the retail price set by the retailer in his own interests will be less than optimal in maximizing joint profits.

Under this contract, the individual retailer sets prices that are too high from the point of view of the combined profit maximization. This is because the retailer marks up the retail price, in inverse proportion to the demand elasticity, over the wholesale price rather than the marginal cost of production, which would be the efficient base — that is, the base for a vertically integrated firm. This explanation of the "double mark-up" effect was invoked by Spengler (1950) to explain vertical integration, and in particular to explain why vertical integration of successive monopolies reduces the extent of monopoly power in production.

In essence, the problem is one of a vertical externality. In choosing the retail price (or any variable affecting the quantity of the product demanded), the retailer ignores the profits flowing to the upstream monopolist, through the mark-up of the wholesale price over marginal production cost. Every additional unit of demand attracted downstream by the retailer increases the upstream profits, but these additional profits are ignored by the retailer in its pricing decision. This is why the retailer

sets a price higher than the joint-maximizing price.

A vertical price ceiling is a contractually simple solution to the double mark-up problem. The ceiling commits the retailers to setting a lower price, which is in the collective interest of the manufacturer and retailer in that it increases total profits. These profits can then be shared through an appropriate choice of the wholesale price.

This explains the reason for a price ceiling. The policy question is then whether the imposition of a price ceiling improves social welfare. In the measure of social welfare, we must include not only the combined profits of the retailer and the manufacturer — which increase with any observed vertical price ceiling, otherwise the restraint would not be observed — but also consumer surplus. Not only do the parties to the contract benefit from a vertical price ceiling, but the third component of social welfare, consumers' surplus, also increases with the vertical price ceiling, because it leads to a decrease in the final price. Economic analysis thus concludes that a vertical price ceiling is normally welfare-optimal in the sense that all affected parties are better off if the practice is allowed. Recently, however, U.S. courts have disallowed vertical price ceilings on legal grounds, ignoring completely all economic arguments. (See J. Rosse's 1980 analysis of *Albrecht v. Herald and Co.*, 390 U.S. 145 (1968).)

Resale Price Floors

The positive economic explanations for vertical price floors can be classified into three categories: explanations of why an individual manufacturer might find RPM to be in his own self-interest; explanations of RPM as an instrument of a cartel at the retail level; and explanations of RPM as a device to facilitate a cartel at the manufacturing level. In this section we synthesize these explanations, isolating where possible the testable implications of each.

For many of the explanations (especially the cartel explanations), the implications for welfare of prohibiting RPM are clear. For the explanations of RPM as a (privately) efficient contractual arrangement, however, the implications for total surplus are not obvious. The effect of allowing or disallowing RPM on total surplus must be determined if one is to draw policy conclusions from the analysis. For several of the explanations, we outline theoretical frameworks to establish the impact of RPM on total surplus.

Vertical Price Floors and the Individual Manufacturer

Why would a manufacturer acting alone ever wish to impose resale price maintenance? A point of view expressed by some policy makers and implicit in some court decisions is that RPM ensures monopoly prices;

the retail price of a monopolistically produced product is maintained because a high price is in the interest of any monopolist. This is simply incorrect. To understand why, note that a manufacturer's profit can be expressed as follows:

$$\pi = Q(P,X) \cdot (P_w - C) \tag{1}$$

(or profit = demand · wholesale mark-up).

Here P is the retail price, X represents other factors affecting demand, P_w and C are the wholesale price and average cost respectively. It is obvious from this simple expression for manufacturer's profits that the manufacturer's interest is in high demand and therefore a low retail price, once the wholesale price has been set. The idea that RPM serves as a device by which a manufacturer retains a high price on its product is a fundamental misconception.

It is precisely because a manufacturer facing a downward-sloping demand curve is interested in a low price, *ceteris paribus*, that RPM has been a puzzle to economists. This positive economic puzzle must be solved before a normative conclusion on RPM can be reached.

One explanation of RPM offered in the economics literature (e.g., Gallini and Winter, 1983; Mathewson and Winter, 1983a, 1983b, 1984a) is that when the *ceteris paribus* condition is relaxed, the demand curve faced by the monopolist may be increasing in the retail price. An increase in price may have a positive impact on nonprice determinants of demand (denoted by X) — such as information about the product offered by retailers to consumers at the point of sale, post-sales service or other quality dimensions determined by retailers, or simply the availability of the product. The indirect and positive effect on demand of the positive impact on nonprice demand determinants may more than offset the negative impact of a price increase. The total quantity demanded of the manufacturer's product may therefore increase when the retail price is raised via RPM. The possibility that the demand curve may be upward-sloping when indirect effects are taken into account is expressed in equation (2):

$$\underset{}{\frac{dQ}{dP}} = \underset{(-)}{\frac{\partial Q}{\partial P}} + \underset{(+)}{\frac{\partial Q}{\partial X}} \cdot \underset{(+)}{\frac{dx}{dP}} \quad > 0 \tag{2}$$

Depending on which variables are represented by X, various "efficiency" explanations of RPM emerge. The increase in retail price may induce more outlets to enter the market, with a consequent positive effect on demand as the product is more easily available (the "outlets hypothesis" or "availability hypothesis"). The increase in the retail

mark-up may induce an increase in the sales effort or in point-of-sale information provided by the retailer which in its impact on demand more than offsets the higher retail price. Similarly, post-sales services such as maintenance, provided by the retailer, may increase with RPM. Each of these explanations is evaluated below, together with two important extensions that underscore the potential generality of the efficiency explanation of RPM.

The Availability Hypothesis

One of the most common arguments put forth by business to justify RPM is that it is necessary to protect a retail distribution system for existing products or, more often, to establish a distribution system for new products. The idea is that price competition among existing retailers may result in retail margins that are very low — so low that many potential outlets for a particular product are dissuaded from carrying the product. Unless retail margins are protected, many retailers will simply not stock the product.

The demand for consumer goods is often sensitive to the number of outlets carrying the product, because this number determines the exposure of shopping consumers to the good. Without observing the product in stores, many consumers will not buy the product at all or only if subjected to costly advertising. More fundamentally, the number of retailers carrying the product determines the availability of the good to consumers, and this availability is an important determinant of demand. For both of these reasons retail demand, especially for new products, will suffer if a wide distribution of the product is not attained. (The demand may depend as well upon the *type* of outlets carrying the product — an alternative hypothesis considered below — but the availability hypothesis refers specifically to the dependence upon the number of stores stocking the product.)

The maintenance of the retail price by a manufacturer above the level that would be established under unrestrained competition will have two effects on demand — the negative, direct impact of the higher price, and the positive, indirect impact of the increase in the number of outlets carrying the product. The availability hypothesis is that the indirect effect may more than offset the direct effect of the higher price, implying that resale price maintenance is profitable.

To elaborate on this intuitive explanation of RPM, we review first a compelling example of the availability motive for RPM and then a theoretical evaluation of this motive. The theoretical model is necessary for a welfare analysis of the motive. Does a manufacturer's willingness to accept a higher price in return for wider distribution of its product signal that the same trade-off is in the social interest?

Some empirical support for the outlets hypothesis is contained in the evidence reviewed by Overstreet (1983). Andrews and Friday (1960) found that the distribution of some products was harmed by price-

cutting after a collapse of fair trade (resale price maintenance). In 1958, for example, after RPM was terminated, the number of dealers carrying Schick shavers in the United States fell from 35,000 to 7,000, apparently because of price-cutting. In 1951, price-cutting by three New York department stores on Sunbeam products increased their share of the New York market for Sunbeam products from 4.2 percent to 74.1 percent in 10 weeks — but Sunbeam's share of the New York market for all brands of similar products fell by 18 percent in 1951, compared to a 9 percent decline nationally. The evidence is consistent with a strong, negative impact of the collapse in fair trade on the demand for Sunbeam products nationally and in the New York market in particular.

Under what conditions will RPM be a profitable means of widening the distribution of a product? Are these conditions consistent with welfare improvement with RPM? Gallini and Winter (1983) address the following simple model. A monopolist manufacturer faces a demand for his product that is represented by a function $Q(P,m)$ of the retail price P, and the number of outlets m offering the product. (The dependence of demand upon m may be due to the availability hypothesis or, more generally, product differentiation at the retail level.) The demand faced by each retailer i is a function $Q_i(P_1,...,P_i,...,P_m; m)$, which incorporates a conjectural variation on the response of other outlets to a change in P_i.

The manufacturer produces under a cost function $C(Q)$ and retail outlets face a fixed cost F together with constant marginal cost, including the wholesale price w of the product. Free entry into the retail market guarantees that outlets earn zero economic profit.

Two kinds of equilibria are considered in this model:

- An unrestrained equilibrium consisting of an optimally set wholesale price w, a retail market equilibrium price P, and number of outlets. Given w, the retail price P is determined by a "Chamberlinian tangency," as illustrated in Figure 1-1. In this figure, DD is the inverse of a retail firm's pro-rata industry demand curve $Q(P,m)/m$, dd is the individual firm's demand curve (incorporating a conjectural variation), and AC is the individual retailer's average cost curve.
- A price-restraint equilibrium in which the monopolist sets both the wholesale price and, via vertical price floor or ceiling, the retail price. The number of outlets is then determined by the condition of zero profits at the retail level.

Starting from the unrestrained equilibrium, a price floor established at a higher level (say, $\hat{P}$ in Figure 1-1) will include the entry of more firms into the retail market, shifting the pro-rata demand curve to the left until it intersects the retailers' average cost curve at the price floor $\hat{P}$ This increase in m will raise the total demand for the monopolist's product. The positive question is: Does the effect on demand of this increase in m more than offset the negative impact of the price increase? That is, is RPM profitable? The following proposition is easily established. Let ϵ_D,

ϵ_d, and ϵ_m be the price-elasticities of DD and dd, and the elasticity of DD with respect to m, respectively.

Proposition 1 In a symmetric, monopolistically competitive market with free entry, resale price maintenance is profitable for an upstream monopolist if, and only if, $\epsilon_D < \epsilon_d \cdot \epsilon_m$ at the constrained equilibrium. A price ceiling is profitable if, and only if, $\epsilon_D > \epsilon_d \cdot \epsilon_m$.

Proof The unrestrained retail market equilibrium (P,m), given W, is determined by a retail profit-maximizing condition on price and a zero profit condition:

$$(P - w)/P = 1/\epsilon_d \tag{3}$$

$$(1/m)Q(P,m)(P - w) - F = 0. \tag{4}$$

In this equilibrium, w is chosen to maximize the manufacturer's profits

$$\pi(w;P,m) = Q(P,m) \cdot w - C(Q(P,m)) \tag{5}$$

subject to (3) and (4).

In the price-restraint equilibrium, however, w and P are chosen to maximize (5) subject only to (4). The two first-order conditions for this maximization problem are easily shown to yield

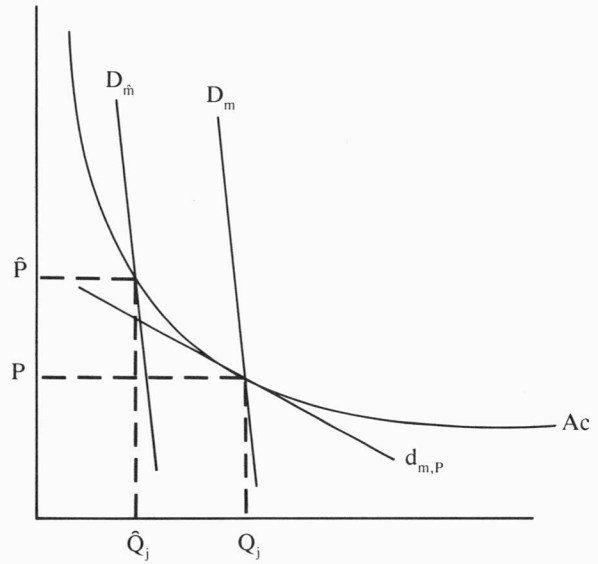
$$(\hat{P} - w)/\hat{P} = \epsilon_m/\epsilon_D \cdot \tag{6}$$

The proposition follows directly from comparison of (6) and (4).

Thus, the non-integrated market does not achieve the (P,m) that is optimal for the monopolist, and the monopolist needs a second instrument, in addition to w, to elicit the optimal values of the two target variables. The intuition behind the comparison of ϵ_D and ϵ_m in proposition 1 is clear. If ϵ_m is much higher than ϵ_I, then with the implementation of a price floor, the impact on demand of the resulting entry into the market overwhelms the negative impact of the price increase, and vice versa. The elasticity ϵ_d enters the comparison because it equals the elasticity of average cost in the Chamberlinian tanquency equilibrium: if this elasticity is extremely high, for example, a price floor only slightly above the unrestrained equilibrium price, it would cut the equilibrium output of each firm by, say, half (Figure 1-1) and therefore would more than double the equilibrium number of downstream firms. This large increase in m would in turn have a positive impact on demand through $\epsilon_m > 0$.

The non-integrated market fails to achieve the optimum because the pricing decisions of downstream firms are inefficient in the sense that joint downstream-upstream profits are not maximized; clearly, if firms set the optimal price $\hat{P}$, w could be used to elicit the optimal m.

FIGURE 1-1 Unrestrained Equilibrium (P,m) and Resale Price Maintenance Equilibrium ($\hat{P}$,m) ($\hat{P} > P$, $\hat{m} > m$)



Why are the downstream firms' incentives in setting prices not compatible with the objective of joint maximization of the manufacturer's and the downstream profits? At the source of this incompatability are two externalities. First, the upstream manufacturer captures a profit equal to $(w - C'(Q))$ for the marginal unit attracted by the downstream firms. Because they do not appropriate this profit, downstream outlets tend to "underinvest" in the activity of attracting demand — i.e., they tend to overprice. Offsetting this vertical externality is the effect of a second, horizontal externality: since each downstream outlet perceives the prices of other outlets as fixed, when it raises its price it causes (in terms of its own perception) the demand curves faced by the other outlets to shift out, with a resulting increase in the profits of these other outlets. Because this increase in profits is not appropriated by the outlet, there is a tendency to price too low. The net effect of this horizontal externality and the vertical externality is that the retail price (and hence product differentiation) will generally be too high or too low to maximize joint upstream-downstream profits.

In general, explanations of vertical restraints, or wholesale market contracts other than the simple uniform-price contract, must identify externalities in the retailers' decisions. The above explanation of RPM in a monopolistically competitive retail market identifies two (offsetting)

externalities. These two externalities are distinct from the "horizontal informational" externality or free-riding (considered below) that is sometimes considered necessary for RPM; this explanation shows that it is not.

Given the demonstration that price restraints are profitable when retail markets are monopolistically competitive, the policy issue is addressed by a welfare evaluation within the model of two feasible institutional arrangements — allowing vertical restraints or prohibiting them (not in comparison of the private and socially optimal use of the restraints). Does the willingness of the upstream monopolist to trade off product diversity for lower prices (or the converse) signal a social desirability for the same trade-off? Or does prohibition of either vertical price floors or price ceilings improve welfare in a monopolistically competitive market?

Evaluation of the welfare impact of the monopolist's optimal use of vertical restraints requires that the model be parametrized. Some insight can be gained initially in the general case, however, by determining the welfare derivative of the final retail price — that is, by evaluating the desirability of price restraints at the margin. We measure welfare by the sum of producers' and consumers' surplus, and adopt the assumption that the demand function $Q(P,m)$ is separable, i.e.,

$$Q(P,m) = h(m) \cdot q(P), \tag{7}$$

for some functions $h(\cdot)$ and $q(\cdot)$. This is equivalent to assuming that changes in m cause iso-elastic shifts in demand, or, if $q(P)$ is interpreted as individual consumer demand, that the selection of consumers' states is independent of the number of outlets.

Let W_p^* and π_p^* denote the marginal changes in welfare and profit when the monopolist restrains the resale price marginally above the unconstrained equilibrium price, *ceteris paribus*. W_p^* is the sum of $\delta W/\delta P$ and $(\delta W/\delta m) \cdot (dm/dP)$ and similarly for π_p^*. If a price floor is observed, then π_p^* must be positive. The issue is to determine when this is sufficient for welfare improvement at the margin. That is, under what conditions does $\pi_p^* > 0$ imply that $W_p^* > 0$? Let $V(P)$ be the consumer's surplus function corresponding to $q(P)$ in (7). The following proposition is proved in Gallini and Winter (1983).

Proposition 2 In a symmetric monopolistically competitive market with free entry and separable demand (7), if

$$\left| \text{dln } V(P)/\text{dln } P \right| \; > (<) \; \left| \text{dln } Q(P)/\text{dln } P \right|,$$

equivalently

$$V(P)/(P \cdot Q) > (<) 1/\epsilon_D,$$

then whenever a vertical price floor (ceiling) is profitable, it is welfare-improving at the margin.

The conditions in proposition 2 are on the price elasticities of demand and surplus, independent of m, and are empirically testable in principle. Examples can easily be constructed in which either inequality of the proposition holds; there is no general and categorical comparison of marginal private and social incentives for vertical price controls in this model. The essence of the proof of the proposition is that for a price floor to be welfare-improving at the margin, the marginal rate of substitution (MRS) in terms of consumer surplus between greater product diversity and lower price must exceed the MRS for the monopolist, which is the slope of an iso-demand curve. Under the separability condition (7), total consumers' surplus equals $h(m) \cdot V(P)$; therefore the elasticities of $V(\cdot)$ and $Q(\cdot)$ with respect to m are equal, and only price elasticities need be compared. The second set of inequalities in the proposition follows from the first and from Roy's identity.

Comparison of the private and social incentives for the use of restraints requires specification of the form of the demand function $Q(P,m)$. The simplest determination of parameters involves the assumption that average production cost and the three relevant elasticities are constant over the relevant range,

$$Q(P,m) = m^{\epsilon_m} p^{-\epsilon_D}. \tag{8}$$

In (8), m^{ϵ_m} can be interpreted as the number of consumers attracted to the market by the m outlets, with $P^{-\epsilon_D}$ being the individual consumer demand function. The indirect utility corresponding to this individual demand is $P^{(1-\epsilon_D)}/(\epsilon_D - 1)$, and the total consumer's surplus is $m^{\epsilon_m} p^{(1-\epsilon_p)}/(\epsilon_D - 1)$. The ratio of consumers' surplus to total revenue in this case is $1/(\epsilon_D - 1)$, whence the condition of proposition 2 for a price floor is always satisfied for this specification. Thus, for the simplest specification of the model that yields deterministic welfare results, private incentive for a vertical price floor is sufficient for the price floor to be welfare-improving.

The next three explanations of why an individual manufacturer might find RPM in its interest are variants of what is generally called the "service" explanation of RPM. It is appropriate to consider the three arguments separately, since different forces are at work in each.

Services: Point-of-Sale Information

The classic efficiency explanation of RPM involves the provision at the point of sale of information to consumers by retailers (Telser, 1960; Mathewson and Winter, 1963a). In markets where consumers are not informed perfectly about the attributes of a product, a role for retailers may be the provision of information about the product. This information may take the form of demonstrations (e.g., a listening room for a stereo retailer), highly trained sales staff, or simply prominent shelf space. The role of retailers in informing consumers is especially important when the product is complex and rapidly changing, such as personal computers, but the need for some information at the point of sale is ubiquitous.

Retailers have an incentive optimally to provide this point-of-sale information only if they fully capture the rewards of doing so. The point-of-sale information thesis is that retailers may not capture the entire gains to their individual expenditures on information. In a market where consumers search for the lowest price, discount stores can be established profitably; these stores offer no information themselves but set prices so low that consumers, having been informed elsewhere, will be induced to buy at these discount stores. To take an example, a discount stereo store may communicate (perhaps implicitly) to its potential customers that they should "go to a 'high class' stereo store, listen to the audio equipment in the controlled environment, get advice from highly trained and available salespersons, decide which brand and model you want and come back to buy it from us in the crate." The discount store can offer low prices and still profit because it does not itself invest in facilities to provide the information.

This market situation may appear to offer consumers both information services and low prices, but in fact there are some obvious problems. The informing stores will not be many in number and will not offer adequate (optimal for the monopolist) amounts of information if they capture only a fraction of the customers that are attracted to the market. Fewer potential customers will be attracted to the market as a result. The implication of the free-riding is a drop in the manufacturer's profits.

By setting a retail price floor, however, the manufacturer forecloses discount houses. Since under RPM a store cannot attract consumers to the market on the basis of price alone, it must offer some information to survive in the retail market. To be more precise, consider the retailer's expenditure on information as determined by the equality of the marginal cost of this expenditure and its marginal benefit. The marginal benefit from attracting an additional sale through nonprice decisions is the retail profit accruing from that sale, which equals the retail margin. (We ignore, for simplicity, any variable costs other than the wholesale price.) This retail margin increases with RPM, which therefore has the beneficial effect of increasing the information offered.

Note that a third externality, the horizontal informational externality, has been added to the two externalities giving rise to vertical control

incentive that were identified in the explanation of the outlets hypothesis. The vertical externality continues to distort retailers' decisions in the current context; for the marginal unit of demand that a retailer attracts to the market through its expenditures on information, the upstream manufacturer gains $w - C'(Q)$, the difference between the wholesale price and the marginal production cost. This upstream benefit will not be taken into account by the retailer in making the decision on how much information to provide. As a result, a suboptimal amount of information is provided by the retail market — even without a horizontal informational externality. The point is that the horizontal free-rider whose empirical importance has been questioned (see, for example, Scherer 1980, p. 593) is not necessary for an inadequacy in the unrestrained retail market provision of information. The incentive for vertical control requires only the vertical externality — and this externality is present whenever the wholesale mark-up is positive.

Notwithstanding the sufficiency of the vertical externality in explaining vertical control, the information free-rider problem is of potential empirical importance in many markets. The obvious example of audio equipment has been mentioned; the logic extends to the market for television as well. In any market where "hands-on" experience by consumers is necessary before the purchase decision can be made, the free-rider problem can arise. The problem is of potential importance for relatively complex and heterogeneous products like personal computers and cameras, where not only inspection of the product by consumers but also expert sales advice is required before purchase. A very different example is the case of standardized, repeat-purchase items like jeans. Here the consumer can select the correct size and style (using fitting rooms and sales advice) in the first purchase of the item at the "informing" store (a department store) and make every purchase thereafter at a discount store (the "Army and Navy"). In all of the markets mentioned, RPM cases have arisen.

Even for standard consumer items such as light bulbs, the free-rider problem may arise in retailers' expenditure on advertising, in-store product demonstration or advertising. An example of this argument is found in the brief in support of the defence (quoted in Bowman, 1955, p. 837) in the case of *McGraw Electric Co.* 11 (1952):

> During the last Christmas season [1951], we found it quite impossible to carry out our seasonal promotion plans in the San Francisco area. This was due to the deep price cutting of one chain organization. Other stores, large and small, refused to meet these extremely low prices, and of course, would not cooperate in our merchandising plans. All dealers are reluctant to participate in merchandising expenditures aimed at creating willingness to buy if some other dealer, large or small, is able to get a free ride by selling at cut prices relying on the goodwill and acceptance which he has not helped to create.

A more recent case in which the free-rider argument was heard is *Continental T.V., Inc. v. GTE Sylvania, Inc.* [433 U.S. 36(1976)]. The Supreme Court in fact relied on the free-rider argument to justify vertical territorial restrictions in the *Sylvania* case, but rejected the argument for vertical price restrictions (see Posner, 1981).

The welfare implications of the use of RPM to correct an extreme free-rider problem are clear. In the extreme case, a market will collapse entirely under free-riding, ceasing to exist unless RPM is allowed. If every consumer in a market is strongly inclined to search for the lowest price outlet after deciding to purchase a product, then any store that attempts to offer information (and to charge a price sufficient to cover the average cost of providing the information) will be undercut by a discount house, will retain no customers, and therefore will earn no revenues. Knowing this, no retailer will offer any information in such a market. If this information is critical to the demand for the product, then no demand is generated so long as discount house operate. The market collapses. In this case, allowing RPM is Pareto-superior to prohibiting it, since RPM allows the generation of positive surplus by ensuring that the market exists.

The policy question relevant to this free-rider explanation of RPM is then the following: Must the informational externality be severe in order that welfare increases with RPM, or will RPM generally be socially efficient even with small free-rider effects? This question can be addressed only in a specific, formal model of a market in which RPM arises due to incentive incompatibilities in the provision of information. There is no a priori reason why the manufacturer's willingness to trade off a higher retail price for greater information at the retail level should signal that the same trade-off is socially efficient.

Elsewhere (Mathewson and Winter, 1983a), such a model has been fully developed. Here, we summarize the essential elements of the model and its welfare results in a discussion at the end of this section, where we analyze the informational free-riding explanation of RPM and show that the use of vertical price floors to correct informational externality increases total surplus and may be Pareto-improving.

The Services Argument: Post-Sales Servicing

A variant of the services explanation of RPM is concerned with retailers' contribution to product quality. This contribution may be the care with which the retailer undertakes the final stage of production, as in the assembly of a bicycle. Most often, however, retailers affect the quality of a consumer product through post-sales servicing of the product, for example, servicing the manufacturer's product warranty or establishing their own guarantee on products sold.

The distortions in retailers' decisions on quality, which lead to an incentive for vertical control, are identified, once again, by isolating the externalities impinging upon these decisions. The vertical

externality discussed in preceding explanations of RPM is operative here; an increase in quality added to the product by a retailer benefits the manufacturer to the extent that additional units of the product are demanded.

Perhaps of greater empirical relevance is an externality created when consumers are unsure of product quality, especially when consumers cannot distinguish the manufacturer's contribution to product quality from the retailer's contribution (Caves, 1980). In this case, an increase in the service offered by one retailer will add not only to the reputation of that retail outlet but also to the reputation of the product and the entire system of retailers. Because consumers are mobile and because they judge the quality of a product by their past experience (and that of others), the reputation of the entire chain of retailers is enhanced. This is a positive externality distorting the retail quality decision. The individual retailer does not take this additional effect into account in its decision on quality of service. As a result, it sets a level of quality that is too low compared to the efficient level.

At this point in the services explanation, it is often claimed that the manufacturer can impose RPM and, by curtailing price competition, can induce retailers to compete in other dimensions, for example, service quality. This argument is misleading in that it assumes falsely that retailers have a particular "capacity for competition" which, if price restraints are imposed, will be manifested in other dimensions. The correct explanation of the role of RPM in regard to a retailer's decisions on quality is that it protects a high retail mark-up. This retail mark-up represents the marginal benefit to the retailer of the additional customers who are attracted to the market through nonprice instruments such as product quality. Thus, by increasing the marginal benefit to expenditures on quality, RPM raises the level of quality provided at the retail level.

The welfare effect of RPM in this explanation has not been analyzed formally, and a formal model would be required for precise analysis. But we conjecture that the welfare effect is very similar to the results obtained in the informational free-riding explanation, namely, that total surplus increases with the use of RPM. It is clear that where the horizontal reputation externality described is severe, RPM must be welfare-enhancing.

The Generalized Service Argument: RPM and Quality Certification

An extension of the special services argument is offered by Marvel and McCafferty (1984), who point out that one of the "services" offered by a retail store is *the signal of a product's quality that is provided by the retail store's decision to stock the product*. Like tangible services, this quality certification may be subject to free-riding. The argument as summarized by Marvel and McCafferty (p. 347) is as follows:

> In place of these special services, we propose a model of retailing in which a retailer serves as the consumer's agent in ascertaining the quality or stylishness of commodities. Our argument does not require that dealers provide tangible services, but rests instead on the mere willingness of dealers to stock the product in question. So long as consumers regard some dealers as having superior abilities to certify the characteristics of branded products, such certification will be valuable to manufacturers. But the branding of the product means that the retailer's certification is subject to free-riding. That is, free-riding is a problem for manufacturers so long as consumers care where a product is sold but do not care where they purchase their own supplies of the good.

The insight of Marvel and McCafferty is that a retailer may be providing information about a product — at an expense given by the cost of screening — simply by stocking a product. Explicit provision of information is not necessary. Like any information provision, this is subject to free-riding by discount stores who have not sunk the costs necessary to build a reputation as capable screeners of quality, and who can therefore charge a lower price while still covering total average costs.

This explanation is similar to the free-rider argument in the explicit provision of information, notwithstanding Marvel and McCafferty's claim to the contrary (1984, pp. 347–49), but as these authors emphasize, the applicability of their argument is likely more widespread. The argument's premise, that retailers serve to screen products, is persuasive and the application of their hypothesis to the *Lennox* RPM case yields "a close fit."

