EA. EG. L

# WORKING PAPERS

FREE TRADING OR FREE RIDING:

AN EXAMINATION OF THE THEORIES AND AVAILABLE EMPIRICAL EVIDENCE

ON GRAY MARKET IMPORTS

John C. Hilke

WORKING PAPER NO. 150

February 1987



BUREAU OF ECONOMICS
FEDERAL TRADE COMMISSION
WASHINGTON, DC 20580

# FREE TRADING OR FREE RIDING: AN EXAMINATION OF THE THEORIES AND AVAILABLE EMPIRICAL EVIDENCE ON GRAY MARKET IMPORTS

by

John C. Hilke[1]

## I. INTRODUCTION

During the first half of the 1980s, real U.S. imports of goods and services surged by $162 billion, more than 50%, while exports were stagnant.[2] The resulting unprecedented increase in net imports gave rise to numerous calls for restrictions on imports. While most of these appeals received a distinctly chilly reception from economists of most persuasions, arguments for across-the-board government restrictions on one subset of imports, "gray market" imports,[3] have received a much warmer response in some quarters where free trade has otherwise been applauded.[4] The difference in the responses has been caused by the assumption that gray market imports, which are not authorized by the U.S. trademark holder, occur primarily

[1] The author is a staff economist in the Federal Trade Commission's Bureau of Economics. The views expressed in the paper are my own and are not meant to reflect those of the Federal Trade Commission or of any individual Commissioner. I wish to thank Mark Frankena, Paul Pautler, Collot Guerard, Howard Beales, Jay Shaffer, Pauline Ippolito, and an anonymous reviewer for helpful comments on earlier versions of the paper.

[2] Survey of Current Business (1986 and 1983). Dollars are expressed in 1982 constant dollars.

[3] Gray market imports are products bearing genuine trademarks that may be legally imported into the U.S. without the permission of the U.S. trademark holder, provided that the U.S. trademark holder is related to the foreign trademark holder.

[4] In particular, see the U.S. International Trade Commission (ITC) (1984) decision in Duracell and the Customes Service filiing by Lexecon (Coalition to Preserve the Integrity of American Trademarks (1986)).

because gray market importers are free-riding on the promotional and service efforts of authorized distributors.

In response to complaints by authorized distributors, the Customs Service has recently proposed abandoning its long-standing "related parties" exception that legalizes gray market imports. Because of conflicting lower court opinions, the Supreme Court has agreed to hear arguments that gray market goods should be excluded entirely.[5]

The purpose of this paper is to present the competing explanations for gray market imports and then examine whether available empirical data[6] generally supports the free-rider hypothesis. If so, one or another of the

---

[5] The author helped prepare the Federal Trade Commission (FTC) staff comments on the Customs Service Proposals submitted to the Customs Service (U.S. FTC staff (1986)). Although such comments do not necessarily reflect those of the individual Commissioners, the Commissioners do authorize filing of the comments.

The proposed Customs Service regulations would require that gray market goods be either relabeled to indicate they are not authorized imports or demarked, that is show no visible trademarks. Only the demarking proposal directly addresses free riding problems. From a consumer protection viewpoint, however, demarking involves potential costs to consumers because it deprives them of potentially useful information about the quality of the product at the manufacturing stage. Relabeling would not address the free rider issue because the trademark being promoted by authorized dealers would still be visible. Relabeling might reduce free riding, however, by imposing additional costs on unauthorized distributors or by making consumers suspicious of the quality of gray market goods.

The Supreme Court agreed to hear arguments about gray market regulations because recent district court decisions have conflicted about the validity of the current Customs Service interpretation of the statutes. See particularly the Coalition to Protect the Integrity of American Trademarks (COPIAT) decision of the U.S. Court of Appeals for the District of Columbia (1986).

[6] The most comprehensive and systematic publicly available source is the mimeo "Economic Effects of Parallel Import: A Preliminary Analysis," Patent and Trademark Office of the U.S. Department of Commerce (Jan. 23, 1985). This source summarizes the results of a Customs Service survey conducted in 1984 at the request of the Cabinet Council on Commerce and Trade. Responses from approximately 60 firms including gray market importers and authorized importers are represented in the report.

proposed across-the-board government restrictions may be appropriate. If not, then either no action is appropriate or only more narrowly drawn remedies are reasonable.

## II. THE FREE-RIDER AND OTHER EXPLANATIONS

Gray market imports can be roughly characterized as the international version of unauthorized domestic transshipment or arbitrage. Both involve movement of products from one area to another by a third party without explicit permission of the original seller. For third parties, such as gray market importers, to willingly assume such shipping costs, there must be price or cost differences between areas that are sufficient to compensate for the third party's transportation costs. The puzzle is whether the higher costs of the authorized distributors should be protected from international arbitrage by the U.S. government.