In all of the explanations for RPM analyzed to this point, we have not considered explicitly the possible institutional responses to a prohibition of RPM. In most of the welfare analyses, for example, we have supposed that the only feasible contracts are the RPM contract and the simple uniform price contract with no vertical restraints. In fact, the prohibition of price restraints leads often to the use of alternative, substitute restraints. (An analysis of the ability of various vertical restraints to substitute for or complement one another is found in Mathewson and Winter, 1984a.) For example, a manufacturer concerned with the adequacy of the promotion of his product by retailers may specify a level of promotion directly in the contract and ensure that this level is met by periodically monitoring the retailers (Mathewson and Winter, 1985).

The presumption in our analysis is that the manufacturer using RPM to achieve a certain goal has chosen the most efficient, least costly means of reaching the goal. Where the manufacturer is forced to use an alternative means (e.g., direct monitoring) the additional costs incurred are social costs as well as private costs. If the goal is in the social interest, there are no welfare benefits to offset the cost of substituting a less efficient contractual means of achieving the goal.

Controlling Opportunistic Behaviour

One means of achieving the optimal level of retail servicing (however interpreted) that was suggested above is through direct contractual specification of the servicing, through periodic monitoring, and through termination of the contracts of those dealers who are found to be defaulting on the contract. The problem with this method as an alternative to RPM is that the act of termination must have some value as a penalty — otherwise dealers have no incentive to honour the contract. If the dealer were indifferent to termination, he would prefer to reduce expenditures by cutting back on servicing.

The penalty value of contract termination must be in the form of the loss of quasi-rents accruing to the dealer under the contract. But in a retail market with completely free entry, including no sunk costs on the part of entrants, no quasi-rents will be earned. The manufacturer must somehow create quasi-rent streams for the retailers if this method of ensuring adequate dealer servicing is to succeed. One way of creating a stream of rents is to restrict entry and, to prevent prices from being bid down to costs by the limited but possibly large number of existing retailers, to impose RPM to protect the retail mark-up. The direct contracting method together with RPM can correct the incentive compatibility in retailers' decisions with quality. Note that the role of RPM here is to protect a rent stream in retailers for the benefit of the manufacturer.

This explanation of RPM is developed by Klein and Murphy (1984) and applied in particular to the *Coors* case. These authors argue persuasively that this case is much better explained by their hypothesis than by the special services model. The special incentive problem in the *Coors* case is the provision by retailers of refrigeration to maintain the beer's quality. (Unlike most bottled beer, Coors is not pasteurized.) The use of RPM to ensure this service does not fit the special services model of RPM. But by creating a retailer rent stream that is forfeited upon contract termination, RPM is part of a contract that assures retailer performance. This explanation has applicability beyond this single case; many distribution and franchising organizations have queues of applicants — evidence of rents accruing to dealers in their contracts with manufacturers. RPM is one means of protecting these rents.

These explanations of why a single manufacturer acting alone might find RPM in its self-interest do not likely constitute an exhaustive list of such theories. But the list is comprehensive enough to establish the generality of an important welfare conclusion: where a single manufacturer finds RPM profitable, for whatever reason, the presumption should be that welfare is increased with RPM. This position is supported consistently by economic analyses of the possible motivations for RPM.

THE RETAILER CARTEL EXPLANATION OF RPM

The two remaining explanations of RPM are cartel theories, which have very different implications for welfare. The first of these — a popular and seemingly straightforward explanation of RPM — is that it is a device to coordinate price-fixing by a retailer cartel. Suppose that a retailer association has successfully blockaded entry into the distribution of a particular product, but cannot perfectly coordinate the prices charged by various members of the association. Without this coordination of prices, the cartel cannot achieve the monopoly retail profits. One retailer cartel explanation for RPM is that the cartel may coerce the upstream manufacturer into imposing RPM on the cartel members. This effectively administers the cartel pricing for the retailers. The retail cartel gains profit at the expense of consumers, who face a higher price, and of the manufacturer, who loses profits from reduced sales.

How realistic is this explanation of RPM? Could it be a very important explanation of the practice, or is the idea of a cartel among dozens or hundreds of retailers completely unrealistic? An answer to this question is critical for optimal public policy in this area, but economists are divided on the issue. Proponents of the efficiency theory of vertical restraints believe that free entry into retail markets guarantees that retailers are disciplined perfectly by potential competition. For example, Marvel and McCafferty (1984, p. 347) write that "there is . . . the question of how retailers engaged in price fixing could expect to retain any monopoly rents generated, given the apparent case of entry," and Easterbrook (1984), as discussed below, dismisses the hypothesis that retail market conditions could support a cartel. On the other hand, some economists regard the retailer cartel explanation as "historically, possibly the most important explanatory hypothesis for resale price maintenance" (Overstreet, 1983, p. 13). A review of the political economy of the U.S. Fair Trade Movement shows that retail trade organizations were a strong interest group in lobbying for fair trade, a fact that contradicts the belief that retailers had no interest in fair trade.

In this section, we attempt to resolve this debate. We consider two distinct hypotheses of how a retailer cartel could coerce an upstream manufacturer into imposing RPM to the cartel's benefit. We argue that the conditions necessary to invoke the first hypothesis, which is a purely *static* explanation, are very strong and that it is this hypothesis that the "efficiency" school has in mind when they dismiss retail cartels as a potential explanation of RPM. The second hypothesis takes explicit account of sunk costs in retailing, and considers the incentives and ability of existing retailers to block or delay the entry of discount stores. Using the retail market for drugs as an illustration, we argue that the second hypothesis cannot be rejected in some historical instances.

THE STATIC RETAILER CARTEL THEORY OF RPM

Suppose that the retailers of a particular product consider collectively demanding an RPM agreement from the manufacturer of the product. This could provide the conditions necessary for a retailer organization to achieve cartel monopoly profits through coercing a single upstream manufacturer into imposing RPM. The following set of conditions is necessary and sufficient:

- barriers to entry into the retail sector;
- monopsony power of a retailer cartel in the wholesale market for the manufacturer's product;
- strong price competition among retailers in the absence of RPM; and
- the impossibility of lump-sum transfers from the manufacturer to the retailers.

To consider first the sufficiency of the conditions, suppose that all four conditions are satisfied. There is a particular retail price P^*, which maximizes the combined profits of the retailer cartel and the manufacturer; this is the price that would be set by a vertically integrated manufacturer. The control over the retail price is indirectly in the hands of the manufacturer under the four conditions listed; by varying the wholesale price, the manufacturer can elicit various retail prices. If the manufacturer set the particular wholesale price that elicited P^*, then the maximum combined profits would be realized. Because of the condition of retailer price competition, however, this retail price would not greatly exceed the retailer average cost — that is, the retailer share of the profits would be small and almost all profits would accrue to the manufacturer.

Because by the second condition the retailer cartel has monopsony power in the bilateral monopoly in the wholesale market, it could bargain with the manufacturer for a larger share of the total profits. The cartel's share of these profits cannot be transferred to it from the manufacturer through lump-sum payments, by the fourth condition, and the transfer must therefore take the form of a lower wholesale price. But *lowering the wholesale price would also cause the retail price to drop*, below the maximizing value P^* unless RPM were imposed by the manufacturer. Thus there is a role for RPM — to allow the wholesale price to serve as a vehicle for allocating rents in the bargaining between the manufacturer and the retailers. This proves that, under these conditions, a retail cartel could profitably demand an RPM agreement with a manufacturer.

The necessity of each condition is clear from the above discussion. Entry barriers are, of course, necessary for any retailer economic profits. If retailers had no monopsony power — for example, if the retailer association did not bargain as a unit with the manufacturer — the manufacturer could collect all the rents once P^* was established. If necessary, a fixed franchise fee could be charged to collect any rents left at the retail

level when P^* and the corresponding wholesale price were set. If the third condition of price competition among retailers were violated, then the wholesale price that elicited P^* would be very near the manufacturer's cost of production. (This is because the elasticity of demand faced by each retailer, who marks up the retail price from the wholesale price, would be near that faced by a vertically integrated firm, who would mark up from the marginal cost of production.) The retail sector would receive more than its share of the rents at the uniform price and would, therefore, be induced to pay positive franchise fees. A reduction in the wholesale price and the use of RPM would not be necessary. Finally, if the manufacturer could transfer rents to the retailers through lump-sum payments, there would be no need to lower the wholesale price below the level eliciting P^* to transfer rents.

How realistic are these necessary conditions? The absence of lump-sum transfers is realistic — any rents allocated in equilibrium to various members of a retailer cartel would presumably be allocated in proportion to retailers' sales. Unless all retailers are of identical size, the transfers must therefore be variable with size — that is, they cannot be lump-sum. Any variable transfer is equivalent to a reduction in wholesale price and would therefore have the same effect on the retailer's incentives in setting retail prices.

The power of retailers to effect barriers to entry and to enter into collusion in extracting rents from a manufacturer is less realistic; entry into a downstream distribution sector is typically much easier than entry into the manufacturing sector. This means that the bargaining power in wholesale markets is generally with the manufacturer. In typical RPM cases, the number of retailers is very large, the retailers are dispersed geographically, and the barriers to entry are quite low.

These observations have led many analysts to conclude that a retailer cartel is a very unlikely source of RPM. Easterbrook (1984, p. 9), for example, states the following:

> The argument that restricted dealing is a way of enforcing a dealers' cartel conceals substantial problems. First, the industry must be one in which the dealers can form a cartel. But when will this be? Most retail markets have free entry, and retailing is about as close to an atomistic market as you get. There is a drugstore on every other corner. There are so many retailers (and potential retailers) of toothpaste and other consumer goods that the firms could not form or sustain a cartel with or without the aid of manufacturers. . . . The dealers' cartel explanation won't amount to much unless there are (1) few dealers; (2) few manufacturers; (3) homogeneous products; and (4) easy policing [of cheaters on the cartel]. If we see many dealers and many manufacturers we can exclude the cartel possibility.

Easterbrook's argument seems, at the surface, a very sensible statement of standard necessary conditions for a cartel. But if the argument is correct, then the history of the fair trade movement in the United States

presents a puzzle. While the fair trade movement did originate with manufacturers, retailers, through trade associations, were the major proponents of the movement that led to fair trade laws in the 1920s and 1930s (see Overstreet, 1983, p. 13, and the studies cited there). The national and regional associations of retail druggists were especially strong members of the fair trade lobby, which advocated resale price maintenance and resulted in the Miller-Tydings and McGuire Acts mentioned above.

One example of the apparent coercion of a manufacturer by retailers into imposing RPM is discussed in the 1945 Federal Trade Commission report on resale price maintenance (FTC 1945, p. 43, quoted in Overstreet, 1983, p. 145):

> During . . . 1935, the Pepsodent Co., upon advice of counsel, withdrew its products from resale price maintenance in California. As a result of this action, the organized retail druggists of the State waged such an aggressive fight against the company that it again placed its products under resale price maintenance contracts in that State. The methods used by the California druggists were described by the executive secretary of the Northern California Retail Druggists Association, at the thirty-seventh annual convention of the National Association of Retail Druggists, held in Cincinnati, in September 1935, as follows:
>
> "Mr. Chairman, fellow druggists, the Pepsodent Co. was operating in the State of California under the California Fair Trade Act. In all the time that they were operating under the Fair Trade Act they made no attempt to enforce their contract and like a bolt of lightning from the blue sky, they informed us that the California fair trade contract was cancelled. . . . We passed a resolution at our meeting and we published that resolution in our journal, and we sent that resolution to every member in California in which we urged and advised them to discontinue the sale of any product that had cancelled their fair-trade contract. . . . And to my great delight and the great delight of our executive committee all the druggists in California refused to sell Pepsodent toothpaste or Pepsodent products. . . . I want you to really understand how the sales of Pepsodent products in all of California dropped off."
>
> After reinstating RPM the Pepsodent Co. donated $25,000 to the National Association of Retail Druggists to be used in behalf of resale price maintenance legislation. The Pepsodent Co. gave wide publicity to this donation. Following this gesture on the part of the Pepsodent Co., several other manufacturers of drugs and pharmaceuticals voluntarily contributed to the fund while still others were solicited for donations to further the enactment of resale price maintenance laws.

While the writer of the speech quoted above was in a position of some incentive to exaggerate, it appears that Pepsodent was coerced into imposing RPM.

The Retailer Cartel Theory of RPM, with Sunk Costs

If the retail drugstore market is competitive, as it seems to be, then

druggists should not have been earning any rents. Why, then, were druggists associations apparently principal supporters of the fair trade lobby? Is Easterbrook's analysis wrong or did the retail druggists not really benefit from RPM at the expense of manufacturers?

The answer is that the static theory ignores sunk costs. A political interest group may form for the protection of quasi-rents, even in the absence of long-run rents. In establishing a drugstore, an entrant into the retail market incurs sunk costs in investing in knowledge of the market and operations, in obtaining store-specific physical capital, and especially in building a reputation for price and quality. In addition, some states such as California have required every drugstore to have a qualified pharmacist. In a competitive equilibrium, retailers that incur sunk costs in entering a market by investing in specific assets will earn quasi-rents that provide a normal rate of return on the cost of the assets. Retailers typically earn no economic (excess) profit, but do have a stream of quasi-rents to protect.

With changes in technology that made possible an increase in national advertising through newspapers and radio, the sales of drugstore products became relatively more dependent upon manufacturers' reputations than upon individual retailers' reputations in sorting and offering products of high quality. This and the improvement in transportation meant that discount stores offering low prices and selling large volumes started to be viable in the 1920s. The effect of the entry of discounters was to decrease the quasi-rents flowing to traditional outlets — i.e., the value of market-specific assets owned by traditional retailers. Fair trade laws were to an extent a means of delaying the entry of discounters, to the benefit of existing retailers.

In short, there are two distinct retailer cartel explanations of RPM. The static theory that Easterbrook has in mind is that a retailer cartel may block entry and coerce the manufacturer into maintaining, through RPM, a retail mark-up greater than the free-entry level. We agree that this is an unlikely explanation. The more realistic theory is that in a retail market in which sunk costs are incurred in "traditional" (high price, high density) marketing, retailers may have coerced manufacturers into imposing RPM as a means of delaying the entry of discounters, so as to protect their flow of quasi-rents.

In contrast to the first theory, the second explanation does not require the presence of entry barriers (beyond the investment in specific assets). The free-entry price generates enough quasi-rents to compensate for investment in specific assets, and it is these quasi-rents that the cartel seeks to protect.

What conditions are required for this second hypothesis to hold? The necessary and sufficient condition for the second explanation, given the existence of specific assets and the threat of entry, is the ability of retailers to establish and coordinate a buyers' cartel in the wholesale

market. To effect an RPM agreement, the Retail Druggists Association of Northern California had to (a) have enough monopsony power that a manufacturer would succumb to their request for RPM rather than terminate its sales through them and sell through discounters instead; and (b) have some protection against cheating by cartel members, in which either a retailer would announce a policy of accepting products from any manufacturers who did not require RPM, or a retailer would continue to sell the goods of a manufacturer whose products were dropped by the cartel following the termination of the manufacturer's RPM policy.

Condition (a) was met in the early years of the growth of discount drugstores in Northern California since there were so few discounters established. (And it would not pay a single manufacturer of any of the dozens of products sold in drugstores to announce a no-RPM policy in the hope of inducing the entry of discounters.) But once the number of discounters grew to a significant proportion of the market, an association of traditional retailers could not hope to exercise the "exclusive dealing" type of constraint on manufacturers to prevent them from selling to discounters. RPM cannot be used to forestall the entry of discounters indefinitely.

Condition (b) is more subtle. One's normal reaction is that a cartel of hundreds or thousands of geographically dispersed and differentiated stores could not possibly coordinate themselves successfully. But consider the first of the two types of cheating that we have hypothesized. If a *single* retail store announced that it would accept any manufacturer's product, then — assuming that the cartel is stable against the second type of cheating — it would not be in the best interests of any manufacturer to terminate its RPM policy and sell at the renegade outlet. While doing so might result in an increase in sales in the specific town or area where the discounter is located, it would also result in the loss of sales elsewhere as members of the cartel carried out their threat to terminate any non-fair-traded product.

Now consider the second type of cheating. Is the cartel's threat to terminate credible, or will individual retailers ignore the association's request to drop the manufacturer's product? The answer depends on the benefits from cheating on the cartel relative to the benefits from cartel stability. The benefit to an individual retailer from cheating — in refusing to drop Pepsodent, for example — is in the additional consumers that it would attract by carrying the extra product at a low price in comparison to other retailers. But this benefit is relatively small. Pepsodent is only one of many products carried by the store, and the number of consumers attracted would be very small. To express this point differently, the number of products is chosen optimally by the retailer with the objective of maximizing profits. By envelope-theorem logic, therefore, the net marginal cost of dropping one product is close to zero.

The benefit of cartel stability recognized by individual stores, on the other hand, may be substantial. The demonstration effect of successful collective action against the single manufacturer would be to deter other manufacturers from dropping RPM. Thus, in the case of many products, cartel benefits may be high. Without overstating the point, the specific characteristics of the market transactions may have allowed a retailer monopsony cartel among Northern California drugstores to remain for some time sufficiently stable to benefit from resale price maintenance by delaying the entry of discount drugstore chains.

The implication of the retailer cartel explanation of RPM is lower welfare (total profits plus consumers' surplus) relative to a market without RPM, and a transfer from consumers and from the manufacturer to the retailers. The unwilling compliance by a manufacturer to RPM is a necessary signal of a retailer cartel. Support by manufacturers for fair trade laws in the United States, therefore, is strong evidence that the retailer cartel explanation does not dominate the explanation of RPM as socially efficient in most cases. FTC studies during the most active period of fair trade in the United States found that support for the practice was higher among manufacturers than among retailers (see the discussion in Marvel and McCafferty, 1984, p. 346).

The Manufacturer Cartel Explanation of RPM

RPM has been explained as a device to coordinate the pricing of a cartel at the manufacturers' level. For a manufacturers' cartel, the standard collusive practice would be the coordination of wholesale prices. But where wholesale contracts are complex or where cheating at the wholesale level is difficult to detect, the manufacturers' cartel may coordinate retail prices.

Contrary to common argument, the desire to fix retail prices is not a sufficient condition for a manufacturers' cartel to profit from RPM. With a competitive retail market and stable retail cost conditions, manufacturers could assume agreed-upon retail prices by fixing their wholesale prices appropriately. Vertical price floors would not be necessary. However, in reality, fixed wholesale prices do not necessarily result in fixed retail prices. Variation in the costs of other retail inputs might cause retail prices to vary. In this case, cartel stability would suffer because cartel members would have difficulty distinguishing changes in retail prices that are caused by variation in retail costs from those changes that would flow from cheating on the cartel. RPM enhances cartel stability here by eliminating any retail price variation (albeit at a cost to the cartel) and communicating easily what retail prices should be.

One study that arrives at the manufacturers' cartel explanation for RPM cases is Telser (1980, pp. 99–105). Telser argued that General Electric and Westinghouse used RPM to aid in their cartel-pricing. And, in a recent Ph.D. thesis which Overstreet (1983, p. 126) describes as

"perhaps the most vigorous and complete empirical evaluation of an application of RPM," McLaughlin (1979) found evidence that the Bakers of Washington Association was a cartel in a retail bakery market. McLaughlin found that when RPM was disallowed in the *Bakers of Washington* case, prices fell but quantity was not adversely affected. This is consistent with the cartel explanation (and with a very inelastic demand). But it is not consistent with the efficiency explanation of RPM; the efficiency hypothesis would predict that if the use of RPM to enhance nonprice demand determinants is prohibited, quantity will generally fall.

The mere existence of a manufacturers' cartel, or the use of RPM by manufacturers of close substitute products, does not imply that the price floor is necessarily coordinating the cartel. Any of the following explanations is consistent with the use of RPM by manufacturers of close substitute products.

- RPM may be being used to coordinate cartel pricing.
- A cartel acting as a multi-plant monopolist may be using vertical price restrictions for any of the efficiency reasons that we have discussed.
- Or competing manufacturers may each be forced to use restraints to achieve the most efficient distribution system.

In the second and third cases, appropriate public policy towards vertical price restraints must follow from the efficiency, rather than the cartel explanation for the practices. The demonstration, however, that a manufacturers' cartel is using RPM as a facilitating device means that welfare would be improved with the prohibition of RPM by the cartel.

Policy Implications

What do the positive explanations for the use of RPM outlined above imply for the appropriate policy towards RPM? The role of RPM in the first set of explanations — its efficiency role — is to implement the mix of price and nonprice demand determinants that maximizes the manufacturer's profit. The welfare impact of RPM in a number of the possible efficiency uses was considered in the section on vertical price ceilings. We find that social surplus generally rises with RPM. The desire of the manufacturer to trade off higher prices for increased nonprice competition generally signals the social desirability of the same trade-off. (Our analysis goes beyond the usual discussion of RPM, which assures a priori that a privately efficient RPM contract for a single manufacturer is in the social interest.) We conclude that where RPM is invoked by a manufacturer acting alone rather than as a member of a cartel, the restraint should be per se legal.

We emphasize that it should not be necessary for defendants in RPM cases to argue for, or for courts to determine, the exact purpose of RPM in this situation (i.e., whether the restraint serves to increase the number

of outlets, the quality of retailer service, etc.). Legality of a particular use of RPM should require only the absence of a cartel.

The role of vertical price restrictions in enhancing nonprice competition has led many economists and lawyers in the United States to urge that RPM be granted the same rule-of-reason status as territorial protection, which can serve the same role. (See the discussion of vertical territorial protection in the section on territorial and customer restrictions later in this report.) Since the *Sylvania* decision in the United States, RPM has retained its per se illegality while territorial exclusivity is now subject to a rule of reason. This asymmetry in the U.S. law has been soundly criticized since the *Sylvania* decision. As Posner (1981) argues, territorial exclusivity restrains both price and nonprice competition among retailers, while RPM restrains only price competition — it is absurd that the weaker restraint should be per se illegal. We have shown elsewhere (Mathewson and Winter, 1984b) that RPM and territorial exclusivity can have identical, socially beneficial effects.

In its amicus brief in the *Monsanto* case, the U.S. Department of Justice criticized the asymmetry in law between price and nonprice restrictions, and the per se prohibition of RPM in particular.

> There is no sound basis for assuming, as courts have since Dr. Miles Medical Co. v. John D. Park & Sons Co., 220 U.S. 373 (1911), that resale price maintenance is so invariably anticompetitive as to justify *per se* condemnation. In many cases, resale price maintenance may have the same effect as the non-price measures Sylvania removed from the category of per se offenses: they may be highly procompetitive and enhance consumer welfare by stimulating interbrand rivalry. Resale price maintenance may be anticompetitive in certain contexts; but abandonment of the per se standard would not require courts, in order to identify those contexts, to engage in the protracted proceedings that the rule of reason is sometimes thought to entail. There are readily ascertainable objective criteria for determining whether, in a particular market, resale price maintenance is likely to have adverse effects. In cases where these criteria are not satisfied there is justification neither for extended factual inquiry nor for automatic condemnation; and in cases where adverse effects may exist, liability will still be imposed. But the overbroad rule that prohibits all resale price maintenance, without regard to its actual impact in the marketplace, is unwarranted; it disserves consumers by precluding beneficial practices along with those that are pernicious. (U.S. Department of Justice, 1982, p. 6)

The retailer cartel explanation of RPM has negative welfare implications. While we argue that this explanation of RPM has been important historically, it is unlikely that retailer associations still have sufficient monopsony power to bring about RPM; discount stores are now well established in retail markets and would attract manufacturers producing close substitutes to any fair-traded goods. (Discount houses are becoming established as a political interest group as well in the United States, funding a

lobby to maintain the RPM laws.) Even in markets such as the retail drug market, where retailer cartels were once influential in establishing RPM, the welfare effects are not always clear. In Britain, for example, the pharmaceutical market is one of two markets for which antitrust authorities have decided (at least ostensibly) that RPM is in the public interest, on the grounds of product availability. In our case discussion below, we illustrate how the retailer cartel may be ruled out in specific instances, by its implication that the manufacturer is worse off under RPM.

In the situation of many manufacturers, the efficiency explanation and its welfare implications continue to hold when the practice is used by manufacturers acting noncooperatively, or by a cartel that is coordinated perfectly by means other than the use of RPM. When RPM is clearly just a means of stabilizing the retail prices of members of a manufacturer's cartel, it should be dissolved. The observable conditions under which one would expect to see such a cartel are high concentration, barriers to entry into manufacturing, and homogeneous products with RPM being applied to maintain a common price for all brands in the market. The use of RPM by many manufacturers is thus consistent with a welfare-enhancing or welfare-decreasing role of the practice. The critical question in producing evidence is whether a successful manufacturer cartel exists and, if so, whether RPM is necessary to coordinate cartel pricing.

In sum, we conclude that the efficient regulation of RPM is to prohibit a practice only when it can be shown that the practice is a consequence of a retailer cartel (in which case the manufacturer would prefer to be prohibited from RPM) or of a manufacturer cartel. The conditions required for each of these cases are given above.

Canadian Cases on RPM

From the list of the Canadian RPM cases under section 38 of the Canadian Competition Act (see Appendix table) a number of observations can be made preliminary to case analysis. Information on vertical pricing practices of those firms competing with the firm charged with RPM is not available but would be necessary to rule out with certainty in each case the manufacturer cartel explanation of RPM. Nonetheless, the vast majority of the 71 cases appear to involve a single manufacturer imposing RPM alone rather than as a member of a cartel. The necessary conditions for a production cartel — a small number of manufacturers, identical products and significant entry barriers — can be rejected for the vast majority of the markets involved in these cases. These conditions cannot be rejected for all cases, however (see the *Large Lamps* case discussion below).

The use of RPM in the majority of cases must be the result either of a manufacturer acting in its self-interest, or of the unwilling compliance of a manufacturer in an RPM agreement with a retailer cartel. A conclusion

on the relative importance of these two explanations would require detailed analysis beyond the scope of this study, but for most of the markets involved it does not appear that the hypothesis of a retailer cartel is tenable.

A detailed analysis of the Canadian cases on RPM is presented below. Our two purposes in this analysis are to illustrate how the policy rule supported by our theoretical analysis can be implemented in actual cases and to assess the efficiency of existing Canadian law on RPM as it is implemented in specific legal decisions.

MATSUSHITA ELECTRIC (1981)

Matsushita is a subsidiary of a Japanese company that produces Panasonic stereo components, which Matsushita of Canada distributes in Canada. In 1975, Panasonic introduced through Matsushita a new line of stereo components called Panasonic High Technics. Matsushita was charged in York County Court with imposing RPM on this new product, in violation of section 38 of the Combines Investigation Act.

Matsushita was convicted on two counts of violating section 38 in its dealings with Sherway Appliances, an independent Toronto retailer that carried the new product. The two counts were (a) trying to influence upwards the price at which Sherway Appliances sold High Technics between 1975 and 1978 (in violation of paragraph 38(1)(a)); and (b) refusing to supply Sherway after 1978 because of Sherway's low pricing policy (in violation of paragraph 38(1)(b)).

The pressure exerted on Sherway by Matsushita included both the tightening of credit (which resulted in Sherway's resorting to a more expensive source of credit) and delays in the filling of Sherway's orders on components. The Matsushita representative argued in court that these tactics were not intentionally used to pressure Sherway, but the court did not find this argument credible. This pressure on Sherway was brought to bear after Bay-Bloor Radio, a competing retailer, threatened to sell Technics at a discount from the suggested prices unless "something was done so that other dealers would get their prices up." When the pressure did not work, Sherway was cut off from the distribution of High Technics components.

In the court's view, the issue was whether or not any upward pressure on prices had been exerted. There was no questioning of the possible benefits of RPM in this instance. For our purpose of determining the appropriate public policy in this case, however, we must identify the reason for RPM in this case and infer from this the net welfare impact of RPM. There are three possible general hypotheses to consider: (a) RPM was imposed as part of a scheme to facilitate price coordination by a cartel of stereo producers; (b) the restraint was forced upon Matsushita by a cartel of retailers or by Bay-Bloor Radio, the retailer whose threats

lead Matsushita to impose RPM; or (c) RPM was imposed to prevent a decrease in the demand and hence in the profits of Matsushita, by enhancing some nonprice determinant of demand.

The hypothesis of a cartel among stereo manufacturers can be rejected immediately. The necessary conditions for the hypothesis, in particular the requirements that all products be nearly identical and that RPM be imposed on all brands, were not met. The product differentiation in the stereo components market is too extreme to allow the coordination of prices across the large number of brands, and the possibility of cartel pricing in stereo components is simply too remote to consider seriously.

The retailer cartel/retailer monopsony power hypothesis can be rejected even before a consideration of the necessary conditions for a retailer cartel. Bay-Bloor Radio, the competitor of Sherway Appliances whose complaints led Matsushita to invoke RPM, threatened to discount Technics if price-cutting of Technics was not halted. This implies clearly that the price floors were in Matsushita's interests. But if a retailer cartel were the source of vertical price-fixing, then Matsushita would benefit from the threatened price cut. The retailer monopsony explanation must be ruled out.

Why then did Matsushita fair-trade Technics? There is only one explanation consistent with the evidence. Discounting at the retail level would have harmed both the distribution of the product and the quality of service offered by the retailers. The stereo market is a very clear candidate for the type of horizontal free-riding that we and others have shown can lead to RPM. Consumers shopping at nondiscount outlets can listen to the components in a controlled (quiet, relaxed) environment, perhaps even a listening room. They can get advice from well-informed sales staff about the relatively complicated products. But if the retail outlet considering offering these services would lose customers to a discount outlet, it might well be dissuaded from carrying the product at all. The expenditure on informing customers would be mostly for the benefit of other outlets.

Free-riding in this market can occur not only on the service provided by the prestige outlet, but also on the informative signal that the prestige outlet provides simply by carrying the product (Marvel and McCafferty, 1984). If Bay-Bloor and similar retailers carried Technics at high prices, most consumers would simply buy from the discount stores. But if consumers bought mainly at discount stores, some prestige dealers would be dissuaded from carrying the product at all. Technics would be seen by consumers — correctly — as a product offered by discount stores, and from this, consumers would infer that the quality of Technics was low. (This would be a rational inference since the average quality of products sold at discount outlets is lower than that of products sold at prestige dealers.) The demand for Technics would suffer as a result.

In the retail market where discounting is allowed, the manufacturer may find it difficult to sell to any "prestige" dealers. If consumers can buy only at discount stores without much service or information, they might buy less in spite of the lower price. In fact, the only reason a manufacturer acting alone would impose RPM is because consumers *would* buy less at discount outlets than at "full-service" nondiscount stores.

The evidence in the case and the explanations offered by Matsushita in its defence are consistent with the "services" explanation of RPM. The Technics product had been introduced into Canada in 1975, and during the 1976–78 period at issue Matsushita was establishing for it both distribution to consumers and a brand name. For new products, the nonprice determinants of demand such as availability and point-of-sale information are most important; often one sees price floors established in the early part of a product's life cycle because of this.

The distribution of Technics was through a few selected prestige dealers, not through discounters. Any attempt to market through both would be met with the horizontal free-riding problems discussed above. The prestige, high-service outlet sector could collapse, or the costs of obtaining and maintaining such outlets could be prohibitive if discounters were allowed to sell the product as well. The Matsushita representative said in the trial:

> It has been proven, not only to us but to other manufacturers as well, that both sides of the fence [prestige outlets and discounters] cannot be worked at the same time.

In selecting dealers, the representative of Matsushita considered

> [the dealer's] image to the consumer and image within the trade (especially other dealers), his methods of merchandising (price selling or product selling) and his willingness to cooperate and work well with suppliers. . . .

Matsushita's arguments in defense of its RPM practice were that it "wanted to deal with persons who were going to stay in business over a long time and that these persons or businesses do not include discounters or trans-shippers," and "the discount-oriented operation did not create the proper image." Matsushita organized its distribution system to sell the most of its product. If the discount route had been most profitable it would have been chosen, but in Matsushita's judgment the maximum sales of High Technics could be achieved with a ratio of product-selling (advertising, sales staff, information) to price-selling higher than that provided by discount outlets. outlets.The only role of RPM in Matsushita's distribution of its product was to achieve a high level of nonprice determinants of demand, such as informed sales staff, "image," advertising and availability. This was the strategy that maximized sales. Otherwise Matsushita would not have used RPM.

What does this conclusion imply for the determination of the appropriate public policy in this case? One view might be that price competition should be encouraged at the cost of less "image" advertising — that low prices are the ultimate goal of a policy to improve the lot of consumers. But this view is inconsistent with the role that has been established for government in the marketplace in Canada. Government has not established a role of regulating the mix of price to nonprice sales expenditure in the economy. Firms are free to choose whether to lower price or to increase advertising and sales staff in order to sell more goods. The same policy should apply here. The government would not intervene to regulate the distribution system of a vertically integrated firm in favour of lower prices and less investment in nonprice sales expenditure. But by prohibiting RPM in a case like *Matsushita Electric*, it is doing exactly that for a non-integrated company. Furthermore, as Matsushita chose not to integrate vertically, the independent dealer arrangement must be efficient; prohibition of RPM renders the arrangement less so.

More fundamentally, the principle of consumer sovereignty implies that the mix of price reductions to advertising, even "image" advertising, that maximizes demand cannot be altered consistently by simple government intervention to improve welfare. In the specific context of vertical restraints, we have shown that prohibiting restraints to affect this mix through government intervention will generally reduce welfare.

In the *Matsushita* case, RPM eased the entry into the market of a new product by helping to establish a wide distribution of a new product in outlets that would not carry the product without the price floor protection. The prohibition of RPM for cases like this therefore acts as a barrier to entry.

H.D. LEE OF CANADA (1980) (*REGINA V. H.D. LEE OF CANADA* 57 C.P.R. 186)

H.D. Lee entered the expanding Canadian market for denim clothing (jeans) in the middle of 1970. Lee maintained retail price floors on its jeans during the early 1970s, when the distribution system for its products was being established. It was convicted in 1980 in the district court of Montreal on four counts of inducing resale price floors and refusing to deal on the basis of low prices, and was fined $65,000. The most significant charge, discussed here, involved Lee's dealings with Army and Navy stores (A&N).

Lee's wholesale price for jeans in 1970 was $6.00, and the company maintained a retail price floor at $10.95. A&N violated this price floor by selling at prices between $6.99 and $8.99. In the court's judgment there was

> . . . no doubt that H.D. Lee of Canada Ltd. refused to sell to Army and Navy for the reason that the latter had resold or offered to resell the articles below the price specified by Lee of Canada.

RPM, according to the court, was "clearly the cornerstone of the company's merchandising plan of orderly marketing." One of the pieces of evidence introduced in this regard was a memo from the national sales manager of Lee to its sales staff:

> We have . . . many requests from reputable merchants whose credit will pass inspection, who we have steadfastly refused to sell. There are many good reasons in marketing theory for this but we can summarize by noting that most of these accounts are either much too close to some of our good loyal established accounts and/or have a reputation in the trade for discount and "loss leader" selling. . . .
>
> One of the many reasons our merchandise is held in such high esteem is that we do not sell it to every Tom, Dick and Harry and we do strive mightily to get our established accounts to observe our suggested retail prices.

In its defence, Lee tried to invoke the defences provided in section 38 of the Combines Investigation Act (subsection 38(5), now subsection 38(9)). Lee argued that it had cause to believe that A&N: (a) used articles as loss leaders, i.e., for the "purpose" of advertising, not profiting on the articles; (b) used them to attract customers to the store to sell them other goods, not to profit on the articles; and (c) did not provide the level of servicing that purchasers of such articles might reasonably expect.

The court rejected each of these arguments. Referring to *Phillips Electronics* (1966), the court cited that a "loss leader" was defined as a product sold below wholesale price. Since A&N's price was above the wholesale price of $6.00, the loss-leader defence, which was allowed under paragraph 38(5)(a) of the Combines Investigation Act, was ruled to have no application. The "bait and switch" defence paragraph 38(5)(b) was ruled inapplicable because it usually involves insufficient inventory, of which there was no evidence in this case.

On the issue of adequate servicing, Lee listed the qualities that a retailer of Lee's jeans should have: a special location in the store, a special display with mannequins, individual hangers for the clothing, etc. A&N simply stacked the jeans on a counter where the customer had to select a size.

The court's response to this line of defence was twofold. First, in a distinctly non-economic argument, the court decided that the intent of the law was to allow post-sales service but not pre-sales service as a defence under 5(d), section 38. This was decided on the basis of the fact that the French language version of the act uses the words "quality of maintenance" rather than "level of service"! The court decided further that:

> However desirable from the supplier's standpoint is the amount of servicing and promotion a retailer will give to his product, the test of Subsection 5(d) is not the level of servicing which the supplier or manufacturer might expect but rather the level of servicing which the purchaser of such product might

> expect. There is no evidence that Lee was receiving complaints from retail customers about Army and Navy nor is there reference to inadequate servicing by Army and Navy. I have come to the conclusion that Subsection 5(d) has no applicability in the present case.

For our purposes of understanding the efficient policy on RPM and the efficiency of the actual decision in this case, we must identify Lee's incentives for invoking RPM. The "intent of the law" is irrelevant to the issue of determining the economically efficient decision in this case.

Lee was not part of a manufacturers' cartel in the jeans industry in the 1970s. While several manufacturers such as Lee and especially Levi-Strauss benefited from their incumbency in the jeans market when it exploded in the early 1970s, entry by other manufacturers was relatively swift. In addition, the difficulty of being in collusion on prices in a rapidly expanding, differentiated-products market means that the hypothesis of a manufacturing cartel can be rejected.

Similarly, Lee was not coerced into imposing RPM by the major Vancouver department stores, who were the main beneficiaries among retailers of Lee's action against Army and Navy. The coordination among a group of department stores large enough to have the monopsony power to coerce Lee into imposing RPM, by threatening credibly to abandon the product if Lee did not impose RPM, is not a realistic possibility.

As in Matsushita, this leaves only one possibility: that Lee invoked RPM to increase the sales of its jeans. How could RPM serve this role in the jeans market? Both the special-services hypothesis (Telser, 1960) and the generalized services hypothesis (Marvel and McCafferty, 1984) are supported by casual empiricism.

For the special-services argument, the critical feature about jeans is that they are repurchased quite frequently by any given consumer. A consumer needs advice on fit and an easily accessible fitting room provided by a department store only the first time he or she buys a given brand. In all subsequent purchases the consumer knows exactly what to expect of a "Lee's jean, bootleg style, size 34–36," and can simply buy the jeans at a discount store, knowing the product is identical to the jeans bought initially at the department store. Similarly, the prominent display in a department store may attract the customer to the brand (at least it may make the consumer aware that the brand is carried so that he or she might try it for fit), but the department store benefits only to the extent of the retail mark-up on the first pair of jeans that the customer buys. On both services (such as fitting) and advertising (such as in-store displays provided by department stores), discount stores free-ride; the consequence of this free-riding is that department stores do not capture the full benefits of their expenditures on these services. Discount stores provide too little service and display compared to the privately efficient level.

Lee imposed RPM and encouraged stores to provide adequate displays and servicing to prevent this free-riding.

On the issue of A&N's quality of service, the court's statement was that the test of subsection 5(d) — now paragraph 38(9)(d) — which allows for a defense of RPM on the grounds of inadequate servicing or promotion, is found in "the level of servicing which the purchaser might expect. There is no evidence that Lee was receiving complaints from retail customers about Army and Navy." In fact, the absence of customer complaints signals only the rationality of customer expectations, and is irrelevant to the issue of adequacy of service. Army and Navy was and is well known as a store that offers low prices for low service. There is no reason to expect customers to be disappointed.

The court said in addition that "the test of Subsection 5(d) is not the level of service that the manufacturer might expect." But the manufacturer in this case is the best judge of what constitutes a (privately) efficient distribution system. We have argued earlier that social efficiency, which should be the goal of the anticombines law, is generally consistent with private efficiency in the choice of servicing and product promotion.

The Marvel and McCafferty hypothesis is that RPM prevents discount houses from free-riding on the informational signal about the quality of the product provided by prestige outlets (major department stores in this case) in their decision to stock the product. As the memo from the national sales manager (quoted above) states, Lee's product is "held in such high esteem" because Lee does not "sell it to every Tom, Dick and Harry." If Lee did, it would be forced into the market for discount clothing (work jeans?) which would be perceived as a relatively low-quality product. A law that prevents RPM in this case is a barrier to entry into the fashion (prestige) jeans market.

In sum, RPM allowed Lee to enter the fashion jeans market by permitting it to establish quickly and to protect a system of product distribution through retailers with high reputations for product quality screening and who offered adequate levels of in-store service and promotion. The prohibition of RPM by entrants into a consumer good market will lower the price of the entrant's product initially but will harm long-run price and product competition in the market.

LEVI-STRAUSS (1979)
(*REGINA V. LEVI STRAUSS OF CANADA INC.* 45 C.P.R. 2.5)

The facts and economic context of this case are nearly identical to the *Lee* case. Between 1972 and 1975, Levi-Strauss expanded its sales of jeans in Canada from $2.3 million to $65 million (*R. v. Levi-Strauss of Canada*, Judgment, p. 2) partly through the use of RPM. Levi-Strauss

pleaded guilty to eight counts of RPM in the York County Court on January 12, 1979.

The economic analysis of the incentives for RPM in the retailing of jeans and the relevant policy implications were set out in the discussion of the previous case. It is instructive, however, to consider some statements made by Judge Locke in his judgment on the case, since these are typical of some of the arguments heard against RPM:

> The admitted facts make it clear that the accused between 1972 and 1975 carried out a lucrative business virtually from coast to coast in Canada. With equal clarity the admitted facts reveal that the accused corporation capitalized on a fast breaking market boom on the sale of denim clothing commonly known as "jeans". Its gross annual sales volume grew from $2.3 million in 1972 to $65 million in 1975. The accused taking supreme advantage of a world shortage of denim cloth during this period was able to not only selectively ration its supply to retailers but also was able to bully them into coming to heel and to maintain a sale price to the public. In this manner the natural forces of competition in the market place were thwarted. As a result the Canadian public artificially paid higher prices for clothing. . . . Clearly the principle of sentencing in this case is deterrence to not only this accused but to others as well. Free competition must be respected, and in that way the public will be protected. (*Levi-Strauss*, Judgment, p. 2)

The judge's statements reflect the view that the public interest is best served when a producer sells "at the gate" to all willing buyers, with no restrictions whatsoever on competition in downstream markets. Any vertical restraints on prices constitute a thwarting of "the natural forces of competition." Levi-Strauss, in the judge's view, had enough market power (provided somehow by a worldwide shortage of denim cloth) to impose these restraints to maintain high prices to its own advantage.

The view is that high retail prices are themselves in the manufacturer's interest (perhaps because Levi-Strauss had some monopoly power and high prices are associated with monopoly). But a high retail price, *ceteris paribus*, is against Levi-Strauss' interests because the retail demand is a downward-sloping function of price. It is impossible to make any claims about the welfare impact of RPM until the private benefits of RPM to Levi-Strauss, which would offset the loss due to the higher retail price, have been explained. The observation that the firm used RPM is in itself evidence that the net benefits of RPM were perceived to be positive. The implication of our theoretical analysis and the *Lee* case analysis is that the social net benefits of RPM were most likely positive as well.

ELECTRIC LARGE LAMPS (1976) (*REGINA V. CANADIAN ELECTRIC CO. LTD. ET AL.*, 34 C.C.C. (2D) 489.)

In this case, Canadian General Electric, Westinghouse Canada and Sylvania Canada were convicted of fixing prices in the sale of large

electric lamps. The industry was characterized by high customs duties and limited imports (Green, 1980, p. 107). The presence of only three manufacturing firms highly integrated into the manufacture of complementary electrical equipment suggests the presence of economies of scale and scope that are large relative to the market. Sales plans of each of the firms established identical list prices. These prices were imposed on a complex distribution system involving wholesalers and each company's employees. Price chiselling frequently occurred. This required monitoring across the distribution networks to prevent chiselling on the established price schedules. The claim was that these sales plans were simply cartel-facilitating devices. Even a three-firm cartel is apparently difficult to monitor, because company officials periodically deviated from the prices in their official sales plans, adding instability to the cartel agreement.

The cartel attempted to monitor prices at the retail level through officially posted prices. The products were relatively homogeneous and required no point-of-sale service, nor was there any signal of high quality through brand name retailers. In this case, the setting and maintaining of prices by the manufacturers had no nonprice feature to the restrictions. The source of the monopoly power, however, is found in the combination of the production technology, high tariffs and a limited Canadian market for the products (relative to efficient plant scale for the firms). RPM does not lead to a cartel in this case, but the setting, policing and maintaining of retail prices in the distribution chain without any demand-increasing nonprice element is part of the cartel package. In our view, the rule-of-reason approach to RPM would lead to a conviction in this case.

ROLEX (1978)
(*REGINA V. ROLEX WATCH COMPANY OF CANADA LTD., HENRY BIRKS AND SONS LTD., HENRY BIRKS AND SONS (MONTREAL) LTD., HENRY BIRKS ET FILS (MONTREAL) LTÉE. AND WILKESHIRE INVESTMENTS LTD.*, 50 C.P.R. 222.)

This case was brought against the Rolex Watch Company of Canada Ltd. under paragraph 38(2)(a) (the RPM section) of the Combines Investigation Act. The charge followed attempts by the western sales representative of Rolex Watch to dissuade jewellers in Vancouver and Alberta from discounting Rolex watches over four time intervals. The former Rolex employee who had applied "moral suasion" to the jewellers became a key witness for the Crown in its case. The trial proceeded along purely legal grounds, as RPM is a per se offence in Canada. In the judgment, the RPM counts in the middle time periods were dismissed, but Rolex was found guilty on the RPM counts in the earliest (count 1) and latest (count 4) period and fined $15,000 for each count.

As is characteristic of Canadian RPM cases, no economic evidence was presented in this case. This of course does not mean that economic

issues were irrelevant to the case, but reflects the per se nature of the offence. What are the relevant economic issues here? Rolex produces a "high quality" timepiece; this observation is consistent with both the product's price and its brand image. This product image is created through national advertising and product endorsement, with little point-of-sale information offered by the retailer. That Henry Birks and Sons Ltd. was named in the charge does offer information on the economics of RPM in this case. Birks is an "up-market" jewellery chain, selling higher quality items with corresponding price tags. Pressure on Rolex to force other retailers to discontinue discounting Rolex products came from Birks. The extension of Telser's service argument by Marvel and McCafferty (1984) offers an explanation of RPM consistent with the observed facts.

Marvel and McCafferty argue that manufacturers purchase quality or style certification from reputable dealers. That is, these dealers act as agents for consumers, and the observation that such dealers stock certain items is a signal of the high quality of these items. Dealers themselves incur the (sunk) investment costs of establishing their reputations. This explanation holds when the quality of the product in question is difficult (costly) for consumers to verify, which would seem to be the case for watches. Once these stores stock the product, putting their brand name capital on the line, they will wish to prevent other retailers from free-riding on their reputations. Rolex profit interests are served by having jewellers such as Birks carry their products — this is a signal of product quality. RPM in this case is a restriction to impede the appropriation of quasi-rents by others on the investment in reputation (in this case, Birks' reputation as a "high quality" jeweller). RPM is therefore demand enhancing — that is, demand for Rolex watches is larger with RPM. If this explanation is appropriate for the Rolex case, the question for economic policy is whether RPM privately motivated is also socially efficient.

Could RPM in this case credibly represent a retailer or manufacturer cartel? The answer is no. While Rolex may feel that its products have some unique set of attributes, a casual glance at magazine advertising confirms a large number of substitute products — high-quality, Swiss-movement watches. Aside from the skills necessary to watchmaking, which do not appear to be in short supply, there appear to be no other entry requirements to the business. While the retail market seems to be divided somewhat between "garden-variety" and "up-market" retailers, there are no barriers to entry into this industry and we would expect vigorous competition.

Together with our analysis of the economics of RPM, the relevant economic facts in this case suggest that RPM should be viewed as a competitive tool of Rolex; RPM in this case is an efficiency-enhancing as opposed to a monopolistic device.

SUNBEAM CORPORATION (CANADA) (1967) (*REGINA V. SUNBEAM CORPORATION (CANADA) LIMITED* 1 O.R. 661 (ONT. C.A.))

This case involved the use of products as loss leaders by retailers and the subsequent right of a supplier to refuse to deal with those retailers that were loss-leading the manufacturer's products. Sunbeam established a minimum profitable resale price plan, which contained resale prices that Sunbeam considered desirable. According to Sunbeam, sales at lower prices constituted loss-leadership, and Sunbeam would respond by refusing to continue supplying the retailer. As we discussed earlier, the court argued that there was no evidence of loss-leadership and that the relevant part of the Combines Investigation Act, paragraph 38(9)(a), is applicable only after the product has been loss-leadered, not as an ex ante restriction to prevent anticipated loss-leadership.

Economic analysis played no role in the case. Why would Sunbeam's profit-maximizing interests be served by such restrictions? There are many diverse retailers of electric shavers, electric floor conditioners and electric frying pans. There is no question of a retailer cartel. Furthermore, there are numerous substitute products manufactured by other firms. Sunbeam alone practiced RPM, so there is no issue of a manufacturers cartel.

One possible explanation is again the Telser "service," or Marvel and McCafferty "signal" hypothesis. Sunbeam enjoyed a reputation as a producer of better-quality products. As evidenced by its use of RPM, Sunbeam's marketing plan called for uniform retail prices to underwrite reputation and demonstration investments by "up-market" retailers. The main economic point here is the complete absence of any monopolistic element in the supply of these products and therefore the wisdom of allowing manufacturers, if they want, to practice RPM. If such a practice is sound business policy, perhaps for reasons of information and signalling, the firm will succeed. Otherwise, the market will discipline such firms and survivorship alone will dictate other marketing-advertising-pricing packages.

Theoretical Welfare Analysis of RPM

This section uses a model from Mathewson and Winter (1983a) to provide a welfare analysis of RPM in the presence of informational externalities. We begin by specifying the assumptions of the model. A single, homogeneous product is sold in a retail market by firms that buy at a wholesale price w and then sell to consumers. Entry into the market is free and retailers are independent. Information is the key to the model; consumers require both product and price information.

The sale of the good requires product information, either because consumers must be introduced to the product (being unaware of its existence) or because they are ill-informed of its characteristics and

need "expert" advice before they purchase. To focus on the retailers' role in informing consumers, we assume that retailers disseminate point-of-sale information (PSI) at a cost borne exclusively by them, and that PSI is the only available channel of information. The retail firm's choice of information is discrete: there is a particular demonstration with a fixed cost of $1 that the firm may or may not offer. The costs other than the wholesale price and information cost are assumed constant and, with no loss in generality, are set equal to zero.

Immediately prior to discovering the nature of the specific product, potential consumers of the product are assumed to be shopping for goods in general. Some of these potential consumers randomly encounter an informing outlet. Once aware of the product, the consumer ceases general shopping. Entry of new outlets into the informing retail sector leads to a decrease in the number of consumers informed by any particular existing store. However, the probability that a particular consumer is aware at all increases with the density of informing outlets. The total number of informed consumers, therefore, is an increasing function of the total number of informing retail outlets.

Once consumers discover the nature of the good (product information), they require information on the location of low-price outlets (price information). Following the search literature, we assume that each consumer holds rational expectations on the distribution of prices in the market — i.e., the consumer knows the vector of prices being charged by the retail firms — but does not know the location of those firms charging each price. The consumer does know the price charged by the store that has informed him.

We have in mind a sequential decision process for the consumer who is "captured" for the market by an informing store. (The consumer's general shopping behaviour before entering this decision process is independent of the market in question, and outside our model.) Once informed by a particular outlet, the consumer makes the decision of whether to buy the product. Those consumers who decide to buy the product have three options: (a) to buy from the one informing store whose price is known; (b) to purchase complete information on the location of the lowest-price store; or (c) to search sequentially among stores for a low price, according to some optimal stopping rule. In this paper, price search is greatly simplified if we assume that the technology of search is such that (b) dominates (c) — i.e. if the consumer decides to search, then at some specified price-information cost, the consumer goes directly to the lowest-price store.

Variation in consumer research costs is essential for variation in retail prices. This variation in retail prices together with accompanying informational packages lies at the root of the RPM problem modelled here. The analysis is simplified if we assume that consumers are characterized by two possible search costs for prices — zero search cost or a very high (prohibitive) search cost. In equilibrium, of the consumers informed of

the product's existence, those with zero search costs patronize discount stores while those with high search costs purchase from the informing outlet.

We specify the demand relationship for an average informed consumer as $d(P)$. There are two interpretations of this relationship, each having a different implication for our subsequent welfare analysis, in particular for the question of whether RPM is Pareto-improving. Both interpretations are associated with possibly different search costs for consumers (either zero or prohibitively high). The first interpretation is that all consumers informed of the product's existence buy multiple units of the good and share the same demand function for the good ($d(P)$). The second interpretation is that consumers informed of the good's existence buy at most one unit of the good and have different tastes. In the second interpretation, we assume search costs and tastes are distributed independently; in this case, $d'<0$ reflects the higher proportion of consumers informed of the good's existence who decide to buy the product as the retail price falls successively below their reservation price levels.

The decisions of the firm are two — the level of the retail price to set, and the amount of information to provide. Since product information is vital, a store that does not offer any can attract customers only if it offers a price so much lower than the informing stores' prices that some consumers who have been informed elsewhere are induced to search. Conversely, a firm setting a high price retains only those consumers who are informed of the product's existence or characteristics at this store and who have sufficiently high costs of acquiring information on the location of the lowest price that they do not search.

The variables defined above that appear in the model are denoted as: n, the (endogenous) number of informing stores; M(n), the number of visitors per store (a flow); $\epsilon = \partial \log[nM(n))]/\partial \log n$, the density elasticity of potential demand, satisfying $0<\epsilon<1$; I, the cost in dollars of the demonstration informing consumers; d(P), the average demand of informed consumers; w, the wholesale price of the product; and λ, the proportion of consumers with high search costs.

Unrestrained Equilibrium

An equilibrium in the retail market is defined by the conditions of retailer profit maximization and zero retail profits. In the (unique) equilibrium under our assumptions, informing stores charge the retail monopoly price P_m and retain λ of the potential consumers that they inform, and non-informing stores charge w. The number of informing stores, n, is determined by the following zero-profit condition:

$$\lambda \cdot (m(n) \cdot d(P_m) \cdot (P_m - w)) - I = 0 \qquad (9)$$

The total quantity of the product sold in the market is $n \cdot M(n) \cdot [\lambda d(P_m) + (1-\lambda)d(w)]$. It is sold to retailers by a monopolistic manufacturer, who produces the good at a constant per-unit cost of one dollar and in the absence of vertical price restrictions, selects w to maximize profits defined as:

$$\pi(w) \equiv n \cdot M(n) \cdot [\lambda d(P_m) + (1-\lambda)d(w)] \cdot [w - 1], \quad (10)$$

where P_m and n are functions of w determined, respectively, by the retail monopolistic mark-up over w and by equation (9).

In this equilibrium, decisions by the retailers are affected by two of the externalities identified earlier. The first externality stems from the informational free-riding by the discount stores, Telser's rationale for RPM. The second externality stems from the deviation of wholesale prices from marginal production costs. This wedge transmits rents to the manufacturer in proportion to the quantity demanded in the market that are not considered by retailers in taking any action to increase demand. As a consequence of the second externality, retailers set retail prices too high to maximize joint profits. Both externalities reduce the number of informing retail outlets.

Equilibrium under RPM

RPM may take the form of a price floor or an administered price in this model. In the latter case, the monopolist manufacturer dictates the price that retailers may charge. The majority of actual RPM cases, however, involve the establishment of a price floor as a minimum retail price for the product. If an administered price leaves retailers with a profit-maximizing incentive only to lower (individually) this retail price and not to raise it, then the equilibrium desired by the manufacturer may be achieved by a price floor restraint. It is useful to identify those situations where the optimal price restraint can take the form of a price floor.

A price floor set appropriately between the lowest and highest pre-RPM retail prices will be binding for all retailers in the restrained equilibrium. If a price floor is set sufficiently close to the high retail price of the pre-RPM equilibrium, those stores charging the high price — who retain only a proportion λ of the consumers they inform — would profit by lowering their price to the universally maintained price floor and thereby retaining all the consumers informed by them. At the maintained price, no store would have the incentive to raise its price. More formally, for this to happen, any price floor must be set no lower than the price P^* defined by

$$(P^* - w) \cdot d(P^*) = \lambda \cdot (P_m - w) \cdot d(Pm) \quad (11)$$

Single-price equilibria are achievable with a price floor only at P^* or higher. If the price floor set by the manufacturer is set exactly at P^*, then the profits of the existing informing stores remain unchanged at the pre-RPM equilibrium level of zero as these stores lower their price from P_m to P^*. No new firms enter as informing stores, product information P_m remains at its pre-RPM level, and discount houses disappear. If the floor is set to achieve a manufacturer's optimal price that is above P^*, new firms will enter the informing retail sector and information will increase. Thus, the manufacturer's optimal retail market equilibrium in our model can be achieved with a price floor (as opposed to an administered price) only if the optimal amount of information exceeds that of the pre-RPM equilibrium.

The conditions that retail and wholesale prices maximize retail and wholesale profits and that entry into the retail sector yields zero profits in this sector do not reveal, in general, those circumstances where the implementation of RPM is Pareto-improving. Therefore, we resort to a pseudo-empirical evaluation of RPM. Specifically, RPM is evaluated under the following, iso-elastic functional forms: $d(P) = P^{-\alpha}$; $nM(n) = n^{\epsilon}$ (over the relevant range) where $\alpha > 0$ and (as before) $0 < \epsilon < 1$. Equilibrium values of prices, information, profits, and surplus are calculated as closed-form functions of the three exogenous parameters $(\alpha, \epsilon, \lambda)$.

These calculations reveal that for (λ/ϵ) sufficiently small, other things being equal, the welfare of low search-cost individuals is increased and therefore administered pricing is Pareto-improving. Intuitively, when λ is very small, the free-rider problem in the provision of information is very severe since few high search-cost consumers are available to underwrite the information expenditures by informing retailers. Both the manufacturers and consumers benefit from the elimination of the information free-rider problem. When ϵ is large (close to 1), the number of consumers captured by the additional informing outlets under RPM (or the probability that a particular potential consumer is informed) is large, so that again both the manufacturer and consumers benefit from additional information through RPM.

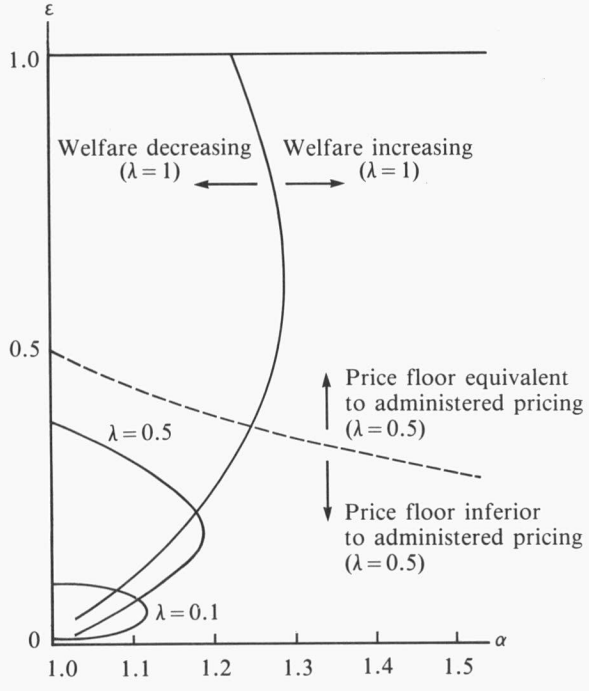
Even when RPM harms low search-cost consumers and therefore is not Pareto-improving, it may increase total surplus, defined as the sum of the manufacturer's profits plus expected consumer surplus (ex ante to the event of becoming informed) accruing to both low search-cost and high search-cost consumers. Numerical calculations of the equilibrium values of prices, information, profits and surplus under the iso-elastic specification demonstrate that whenever the pre-RPM equilibrium involves less than optimal product information from the manufacturer's viewpoint, total surplus increases with administered pricing. An increase in information with administered pricing implies an increase in welfare. Again, this is an intuitive result: The marginal social value of point-of-sale information (PSI) exceeds its marginal private value to the

manufacturer by its positive marginal impact on consumers' surplus. If product information is less than optimal for the manufacturer, it must also be less than socially optimal. The profitable use of RPM to increase product information is therefore welfare-improving.

Administered pricing nevertheless does not necessarily increase the provision of PSI. If λ is very close to 1, ϵ is small and α is very high, the pre-RPM manufacturer suffers much more from the overpricing of the retailers (the double mark-up effect) than from the informational free-rider effect. In this case, the manufacturer's profits are increased more by administering a retail price near w than by using high retail margins to support a large number of informing retailers. Initial conditions may arise where the sacrifice of information by a manufacturer for a lower average (administered) retail price is profitable but not in the social interest because the marginal social value of information continues to exceed its private value.

These welfare results are illustrated in Figure 1-2. This figure partitions the exogenous parameters $(\alpha,\epsilon,\lambda)$ into regions where RPM through administered pricing is welfare-increasing and welfare-decreasing. The

FIGURE 1-2 Partition of Initial Conditions into Sets Where Administered Pricing Is Welfare-Increasing and Welfare-Decreasing



contours in the figure are defined by selecting values (ϵ,α) for each value of λ such that $\hat{W}(\alpha,\epsilon,\lambda) - W(\alpha,\epsilon,\lambda) = 0$. As well, for $\lambda = .5$, the figure also partitions the parameters (ϵ,α) into regions (separated by the dashed line) where product information increases or decreases $[\hat{n}(\alpha,\epsilon,.5) > (<) n(\alpha,\epsilon,.5]$ with administered pricing. The set of exogenous conditions under which this information increases with the vertical restraint is contained in the set under which welfare improves with the price restraint. (This set relationship holds for all values of λ.) Thus in this model, the observation of a price floor (as opposed to a ceiling) is evidence that the price restraint is welfare-improving.

Chapter 2

Territorial and Customer Restrictions

Territorial and customer restrictions involve the assignment of potential consumers by geographical area to specified retailers or distributors. Sometimes the assignment is strict in the sense that consumers within a territory must deal exclusively with one retailer. For example, the repair and servicing of consumer durables manufactured by the large known manufacturers (General Electric, Westinghouse, etc.) is franchised to independent service firms. Large consumer durables require a house call to service the product. It is therefore a simple matter to assign consumers in any geographic area to a single firm and to enforce this assignment through a common agency to allocate the service calls.

Sometimes the assignment is less strict in that retailers have zones of influence. For example, McDonald's franchisees may be given guarantees by head office on the locations of actual or potential competing McDonald's outlets, or retailers renting space in shopping centres may be given guarantees about the absence or density of competing retail outlets. Clearly, these retailers cannot prevent mobile consumers from gleaning information at one outlet to assist in purchases made at competing outlets, perhaps in the same chain. (Indeed the presence of such horizontal free-riding will lead to alterations in the nature of contracting relationships between the manufacturers and franchisees in the wholesale or retail chain.) Yet rational retailers will have some idea of the magnitude of consumer flows, and these guarantees offer some market power to the local merchant.

Next we analyze the legal status of territorial and customer restrictions in the United Kingdom and the United States. We proceed to

examine the economics of these restrictions and then return to their role in Canadian cases.

Legal Status in the United Kingdom and the United States

In both the United Kingdom and the United States, territorial restrictions are subject to rules of reason. Our survey of recent U.K. cases and studies undertaken by the U.K. Monopolies and Mergers Commission indicated that territorial restrictions did not surface as relevant features. This could indicate either a decline in their use by firms of a lack of interest in the practice on the part of the Monopolies and Mergers Commission. However, the increased percentage of retail trade conducted via franchising outlets and the inevitability of some territorial guarantees in these contracts reveals a shrinking interest in territorial assignments as an antitrust issue in the United Kingdom.

Territorial issues have not been the central focus of either U.S. government action (before the recent hiatus on vertical cases under the Baxter administration) or continuing private suits in the United States. The principal recent U.S. case (pre-Baxter) involving territorial assignment was *Continental T.V. Inc. v. GTE Sylvania* 433 U.S. 36 (1977). The details of this case and the court and appeal decision may be found in Easterbrook and Posner, (1981, pp. 249–62). It suffices here to note that the U.S. Supreme Court upheld the decision of the Court of Appeals that "Sylvania's location restriction . . . should be judged under the 'rule of reason' rather than the *per se* rule in Schwinn." (*Schwinn* was an earlier case involving territorial and price issues in the retailing of Schwinn bicycles. In the *Schwinn* case, the court had applied per se illegal rules to evaluate the legality of restrictions by the Schwinn company to sell bicycles only to franchised dealers who enjoyed territorial monopoly and agreed to perform pre-delivery that the manufacturer considered essential to the product and therefore to the maintenance of the brand name.)

Economic Analysis

What are the economics of territorial restrictions? Are territorial restrictions inevitably welfare-enhancing?

Territorial restrictions may be the consequence of either a cartel or an efficient distribution system. Consider the cartel possibility first. We emphasize that vertical restrictions in general and territorial assignments in particular are never the source of any cartel power (a barrier to entry) but may be a practice to capture rents that flow from some other source of market power. The cartel may be either a manufacturers' or a dealers' cartel orchestrated via restrictions imposed by a manufacturer.

Imagine a set of manufacturing firms that have market power because either (a) they have been granted exclusive licences; or (b) the industry is subject to direct entry regulation (e.g. airlines in Canada); or (c) production is characterized by tariff protection and significant economies of scale coupled with significant transportation costs for the product. (The last conditions generate regional monopolies even with modest scale economies, a condition that has been labelled the Canadian malaise.) Under such conditions, the cooperative industry strategy would yield a multi-plant cartel acting as a monopolist. Under the monopoly price, output is allocated across the plants (firms) according to marginal costs. With regional producers, one method of allocating consumers to plants would assign exclusive regional territories to each plant. Therefore, territorial restrictions might emerge as an efficient cartel arrangement. Typically, this would involve different brands if the cartel members marketed under different brand names, even if the products themselves were strong substitutes. (In contrast, exclusive territories under efficient networks typically involve only one brand name, e.g., Schwinn bicycles, Sylvania or McDonald's.)

Similarly, a dealer cartel may seek to protect local monopoly power (and rents) by assigning retail territories to existing dealers. While dealer cartels are a possibility, they are unlikely in the absence of other entry barriers into the retail trade. In the absence of regulatory intervention, the existence of large numbers of retail establishments suggests the absence of significant economies of scale and therefore the absence of any power to prevent entry or establish retail monopoly power. Retailers that set up cartels with monopoly prices enforced by manufacturers assigning retail territories would soon find those prices eroded by the entry of other retailers supplying substitute products. The manufacturers themselves would have no incentive to enforce such arrangements. The key question of the cartels' alleged use of exclusive territory is: What is the source of the cartel power in the first place? If there is no additional empirical evidence of such primary cartel potential, the territorial arrangement must flow from the manufacturer's desire to rationalize the distribution system, a vertical efficiency issue. The territorial arrangement alone cannot be a source of cartel power.

How do exclusive territorial arrangements promote distributional efficiency? The principal rationale in the United States for nonprice restrictions including territorial assignment flows from the distinction between intrabrand and interbrand efficiency advocated by the U.S. Supreme Court in *GTE Sylvania* (see Silberman, 1983). The argument is that nonprice restrictions such as exclusive territories impede intrabrand competition by parcelling out retail territories and protecting retailers from the competition that might otherwise emerge from the territorial invasion of competing retailers. This monopolistic element is tolerated because the offsetting virtue of such practices is their enhancement of

interbrand competition. The loose logic is that the added monopoly power accorded the brand generates rents that enhance its chances of survival, and that this is healthy because more players erode any market power accorded to the producers of substitute products. We contend that this argument is misleading at best. In fact, these nonprice features are efficiency-enhancing even in the presence of a manufacturing monopoly — that is, in the absence of any interbrand competition.

We consider four features of such nonprice competition: (a) rationalizing retailer density; (b) eliminating "hold-ups" in vertical contracts; (c) eliminating warranty and quality free-riding; and (d) facilitating price discrimination by both retailers and manufacturers.

Retailer Density

While there are typically fixed franchise fees for entering the retail business as a dealer, perhaps exclusive, for a manufacturer (for instance, McDonald's currently requires a $500,000 ex ante payment from each franchisee, 50 percent of which must be unencumbered), these fees are sufficiently small that the supply of potential franchisees is still perfectly elastic. For example, McDonald's currently accepts about 1 percent of its applicants, all of whom apparently have the required initial payment. (The interesting question is why franchisers do not raise the initial fee in light of the excess supply of applicants; we deal with this question in Mathewson and Winter, 1984a.) This perpetual queue of applicants suggests that franchisees may earn rents. The persistence of these rents suggests that these institutional arrangements are efficient. Rents can emerge as incentive devices to franchisees to act in the profit-maximizing interests of the rental chain. Franchisees who are caught chiselling on quality forfeit the future rent stream. Securing franchisee commitment through a larger franchise fee would be impossible, for rational franchisees would be aware of the adverse effects of such larger fees collected ex ante by the franchiser on the franchiser's post-contractual performance. The larger the sunk investment by the franchiser in physical or brand name capital, the smaller is this franchiser moral-hazard issue. Rent sharing thus becomes an efficient control mechanism. Exclusive territories may be part of this package to guarantee the nondissipation of quasi-rents whose guarantee is sufficient to underwrite the required (sunk) physical and brand name capital investments in the first place.

Whether or not the upstream firm needs to share rents because of control issues, this general rent-dissipation result holds. From the viewpoint of this upstream firm, the demand for its product depends on both the retail price and the density of dealers in the retail network, as well as on the information, point-of-sale services and advertising offered by each retailer. The initial set-up costs for the retailer are an important

ingredient in determining the nature of the retailer system with competitive returns for the dealers. For any given retail price, a sufficiently large guaranteed market may be required by the dealers to cover costs, including these (sunk) set-up costs. From the manufacturer's point of view, there are trade-offs between retail prices, dealer density and the provision of local information (i.e., price and nonprice features). This retail density justification for vertical restrictions is labelled the "outlets" hypothesis (Gould and Preston, 1965; Mathewson and Winter, 1983b).

Our previous analysis (Mathewson and Winter 1984a) argues that exclusive territorial assignment can be used effectively in combination with other vertical restrictions. The central theoretical point is that exclusive territories, by creating a local "monopoly" for a dealer, protect the quasi-rent stream to the dealer that is necessary to cover the dealer's set-up costs, including possible investments in services beneficial to consumers. This encourages dealer entry and increases the density of the dealer network; increased services and denser dealer networks may generate consumer benefits that more than offset price increases. The logic of the theory is best illustrated through an example where exclusive territories aid in producing a welfare-enhancing reallocation of resources.

First, we analyze private incentives. Consider manufacturers who use both a territorial restriction and a (lumpy) franchise fee but who do not need to share rents with retailers as a control device. In this setting, the manufacturer would set the wholesale price to the retailer equal to the marginal production costs of the product, a well-known efficient transfer price arrangement. This avoids those distortions that would otherwise flow from the double marginalization of the marginal production costs, once by the manufacturer in setting the wholesale price and a second time by the retailer in setting the retail price. In other words, this arrangement imitates perfectly a vertically integrated firm. (This effect is discussed earlier in this report in the section on resale price maintenance.) The (lumpy) franchise fees could then be used to transfer rents upstream to the manufacturer who owns the scarce brand name. Ongoing manufacturers leave sufficient quasi-rents at the retailer level to underwrite the (sunk) retailer set-up costs, including possible display and service elements incurred by the retailer. Closed territorial distribution allocates exclusive retail territories to dealers. In its absence, dealers would be encouraged to engage in price competition for consumers at each dealer's territorial margin. The equilibrium effect would be to erode retailer quasi-rents, undermining the incentives for investment not only in the service features of the dealer's activities but in the retail outlet itself. The effect would cause the dealer network to shrink in size. Reductions in upstream returns may also discourage manufacturer investment. In fact, closed territorial distribution plus two-part whole-

sale prices (in the absence of any service free-riding by dealers in the remaining retail network) achieve those retail prices, density and service levels that would maximize profits for a hypothetically integrated manufacturer.

In other words, the manufacturer dealing with an independent retailer can achieve the same allocation of resources to production and distribution as an integrated manufacturer. This observation facilitates two points. First, obviously these contractual restrictions represent a cost-minimizing arrangement for the firm actually using them over the alternative of formal integration. Second, were the manufacturer and dealer to integrate formally and retail the products in any fashion found to be in their self-interest, no antitrust issue would arise. Put differently, antitrust intervention could tip the scales in favour of an inefficient institutional arrangement. In our view, it is inconsistent for the law to permit formal vertical integration (by ownership) but potentially to restrict the same allocation of resources achieved by indirect integration through vertical restrictions.

Now we consider social incentives. While exclusive territories represent an improvement in the profits of the manufacturer, would the net welfare of society be improved with exclusive territories? The answer is yes. Again, the technical details of this welfare calculation are described in Mathewson and Winter (1984b). It suffices here to analyze the nature of the changes. Exclusive territories do assign some local "monopoly" power to the retailer that acts to *increase* retail prices *ceteris paribus*; reducing wholesale prices to marginal production costs, however, *lowers* prices. On balance, retail prices may rise or fall. Closed territories protect quasi-rents to retailers; lumpy franchise fees transfer some rents back to upstream manufacturers. Whether these instruments are used, or a marginal wholesale price alone coordinates retailer actions and simultaneously transfers rents, the retailer sector earns competitive rates of return (has open entry). The combination of franchise fees and closed territory may increase or decrease the density of the retailer network relative to an exclusive wholesale price equilibrium. With reduced wholesale prices, each retailer has an incentive to provide more local advertising and point-of-sale service (i.e, the marginal value product of advertising or point-of-sale service is increased). These are the individual effects at work between the two equilibria. For a wide range of parameter values in a simple, spatial-equilibrium retail model, net welfare — consumers' plus producers' (manufacturers and retailers) surplus — rises as a consequence of these changes.

"Hold-ups" in Vertical Contracts

"Hold-ups" or potential opportunism exists in contracts when either party to a contract commits resources without contractual guarantees of performance by the other party. An example serves to illustrate best the

problem in a vertical contract. A retailer may incur substantial sunk costs in becoming a dealer for a manufacturer. For example, display and advertising material may be ordered and installed peculiar to a manufacturer's product; sales personnel may be trained in the use and features of the product; long-term rental contracts may be signed for site leasing. Such sunk costs may yield substantial deviation between short-run and long-run shutdown rules. Before committing such resources, a rational retailer would seek some contractual agreement that the manufacturer or franchiser will not install competing retail outlets within the preassigned (verbal promise only) market that would subsequently erode the retailer's market and therefore the quasi-rent.

To some extent, the desire of the manufacturer to sell future franchises or convince future dealers to handle the products and incur similar set-up costs will deter the manufacturer from "holding up" retailers. That is, the manufacturer's ex ante sunk investment in the brand name is a general deterrent to such opportunism. The larger and more sunk this investment is for the manufacturer, the smaller is the temptation for a manufacturer to forfeit future quasi-rents by exploiting existing retailers by "packing" retail zones for a short-run gain. The manufacturer is as assiduous as the retailer in the protection of quasi-rents. Rational retailers are aware of these incentives, so that self-enforcing contracts may not require explicit territorial agreements; immobile and sunk investment in reputation by the manufacturer alone may be a sufficient signal.

A contractual guarantee that affords protection to the ex post of retailer quasi-rents by the manufacturer is the assignment of an exclusive territory. For example, new and unproven manufacturers with a relatively small sunk investment in reputation may be forced to offer explicit contractual guarantees of exclusive retail territory to their dealers. If such guarantees were directly costless to the manufacturer but beneficial to the retailers, why not always include them? The answer is that these guarantees have a potential cost to the manufacturer.

Consider again the new and unproven manufacturer. Based on expectations about future sales growth, the required dealer investment may require relatively long-term (e.g., 20-year) contracts which include territorial guarantees. Spectacularly successful ventures may require ex post an increase in the density of dealer networks to increase profits from the product. Ex post contractual renegotiation with the dealers may be costly, and dealers may attempt to hold up the manufacturer for all the increase in profits. Manufacturers may therefore be unwilling to provide these territorial guarantees ex ante even though the contractual arrangements without the guarantees are initially more costly to the manufacturer.

These considerations lead to three predictions. (a) The larger the dealer's set-up costs, the more likely is the assignment of exclusive retail territory.

(b) The larger the manufacturer's set-up costs in establishing a particular (and sunk) brand name relative to the aggregate set-up costs for all retailers, the lower is the incentive for the manufacturer to exploit existing retailers, reducing the need for explicit retail market guarantees such as exclusive territory. (c) The more diffuse the manufacturer's prior expectations about the venture's success and the more likely therefore that future profits can be increased by contractual flexibility that permits a denser dealer network, the less likely it is that the manufacturer will agree to long-term territorial guarantees. The welfare consequences are straightforward in this case — exclusive retail territories when used in distribution contracts facilitate efficient (least-cost) distribution systems.

Warranty and Quality Free-Riding

Free-riding on quality by regional manufacturers may provide a rationale for assignment of retail territories. Consider a product where there are no significant economies of scale but there are significant transport costs and the firm developing the product wishes to enter the high-quality end of the market. An example is provided by the Sealy Mattress case in the United States. (A brief discussion of the *Sealy* case appears in Easterbrook and Posner, 1981, pp. 247–49.) Sealy (originally a Texas firm) licensed regional manufacturers of its mattresses and other products, assigning explicit local geographical markets to each manufacturer. Sealy produces "high-quality" products with guarantees.

What is the potential for free-riding and how do territorial restrictions avoid the problem? (The answer is similar to the resolution of free-riding through RPM discussed in the section on resale price maintenance.) Imagine that a Sealy licensee has successfully built up a brand name for the product within a local market. It would then pay an adjacent manufacturer to import possibly lower quality products into the established manufacturer's retail market. The free-riding potential is twofold. First, adjacent manufacturers could capture demand with no advertising cost. Sealy could reduce such free-riding through national advertising conducted by the franchiser or through advertising levies and subsidies across the regional manufacturers. Territorial assignment could also restrict such free-riding. Second, adjacent manufacturers could free-ride by shipping inferior products into the established retail market. This opportunistic behaviour by other retailers reduces the incentive to maintain quality by reducing the value of the brand name. In such a case, future licensees would pay less for the local use of the Sealy brand name, damaging the returns to the parent franchiser. Through territorial restrictions, the franchiser avoids any misidentification with the producer of an inferior product, and therefore guarantees that all the costs of producing a substandard product accrue exclusively to the local franchisee.

Price Discrimination by a Manufacturer

Separate retail markets with the elimination of arbitrage across these markets could facilitate price discrimination by a manufacturer. Of course, retail demand elasticities would have to vary across these markets to make price discrimination a worthwhile practice. We can identify three potential aspects to price discrimination, provided the necessary conditions are met.

- *Price discrimination by territory.* The most obvious discrimination would occur where retail price elasticities vary across regions (e.g., urban versus rural) and either transportation costs or the nature of the product prohibit arbitrage. Then manufacturers grant exclusive territory to retailers who in their profit-maximizing calculations set retail prices that differ across the regions, and competition for the territories guarantees that rents flow to the upstream firm.
- *Price discrimination within a territory.* The exclusive provision of a product or service within a territory may facilitate price discrimination across consumers within that territory who have difference price elasticities. For example, a repair service for consumer durables could vary retail prices by the value of the consumer durable or the wealth of consumers (for instance, the value of a residence may be a reasonable estimate of the consumer's wealth). Such discrimination would not be sustainable with the competitive supply of services.
- *Price discrimination across consumer classes.* A manufacturer may assign exclusive territory in the form of exclusive classes of consumers to the retailers, reserving others for supply directly from the manufacturer to facilitate price discrimination. For example, in *White Motor Co. v. U.S. 372 U.S. 253, 263 (1963)*, fleet sales of trucks by White were reserved for head office, while dealers were permitted to service other sales. If fleet demands were most elastic, then it would be easier for the manufacturer to negotiate a lower price directly.

Canada

Exclusive territories have not played a major role as the principal issue in anticombines proceedings in Canada. This observation does not mean that such considerations could not arise under, for example, the general conspiracy sections of the Combines Investigation Act (section 32), if exclusive territories were held to be part of general price-fixing agreements. The observation that this is not the case is taken as a revealed indication that exclusive territories are generally taken not to play such a role. Furthermore, exclusive territorial protection frequently appears in franchise contracts, which have generally not been the subject of action by the Bureau of Competition Policy.

The criminal nature of anticombines activity in Canada, in contrast to its civil nature in the United States, permits only publicly initiated legal action and prevents private suits. Nevertheless, issues involving dealership awards did arise in one recent civil case in Canada, *Consumers Distributing Limited v. Seiko Time Canada Ltd.* 54 N.R. 161. Consumers Distributing is a national discounter that offers both reduced retail prices and point-of-sale service. Seiko is a brand of watches and other timepieces produced by K. Hattori and Company Limited in Japan, marketed worldwide through authorized distributors and dealers. In Canada, the distributor is Seiko Time Canada Ltd. In turn, this distributor authorizes dealers. Consumers Distributing Company Ltd. was *not* one of these dealers. Rather, Consumers Distributing purchased watches outside the country and sold them at reduced prices. The contentious issue concerned the one-year guarantee packaged with the watch. As Seiko Time Canada Ltd. received no revenue from the sale of these watches, it was unwilling to provide warranty service. The warranty certificate indicated that the certificate was valid only when filled out by an authorized dealer.

Consumers Distributing appealed in the Supreme Court a lower court decision to prevent Consumers Distributing from acquiring, advertising or selling Seiko watches or from claiming that they were an authorized Seiko dealer. The appeal dealt only with the injunction preventing Consumers Distributing from advertising or selling the watches in Canada. The Court granted the appeal. The legal issue centered on whether Consumers Distributing had "passed itself off" to consumers as a bona fide Seiko dealer. The Court argued that this was not the case, and that consumers could determine clearly before purchasing the Seiko watch that Consumers Distributing Ltd. was not an authorized dealer.

What are the economics of this case? It is difficult to determine the underlying economic factors from the information presented in the Supreme Court decision. Seiko Time Canada Limited is controlled through Seiko Time Corporation (U.S.) by Hattori, the Japanese manufacturer. The watches purchased by Consumers Distributing were bought legally from an offshore source (labelled a "diverter"). If all the authorized distributors were vertically integrated with the manufacturer, this problem would not arise. Therefore, some distribution must be performed by contract. If this contract leaves the provision of service up to the local distributor (even though the warranty conditions are uniformly specified), there is an incentive in this heterogeneous distribution system for a free ride.

The offshore source can sell watches to a Canadian retailer knowing that it will not have to provide a service contract; therefore, a lower wholesale price to the dealer would prevail. Depending on consumers' perceptions at the time of purchase, there is the potential for Consumers Distributing to free-ride on the brand name. Of course, the offshore

source would have to seek some guarantee that these lower-priced watches would not re-enter the retail market serviced by the distributor itself. The continued availability of the watches to Consumers Distributing from this source may alone be sufficient to prevent this arbitrage.

Similar issues arose in both the *Schwinn* case in the United States and the *Raleigh* case in the United Kingdom. Unlike watch retailers, however, bicycle retailers provided the important point-of-sale service assembly of the final product. In these bicycle cases, both manufacturers feared that unauthorized dealers would have inappropriate incentives to assemble the bicycles carefully, to the detriment of both the manufacturers themselves and the authorized retail chains. Such issues would not seem to be operative for pre-assembled watches where, aside from general store ambiance, little is done specifically by the retailer.

A second argument is that retailers of higher quality products, such as those carrying Seiko products, may have invested considerable resources, now sunk, in brand names. To the extent that discounters sell the product without the investment in reputation, they can free-ride on other retailers, appropriating their quasi-rents and discouraging such brand name investment. Hattori itself may wish to distribute its product through non-discount dealers as an important signal of the product's quality. The manufacturer may be under some (considerable?) pressure from these retailers to prevent such free-riding by discount outlets.

An additional feature of the world sales of these markets may involve price discrimination. Seiko Time Canada Ltd. may have some price setting powers because of a (to some extent) inelastic derived demand curve for its product. Costly search, together with a tied warranty, may reduce arbitrage across world markets. Dumping by the manufacturer in some markets with highly elastic demands, coupled with higher domestic prices in Canada, may be a profit-maximizing segmentation of markets. The legal case may be an attempt to prevent one agent (Consumers Distributing Ltd.) from arbitraging across these two markets.

These competing hypotheses require additional institutional evidence to test. In fact, elements of both brand name free-riding and retail price discrimination across international markets may be operative in this case.

Conclusions

In our view, the general conditions necessary for the facilitation of a manufacturers' or dealers' cartel through exclusive territorial assignment are unlikely. Even if a cartel did exist, the source of the cartel's power lies elsewhere. As opposed to a cartel with many brands, exclusive territories as part of an efficiency-enhancing distribution network involve a single brand and are used in conjunction with other restrictions such as RPM, franchise fees or quantity forcing.

Where territorial restrictions are used by a single manufacturer producing a product for which there are substitutes in the marketplace, such restrictions are unlikely to signal a cartel. Rather, they are restrictions to reduce quality and advertising free-riding or to provide sufficient ex ante incentives for investment in product development and efficient dealer networks and display. Such restrictions yield not only more profitable distribution systems but dealer networks, product information and introduction, and retail prices that also enhance welfare. (This is the position taken by the U.S. Department of Justice in its recent amicus briefs.)

Chapter 3

Tied Sales

"Tying" refers to the practice of making the purchase of one good a condition of purchase of another. This vertical restraint is imposed by sellers in one of two forms: (a) any purchaser of good A (the "tying" good) must purchase *all* of the requirements of another good B (the "tied" good) from the producer of good A; or (b) any purchaser of one unit of good A must buy one unit of good B. The second type of tying is known as *bundling*. The first type we refer to as *exclusive tying* or *requirements contracting* to distinguish it from bundling.

The practice of tying is ubiquitous. One cannot easily buy an automobile without an engine, a coat without sleeves, or the first half of a book without the second half. Obviously, many instances of tying could not conceivably be considered obnoxious to the public interest, and as the Monopolies and Mergers Commission (U.K.) noted (see below), a per se ban on tying is impossible. Where the controversy arises over the appropriateness of the practice is in those cases where there are established or potential separate markets for the tied goods — for example, where purchase of photographic film is tied to developing the film, computer cards are tied to the purchase of computers, or maintenance and servicing to the purchase of equipment, or when products such as cinematic films must be purchased in bundles. Does tying in any particular case represent (a) an extension of monopoly power from the tying-good market to the tied-good market (the foreclosure explanation); (b) a means of metering demand elasticities (the price discrimination explanation); or (c) can the practice be explained as an efficient means of lowering costs? In the following section, we review the courts' and policy authorities' judgments on these questions and in the next, we survey the existing economic models of tying. We conclude with an

analysis of this section, a Canadian case involving tying — the *BBM* case heard by the Restrictive Trade Practices Commission.

Legal Status

United Kingdom

The Monopolies and Mergers Commission (MCC) has generally but not always found the cases of tied goods that have been referred to it to be against the public interest. Before 1981, the most important cases of tied goods were the following, each the subject of a Monopolies and Mergers Commission Report.

- Petrol (1965). Suppliers of petrol (gasoline) required retailers to sell also their lubricants and other petroleum products. In this case, the Commission objected not to the tied-goods nature of the contracts involved, but to the exclusivity — the requirement that other brands not be sold.
- Colour film (1966). The tying of colour film with film developing was found to be against the public interest.
- Films for exhibitions in cinemas (1966). The practice of "block-booking" or tying of one film with others was found to be against the public interest.
- Metal containers (1976). Can-closing equipment was tied to the sale of cans by the Metal Box Company. The commission commented that in restricting a consumer's choice of purchase, the arrangement acted against the public interest.
- Copying machines (1976). Xerox tied the rental of its copying machine with servicing, toner and supplies. The commission allowed the tying of servicing and parts where the use of other supplies could affect the performance and maintenance of the machine, but ruled that the tying of toner was against the public interest.

In response to a green paper, "A Review of Restrictive Trade Practices Policy" presented to Parliament in March 1979, which highlighted tying and full-line forcing as practices that the commission had nearly always found anticompetitive, the Secretary of State referred the practice to the commission for a general report (U.K. MMC, 1981c). The commission was to provide some guidelines, specifically to prohibit the practice of tying if that were shown to be justified.

The commission decided early in its investigation into the practice of tying that it was not always against the public interest and that a per se ruling was inoperable in any case. (There is no clear division between the supply of a single product, e.g., a cutlery set, and the tied supply of many products, e.g., knives and forks.) The commission examined a wide

variety of instances of tied sales, noting that the cases fell variously into four main classes delineated in the analytical literature of tying:

- Monopoly power in one market — the tying good *A* being extended into the market for the tied good *B*;
- The "metering" argument — the supplier of *A* charging different prices on the basis of the use of *B*;
- The supplier of *A* ensuring a standard of performance of *A* through tying to (for example) servicing or parts; and
- The supplier realizing economies of scale in the production of *B* because of tying.

Finally, two sets of guidelines for the legality of tying were presented — the general guidelines and guidelines for tying in the rental sale of equipment:

1. General guidelines on tying (United Kingdom, Monopolies and Mergers Commission, 1981c, p. 44).

> The information available to us as a result of our inquiries suggests certain guidelines which might usefully be borne in mind in the process of identifying tie-in sales and line forcing and of deciding when to initiate action against them. These are as follows:
>
> (a) Tie-in sales and line forcing are unlikely to be found, or are unlikely to persist, except when the supplier has some degree of market power in the supply of the tying goods or service, and any adverse effect on the public interest is likely to depend on the extent of the market power. Where there is little market power (because for instance there are alternative goods or alternative suppliers available), a tie may be difficult to operate and, to the extent that it is operated, may not have any significant effect on the public interest.
>
> (b) where a supplier has substantial market power in the tying good or service, the exclusionary effect on competitors is likely to be against the public interest, but how far this is so in practice is likely to depend on the structure of the market for the tied good or service and the extent to which it may be changing. If a tie forecloses only a small part of the market and there are numerous other outlets available the effect on competitors in the supply of the tied good or service may be negligible.
>
> (c) Tie-in sales and line forcing may simply represent the exercise of monopoly power in one market to restrict competition in another market, with no additional factors being involved. Any such cases are likely to be almost invariably against the public interest.
>
> (d) The anti-competitive effects of tie-in sales and line forcing are likely to be much more significant if the practices are associated with an insistence on exclusive dealing.
>
> (e) Ties which are potentially anti-competitive may often be defended on technical grounds, as in the case of tying of spare parts and consumable materials. These ties may be hard to evaluate and may often require detailed examination.

2. Conclusions re the tying of equipment with related supplies (United Kingdom, Monopolies and Mergers Commission, 1981c, p. 18):

   (a) it is reasonable that a supplier of rented equipment should, as owner, retain responsibility for its maintenance provided that the maintenance is supplied on reasonable terms;
   (b) a condition that a customer should use specified consumable products might or might not be against the public interest, the test being whether the use of other products would materially affect the performance of the equipment;
   (c) even if there is no such explicit condition other terms or circumstances of the transaction might produce a tying effect; the test of public interest remains the same;
   (d) where equipment is sold the tying-in of maintenance is likely to be against the public interest, as is that of consumables as a condition of a guarantee, unless it is a genuine requirement for technical reasons; the test is the same as in (b).

United States

In the United States, tied sales may run afoul of several different areas of the law. Section 1 of the Sherman Act prohibits contracts in restraint of trade, which may be interpreted to cover tie-ins. If interpreted as an attempt to monopolize the tied market, tying would be prohibited under section 2. If tying is judged to lessen competition substantially in the tied good market by excluding competitors from this market, then it is illegal under section 3 of the Clayton Act. While the Clayton Act covers only cases in which both the tied and the tying good are commodities, and is therefore narrower than the Sherman Act's coverage, most cases have been brought under the Clayton Act.

The prohibition of tying under section 3 of the Clayton Act involves a rule of reason to determine the competitive effects of the practice. But the trend of court decisions has been toward the position that if the seller has a high market share in the tying good and a substantial volume in the tied good market, then competition is substantially lessened. Either of these conditions is then sufficient to find the practice illegal.

The contractual clauses that are prohibited under the U.S. law may be contractually explicit tying clauses ("contractual conditioning") or clauses that make purchase of both goods attractive compared to the purchase of only one ("economic conditioning"). Economic conditioning includes selling two products as a bundle at a discount from the combined price for separate purchases beyond that which could be justified by cost conditions. (The distinction between economic and contractual conditioning is important for recent cases in Canada.)

The condition that the seller has sufficient monopoly power in the tying market to make the practice of tying illegal can be established by

the existence of patent protection, copyright protection or uniqueness of land as a product. The condition that a substantial volume of the tied good be sold refers to a dollar amount of business, not a market share. The following arguments have been used successfully to justify tying in U.S. courts (see Pasahau, 1982 for details and additional case citations).

- The new product justification. The requirement that new buyers of Cable TV systems buy a five-year service contract was allowed when the system was introduced, but became illegal when the industry matured (*U.S. v. Jerrold Electronics* 365 U.S. 567 (1961));
- Protection against deception. The lessor of gasoline pumps that bear a particular brand's trademark can restrain the lessee against using pumps to dispense gasoline of other brands (*FTC v. Sinclair Refining Co.*, 261 U.S. 463 (1923));
- Justification based on convenience [*Siegel v. Chicken Delight, Inc.* 9th circuit (1971)]; and
- Justification based on protecting the goodwill of a supplier by way of insuring product performance (*Kentucky Fried Chicken Corp. v. Diversified Packaging Corp.*, 5th circuit (1977), 549 F.2d. 368).

Economic Analysis of Tying

The various explanations that have been offered for the observed practice of tying are listed in Table 3-1. Some of these, as indicated in the table, are relevant to bundling, and others describe incentives for exclusive tying. The following is a summary of the various incentives for tying and their impact on welfare.

TABLE 3-1 Economic Explanations of Tying

	Applicable to:		Welfare
	Bundling	Exclusive Tying	Impact
Foreclosure of tying good market	x	x	↓
Price discrimination: metering		x	?
Price discrimination: bundling	x		?
Product reputation depends on servicing		x	↑
Risk-sharing		x	↑
Prevention of excessive sorting	x		↑
Variable proportions incentive	x		?

Foreclosure

By far the most controversial explanation of tying is the foreclosure argument. This argument has found sympathy in the courts but is increasingly criticized by economists. According to the argument, a producer with monopoly power in one market (the market for the tying

good) can extend monopoly power into a second market (the market for the tied good) by requiring purchasers of the first product to buy from him in the second market. In doing so, the monopolist forecloses some or all of the tied-good market to rival producers. Since the distortion of monopoly pricing is spread from one market into another as the monopolist uses his leverage in the tying market to extend his power, the conventional wisdom is that the foreclosure decreases efficiency and should therefore be banned. The monopolist's leverage is strongest when the tying and tied goods are complements, which is the situation where tying is most often observed.

Stigler (1963) and others (e.g. Bork, 1978, p. 374) have argued that the leverage argument is fallacious. The monopolist in the tying good can extract monopoly rent only once. If the price were raised in the tied-goods market, Stigler argues, it would have to be lowered in the tying-good market. The extension or transfer of monopoly power from one market to another cannot explain tying.

A potentially more serious variant of the foreclosure argument is that foreclosure of most or all of the tied-goods market will make entry into the tying market difficult, because any entrant into this market would simultaneously have to enter the tied-goods market. Kaysen and Turner (1959, p. 157) have proposed a per se ban on tying based on this argument:

> A tie-in always operates to raise the barriers to entry in the market of the tied good to the level of those in the market for the tying good: the seller who would supply the one, can do so only if he can also supply the other, since he must be able to displace the whole package which the tying seller offers. Developing a substitute for the tying product may be very difficult, if not impossible. Thus tying tends to spread market power into markets where it would not otherwise exist; for example, few firms are prepared to supply machines like those of IBM, whereas many may be prepared to supply punch cards.

This argument is identical to the argument that vertical integration into two vertically adjacent markets makes entry into either more difficult by requiring entry into both. Whatever its practical merits, the argument requires that a very large share of the tying market be foreclosed. The current antitrust law in the United States is that a non-significant dollar amount of business in the tied market be foreclosed; there is no reference to market share.

Price Discrimination

An explanation of tying associated with the Chicago School is that the practice allows a producer with market power in the tying-good market to price discriminate. The idea is that consumers of the tying good (e.g., a central processing computer unit) vary in their intensities of demand, i.e., in their reservation prices. If the reservation prices are correlated

with the use of the tied product (e.g., a peripheral computer on cards in a computer system), then by charging a high price for the tied product, the monopolist extracts a higher "total" price from these with higher reservation prices that allows greater extraction of rent than uniform pricing.

Similar to other forms of price discrimination, tying increases monopoly profits in this role but has an ambiguous effect on total surplus (efficiency). The price discrimination role of tying does not provide a basis for antitrust intervention.

Other Explanations

The remaining explanations for tying listed in Table 3-1 are "efficiency" explanations of tying which demonstrate that tying can reduce costs of production. Of these, the explanation that surfaces in most court cases on the issue is that the servicing or maintenance of a product must be tied to the sale of the product to ensure that the product quality does not deteriorate. If consumers could identify perfectly the source of poor product performance — for example, between a faulty product and faulty maintenance — then the maintenance market would function well. But if the general product reputation suffers as a consequence of poor performance, even if this is due to poor maintenance, then the manufacturer of the product is the only seller in the maintenance market with the correct incentive to service the product.

An efficiency explanation of tying that is important in franchise cases is that it can be an instrument for risk-sharing (Liebowitz, 1983). In franchising, the purchase of a franchise is often tied to the purchase of variable inputs into the franchise operation — e.g., *Siegel v. Chicken Delight Inc.* 488 F.2d 43 (9th circuit 1971). The variable inputs may be priced higher than perfect substitutes in the marketplace. The effect of a low franchise fee–high variable input price combination is to shift some of the risk of the franchise operation to the franchiser upstream. The franchise mark-up is lower and the franchise profits therefore less exposed to fluctuations in, for example, demand downstream as compared to the situation of a flat franchise fee with no restraints. Of course, franchisees would prefer both the low franchise fee and the opportunity to purchase inputs at a low price — this is why franchisees bring suits against franchisers for the practice of tying — but prohibition of the practice in this case would be welfare-decreasing in a strong Pareto sense.

The argument for tying as a means of risk-sharing relies on either fixed proportions in franchise operations (e.g., one paper bucket, one bucket full of chicken), or the infeasability of royalty payments due to the cost of monitoring output. If there are variable proportions in the franchise production function, then the franchisee will tend to substitute away from the tied input to other inputs, this resulting in an efficient input mix

since the downstream franchisee is not choosing input quantities on the basis of their relative marginal costs of production. A royalty, if feasible, achieves the same goal of risk-sharing without the input distortion. Of course, if franchise operations are characterized by fixed proportions, input-tying at a price above opportunity cost has effects equivalent to those of a royalty.

Tying, in other circumstances, can *correct* an input distortion arising from monopoly pricing of a single product in an intermediate market (Burstein, 1960; Blair and Kaserman, 1978). If production downstream has variable proportions, then by tying all substitutable inputs and charging prices in proportion to marginal production costs, an upstream monopolist will eliminate distortions in downstream input choices. In this case, tying achieves the same result as vertical integration.

Finally, bundling of products such as block-booking of cinematic films can be explained as a means of avoiding wasteful expenditure on sorting (Kenney and Klein, 1983). Kenney and Klein explain bundling in the markets for films and diamonds, but also suggest a more familiar example of tying, the selling of oranges in bags, which makes the point simple. (A similar measurement point was made earlier by Barzel, 1982.) If oranges are sold in bins and sell at a uniform price, each buyer has the incentive to sort the oranges and select those of highest quality. This expenditure on information results in a transfer of the poor quality oranges to other customers (those arriving at the end of the week) who pay a lower price. There is no socially productive function of this sorting, as it simply results in a transfer from some customers to others. The total consumer surplus is lowered by the total expenditure of resources (time) on sorting. If the oranges are instead sold in bags of large enough size that the average quality across bags varies little, then expenditure on sorting is eliminated. The additional surplus, whether it accrues to consumers or to the supplier of the oranges, represents a gain in efficiency.

Tied Sale in Canada

The Combines Investigation Act deals with tied sale in section 31(4). As with exclusive dealing, tied sale is dealt with through application by the Director of Investigation and Research of the Bureau of Competition Policy to the Restrictive Trade Practices Commission (RTPC). Where the RTPC after a bearing finds that tied selling is likely to either (a) impede entry or expansion of a firm in the market, (b) impede introduction of a product into or expansion of sales of a product in the market, or (c) have any exclusionary effect in the market with the result of a substantial lessening of competition, the RTPC may issue cease and desist orders to prevent the practice. Tied sale has not been a major issue in cases before either the RTPC or the courts as part of other anticombines charges. One

recent (1981) case before the RTPC, however, involved exclusively a tied-sale issue about the purchase of data on TV and radio audience ratings.

Institutional Facts

BBM sells two products, audience ratings of both certain radio stations (radio data) and certain television stations (TV data). These products are demanded by three classes of consumers — advertising agencies, station representatives and advertisers. In 1979, advertisers were required to purchase jointly the two products (pure bundling) while agencies and station representatives could purchase either for a fee (conditional on gross advertising revenues) with the additional element costing the customer a small incremental fee (mixed bundling). BBM is organized as a nonprofit association of members of its three classes of consumer (i.e., a consumer cooperative).

The competition in the industry came from A.C. Nielson Company, a conventionally private firm. Nielson in 1979 collected and sold only TV data for a correspondingly lower fee than BBM. The contention in this case was that the tied sale by BBM impeded the entry and expansion of Nielson (counter to section 31(4) of the Combines Investigation Act). Nielson had experienced growing losses over the period 1970 to 1980. In radio data, BBM had a monopoly; in TV data, BBM had the lion's share of the market (87 percent as opposed to Nielson's 13 percent). Although the products of the two companies were slightly differentiated, they were virtually perfect substitutes.

All parties agreed that there were substantial fixed costs to entering the electronic data media measurement market and setting up the measurement network to carry out the surveys, but that there were relatively small costs at the margin for an additional rating. This means that there were economies of scale in producing the products; this alone, however, did not explain the tied sale. (A technological justification for tied sale would require economies of scope in the sales of the two products, but any scope economies in sales are apparently small.)

The Crown (and the complainant Nielson) argued that Nielson suffered from lost customers specifically because of the bundling practices of BBM. While Nielson sold the TV data at a lower price, firms desiring both TV and radio data were better off buying the joint product from BBM. The RTPC ruled that this violated section 31(4) of the Combines Investigation Act, and prohibited BBM from engaging in the tied sale (either pure or mixed bundling).

Economic Analysis of a Canadian Case

The first economic issue to address is whether the retailing practices of BBM were efficient in the resource allocation sense. The RTPC argued in

its decision that the retailing practices of BBM foreclosed the market for Nielson by likely impeding its entry and expansion. This concern for the welfare of Nielson's shareholders is misplaced from an efficiency viewpoint. Tying by BBM may result in an improved allocation of resources (the realization of gains from trade), yet at the expense of reducing demand for the products of the competition and thus harming them. This is the nature of competition; efficient competition may harm competitors. In particular, general economic welfare need not be improved by a prohibition on tying, although the wealth of the nontying competitor's shareholders may be improved.

What role is played by BBM's organizational structure? As we indicated, BBM is a customer cooperative. In BBM's case, the surplus is not distributed to the members. Either no surplus accrues to the firm because of its pricing policy or any surplus is "consumed" by BBM's management. In fact, the prices at BBM are set annually by a board of directors elected from the member customers. As these directors receive no direct remuneration from BBM, their pricing incentives would appear to be to maximize the welfare of a representative consumer of BBM's services, the owners of this "mutualized" firm.

These incentives stand in contrast, for example, to the incentives commonly attributed to the directors of a mutual insurance company, a similarly organized firm where policyholders "own" residual but nontransferable rights in the firm. In the absence of any natural or tax advantage to mutualized insurance firms and open entry into the industry, the presence of joint stock insurance firms producing substitute products in a profit-maximizing manner should discipline the mutualized firms to seek the same objective. In Canada, mutualized insurance firms once enjoyed a tax advantage that was subsequently mutualized through a tax on premium revenue. These institutional considerations do not appear to apply in the case of BBM.

If BBM is a democratic cooperative, any restrictions imposed by the public sector on BBM's actions (pricing policy) harms its consumer/owners where their welfare is the appropriate objective for evaluating the efficiency of the pricing practices of this firm. If these owner/consumers decide cooperatively that tying (pure or mixed bundling) of whatever magnitude is in their collective interest, any prohibition of this pricing policy is paternalistic.

If BBM's interests are identical to the social interests (apparently Nielson's profits are not supernormal so that allocative efficiency remains undistorted from the competition) then the remaining puzzle is twofold. First, why is tying in the interests of BBM (why is tying efficient)? Secondly, why is BBM organized as a cooperative (in contrast to most other markets in Canada, or radio and TV data collection in the United States)? At the moment, we have no answer to the second question. We have a possible explanation for the first.

We begin by extending the standard theory of bundling by a monopolist to include possible entry by a single profit-maximizing competitor producing one of the bundled products. We can then extend this analysis to the case of a cooperative. In general, the welfare impact of eliminating tying is ambiguous even when such elimination results in a single firm monopolizing a market by eliminating a competitor (foreclosing that market).

The analysis requires some modest formalism that uses only a diagram. We first present this formal argument and then comment on the economic logic. Price discrimination is the key to the argument. That bundling is an effective price discrimination tool dates from Stigler's original article (1963). The virtue of the diagram and the analysis is that our understanding of this result is deepened.

Consider the following set of assumptions.

- There are two goods in this market — TV data (good 1), radio data (good 2).
- The purchase decision for each good is either to buy a fixed amount of this good or none of this good; the goods are independent.
- The costs of production for BBM are (c_1,c_2) and BBM is a monopolist in supply good 2. (Ignore for the moment any fixed costs of entering these markets.)
- The cost of producing good 1 for the rival is c_1.
- Consumers are identified by (r_1,r_2) their respective reservation prices; while the goods are independent for each consumer, the joint distribution of reservation prices (the correlation between reservation prices across consumers) is important.

The socially optimal allocation of resources in this market is for any consumer whose value $r_i \geq c_i$ to consume good i. Figure 3-1 illustrates this optimum. This social optimum satisfies two conditions (identified by Adams and Yellen, 1976, p. 481).

(1) *Exclusion*: No individual consumes a good if the cost of that good exceeds the reservation price for it.

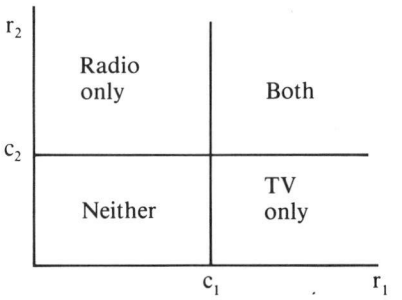
(2) *Inclusion*: Any individual whose reservation price for a good exceeds its cost consumes that good.

Under a hypothetical distribution of reservation prices, we can distinguish the equilibrium in which the dominant firm (BBM) is prohibited from tying with two (exclusive) alternatives.

- *Contestable markets*: The monopolist can tie and the rival firm remains in the market.
- *Entry barriers*: The monopolist can tie and the rival is foreclosed from the market as a result.

In both cases, we analyze the mixed bundling case of BBM's sales to agencies and station representatives. Define (P_1,P_2,P_B) to be the respective price vector where B indicates the bundle and P_B $P_1 + P_2$ (or no one would buy the bundle).

FIGURE 3-1 Inclusion and Exclusion

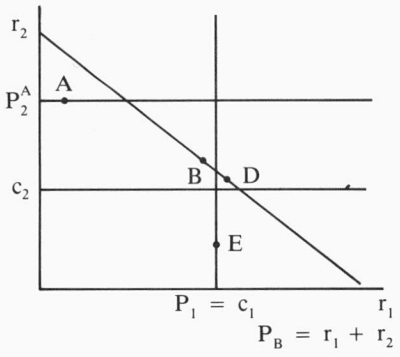


CONTESTABLE MARKETS AND TYING (FROM SCHMALENSEE 1982)

In general, a monopolist prices to satisfy (or compromise) conditions (1) and (2) above, or a third condition — extraction. No consumer realizes any surplus in a purchase; rather, this surplus accrues to the firm. Because the monopolist trades off conditions (1) and (2) for (3), the resulting allocation is generally *not* first best. But if bundling is tantamount to price discrimination, then monopoly tying can be first best. Suppose BBM is a profit maximizer and markets are contestable.

Consider four consumers whose respective reservation values are represented by points A, B, D and E. Each consumer seeks the purchase to maximize his or her surplus; firms make offers to maximize profits conditional on the state of the market. In the contestable case (because of competition), BBM sells its output TV data at a marginal cost price so that $P_1 = c_1$; radio data, for which BBM is the supplier, are marked up over marginal cost so that $P_2^A \equiv r_2^A > c_2$ (see Figure 3-2); the third option is to buy a fixed bundle (all the TV and radio audience ratings relevant for the geographical market) at a bundled price $P_B < P_1 + P_2$. The competitor Nielson sells only TV data at P_1. The analysis proceeds most simply with the use of the figure. Define $P_B = r_1 + r_2$ as BBM's mixed bundling line. This is the locus of reservation values that would leave any consumer indifferent between buying and not buying the bundle. For P_B to be feasible, $P_B > c_1 + c_2$; this holds in Figure 3-2. The social question is whether private and social (resource allocation) interests are synonymous.

FIGURE 3-2 Mixed Bundling: Contestable Markets



The consumer whose reservation values are given by *A* buys only the radio data (good 2) from BBM; this action alone maximizes *A*'s surplus as *A*'s evaluation of the TV data (good 1) lies below $P_1 = c_1$. There are two consumers whose reservation values for the two goods lie on the mixed bundling line (*B* and *D*). Their actions, however, are different. The consumer whose reservation values are given by *B* buys the TV and radio data bundle from BBM. The consumer whose reservation values for the two goods are represented by *D* does not buy the bundle (where realized surplus would be zero) but buys only the TV data (good 1) from either firm to realize a strictly positive surplus ($r_1^D - c_1$). The final consumer whose reservation values are represented by the point *E* buys only TV data (good 1) from either firm.

Is mixed bundling under these conditions a profit-maximizing strategy for BBM? Consider the nonbundling strategies facing BBM. In this market, BBM has market power only in the production and sale of good 2 (radio data). Why doesn't the second firm (Nielson) enter this market as well? The answer must be that while there may be economies of scope from producing and marketing the two products — the measurement networks overlap, the same sales agency can sell both goods — there are still additional fixed investments required to enter the market for good 2 that are unwarranted, given the size of the market for good 2 and the post-entry equilibrium prices should Nielson enter this market.

If this condition holds, BBM would continue to have price-setting power in the market for good 2. With the distribution of consumer tastes as given by the four pairs of reservation values, in the absence of mixed bundling, BBM could capture consumer *B* only if it lowered P_2 (from P_2^A) such that $P_2 \leq r_2^B$ and could capture consumer *D* only if $P_2 \leq r_2^D$. Mixed bundling is a profit-maximizing strategy if it dominates these two alternative unbundled pricing strategies.

Under this condition, mixed bundling is a profitable venture for BBM. Here, this pricing strategy leads to an oversupply of TV data as the consumer at B holds a reservation price of TV data (r_1^B) less than the marginal cost of the good (revealed by an inspection of Figure 3-2).

Mixed bundling in this analysis is a price discrimination device. For the distribution of consumer reservation prices shown in Figure 3-2, mixed bundling leads to a perfect sorting of these consumers. Condition (3) on extraction of surplus by BBM drives an oversupply of TV data (a compromise on condition (1) of inclusion) to facilitate the increased profits. In the absence of mixed bundling, the price of radio data would fall either to $P_2^B = r_2^B$ (where the consumers at A and B would purchase radio data) or to $P_2^D = r_2^D$ (where the consumers at A, B, and D would purchase radio data). (Consumers at D and E continue to purchase TV data as well). In this case, disallowing the tied sales improves resource allocation according to the inclusion and exclusion conditions specified earlier (conditions (1) and (2)). BBM's profits, however, would fall.

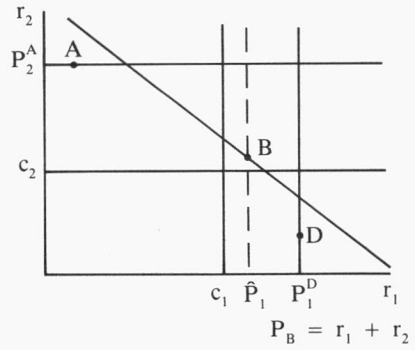
Notice, however, that these results depend crucially on the (arbitrarily) assumed distribution of reservation prices. There are two points here. First, the correlation between reservation prices across consumers is negative. Second, the distribution, while arbitrarily chosen, was selected for purposes of illustration. In our next example, where markets are not contestable, we select a distribution of reservation prices that improves resource allocation.

Entry Barriers (Fixed Costs) and Tying

In this setting, unlike our earlier setting with contestable markets, there is a fixed initial (sunk) cost (F) to enter the market (incurred, for example, to set up the measurement network). The operational difference is that tying by BBM with fixed entry costs could prevent Nielson's entry (foreclose the market). Recall that the facts of the case were that up to the case date Nielson had an accumulated history of negative profits (at least in accounting terms) from its Canadian operation. In this apparently more monopolistic setting, however, mixed bundling, under a particular distribution of consumer reservation values, will be shown to be first best. The general welfare point of this tying/price discrimination analysis is that the welfare effects of tying are typically ambiguous.

Again, modest formalism is required. Again, a simple diagram aids the analysis considerably. In Figure 3-3, we consider three consumers whose reservation values are given by A, B and D, a distribution with a negative correlation between prices across consumers (even though the goods themselves are independent for each consumer). Consider the pricing strategy of BBM before Nielson's entry into the market — i.e., BBM has price-setting powers in both markets.

FIGURE 3-3 Mixed Bundling: Entry Barriers



The price of radio data alone is set at $P_2^A = r_2^A$; the price of TV data alone is set at $P_1 = r_1$; and the price of bundle is set at $P_B = r_1^B + r_2^B$. As before, $P_B = P_1^B + P_1^D$. Given the locations of the reservation prices of consumers and the prices set by BBM:

- Consumer *A* buys only radio data at a price $P_2^A > c_2$;
- Consumer *B* buys both radio and TV data at a bundled price $P_B = r_1^B + r_2^B$; and
- Consumer *D* buys only TV data at a price $P_1^D > c_1$.

Observe that given these particular pricing rules $r_2^A > c_2$, $r_2^B > c_2$, $r_1^B > c_1$, $r_1^D > c_1$ so that inclusion and exclusion conditions are satisfied and the resource allocation is Pareto-efficient.

Now suppose that Nielson enters the market producing only TV data. Suppose further that Nielson's price for TV data is $\hat{P}_1 = r_1^B$. Why this price? The answer is that by assumption, the fixed costs to Nielson of entering this market are such that entry is worthwhile only if Nielson captures consumers at both *B* and *D*. $\hat{P}_1$ is then *maximum* price that this entrant can charge to effect this result, given BBM's prices, because at P_1, consumer *B* is indifferent between the bundled sale from BBM and the TV data exclusively from Nielson.

What would be the effect of an unanticipated prohibition against tied selling? "Unanticipated" is important, for if BBM had anticipated a subsequent RTPC decision to reduce its quasi-rent stream, it might have altered the timing of entry or decided not to enter at all. With the fixed set-up costs sunk, BBM obviously would continue to operate, provided its variable costs were covered. If the tied sale were disallowed by the RTPC, given the distribution of reservation prices illustrated in Figure 3-3, BBM has a choice of maintaining the price of $P_2^A = r_2^A$ and selling only

to the consumer at A, or dropping its price to $P_2^B = r_2^B$ and selling to the consumers at both A and B. The condition for maintaining the price at P_2^A instead of dropping it to P_2^B is obviously given by $(r_2^A - c_2) > 2(r_2 - c_2)$.

If this were the case, the consumer at A would buy the radio data at $P_2^A = r_2^A$ and at B and D would buy only the TV data from the lower-priced supplier at $P_1 = r_1^B (< r_1^D)$ (assuming that P_1 is the equilibrium duopoly price with both BBM and Nielson competing). Even though the fixed costs of entering the market constitute a "natural monopoly" element, in this equilibrium, the elimination of the tied sale reduces consumer surplus by $r_2^B - c_2$ (> 0). Again, mixed bundling facilitates price discrimination. Now, however, with this distribution of reservation prices, surplus is reduced without the tied sale. Of course, the point that price discrimination facilitates a Pareto improvement over "garden-variety" monopoly is an old point. Here, in the context of standardized unit purchases by consumers, mixed bundling can (but need not) improve resource allocation according to the inclusion and exclusion conditions, depending on the distribution of consumer tastes.

If Nielson's entry were conditional on a price level of TV data smaller than r_1^B (on capturing both consumers B and D), then Nielson would fail if bundling were allowed *and* the equilibrium post-entry price for TV data exceeded r_1^B. But Nielson's failure, given the distribution of reservation prices, does not reduce the efficiency of the resource allocation, even though it alters the recipients of the surplus. Our point is to show that we can produce plausible examples that counter the claim that the mixed bundling of BBM in light of the entrant's (Nielson's) continuing losses is invariably inefficient and on these grounds bundling should be disallowed. This is not the case. It is possible to produce other examples where welfare decreases with the tying arrangement. We did just this in our analysis of contestable markets, above. Together with other writers on the subject, we make the more general point that the welfare impact of tied sale is ambiguous.

Further Application of the Economic Analysis

What does our economic analysis tell us about the BBM case? We have labelled the firms in our economic analysis as BBM and Nielson, but do the facts of the case fit this analysis? We believe that the answer is yes. First, the industry appears to be characterized by some economies of scale and scope large relative to the market (RTPC, 1980, p. 32–35). In the presence of flexible retail prices, this suggests that these markets are not contestable, so that our analysis in the above discussion is applicable. Nielson had incurred continuing losses over a sustained period of time.

In the model, the distribution of consumer reservation values across the two commodities required a *negative* correlation across consumers. Is this likely to be the case for consumers of the outputs of BBM and

Nielson? Consumers of radio and TV data are typically advertising agencies. In general, larger advertising agencies place more of both radio and TV advertising. The larger the agency, therefore, the higher we would expect their reservation values to be on both goods. BBM, however, sets its prices so that they vary with gross advertising revenues of the agency. This measure is a good proxy for firm size. Within each size class, therefore, a negative correlation is likely between these reservations values across agencies. Therefore, a necessary condition for the above analysis to be applicable is that there be variation across agencies of equal size in the placement of advertising in electronic media. Within agencies of equal size, do some agencies specialize in TV and others in radio placement? If so, at least a necessary condition is met for our analysis to be applicable.

Our model has inputed a profit-maximizing objective to the firms in the market. BBM is a cooperative. Does this institutional arrangement affect the applicability of our analysis? We think not, for we have argued that as a cooperative, BBM should maximize its surplus subject to at least normal rates of return. If so, tied sale is consistent with the cooperative nature of BBM. However, we have not attempted a precise formulation of BBM's objectives as a cooperative. Nor have we attempted to rationalize the differences in the industry's institutional structure between Canada and the United States. In the United States, the market is serviced by two private specialized firms — Arbitran, a firm specializing in audience data in local markets, and Nielson, a firm specializing in audience data in national markets.

If our analysis is applicable, and if the efficiency of resource allocation is the sole criterion in this case for evaluating pricing practices, tied sale is not necessary socially harmful. There is insufficient evidence in the RTPC's report on the case (1981) to judge whether our necessary conditions are applicable.

From a legal point of view, the relevant section of the Combines Investigation Act is section 31(4)(2), where tied sale is potentially prohibitable if it impedes entry or the introduction of a product or has exclusionary effect likely to lessen competition substantially. In terms of our earlier analysis of entry barriers and tying, mixed bundling would prevent entry. In this sense, competition is lessened. However, if detriment is not interpreted as the number of independent competing firms but in terms of an inefficient resource allocation, tying need not be detrimental.

Chapter 4

Exclusive Dealing

Exclusive dealing (ED) restrictions in vertical contracts surface in two forms — a restriction on retailers imposed by a manufacturer to carry that particular manufacturer's product lines to the exclusion of substitute products, and a requirement restriction on a manufacturer imposed by a downstream firm where the downstream firm purchases the output of an upstream firm to the exclusion of all other buyers. The most frequent and contentious form of ED is the manufacturer's restriction on dealers not to carry substitute products. It is this restriction that has been central to several antitrust cases in Canada and the United States. Obviously, such exclusive dealing restrictions foreclose the retailers or supplier to other agents in the marketplace; the central issue is whether this foreclosure has negative economic consequences for those other agents and for consumers of the products. In other words, can a manufacturer acquire insulation against market forces through these ED requirements? If so, does this protection yield an inefficient allocation of resources?

Legal Status

United Kingdom

Exclusive dealing, like other nonprice restrictions, is subject to a rule of reason in the United Kingdom. Frequently ED and territorial restrictions appear as a package. In return for retailers agreeing to carry the lines of one manufacturer exclusively, they are granted an exclusive territory. In the United Kingdom, ED most recently surfaced in car parts retailing (U.K. Monopolies and Mergers Commission, 1982). We summarize here

the elements of the arguments presented in the U.K. car parts report as an illustration of the position of the Monopolies and Mergers Commission (MMC) on exclusive dealing.

Car dealerships in the United Kingdom and elsewhere are typically, although not exclusively, franchise (profit-sharing) arrangements where dealers agree to carry exclusively the brand name products for car repairs. As our previous section on tied sale indicates, exclusive dealing in the sale of car parts could be studied as a tied-sale issue — both cars and their replacement parts (including servicing) are sold at the same franchised retail outlet. Once car warranties have expired, car owners have some incentive to shop more carefully across branded outlets and independent garages possibly using substitute parts manufactured by independent firms. In the United Kingdom, pressure was brought on the Secretary of State by those independents to investigate the alleged anticompetitive feature of the franchise contracts requiring dealers to carry exclusively the parts of their sponsoring car manufacturers. Not surprisingly, any move to delete such clauses was opposed by car manufacturers. The decline in car sales in the United Kingdom through the middle and late 1970s was accompanied by a growth in demand for car parts as consumers maintained their automobile and truck stock over a longer period of time. At this time, therefore, there was a struggle between independents and major manufacturers over market share in this growing market.

Some franchisees also supported the efforts of the independents to have the MMC declare illegal the exclusive dealing restrictions in franchise contracts. The reason for this is straightforward. There is no need to assume any qualitative difference between the parts supplied by the manufacturer and those supplied by the independent. Franchisees complained that from their point of view, manufacturers' use of exclusive dealing clauses caused them to overstock parts inventory. Their preference would be to stock less and buy whenever they needed parts, from independent firms where possible. This reflects a vertical externality between car manufacturers and their dealers.

To the extent that the price charged dealers for the parts is above the marginal production costs, dealers have an incentive to stock less inventory (supply less quality) than the manufacturers would find in their profit-maximizing interests. Furthermore, to the extent that consumer demand for repairs represents a transient demand, say from travellers or vacationers, then the incentive to stock parts is further eroded as any depreciation in the national brand name because of the unavailability of parts at a particular location accrues to other (both current and future) dealers in the system.

Car manufacturers made the argument that consumers have a choice — they can return to the branded dealers for repairs with branded parts or they can go to the independents. The branded dealer

represents a known quality associated with the brand name; the national brand name is a signal for consumers. Alternatively, consumers can go to independents, who presumably charge lower prices. Consumers now choose between independent and franchised outlets for subsequent repair. Those consumers who return to the sales outlet do so because of positive brand name effects. Therefore, in the presence of considerable choice, exclusive dealing, while obviously in the interests of the manufacturer, does not appear to be against consumers' interests.

MMC rejected these arguments, concluding that they were against the public interest. They recommended "that car manufacturers and importers should be required to exclude from their franchise agreements any clause having the effect of requiring franchisees to buy car parts exclusively from them or from sources approved by them and to cease enforcing any such clauses in current franchise agreements" (U.K. MMC, 1982, pp. 50–51). In spite of these changes, the MMC recognized that "even in the absence of any formal requirement to buy parts exclusively from car manufacturers and importers, it is virtually certain that franchised outlets could in practice continue to buy mainly from them" (ibid., p. 50). The reason is that consumers would continue to demand branded parts.

If there are no changes, why should manufacturers care if ED enters the contract? Alternatively, why should the MMC wish to disallow the practice? Based on our arguments about ED in this case, we make a prediction: with no other changes, dealers will carry a lower inventory of parts because of parts-forcing (due to double marginalization) and possible free-riding on the brand name (due to transient consumers). Car manufacturers and importers will, however, be aware of these influences in contract design. Such effects may be partially but not totally offset by lower parts prices and higher franchise fees. We allege that such arrangements will compensate only partially for the potential unbranding of the car parts. As a result, resource efficiency will worsen.

United States

As in the United Kingdom, exclusive dealing is subject to a rule of reason but may in some cases be in violation of section 1 of the Sherman Act, section 3 of the Clayton Act, or section 5 of the Federal Trade Commission Act when ED substantially lessens competition. There appear to be no clear lines of illegality on the following three issues (see Pasahow, 1982, pp. 84–98).

- What constitutes a substantial lessening of competition or tendency to create a monopoly?
- Where is the line drawn between ED and tying?

- What constitutes a condition, agreement or understanding not to deal in the products of competing firms?

There are several key U.S. cases — *Standard Fashion v. Magrane-Houston Co.* 258 U.S. 346 (1922); *Standard Oil Co. of California v. U.S. 337 U.S. 293 (1949)*; *Tampa Electric Co. v. Nashville Coal Co.* 365 U.S. 320 (1961); *Brown Shoe v. U.S. 370 U.S. 294 (1961)*; and more recently, *FTC v. Beltone Electronics Corp.* (Dkt. 8928) 3 CCH Trade Re. Rep. 21,934 (1982). *Tampa Electric* was a requirements case involving a 28-year contract for the provision of coal between Tampa Electric (an electric generating company) and Nashville Coal (a supplier of coal); approximately 7.7 percent of the relevant coal market was involved in the contract. The court held that the contract was not illegal, since neither a dominant seller nor myriad outlets with substantial sales volume were involved. The other cases involve restrictions placed on retailers by manufacturers; the issues centred on the magnitude of the foreclosed retail market to other manufacturers because of ED restrictions. In the *Standard Fashion* case, the court's estimate of the foreclosed market was 6.7 percent, sufficient for foreclosure in the court's judgment. In *Brown Shoe*, more than 650 dealers were restricted to selling Brown shoes against the competition, again a sufficient restriction for foreclosure according to the court. In the *Beltone* case, the FTC estimated that Beltone's ED policy affected 16 percent of market sales and 7 to 8 percent of the dealers. For the *Beltone* case, however, the FTC found no restraint of trade because: (a) interbrand competition was vigorous; (b) there was new entry into the market; (c) most firms in the market did not use ED; and (d) the FTC could find no effort by Beltone to use ED to further any anticompetitive objectives of the distributors.

In ruling on ED, the U.S. courts appear to consider several factors: (a) market share of the manufacturer enforcing ED; (b) value of sales for the manufacturer enforcing ED; (c) relative size of the contracting parties to the other competitors in the market; (d) justification for ED; and (e) ease of entry into the market.

Canada

In Canada, the section of the Combines Investigation Act dealing with ED is subsection 31(4), the same subsection that deals with tied sale. As well, the test for a cease-and-desist order for ED by the RTPC is identical to the test for tied sale — that ED impedes entry or expansion, impedes the introduction of a new product, or has any other exclusionary effect to lessen competition substantially.

ED has surfaced recently in Canada in two cases, both before the RTPC — *Bombardier*, decided in 1980, and an inquiry into the oil industry. Because the charges in the oil industry involve a large number of

industry practices in addition to ED, we focus on the *Bombardier* case in our analysis.

Some relevant institutional facts are these. Bombardier, a Canadian company begun in the mid-1930s, sells, among other products, two lines of snowmobiles and snowmobile accessories — Ski-Doo and Moto-Ski. The company developed the snowmobile products; the early 1970s witnessed a growth in the demand for snowmobiles that was accompanied by entry into the market (about 75 manufacturers produced snowmobiles in the early 1970s); the late 1970s witnessed both a fall in demand and the departure of several firms from the market. Both Ski-Doo and Moto-Ski franchise contracts had exclusive-dealing clauses forbidding dealers to carry substitute snowmobiles from competing manufacturers.

The contested market in this case was Ontario, Quebec and the Maritime provinces. In this region, competing manufacturers had in their contracts either exclusive-dealing restrictions that they did not enforce (Yamaha) or no exclusive-dealing restrictions (Arctic Enterprises, Kawasaki, Polaris, John Deere). Bombardier had 60 percent of the retail sales in snowmobiles in Quebec and the Maritimes, and 40 percent of the market in Ontario. For this market, Bombardier was considered a major supplier. This market area represented 20 percent of North American sales, and Bombardier had approximately 50 percent of these sales, so that the RTPC argued that the long-run viability of competition in the industry was not at issue.

Because antitrust law is criminal law, the Crown, as opposed to private economic agents, must initiate legal proceedings. Therefore under anticombines legislation, aggrieved private agents can only complain to the Bureau of Competition Policy. In this case, the complainants were eight Bombardier dealers, and their franchises were cancelled. Several features of the contract and the retail network are relevant to our analysis, which follows. Franchise contracts terminated each year, so that competition for existing dealers was an important feature of competitive rivalry among distributors. Furthermore, the RTPC's analysis in *Bombardier* suggests that there was a minimum viable dealer size, implying that retailers may have at least local price-setting powers; with open entry into the industry, these retailers should, however, earn only normal rates of return. In other words, the retail market was Chamberlinian. The dealer network was important, since each distributor's dealer brand name identification included service and parts sales as well as retail sales of snowmobiles.

In this case, the Bureau of Competition Policy sought to have the RTPC prohibit Bombardier from continuing to enforce ED on its retailers. The RTPC dismissed the case, arguing that entry at the retail level was easy. Furthermore, the evidence was that while some manufacturers failed, others who survived and grew did not uniformly enforce ED. Bombardier used ED while the other surviving firms did not. The

RTPC does not report whether in its opinion the ED practices of Bombardier were critical in the death of the non-surviving manufacturers. Foreclosure is the key here, and the RTPC found implicitly that ED by Bombardier did not foreclose the retail market to competitors.

In the sections that follow, we first review recent papers analyzing the economics of ED and then present a simple analysis of our own to illustrate that even when the model is biased against ED, we cannot demonstrate that ED invariably constitutes a welfare-reducing barrier to entry. In this strong case, the assumptions incorporate several key features of the Bombardier case. Thus, our analysis tends to support the RTPC decision in this case.

The Economics of Exclusive Dealing

The ability of firms to foreclose markets to the detriment of their rivals through ED is at the heart of the economics of ED. Those in favour of stricter antitrust control of ED see this ability as substantial and damaging; those in favour of no control of ED see the foreclosure argument as vacuous.

The existing economic theories on ED stand in sharp contrast. In Marvel (1982) ED is thought to protect the quasi-rents of advertisers from misappropriation by free-riding producers of substitute products. The story is similar to Telser's defence of resale price maintenance discussed earlier. For example, in the *Standard Fashion* case, a manufacturer of dress patterns (Standard Fashion) invoked ED on its retailers. Marvel argues that in each year only a small proportion of dress patterns were successful. Fashion is difficult to predict in advance. In the absence of ED, competitors of Standard Fashion could easily copy the successful patterns and sell them to retailers, avoiding the costs associated with unsuccessful lines. In this argument, competitors used Standard Fashion to determine demand and avoid costly production.

As well, ED is frequently enforced by large life insurance firms that advertise substantially and maintain a large sales force. (In Canada, historically, this practice was enforced by single-company sponsorship provisions in the various provincial life insurance acts.) The argument is that such informing life insurance firms signal the product's existence and characteristics to consumers, who then seek out an agent for purchasing the product. If the agent represents non-informing life insurance firms as well, then these firms could underprice the informing firms and capture the consumers, thus free-riding on the advertising efforts of the informing firms. In both of these examples, ED protects the quasi-rent stream on the sunk informational investment and therefore ED is efficient.

In contrast, with economies of scope at the retail level, Comanor and Frech (1985) argue that ED is potentially anticompetitive. Comanor and

Frech consider a world with an incumbent manufacturing firm and an entrant. They claim that ED imposed by the incumbent firm has the advantage of permitting that firm to raise its limit price. The structure of this model is relatively simple: suppose that retail technologies display economies of scope and furthermore that there are two classes of consumers — those who value the incumbent's product at a premium and those who see the incumbent's and the entrant's products as perfect substitutes. This latter condition means that the two products have different demands at identical prices (different market sizes) but that the two products are highly substitutable (have high cross-elasticities). The firm's demand conditions are asymmetrical and therefore their sustainability conditions are asymmetrical. In this world, the limit price that forecloses entry can be raised if ED is invoked, for ED means that scope economies are unrealized by both firms. The incumbent that enjoys greater demand, however, can sustain these additional costs, for the advantage is to eliminate a firm producing a highly substitutable product.

In a setting virtually identical to Comanor and Frech, Bork (1978, p. 327) arrives at the opposite conclusion. In a one-retail-outlet town (the extreme case, where fixed costs are so large relative to the market that only one retail outlet is sustainable), Bork argues that the retailer acts as an agent for the consumer. Manufacturers would have to bribe the single retailer to carry their product exclusively. To do so, they would be forced to lower their wholesale price to confer at least quasi-rents on the retailer and benefits on the consumer. Manufacturers would pursue ED if the increase in demand more than compensated for any reduction in wholesale price; retailers would agree to ED only if the reduction in prices more than compensated the consumer for the restriction on the consumer's choice set. Otherwise, the retailer's profits would be lowered and the retailer would decline the ED contract. Private and social interest are synonymous; ED is procompetitive.

In our view, Bork raises the critical issue of the impact of potential competition on equilibrium prices in a world where one player can invoke ED contracts. Manufacturers compete with wholesale contracts. Any ED contract put to a retailer must involve concessions by the manufacturer to the retailer, or the retailer will reject the ED contract and carry only the products of the non-ED manufacturers. In our view, the impact of potential competition with ED contracts relative to non-ED settings is uncertain; wholesale and retail prices may rise or fall with ED. The direction of the change depends on the retailer's pre- and post-ED profit levels. Clearly, with a restriction in product choice, retail price reductions are necessary for improvements in consumer welfare. In general, ED has the potential to be either pro- or anticompetitive. Sorting out the moves in the manufacturer-retailer contract game is the key to the resolution of the issue.

Equilibrium Model of Exclusive Dealing

Following Bork (1978, p. 327), we analyze a one-store town — a retail market where the fixed costs of multiproduct retailing are sufficiently large that the market in question supports only one outlet. Retailers have price-setting powers in such circumstances. For example, the bulk of the retail sales in the *Standard Fashion* case in the United States came from one-store markets. In this 1922 case, Standard Fashion Co. supplied dress patterns only to retailers who agreed not to handle the patterns of other firms. No doubt mail-order retailers provided substantial retail competition even in towns with only one retail outlet. Nevertheless, along the lines of the *Standard Fashion* case, it is instructive here to postulate an extreme monopoly position at the retail level to demonstrate the potential benefits of ED under even these conditions. Furthermore, these conditions are consistent with the Comanor-Frech analysis, where retailers face economies of scope across product lines; fixed (sunk) set-up costs for retailers alone would generate such economies. Retailers selling dress patterns in the *Standard Fashion* case were local multiproduct retailers (e.g., dry goods stores).

We restrict our attention to two upstream manufacturers who produce (not necessarily perfect) substitute products sold in these multiproduct retail outlets. A manufacturing duopoly constitutes a limited degree of product competition. Some competition at the manufacturing level for the individual retail sites is the critical force behind any potential welfare improvements through ED. A manufacturing duopoly represents a minimum level of upstream competition. Again, the bias is against benefits from ED.

Final retail prices set by individual retailers are denoted by P^i $(i=1,2)$ and corresponding demands are $q^i(P^1,P^2)$ $(i=1,2)$. We restrict our attention to a single retail market. Manufacturers are assumed to face identical cost conditions and for convenience these common costs are assumed to be zero. Manufacturers have two potential instruments available to market their products. First, each manufacturer selects a wholesale price W^i $(i=1,2)$ (a continuous instrument). Second, each manufacturer decides whether to enforce ED upon the single retailer (a discrete instrument); $\delta^i=1$ if ED, 0 otherwise. In this setting, the contracts offered by each manufacturer to the retailer are described by (W^i,δ^i). Contracts offered by the manufacturers, however, may be refused by the retailer. This power to select among competing contracts constitutes a discrete monopsonistic element for the retailers.

For example, one manufacturer may offer a wholesale price with the product available to the retailer only under ED. The retailer may refuse the contract and instead carry the product of the second manufacturer under conditions tantamount to ED — i.e., in a manufacturing duopoly, the retailer would carry exclusively the other manufacturer's product.

The manufacturers compete with each other via their contracts. Nor is the specification inappropriate if the manufacturers enter sequentially, provided the contracts are short-lived. In the *Standard Fashion* case, the contracts ran for two years with half of the contracts up for renewal each year. This represents substantial annual competition for the favours of retailers; these markets are contestable.

The first issue is to demonstrate necessary and sufficient conditions for ED in this market. Some additional notation is necessary. In general, denote the profits of the retailer by $R(\cdot)$ and the manufacturer by $\pi^i(\cdot)$ $(i = 1,2)$ with a potential subscript to indicate the respective profits under an ED regime for a particular product. For example $R_1(\cdot)$ is the retailer's profit if the retailer sells exclusively the output of the first manufacturer. Variables denoted by $\hat{}$ are equilibrium values under ED; otherwise, solution values are without ED. The sole variable costs faced by the retailer are the wholesale fees paid to the manufacturer.

The equilibrium in this market without ED is Bertrand-Nash; the resulting wholesale prices are (W^1,W^2) and retail prices are (P^1,P^2). The single retail firm selling both products endogenizes the cross-demand (substitution) effect in setting the final retail prices. The upstream manufacturers are conventionally Bertrand. No single retailer in the non-ED game has any conventional monopsony power. While each retailer has a local monopoly, there are a large number of independent retail markets, so that each retailer knows its size is limited relative to the entire retail market.

The sequence of moves by the players is identical in the non-ED and ED game. The one element of monopsony, however, arises only in the ED game. Given that we assume a limited duration of the ED contract (e.g., two years in the Standard Fashion contract), the wholesale price and the exclusivity clause in these contracts are equally flexible. In particular, upstream manufacturers do not foresee wholesale price competition occurring after any ED arrangements are established. The discrete monopsony element arises when the retailer is allowed to choose across the competing contracts after the manufacturers offer their contracts.

In a perfect Nash equilibrium, the manufacturer invoking ED recognizes that its choice must dominate the offer of its rival. To illustrate, suppose firm 1 imposes ED in its retailing contracts. Then with zero marginal and total costs, firm 2 makes its best offer at $\hat{W}^2 = 0$. In other words, in an effort to capture the retail market, firm 2's best offer is to transfer completely any potential rents from this market back to the retailer through a lower wholesale price. The corresponding ED contract for firm 1, given by $(\hat{W}^1,1)$, is defined by $R_1(\hat{W}^1) \equiv R^2(0)$ as a necessary condition. This condition simply tells us that firm 1 will impose ED only if the ED contract succeeds in capturing the retail market for firm 1. As an equilibrium feature, the bidding away of rents by firm 2 as this firm

curries the favours of the retailer is analogous to the dissipation of rents through a competitive auction process by the successful firm under natural monopoly conditions in a Demsetz auction (1968). An additional necessary condition is, of course, that the first firm have a profit incentive to invoke ED, $\pi^1(W^1,W^2) \leq \pi^1(W^1)$. These two conditions together constitute sufficient reason to observe ED contracts by firm 1. Symmetrical conditions could be defined for firm 2 to be the successful initiator of the ED game.

Provided ED is worthwhile, the successful firm is the firm that can afford the larger bribes to the retailers. In other words, should the competitor attempt to match the rent transfers of the successful firm that still finds the practice of ED worthwhile, the competitor would be bankrupt. To observe ED in this model, therefore, firms must be asymmetrical. Otherwise, competition through ED between symmetrical upstream duopolists would dissipate profits completely. ED would then be an attractive strategy to neither firm and would never be observed. In a world with identical (costless) production, assymmetries must flow from demand features — the products cannot be perfect substitutes for all consumers, a feature common with Comanor and Frech (1985).

Notice that in this model, the local retail market is completely foreclosed to the unsuccessful manufacturer. Were the entire retail market a series of such locally independent one-store towns, ED contracts would foreclose the entire retail market to the unsuccessful competitor. In this case, the impact of ED upon the final retail market is entirely through potential competition. In fact, we do not expect complete market foreclosure to flow from ED contracts. Such contracts may foreclose a particular distribution channel for the unsuccessful firm but leave open possibly inferior alternatives. This would serve to lessen the damage from ED; again, our model is biased against benefits from ED.

Relative to the Bertrand-Nash equilibrium, the successful firm's wholesale price could rise or fall in the ED equilibrium. A necessary and sufficient condition for the successful firm's wholesale price to rise is $R(W^1,W^2)>R_1(\hat{W}^1)\equiv R_2(0)$. In words, this condition tells us that if the profits to the retailer in the (non-ED) Bertrand-Nash equilibrium exceed those to the retailer under the equilibrium ED contract (the best wholesale offer from the unsuccessful firm), then the successful ED competitor can invoke ED, *raise* its wholesale price, and still capture the retailer. Obviously, with a higher wholesale price and a larger demand captured through ED, the profits of the successful ED firm increase; ED is, more conclusively, privately worthwhile. In this case, the rent flow is reversed; the ED firm captures rents that formerly accrued to the retailer in the Bertrand-Nash equilibrium.

It is immediately apparent that consumer welfare is altered through two effects. First, profitable ED restricts the choice set of the consumer. Second, the price of the successful firm's product may rise or fall. In fact,

the direction of the change in the final retail price depends upon two effects. First, a drop in the wholesale price obviously reduces the final retail price. The elimination of the competition from the local market, however, not only shifts the successful ED firm's demand curve to the right but decreases that firm's demand elasticity. *Ceteris paribus*, this change mitigates in favour of higher retail prices. (Both of these effects are summarized in our retail profit condition for an increase in the manufacturer's wholesale price.) Provided that one firm finds ED profitable, a necessary condition for ED to be welfare-improving is that the final retail price must fall. In terms of our welfare effects, consumers must be more than compensated for a reduction in their choice set by a sufficiently large fall in price of the remaining product.

We may now answer our initial question. Bork's policy statement (1978, p. 307) must be qualified. Private and social interests in ED do not coincide: a retail price rise and a restriction in consumer choice would leave consumers unambiguously worse off, but they are feasible outcomes of privately profitable ED restrictions. ED is not invariably welfare-increasing. As well, Comanor and Frech's (1984) result must be qualified. Private and social interests in ED *may* intersect: a retail price fall and a restriction in consumer choice could simultaneously improve consumers' welfare and the profits of the successful firm. In both cases, the unsuccessful firm earns zero gross revenues, the opportunity cost of its resources. Counter to Comanor and Frech, in a world with possibly substantial economies of scope but with short-lived contracts (factually consistent with ED contracts), potential competition for the unique retailers disciplines the price-setting, rent-seeking actions of the manufacturers. In the language of antitrust law, the call, even in this extreme model, is for a rule of reason as opposed to a per se rule.

The multiproduct nature of the locally monopolistic retailer is critical for another reason. Multiproduct retailers, where these product lines are substantial in number, would find prohibitive the transactions costs of many two-part (or multi-part) wholesale contracts. The elimination (infeasibility) of such contracts is crucial to our result. In our model, ED is a contractual device designed to facilitate the capture of a retailer through rent transfer (possibly a negative rent transfer from the retailer); the only instrument available to effect this transfer is the wholesale price. Under ED, the wholesale price must serve two objectives — the elicitation of the profit-maximizing flow of output and the profit-maximizing marketing network through the transfer of rents between manufacturer and retailer. Consumers benefit only when the rent transfer is from the manufacturer to the retailer with the indirect pay-off to the consumer of (sufficiently) lower retail prices. The process of capturing rents by the ED manufacturer dissipates some of the joint (manufacturer-retailer) Bertrand-Nash equilibrium rents to the advantage of consumers. Should the manufacturer have two price instruments — a lumpy one

for rent transfer and a marginal one for product flow — this would not be the case. Such two-part wholesale price schemes (a franchise fee and a wholesale price) are characteristic of single-output retailers (such as gasoline retailers, hearing aid retailers, snowmobile retailers, all the subjects of ED legal cases). In this world, two-part wholesale prices could achieve a vertically integrated solution so that ED would have no impact on retail prices in a model such as ours. (The analysis of ED in such a world appears in Mathewson and Winter, 1984b.) In general, further insight is gained through pseduo-empirical calculations, the subject of the next section.

Welfare Pseudo-Empirics

The general welfare effects are straightforward and have already been stated. To summarize, if the best ED offer from the unsuccessful manufacturer leaves retailers with smaller rents than the (non-ED) Bertrand-Nash equilibrium, the wholesale prices and retail prices rise, the consumer is worse off, and welfare losses ensue. If, however, the best ED offer from the unsuccessful manufacturer leaves retailers with larger rents than the (non-ED) Bertrand-Nash equilibrium, the wholesale prices fall; if retail prices fall sufficiently, (the drop in wholesale prices overwhelms the fall in the price elasticity of the succeeding firm's demand curve so that retail prices fall), then consumers are more than compensated for their restricted choice set and welfare is improved.

Our understanding of these effects is enhanced through a linear demand example. With an appropriate selection of units, we characterize the retail demand curves facing each firm as: $q_1 = 1 - p^1 + cP^2$ and $q_2 = 1 - bP^2 + cP^1$. This parametrization is convenient, since b captures the size of demand for q_2 relative to q_1. For example, $b \geq 1$ implies that the market for q_2 is smaller, or firm 1 is the "dominant" firm. The parameter $c > 0$ captures the degree of substitution between the products.

This parametrization is also useful because it permits a comparison with the Comanor-Frech model (1985). In their model, some consumers view the two products as identical while others attach a constant premium to their reservation values of one product. If q_1 is the "superior" product for these consumers, then the Comanor-Frech demand specification emerges if $c = 1$, $b > 1$ where $(1/b)$ reflects the number of consumers who hold that q_1 is "superior" and the size of the premium they are willing to pay for the "superior" product over the product.

In our model, ED corresponds to setting the price of the excluded product at a "choke" price. Such a price is the minimum price where demand for that product is zero conditional on the price of the other product. More generally, the demand system incorporating "choice" prices may be written as:

$$q_1 = 1 - P^1 + c \cdot min(P^2, (1 + cP^1)/b),$$

$$q_2 = 1 - bP^2 + c \cdot min(P^1, (1 - cP^2)).$$

Consumer surplus measures corresponding to these demand equations are written as $CS(P^1,P^2)$.

The following calculations were then made for the range of parameter values $10 \geq b \geq 1$, $1 \geq c \geq 0$.

- Bertrand-Nash (non-ED) equilibrium: $\pi^i(W^1,W^2)$ (each manufacturer's profits); $R(W^1,W^2)$ (the retailer profits in a one-store town); $CS(P^1,P^2)$ (corresponding consumers' surplus).
- ED equilibrium: $(W^1,1):\pi^1(W^1)$ (manufacturer's 1's profits with ED); $R_1(W_1)$ (retailer's profits with ED contracts on product 1); $CS(P^1)$ (consumers' surplus with product 1 exclusively available at the one retailer).

Comparisons on the private and social incentives for ED require a comparison of manufacturer 1's profits and the sum of consumers' plus producers' (retailer and manufacturer) surpluses under the two regimes. The respective private (PI) and social (SI) indices are defined as:

$$PI \equiv [\pi^1(\hat{W}^1)/\pi^1(W^1,W^2)],$$

and

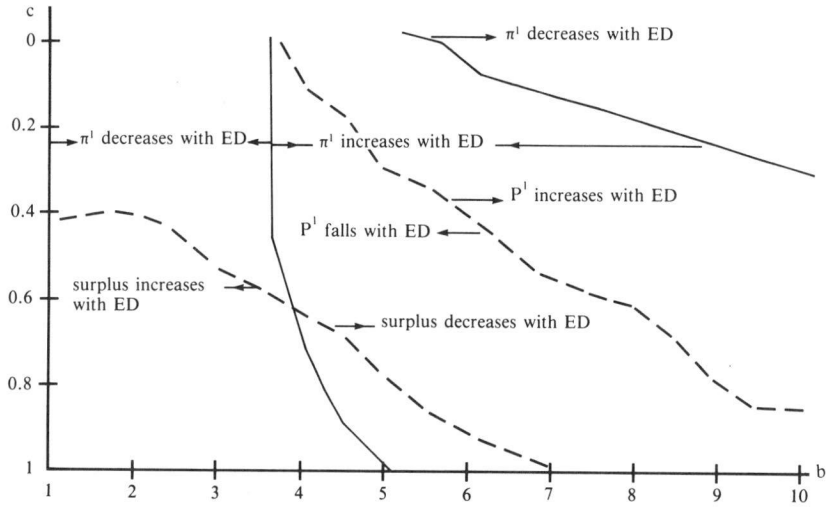
$$SI \equiv [(CS(\hat{P}^1) + R_1(\hat{W}^1) + \pi^1(\hat{W}^1)) / (CS(P^1,P^2) + R(W^1,W^2) + \pi^1 \ (W^1,W^2) + \pi^2(W^1,W^2))]$$

A private incentive exists for invoking ED if $PI(b,c) \geq 1$; a social incentive exists if $SI(b,c) \geq 1$. Figure 4-1 illustrates the set of contours for which $PI(b,c) = 1$ and $SI(b,c) = 1$.

As we now expect, contrary to Bork, the intersection of $PI(b,c) = 1$ and $SI(b,c) = 1$ is not the union of the two sets; contrary to Comanor and Frech, neither is the insection the null set. If we take the Comanor and Frech demand conditions $c = 1$, then we maximize the likelihood that the private and social incentives coincide.

The parameter space (b,c) in Figure 4-1 is divided into regions where ED is both a profitable strategy for firm 1 and a socially desirable strategy. In general, the figure offers a reasonable interpretation. An understand-

FIGURE 4-1 Private and Social Incentives for ED



ing of the private and social desirability for the practice emerges if we fix one parameter and then examine the incentives as the second parameter changes. First fix *c*, the degree of substitutability (say at .8). Consider, first, the private incentives for ED. There is a maximum size of the competitor's market to make ED for firm 1 a profitable venture. The rationale lies in the size of the bribe to the retailer that is required for exclusivity. If *b* is sufficiently close to 1 (the market for product] is sufficiently close to the market for product 1), then the bribe to the retailer necessary to meet firm 2's best ED offer is sufficiently large that Bertrand-Nash profits dominate ED profits for firm 1 (wholesale prices with ED fall relative to Bertrand-Nash in this range of *b*). Consider a second *c*,; for *c* sufficiently small (say .2) (low degree of substitutability), the profit-decreasing region of ED contracting is not continuous. As *b* increases from 1 (firm 2's market falls relative to firm 1), ED contracting involves eventually a wholesale price rise for firm 1 as firm 2's best ED offer constitutes a reduction in the retailer's profits relative to the Bertrand-Nash equilibrium. With *b* sufficiently large, the effect on firm 1's profits of the additionally captured consumers no longer warrants the wholesale price increase relative to the non-ED Bertrand-Nash equilibrium profits.

Now consider social incentives for ED. With *c* again at .8, the required reduction in wholesale prices through firm 1's ED contract offers (matching firm 2's best ED contract) are sufficiently large that consumer welfare plus producers' surpluses increase. Eventually, as *b* increases, the required bribes to the retailer fall sufficiently that the price reduction fails to offset for the consumer the restriction in the choice set.

Now fix b, the relative market size of the two manufacturers (say at 4). As c, the degree of substitutability, falls from 1 (i.e., the degree of competition is reduced), the wholesale price reduction (required for firm 1 to capture the retailer through ED) falls. Eventually, the retail price reduction is sufficiently small that capturing the market through ED contracts is profitable for firm 1. Still further reductions in the bribe to the retailer as c continues to decline produce retail price reductions that are incapable of compensating consumers for their restricted choice, and welfare declines.

In general, contrary to Comanor and Frech, the intersection of the space of profit-improving and welfare-improving parameters is not empty. In the absence of any information on the distribution of parameters, we can say little on the likelihood of events. Other differences between the manufacturers can affect Figure 4-1. For example, possible differences in both marginal and fixed costs for players in this market game obviously alter both the profit-maximizing and welfare-improving regions.

Application of the Economic Analysis of ED

We first consider two U.S. cases appropriate for our framework — *Standard Fashion v. Houston-Magrane Co.* (discussed briefly earlier) and *C.R. Laurence v. General Electric* (General Electric produced silicone sealants which it sold to its distributors including C.R. Laurence under ED conditions; Laurence stocked an entrant's substitute product, was terminated and sued General Electric; further details appear in Comanor and Frech). In both cases, the competing products in the market were highly substitutable (*c*s were low); in both cases, the retail outlets were multiproduct and exhibited certain economies of scale and scope that were large relative to the local market. Bork (1978) argues that ED by Standard Fashion was invariably price-reducing and welfare-increasing. Comanor and Frech argue that ED, successfully enforced by General Electric against distributors such as C.R. Laurence, was an entry barrier that foreclosed important markets to some entrants, bestowing increased profits on ED incumbents and welfare losses on consumers. In terms of Figure 4-1, there is possibly discriminating evidence under the appropriate experimental conditions. If the retail price of Standard Fashion's dress patterns fell after the courts struck down the ED clauses in Standard Fashion's contracts, then, driven solely by the strategic retail aspects of our model, welfare falls with ED. In the *C.R. Laurence* case, if the presence of a rival supplier of silicants to General Electric caused GE to lower its wholesale price to capture the contested downstream distributors who, in turn, lowered their prices, then welfare could increase with the successful enforcement of the ED clauses, even if entry is foreclosed.

Next, we reconsider the Canadian *Bombardier* case. As we discussed earlier, the RTPC dismissed the request of the Bureau of Competition Policy for an order prohibiting Bombardier's continued use of ED. Several institutional features of our analysis are consistent with this case; other features of our analysis are excessively biased against ED relative to the institutional facts. In the *Bombardier* case, the competing products were in existence so that, as in our analysis, ex ante arguments about the protection of a quasi-rent stream through ED that is sufficient to underwrite product development are inapplicable. Casual observation suggests that the competing products are highly substitutable (*c*s were high); Bombardier had the largest market share (RTPC 1981, pp. 36–37), an observation consistent with our model ($b>1$).

The RTPC (1981, p. 38) argued that the market in question represented approximately 10 percent of the North American market and, furthermore, that retailer contracts lasted for only one year, and that "competition for dealers is an important form of rivalry among distributors." This potential competition constitutes the driving force behind the potentially beneficial effects that emerge from our formal analysis.

The RTPC (1981, p. 39) argues further that entry at the retail level is easy. This contrasts with our model, where entry was difficult (impossible). Easier entry only mitigates in favour of an enhanced case for the social benefits from ED. One feature not developed in our model but at the heart of Marvel's (1982) analysis is the protection that was afforded Bombardier through ED against the opportunistic behaviour of competing firms as they attempted to have Bombardier's retailers carry their products and thus free ride on Bombardier's sunk investment in dealer recruitment. Again, this rules in favour of permitting ED contracts when they are privately attractive.

If the criterion should be to minimize the error of rejecting ED when it is socially beneficial, then our analysis augmented by easy retail entry and Bombardier's investment in dealer recruitment supports the RTPC's decision.

Chapter 5

Policy Implications and Conclusions

This study analyzes the economics of a number of vertical restraints imposed by manufacturers on the retailers who are distributing their products. Each of the major sections of our study focusses on one type of restraint — resale sale price maintenance, exclusive territories, tied sale, and exclusive dealing. In each section, we sort out the various incentives for the imposition of the specific contractual restraint and delineate the welfare implications for each motivation. Where possible, we offer testable propositions and observations to distinguish the potential that each of the restraints has to enhance or to diminish efficiency. The impact and economic wisdom of the Canadian laws on each restraint are assessed in light of the analysis. Has the Canadian treatment of each restraint, historically at least, enhanced the efficiency of resource allocation? We hasten to add that we have not evaluated the political economy of the Canadian record. (In general, policies that apparently diminish the efficiency of resource allocation may have political survival value.) What are the specific observations associated with our analysis?

In terms of cases before the courts and the RTPC in Canada, the predominant constraint is resale price maintenance (RPM). We evaluate here three private incentives for RPM: a manufacturer cartel across a set of nearly identical products; a cartel among the retailers of a common set of products; and the use of RPM by a single manufacturer to enhance nonprice aspects to the demand for a product.

A manufacturer cartel might use RPM as a cartel-facilitating device, an instrument to stabilize the cartel by allowing price-fixing at the retail rather than at the wholesale level, which is difficult to monitor. If this is the case, the prohibition of RPM, or of any facilitating device, will enhance efficiency. The test of the manufacturer cartel hypothesis in

observed RPM cases is that the prices for all products in the relevant market are maintained at the same level (i.e. that there is no price chiselling) and that the standard institutional conditions for a manufacturer cartel are satisfied: a small number of producers, nearly identical products with a stable product set, and barriers to entry (including significant tariffs). The manufacturer cartel explanation was invoked in some U.S. cases, and we argue that the *Large Lamps* case in Canada (heard before the RTPC) involved a product cartel. To the extent that RPM efficiently facilitated the cartel, its prohibition has likely increased economic efficiency.

But those conditions necessary for a manufacturer cartel are violated for the vast majority of RPM cases in Canada. The typical Canadian case has a lone manufacturer using RPM, in which case the producer cartel hypothesis may be rejected immediately. In short, the relevant policy point is that whenever RPM facilitates a cartel, it should be prohibited; such cases are easy to identify but seldom arise — they are the exception rather than the rule.

The possibility of a retailer cartel coercing a manufacturer to aid cartel stability through RPM is a contentious issue in the economics of RPM. Some argue that this hypothesis is historically the most important explanation of RPM. Proponents of the "efficiency school" of vertical restraints dismiss this hypothesis, since there are invariably dozens of retailers of most fair-traded products and many manufacturers of substitute products. Such numbers mean high monitoring costs and therefore a correspondingly high incidence of price chiselling. We attempt here to resolve this apparent dilemma. We assert that those rejecting the retailer cartel hypothesis have ignored, as a historical explanation of RPM, the sunk costs in retailing and the implied quasi-rent streams that are earned by "traditional" retailers. The historical emergence of RPM as a means of protecting these quasi-rents by delaying the entry of discount stores cannot be rejected on the basis of the available evidence. Of course, sunk investments do not last forever, so that RPM in this explanation is at best a delaying tactic for the inefficient retailers. Nevertheless, the prohibition of RPM by facilitating earlier entry of more efficient retailers would improve welfare.

This argument is less relevant today, however, when discount stores are a well-established institution in most consumer markets. In any case, this hypothesis offers a clear, testable implication — the manufacturer of the fair-traded product should be worse off under the RPM agreement. The manufacturer is an unwilling accomplice but agrees only if the established retailers have monopsony power. The application of this test to one Canadian case, *Matsushita*, demonstrates its policy usefulness.

The most important conclusions of the RPM section concern the role of RPM in increasing the profits of a single manufacturer by altering the mix of price and nonprice determinants of demand for the manufac-

turer's product. An error reflected in many court decisions and some policy discussions is that reduced price competition at the retail level, *ceteris paribus*, benefits a manufacturer. In fact, a single manufacturer will implement a higher retail margin *only* in return for an increase in some nonprice demand determinant. Neither the Canadian courts nor the RTPC has been given the legal mandate to regulate directly the service, quality or advertising intensity of vertically integrated manufacturers. One policy position argues that these same institutions, therefore, should not attempt to regulate these variables when they are established indirectly via RPM — single manufacturers should be free to choose the retailing environment that they consider to be the most efficient.

We are sympathetic to this position and we carry the analysis a significant step further by considering five specific motivations for RPM by a single manufacturer, and for these, investigating formally the relationship between a manufacturer's willingness to trade off higher retail prices for greater product information, quality or availability, and society's willingness to accept the same trade-off. Our general finding is that the private desire to effect such a trade-off through price restraints signals the social efficiency of RPM.

An examination of a sample of Canadian cases on RPM reveals that the single manufacturer or "efficiency" hypothesis of RPM predominates. Specific evidence in most cases rules out both of the cartel hypotheses. We offer a rule-of-reason as an efficient candidate for policy on RPM in Canada: *RPM should be legal unless conclusive evidence is presented that the price floor supports a producer cartel or protects a cartel of established retailers against entry by more efficient (discount) retailers.* The burden of proof, on the basis of the tests that we have outlined above, should rest with the Crown (if anticombines law continues to be criminal). In particular, the imposition of RPM by a single manufacturer in its own self-interest should carry a presumption of legality; the courts should not be burdened with the unnecessary task of discovering the particular nonprice rationale for each manufacturer's use of RPM.

Exclusive territorial and customer restrictions have not played a large role in Canadian cases, but elements of these restrictions have arisen in at least one Canadian case, the *Seiko* case, and in several U.S. cases, in particular the *Schwinn* case. We analyze four features of territorial and customer restrictions — a manufacturer's concern for the optimal density of retail outlets, potential manufacturer "hold-ups" that arise because of sunk investments by the retailer, free-riding on warranties and general quality in franchised manufacturing, and the possible use of these restrictions to facilitate price discrimination.

We argue for a rule-of-reason approach to legislation. As with RPM, the distinguishing feature is the use of territorial and customer restrictions by a single manufacturer. In this case, the presumption should be

that such restrictions are efficiency-enhancing. To the extent that these restrictions are cartel-facilitating, strong evidence should exist of the cartel's existence. The necessary conditions are the same as those for RPM — a small number of producers, nearly identical products with a stable product set, and barriers to entry (including significant tariffs). The prohibition of these restrictions under these otherwise stable cartel conditions may destabilize the cartel and enhance welfare. Otherwise, in the use of these restraints by a single manufacturer, the presumption should be that the restraints are effeciency-enhancing.

The next restriction we analyze, tied sale, is more a contentious issue. The foreclosure of extension-of-monopoly-power argument is generally held to be false: monopoly power yields only one collection of rent, so that tied sale could not profitably extend any monopoly power. The economically more conventional argument is that tied sale facilitates price discrimination (e.g., block booking in the movie industry). It is a well-known economic point that price discrimination can, under some conditions, improve resource efficiency over "garden-variety" market power. We demonstrate the welfare ambiguity of tied sale in both contestable and noncontestable markets through an example that relies heavily on the institutional details of a Canadian case heard before the RTPC, the *BBM* case. There is insufficient evidence presented in this case to draw a strong conclusion about the impact of BBM's tied sale on the efficiency of resource allocation. One result does emerge: the failure of Nielson (BBM's competitor) — that is, BBM's market foreclosure — alone is insufficient to conclude that BBM's tied sale is welfare-diminishing.

Finally, we analyze exclusive dealing in the context of a model whose specification was biased against an efficiency-enhancing role for ED. In particular, we applied the institutional features of a recent Canadian case, *Bombardier* (heard before the RTPC), to our model. In general, our results support the RTPC's decision in favour of Bombardier. ED may guarantee a sufficient quasi-rent stream to underwrite product development expenses. Even if products already exist, competition for the distribution networks, when ED contracts are short-lived, may result in lower wholesale prices as manufacturers curry the favours of retailers. If wholesale price reductions are sufficient, ED contracts may simultaneously be profitable yet yield increased consumer welfare if lower retail prices more than compensate for a reduction in product choices.

While our analysis yields no simply applied rules even for a rule-of-reason approach, critical factors include sunk investments by manufacturers that yield appropriable quais-rents by other firms (i.e., free-riding), substitutable products, short-lived ED contracts and significant competition for dealer networds. All of these rules in favour of the welfare-enhancement role of ED.

Appendix

Retail Price Maintenance Fines and Prohibitions Under Section 38 of the Combines Investigation Act

Person or Company Fined	Product	Date of Conviction	Amount per Charge	Total Fine ($)
Cases in which fines were imposed.				
Joseph Menard (Chicoutimi)	Household supplies	Nov. 1954	$5 on one count	5
Parsons-Steiner (Toronto)	Earthenware	Nov. 1954	$500 on each of two counts	1,000
Moffats Limited[a] (Toronto)	Refrigerators	21/09/56	$500 on one count	500
Kralinator Filters Ltd. (Winnipeg)	Filters	21/11/62	$750 on each of two counts	1,500
Cooper Campbell (Toronto)	Surgical blades	25/05/64[b]	$50 on each of six counts	300
Sunbeam Corporation (Canada) Ltd. (Toronto)[a]	Electric shavers & small appliances	18/03/66[c]	$1,000 on each of two counts	2,000
Phillips Appliances Ltd. (Toronto)[a]	Electric shavers	26/11/68[d]	$1,000 on one count	1,000
William E. Coutts Company Ltd. (Toronto)	Greeting cards	17/10/66	$500 on one count	500

Appendix (cont'd)

Person or Company Fined	Product	Date of Conviction	Amount per Charge	Total Fine ($)
Phillips Appliances Ltd. (Montreal)	Electric shavers	10/10/67[e]	$3,000 on each of two counts	6,000
Phillips Industries Ltd. (Montreal)	Electric shavers	29/01/68	$500 on one count	500
Phillips Electronics Industries Ltd. (Montreal)	Electric shavers	29/01/68	$500 on one count	500
John A. Huston Company Ltd.[a] (Toronto)	Perfume	28/01/69	$400 on each of three counts	1,200
Head Ski Company Inc.[a] (Montreal)	Skis	19/06/69	$400 on each of seven counts	2,800
Thomas Products Corporation Ltd.[a] (Ottawa)	Cosmetics	27/08/69	$750 on one count	750
Herdt & Charton, Inc.[a] (Montreal)	Cosmetics	01/05/70	$500 on each of two counts	1,000
Magnasonic Canada[a] Limited — Montreal[a] (Vancouver)	Stereo systems	02/03/72	$1,000 on each of two counts	2,000
Corning Glass Works of Canada Ltd. (Toronto)	Glass kitchenware	17/01/72[f]	$1,000 on first count $1,500 on third count $700 on fifth count	3,250

Arrow Petroleums Ltd. (Windsor)	Gasoline	21/06/72	$1,500 on one count	1,500
Pfizer Company Ltd.[a] (Sarnia)	Agricultural chemicals	15/05/73	$1,500 on one count	1,500
Browning Arms Company of Canada Ltd. — Montreal (Toronto)	Firearms	19/09/73	$15,000 on each of four counts	60,000
		30/05/74 Appeal	Fine reduced to $2,500 on each count	10,000
Croydon Manufacturing Co. Ltd. (Montreal)	Men's coats	0/05/74	$1,000 on one count	1,000
Rubbermaid (Canada)[a] Co. Ltd. (Montreal)	Rubber housewares (Rubbermaid products)	07/10/74	$3,000 on one count	3,000
Hartz Mountain Pet[a] Supplies Ltd. (Toronto)	Pet food and supplies	15/10/74	$3,000 on each of five counts	15,000
Petrofina Canada Ltd.[a] Montreal (Sudbury)	Gasoline	28/10/74	$15,000 on one count	15,000

Appendix (cont'd)

Person or Company Fined	Product	Date of Conviction	Amount per Charge	Total Fine ($)
Black and Decker Manufacturing Co. Ltd.[a] (Toronto)	Black and Decker tools	02/12/74	$5,000 on each of two counts	10,000
LePage's Ltd.[a] — Bramalea, Ontario (Ottawa)	Rez & Resilacrete waterproofing and sealing materials	16/12/74	$4,000 on one count	4,000
Alvin T. Radiesa[a] (Little Hoky Sales) (Penticton, B.C.)	Little Hoky carpet sweepers	15/04/75	$1,000 on one count	1,000
C.E. Springer Company Ltd.[a] (Borough of North York)	Rubbermaid products	18/04/75	$3,000 on one count	3,000
Burlington Industries (Canada) Ltd.— Lachine, P.Q. (St. John's, Nfld.)	Cameo panty hose	28/05/75	$1,000 on each of two counts	2,000
Kito Canada Ltd. (Winnipeg)	Little Hoky carpet sweepers	10/07/75	$750 on each of two counts; $500 on each of two counts	2,500
		26/03/76 Appeal	Fines raised to $2,000 on each of two counts and $1,000 on each of two counts	6,000

Glenayr-Knit Ltd.[a] (Toronto)	Kitten sweaters & dresses	24/11/75	$5,000 on one count	5,000
The Hoover Co. Ltd. Burlington (Hamilton)	Hoover vacuum cleaners	19/02/76	$3,500 on each of six counts	21,000
Caprice Hosiery Ltd.[a] — Montreal (Toronto)	Can Can panty hose	03/05/76	$3,000 on each of two counts	6,000
Fashion Avenue Ltd.[a] (Toronto)		03/05/76	$1,500 on one count	1,500
Roper Corporation carrying on business under the name and style of Moto-Mower of Canada — Ingersoll (Ottawa)	Snow throwers	18/05/76	$3,500 on one count	3,500
Bell and Howell Canada Ltd. (Toronto)	Cameras	07/06/76	$5,000 on one count $2,500 on one count	7,500
Flecto Coatings Ltd.[a] (Richmond, B.C.)	Varathane floor finishings	09/07/76	$5,000 on each of five counts	25,000
Altec Corporation (Toronto)	Stereo speakers	31/03/77	$5,000 on each of four counts	20,000

Appendix (cont'd)

Person or Company Fined	Product	Date of Conviction	Amount per Charge	Total Fine ($)
Onward Manufacturing Company Ltd.	Panasonic radios and televisions	04/05/77	$5,000 on each of five counts	25,000
Columbia Pictures Industries, Inc.[a,g] (Toronto)	Entrance passes for films	09/06/77	$5,000 on one count	5,000
E.S. Gould Marketing Co. Ltd.[a] — Montreal (Toronto)	Dynaco stereo components	04/11/77	$5,500 on each of two counts	11,000
GWG Ltd. (Edmonton)	GWG jeans and casual clothes	21/11/77	$14,000 on one count $7,000 on one count	21,000
Ravel Enterprises Ltd. (carry on business as S.H. Parker Ltd.) (Toronto)	Pioneer stereo components	22/12/77[h]	$25,000 on one count $5,000 on a second count	30,000
Lind Manufacturing Ltd. (Vancouver)	Furniture	04/05/78[i]	$750 on one count	750
Karod Manufacturing Ltd. (Vancouver)		04/05/78[i]	$750 on one count	750
John Frederick Grange (Vancouver)		04/05/78[i]	Unconditional discharge	
Cleveland Twist Drill Canada Ltd.[a] — Rexdale (Toronto)	Cutting tools	08/05/78	$5,500 on one count	5,500

C & D Holdings Ltd. (Edmonton)	Vacuum cleaners	26/06/78[j]	$5,000 on one count	5,000
Doulton China of Canada Ltd.[a] (Toronto)	Chinaware	30/06/78	$7,500 on each of three charges	22,500
The Rolex Watch Co. of Canada Ltd.[a] (Toronto)	Rolex watches	11/09/78[k]	$15,000 on each of two counts	30,000
Schwarzkopf Ltd.[a] — Scarborough (Toronto)	Perfume	25/09/78	$10,000 on one count and $7,500 on another	17,500
David A.J. Nugent[a] (Toronto)		25/09/78	$2,000 on one count and $1,000 on another	3,000
Dominion Simplicity Patterns Ltd. (Toronto)	Sewing patterns	12/10/78	$7,500 on one count	7,500
Superior Electronics — Montreal (Vancouver)	Stereo components	31/10/78[l]	$10,500 on one count $7,500 on a second count	17,500
		22/02/79 Appeal	Fine lowered to $3,000 and $1,000	4,000
Allen Pringle Ltd.[a] (Toronto)	Stereo components	24/11/78	$7,500 on each of two counts	15,000

Appendix (cont'd)

Person or Company Fined	Product	Date of Conviction	Amount per Charge	Total Fine ($)
Levi Strauss of Canada Inc. — Don Mills (Toronto)	Levi jeans	12/01/79[m]	$18,750 on each of eight counts	150,000
David Jones Distributors — Burnaby, B.C.	Metal detectors	04/12/78[n]	$1,500 on one count	1,500
Kroehler Mfg. Co. Ltd. — Stratford, Ontario	Furniture	01/05/79	$15,000 on each of three counts	45,000
Pro-Sound Distributors Ltd.[a,o]	Akai stereo components	22/05/79[p]	$15,000 on one count $7,500 on another count	22,500
Steintron International Electronics Ltd.[a,o] — Vancouver, B.C.	Sansui stereo components	22/05/79[p]	$15,000 on one count $7,500 on another count	22,500
Peter Campbell, Kelowna, B.C.	Automobile rentals	14/06/79	$500 on each of two counts (in default 30 days on each count)	1,000
A & M Records of (Canada) Ltd. (Toronto)	A & M stereo records	21/01/80[r]	$35,000 on one count, sentence on nine other counts suspended	35,000
Dannyco Trading (Canada) Ltd. (Montreal)	Haircutting supplies	29/05/80	$1,250 on each of two counts	2,500

Church and Co. (Canada) Ltd. (Toronto)	Dack, Hartt and Church men's shoes	06/06/80[s]	$3,000 on each of eight counts, $2,000 on twenty co-op ad counts	64,000[t]
Arrow Petroleums Ltd. (London, Ontario)	Gasoline	17/10/80	$7,500 on one count	7,500
H.D. Lee of Canada Ltd. (Montreal)	Lee jeans	19/11/80[u]	$25,000 on one count $10,000 on one count $20,000 on each of two counts	75,000
Matsushita Electric of Canada Ltd. (Toronto)	Panasonic stereo components	31/01/81[v]	$50,000 on one count sentence suspended on second count	50,000
300335 Ontario Ltd. carrying on business under the name of Unitrade Associates (Toronto)	Coins and stamp accessories	30/06/81	$2,000 on one count	2,000
Magnasonic Canada Ltd. (Toronto)	Magnasonic stereo components	08/09/81	$15,000 on each of two counts	30,000
Rolf C. Hagen Inc. (Toronto)	Pet food and supplies	08/01/82	$10,000 on one count	10,000
Noresco Inc. (Toronto)	Noresco stereo components	25/06/82	$4,500 on each of two counts	9,000
Cluett, Peabody Canada Inc. (Toronto)	Arrow shirts	06/05/82[w]	$10,000 on each of two counts	20,000[x]

Appendix (cont'd)

Person or Company Fined	Product	Date of Conviction	Amount per Charge	Total Fine ($)
S. & E. Furnishings Ltd. (Sudbury)	Furniture	18/05/82[y]	$2,000 on each of seven counts	14,000
Trans Canada Glass Ltd. (Vancouver)	Auto glass	13/09/82	$4,000 on one count	4,000
Acme Signalisation Ltée André Brouillette (Montreal)	Outdoor signs	01/10/82[z]	$30,000 on one count for Acme $10,000 on one count for Brouillette	40,000
Crossley Karastan Carpets Ltd. (Toronto)	Carpets	04/02/83	$40,000 on one count	40,000
Hurtig Publishers Ltd. (Edmonton)	Books	08/03/83	$500 on one count	500
BSR (Canada) Ltée/Ltd. (Toronto)	Bang and Olufsen stereo equipment	26/07/83	$7,500 on one count	7,500
W.S. (Bud) Hardy Agency Ltd. (Saskatoon)	Dale men's clothing	13/09/83	$500 on each of two counts	1,000
RCA Ltd. (Edmonton)	RCA television sets	23/09/83	$5,000 on one count	5,000
Savroche Enterprises Inc. David Tenenbaum (Montreal)	Jordache jeans	23/09/83	$25,000 for ten counts for Savroche Absolute discharge on one count for Tenenbaum	25,000

Cases in which only a prohibition order was granted.

Garlick Films Ltd.	Cameras	30/10/63
Arrow Photographic Equipment Ltd.	Cameras	30/10/63
Irving Oil Company Ltd.	Gasoline	04/06/64
Continental Ski Imports Ltd.	Skis	19/04/66
Miss Mary Maxim Ltd.	Knitting wool and patterns	16/05/68
Hemlock Park Cooperative Farm Ltd.	Eggs	08/02/72
Lange Canada Inc.	Ski boots	14/03/74
K-Tel International Inc.	Sound recordings	13/02/78
Tee-Vee Records Inc.	Sound recordings	13/02/78
Pacific Athletic Supplies Ltd.	Athletic shoes	14/06/78
United Artists Corporation	Motion pictures	18/05/79
Bellevue Film Distributors Ltd.	Motion pictures	18/05/79
Nu-Life Nutrition Ltd.	Health foods	18/02/80
Gahler Enterprises Ltd.	Health foods	18/02/80

Appendix (cont'd)

Notes: Fines imposed under section 38 of the Combines Investigation Act (until July 15, 1971, section 34..

a. Prohibition order granted.
b. The accused was acquitted of all six charges on May 15, 1962 but later convicted on all six counts on May 5, 1964. Sentencing was June 10, 1964.
c. The sentence date was April 13, 1966. On March 31, 1967 the Ontario Court of Appeal convicted the accused on two additional counts and added $2,000 to the fine. This was overturned by the Supreme Court of Canada on November 1, 1968.
d. This is the decision of the Ontario Court of Appeal. Earlier on September 26, 1966 the trial judge had found the accused guilty on two counts and fined the company $2,000 and dismissed one charge against Philips Electronics Industries Ltd.
e. The company was sentenced on January 29, 1968.
f. The accused was sentenced on December 6, 1972.
g. On Sept. 5, 1978 the Crown appeal of the original sentence of $1,250 was granted.
h. The company was sentenced on January 24, 1978.
i. Sentencing occurred on May 31, 1978.
j. Appeals of conviction and sentence dismissed on May 14, 1979.
k. Sentencing occurred on October 24, 1978. On March 31, 1980, appeals against the conviction and sentence were dismissed.
l. The accused pleaded guilty to one charge on March 14, 1978; was found guilty on another charge on October 31, 1978; and was fined on November 28, 1978.
m. Sentencing occurred on January 29, 1979.
n. Sentencing occurred on April 27, 1979.
o. For the purposes of prosecution, these two inquiries were combined.
p. Sentencing occurred on June 14, 1979.
r. Sentencing occurred on August 5, 1980.
s. Sentencing occurred on September 3, 1980.
t. Leave to appeal was refused to the Crown and Defence by the Supreme Court of Ontario on January 29, 1981 on the matter of sentencing.
u. Sentencing occurred on December 2, 1981.
v. Sentencing occurred on February 13, 1981.
w. Sentencing occurred on June 3, 1982.
x. Leave to appeal to Supreme Court of Ontario by Defence refused on April 29, 1983.
y. First conviction under Section 38(6. of the Act.
z. Sentencing occurred on December 3, 1982.

Bibliography

Adams, W., and J. Yellen. 1976. "Commodity Bundling and the Burden of Monopoly." *Quarterly Journal of Economics* 90 (3).

Andres, P.W.S., and R.A. Friday. 1960. *Fair Trade: Resale Price Maintenance Re-examined*. London: Macmillan.

Barzel, Y. 1982. "Measurement Costs and the Organization of Markets." *Journal of Law and Economics* 25 (1): 27–48.

Baxter, W.F. 1982. "Vertical Restraints and Resale Price Maintenance: A 'Rule of Reason' Approach." *Antitrust Law and Economic Review* 14 (4).

_____. 1983. "Vertical Practices — Half Slave — Half Free," *Antitrust Law Journal* 52: 743–54.

Blair, R., and D. Kaserman. 1978. "Vertical Integration, Tying and Antitrust Policy." *American Economic Review* 68 (3): 397–402.

Bork, R.H. 1978. *The Antitrust Paradox*. New York: Basic Books.

Bowman, W.S. 1955. "The Prerequisites and Effects of Resale Price Maintenance." *University of Chicago Law Review* 22 (4).

_____. 1957. "Tying Arrangements and the Leverage Problem." *Yale Law Journal* 67: 19–36.

Burstein, M. 1960. "The Economies of Tie-In Sales." *Review of Economics and Statistics* 42: 68 –73.

Canada. 1981. *Combines Investigation Act*, 1978, R.S., c.C-23 amended by c.10 (1st Supp.) c.10 (2nd Supp.) 1974–75–76, c.76 1976–77, c.28. Ottawa: Minister of Supply and Services Canada.

Caves, R.E. 1980. "Vertical Restraints as Integration by Contract: Evidence and Policy Implications." Discussion Paper 754. Cambridge, Mass.: Harvard University.

Comanor, W., and T. Frech III. 1985. "The Competitive Effects of Vertical Agreements." *American Economic Review* 75 (3).

Demsetz, H. 1968. "Why Regulate Utilities?" *Journal of Law and Economics* 11 (1).

Easterbrook, F. 1984. "Vertical Arrangements and the Rule of Reason." Chicago: University of Chicago. Mimeo.

Easterbrook, F., and R. Posner. 1981. *Antitrust*. 2d ed. St. Paul: West Publishing.

Fisher, F.M. 1984. "Can Exclusive Franchises be Bad?" Cambridge, Mass.: MIT. Mimeo.

Gallini, N., and R.A. Winter. 1983. "On Vertical Control in Monopolistic Competition." *International Journal of Industrial Organization* 1: 275–86.

Gould, J.R., and L. Preston. 1965. "Resale Price Maintenance and Retail Outlets." *Economica* 32: 302–31.

Green, C. 1980. *Canadian Industrial Organization and Policy*. Toronto: McGraw-Hill Ryerson.

Kaysen, C. and D.F. Turner. 1959. *Antitrust Policy: An Economic and Legal Analysis*. Cambridge, Mass.: Harvard University Press.

Kenney, R., and B. Klein. 1983. "The Economics of Block-Booking." *Journal of Law and Economics* 26 (3): 497–540.

Klein, B., and K. Murphy. 1984. "The Economics of Resale Price Maintenance." Los Angeles: University of California at Los Angeles. Mimeo.

Klein, B., and L. Saft. 1984. "Tie-in Contracts as Franchising Quality Control Mechanisms." Los Angeles: University of California at Los Angeles. Mimeo.

Liebowitz, S. 1983. "Tie-in Sales and Price Discrimination." *Economic Inquiry* 21 (3): 387–99.

Marvel, H. 1982. "Exclusive Dealing." *Journal of Law and Economics* 25 (1): 1 – 26.

Marvel, H., and S. McCafferty. 1984. "Resale Price Maintenance and Quality Certification." *Rand Journal of Economics* 15 (3): 340–59.

Mathewson, G.F., and R.A. Winter. 1983a. "The Incentive for Resale Price Maintenance Under Imperfect Information." *Economic Inquiry* 21 (3): 337–48.

_____. 1983b. "Vertical Integration by Contractual Restraints in Spatial Markets." *Journal of Business* 56 (4): 497–518.

_____. 1984a. "An Economic Theory of Vertical Restraints." *Rand Journal of Economics* 15 (1): 27–38.

_____. 1984b. "The Economics of Vertical Restraints in Distribution." In *New Developments in the Analysis of Market Structure*. IEA Conference Volume. New York: Macmillan.

_____. 1985. "The Economics of Franchise Contracts." *Journal of Law and Economics* (forthcoming).

McLaughlin, A. 1979. "An Economic Analysis of Resale Price Maintenance." Ph.D. dissertation, University of California at Los Angeles.

Overstreet, Thomas. 1983. *Resale Price Maintenance: Economic Theories and Empirical Evidence*. Washington, D.C.: Federal Trade Commission.

Pasahow, L. ed. 1982. *Vertical Restrictions Upon Buyers Limiting Purchases of Goods for Others*. Chicago: American Bar Association.

Pitofsky, R. 1978. "The Sylvania Case: Antitrust Analysis of the Non-Price Vertical Relations." *Columbia Law Review* 78 (1).

Porter, M. 1976. *Interbrand Choice, Strategy and Bilateral Market Power*. Cambridge, Mass.: Harvard University Press.

Posner, R. 1981. "The Next Step in the Antitrust Treatment of Restricted Distribution: Per Se Legality." *University of Chicago Law Review* 48 (6): 6–26.

Reilly, Ann. 1984. "Antitrust Policy After the Steel Veto." *Fortune*, March 19, 1984, pp. 85–98.

Restrictive Trade Practices Association. 1980. *Annual Report for the Year Ending March 31, 1980*. Ottawa: Minister of Supply and Services Canada.

Rosse, J. 1980. "Vertical Price Fixing in Newspaper Distribution: A Per Se Rule that Makes Everyone Worse Off." Studies in Industry Economics Working Paper 112. Stanford: University of Stanford.

Scherer, F.M. 1980. *Industrial Market Structure and Economic Performance*. 2d ed. Chicago: Rand McNally.

Schmalensee, R. 1982. "Commodity Bundling by Single-Product Monopolies." *Journal of Law and Economics* 25 (1): 67–72.

Sharpe, Thomas. 1982. "Refusal to Supply." Oxford: Wolfson College, Centre for Socio-Legal Studies.

Silberman, Alan. 1983. "Relationships with Supplier, Customers and Franchisees." In *Twenty-Fourth Annual Antitrust Law Institute*. New York: Practising Law Institute.

Skeoch, L.A. 1966. "Resale Price Maintenance, Canada." In *Resale Price Maintenance*, edited by B.S. Yamey. London: Aldine Publishing Company.

Spengler, J. 1950. "Vertical Integration and Antitrust Policy." *Journal of Political Economy* 68: 347–52.

Stigler, G. 1963. "United States v. Loew's Inc.: A Note on Block-Booking." Reprinted by G.J. Stigler, *The Organization of Industry*. Homewood: Richard D. Irwin.

Telser, L. 1960. "Why Should Manufacturers Want Fair Trade." *Journal of Law and Economics* 3: 86–105.

United Kingdom. Monopolies and Mergers Commission. 1981a. *Bicycles*. HC 67.

_____. 1981b. *Discount to Retailers*. HC 311.

_____. 1981c. *Full-line Forcing and Tie-In Sales*. HC 212.

_____. 1982. *Car Parts*. HC 318.

_____. 1983. *Films*. Cmnd. 8858.

United States. Department of Justice. 1982. "Amicus Brief for Monsanto v. Spray-Rite Service Corporation." Washington, D.C.: The Department.

United States. Federal Trade Commission. 1945. *Report on the Resale Price Maintenance*. Washington, D.C.: FTC.

Warren-Boulton, F. 1978. *Vertical Control of Markets*. Cambridge: Ballinger.

THE COLLECTED RESEARCH STUDIES

Royal Commission on the Economic Union and Development Prospects for Canada

ECONOMICS

Income Distribution and Economic Security in Canada (Vol.1), *François Vaillancourt, Research Coordinator*

Vol. 1 Income Distribution and Economic Security in Canada, *F. Vaillancourt* (C)*

Industrial Structure (Vols. 2-8), *Donald G. McFetridge, Research Coordinator*

Vol. 2 Canadian Industry in Transition, *D.G. McFetridge* (C)
Vol. 3 Technological Change in Canadian Industry, *D.G. McFetridge* (C)
Vol. 4 Canadian Industrial Policy in Action, *D.G. McFetridge* (C)
Vol. 5 Economics of Industrial Policy and Strategy, *D.G. McFetridge* (C)
Vol. 6 The Role of Scale in Canada–US Productivity Differences, *J.R. Baldwin and P.K. Gorecki* (M)
Vol. 7 Competition Policy and Vertical Exchange, *F. Mathewson and R. Winter* (M)
Vol. 8 The Political Economy of Economic Adjustment, *M. Trebilcock* (M)

International Trade (Vols. 9-14), *John Whalley, Research Coordinator*

Vol. 9 Canadian Trade Policies and the World Economy, *J. Whalley with C. Hamilton and R. Hill* (M)
Vol. 10 Canada and the Multilateral Trading System, *J. Whalley* (M)
Vol. 11 Canada–United States Free Trade, *J. Whalley* (C)
Vol. 12 Domestic Policies and the International Economic Environment, *J. Whalley* (C)
Vol. 13 Trade, Industrial Policy and International Competition, *R. Harris* (M)
Vol. 14 Canada's Resource Industries and Water Export Policy, *J. Whalley* (C)

Labour Markets and Labour Relations (Vols. 15-18), *Craig Riddell, Research Coordinator*

Vol. 15 Labour-Management Cooperation in Canada, *C. Riddell* (C)
Vol. 16 Canadian Labour Relations, *C. Riddell* (C)
Vol. 17 Work and Pay: The Canadian Labour Market, *C. Riddell* (C)
Vol. 18 Adapting to Change: Labour Market Adjustment in Canada, *C. Riddell* (C)

Macroeconomics (Vols. 19-25), *John Sargent, Research Coordinator*

Vol. 19 Macroeconomic Performance and Policy Issues: Overviews, *J. Sargent* (M)
Vol. 20 Post-War Macroeconomic Developments, *J. Sargent* (C)
Vol. 21 Fiscal and Monetary Policy, *J. Sargent* (C)
Vol. 22 Economic Growth: Prospects and Determinants, *J. Sargent* (C)
Vol. 23 Long-Term Economic Prospects for Canada: A Symposium, *J. Sargent* (C)
Vol. 24 Foreign Macroeconomic Experience: A Symposium, *J. Sargent* (C)
Vol. 25 Dealing with Inflation and Unemployment in Canada, *C. Riddell* (M)

Economic Ideas and Social Issues (Vols. 26 and 27), *David Laidler, Research Coordinator*

Vol. 26 Approaches to Economic Well-Being, *D. Laidler* (C)
Vol. 27 Responses to Economic Change, *D. Laidler* (C)

* (C) denotes a Collection of studies by various authors coordinated by the person named.
(M) denotes a Monograph.

POLITICS AND INSTITUTIONS OF GOVERNMENT

Canada and the International Political Economy (Vols. 28-30), *Denis Stairs and Gilbert R. Winham, Research Coordinators*

Vol. 28 Canada and the International Political/Economic Environment, *D. Stairs and G.R. Winham* (C)
Vol. 29 The Politics of Canada's Economic Relationship with the United States, *D. Stairs and G.R. Winham* (C)
Vol. 30 Selected Problems in Formulating Foreign Economic Policy, *D. Stairs and G.R. Winham* (C)

State and Society in the Modern Era (Vols. 31 and 32), *Keith Banting, Research Coordinator*

Vol. 31 State and Society: Canada in Comparative Perspective, *K. Banting* (C)
Vol. 32 The State and Economic Interests, *K. Banting* (C)

Constitutionalism, Citizenship and Society (Vols. 33-35), *Alan Cairns and Cynthia Williams, Research Coordinators*

Vol. 33 Constitutionalism, Citizenship and Society in Canada, *A. Cairns and C. Williams* (C)
Vol. 34 The Politics of Gender, Ethnicity and Language in Canada, *A. Cairns and C. Williams* (C)
Vol. 35 Public Opinion and Public Policy in Canada, *R. Johnston* (M)

Representative Institutions (Vols. 36-39), *Peter Aucoin, Research Coordinator*

Vol. 36 Party Government and Regional Representation in Canada, *P. Aucoin* (C)
Vol. 37 Regional Responsiveness and the National Administrative State, *P. Aucoin* (C)
Vol. 38 Institutional Reforms for Representative Government, *P. Aucoin* (C)
Vol. 39 Intrastate Federalism in Canada, *D.V. Smiley and R.L. Watts* (M)

The Politics of Economic Policy (Vols. 40-43), *G. Bruce Doern, Research Coordinator*

Vol. 40 The Politics of Economic Policy, *G.B. Doern* (C)
Vol. 41 Federal and Provincial Budgeting, *A.M. Maslove, M.J. Prince and G.B. Doern* (M)
Vol. 42 Economic Regulation and the Federal System, *R. Schultz and A. Alexandroff* (M)
Vol. 43 Bureaucracy in Canada: Control and Reform, *S.L. Sutherland and G.B. Doern* (M)

Industrial Policy (Vols. 44 and 45), *André Blais, Research Coordinator*

Vol. 44 Industrial Policy, *A. Blais* (C)
Vol. 45 The Political Sociology of Industrial Policy, *A. Blais* (M)

LAW AND CONSTITUTIONAL ISSUES

Law, Society and the Economy (Vols. 46-51), *Ivan Bernier and Andrée Lajoie, Research Coordinators*

Vol. 46 Law, Society and the Economy, *I. Bernier and A. Lajoie* (C)
Vol. 47 The Supreme Court of Canada as an Instrument of Political Change, *I. Bernier and A. Lajoie* (C)
Vol. 48 Regulations, Crown Corporations and Administrative Tribunals, *I. Bernier and A. Lajoie* (C)
Vol. 49 Family Law and Social Welfare Legislation in Canada, *I. Bernier and A. Lajoie* (C)
Vol. 50 Consumer Protection, Environmental Law and Corporate Power, *I. Bernier and A. Lajoie* (C)
Vol. 51 Labour Law and Urban Law in Canada, *I. Bernier and A. Lajoie* (C)

The International Legal Environment (Vols. 52-54), *John Quinn, Research Coordinator*

Vol. 52 The International Legal Environment, *J. Quinn* (C)
Vol. 53 Canadian Economic Development and the International Trading System, *M.M. Hart* (M)
Vol. 54 Canada and the New International Law of the Sea, *D.M. Johnston* (M)

Harmonization of Laws in Canada (Vols. 55 and 56), *Ronald C.C. Cuming, Research Coordinator*

Vol. 55 Perspectives on the Harmonization of Law in Canada, *R. Cuming* (C)
Vol. 56 Harmonization of Business Law in Canada, *R. Cuming* (C)

Institutional and Constitutional Arrangements (Vols. 57 and 58), *Clare F. Beckton and A. Wayne MacKay, Research Coordinators*

Vol. 57 Recurring Issues in Canadian Federalism, *C.F. Beckton and A.W. MacKay* (C)
Vol. 58 The Courts and The Charter, *C.F. Beckton and A.W. MacKay* (C)

FEDERALISM AND THE ECONOMIC UNION

Federalism and The Economic Union (Vols. 58-72), *Mark Krasnick, Kenneth Norrie and Richard Simeon, Research Coordinators*

Vol. 59 Federalism and Economic Union in Canada, *K. Norrie, R. Simeon and M. Krasnick* (M)
Vol. 60 Perspectives on the Canadian Economic Union, *M. Krasnick* (C)
Vol. 61 Division of Powers and Public Policy, *R. Simeon* (C)
Vol. 62 Case Studies in the Division of Powers, *M. Krasnick* (C)
Vol. 63 Intergovernmental Relations, *R. Simeon* (C)
Vol. 64 Disparities and Interregional Adjustment, *K. Norrie* (C)
Vol. 65 Fiscal Federalism, *M. Krasnick* (C)
Vol. 66 Mobility of Capital in the Canadian Economic Union, *N. Roy* (M)
Vol. 67 Economic Management and the Division of Powers, *T.J. Courchene* (M)
Vol. 68 Regional Aspects of Confederation, *J. Whalley* (M)
Vol. 69 Interest Groups in the Canadian Federal System, *H.G. Thorburn* (M)
Vol. 70 Canada and Quebec, Past and Future: An Essay, *D. Latouche* (M)
Vol. 71 The Political Economy of Canadian Federalism: 1940-1984, *R. Simeon and I. Robinson* (M)

THE NORTH

Vol. 72 The North, *Michael S. Whittington, Coordinator* (C)

COMMISSION ORGANIZATION

Chairman

Donald S. Macdonald

Commissioners

Clarence L. Barber
Albert Breton
M. Angela Cantwell Peters
E. Gérard Docquier
William M. Hamilton
John R. Messer
Laurent Picard
Michel Robert
Daryl K. Seaman
Thomas K. Shoyama
Jean Casselman-Wadds
Catherine T. Wallace

Senior Officers

Executive Director
J. Gerald Godsoe

Director of Policy
Alan Nymark

Secretary
Michel Rochon

Director of Administration
Sheila-Marie Cook

Senior Advisors
David Ablett
Victor Clarke
Carl Goldenberg
Harry Stewart

Director of Publishing
Ed Matheson

Directors of Research
Ivan Bernier
Alan Cairns
David C. Smith

Co-Directors of Research
Kenneth Norrie
John Sargent

Research Program Organization

Economics

Research Director
David C. Smith

Executive Assistant & Assistant Director (Research Services)
I. Lilla Connidis

Coordinators
David Laidler
Donald G. McFetridge
Kenneth Norrie*
Craig Riddell
John Sargent*
François Vaillancourt
John Whalley

Research Analysts
Caroline Digby
Mireille Ethier
Judith Gold
Douglas S. Green
Colleen Hamilton
Roderick Hill
Joyce Martin

Politics and the Institutions of Government

Research Director
Alan Cairns

Executive Assistant
Karen Jackson

Coordinators
Peter Aucoin
Keith Banting
André Blais
Bruce Doern
Richard Simeon
Denis Stairs
Cynthia Williams
Gilbert R. Winham

Research Analysts
Claude Desranleau
Ian Robinson

Office Administration
Donna Stebbing

Law and Constitutional Issues

Research Director
Ivan Bernier

Executive Assistant & Research Program Administrator
Jacques J.M. Shore

Coordinators
Clare F. Beckton
Ronald C.C. Cuming
Mark Krasnick
Andrée Lajoie
A. Wayne MacKay
John J. Quinn

Administrative and Research Assistant
Nicolas Roy

Research Analyst
Nola Silzer

*Kenneth Norrie and John Sargent co-directed the final phase of Economics Research with David Smith

ECONOMICS
Industrial Structure

Competition Policy and Vertical Exchange

G. FRANK MATHEWSON and RALPH A. WINTER

This is the last of seven volumes dealing with **Industrial Structure** (see list in back of book), included in the Collected Research Studies of the Royal Commission on the Economic Union and Development Prospects for Canada.

The legal status of vertical restraints in contracts between manufacturers and distributors has become a contentious issue in recent years. This study offers an economic analysis of vertical restraints and a delineation of policy guidelines.

The authors discuss four vertical practices: resale price maintenance, exclusive territorial protection, tying and exclusive dealing. They compare the current legal status of these practices in Canada, the United States and Britain, and examine the competing theories underlying them.

On the basis of their comparative analysis, the authors derive a distinction between those situations in which vertical restraints involve potential cartel behaviour and those that serve social interests as well as the interests of manufacturers and retailers.

G. FRANK MATHEWSON is Professor in the Department of Economics, University of Toronto.
RALPH A. WINTER is Associate Professor in the Department of Economics, University of Toronto.

The research coordinator for the section on **Industrial Structure** is Donald G. McFetridge, Professor in the Department of Economics, Carleton University, Ottawa.

University of Toronto Press

Royal Commission on the Economic Union and Development Prospects for Canada

ISBN 0-8020-7248-8