Critics of gray market imports contend that these differences reflect the higher costs of authorized U.S. distributors, higher costs that benefit U.S. consumers in the long run by supporting proper handling and promotion of imported products. In this view, gray market goods undermine U.S. consumer welfare by allowing unauthorized distributors to enjoy the benefits of a brand's good reputation without bearing the costs. In the long run, proper handling and promotion cannot be continued without contributions from all of the beneficiaries.[7]

---

[7] Vertical restraints that limit free riding, such as restrictions on the area served by a particular distributor, often benefit consumers if "the product in question can best be marketed with a service that is most efficiently provided by the resellers," if it is "inefficient or impractical to charge separately for the service," and if "without some form of (territorial) restraint the opportunity to free ride must cause the underprovision of the service." (Overstreet (1983).) Vertical restraints, like other forms of

Just as in the case of domestic transshipment, most of the theories for gray market imports revolve around manufacturer's vertical restraints, exclusive territories, in particular.[8] The classic theories are: free riding on retailer-provided services, geographic price discrimination by manufacturers, manufacturer efforts to set maximum retail prices, consumer deception, and distributor collusion. The international trade versions of these theories are sketched below.[9] In addition, there are some explanations for gray market imports that are largely irrelevant in explaining domestic transshipment. These alternatives include lags in adjusting to appreciation of the dollar and inefficient U.S. retail price regulations. These theories are also sketched below.

---

voluntary contracting, are likely to embody efficiency-enhancing agreements unless they involve market power.

Free-rider problems may also occur when the identity of the distributor acts as a signal of product quality if consumers cannot readily ascertain quality in other ways.

When consumers can accurately assess products with visual inspection, when products are consumed frequently, or when highly differentiated products have been available for long periods of time, free-rider problems of this type are unlikely. (Overstreet (1983).)

Although most economic treatments have focused on intrinsic quality, demand may also be a function of the exclusivity of a product, in the case of what are termed "snob appeal" goods. For such goods, a high price is part of the appeal or quality of the product. Manufacturer efforts to foster different levels of price and snob appeal for a product in different countries is still a form of price discrimination, but a peculiar one in which reduction in prices to some consumers reduces the demand of another subset of consumers. For a discussion of the tradeoff between complete exclusivity of snob appeal goods and only partial exclusivity with some sales taking place at less exclusive retail prices, see R. Higgins and P. Rubin (1986). Complaints by some perfume and wine importers appear to be based on concerns about exclusivity.

[8] For a statement of the free rider perspective on exclusive dealing, see H. Marvel (1982).

[9] See the recent FTC report (Overstreet (1983)) that reviews the theories and cases involving domestic vertical restraints.

A. Free Rider

How might free riding result in gray market imports? In the most widely cited scenario, authorized importers provide national promotional services that are more intensive in the U.S. than in other countries.[10] This results in higher distribution costs in the U.S. than in other countries. Gray market importers of such products could be expected to obtain lower prices by buying from foreign distributors who do not bear the extra promotional costs. The gray market importers would benefit from the extra promotional effort financed by the authorized importer, but would not have to pay for it themselves.

Although potential free-riding problems are generally recognized as an arena for private contracting in domestic markets,[11] some economists suggest that private contracting may be an inadequate solution, however, because of legal impediments.[12] In the case of gray market imports, there may be a number of such impediments to contracting, but there is little available information about their magnitude. For example, U.S. antitrust regulations

---

[10] If consumers are receiving different goods because of different treatment of the products by unauthorized dealers, but they perceive them to be the same, deception might be involved instead of free riding. Allegations of this type seem to be most prominent in wines. See comments by Moet and numerous champagne producers to the Customs Service request for comments, October 19, 1986.

[11] Direct government policing of vertical arrangements, such as those that existed under the fair trade laws, has been rejected because it may lead to abuses, i.e. opportunities to encourage monopolistic practices and perhaps disincentives to initiate cost saving innovations in retailing. See, for example, R. Steiner (1984). For a revised interpretation of the U.S. Fair Trade Law period, see H. Marvel and S. McCafferty (1985), and comments in the same volume by K. Leffler.

[12] All solutions are likely to be incomplete. Even horizontal competition may involve some spill-over effects. For example, advertising for one brand of tissues may increase demand for all brands of tissues.

attempt to limit contractual relationships that are believed to create or sustain market power, but may also restrict other contracts as well. Although the interpretation of vertical antitrust laws has eased over the past few years, some restrictions may continue to exist.[13] Also, European governments have taken a dim view of private efforts to limit exports between EEC members for any reason and this may make private efforts to restrict exports from the EEC prohibitively expensive.[14]

The relative difficulties in enforcing efficient exclusive territories in an international context that are mention above may be offset, however, by private remedies that are available only in the context of international trade.[15] For example, the manufacturer might be able to alter its trademark, labeling, product specifications, promotions, pricing, or distribution contracts in different countries to reduce or eliminate free riding. The manufacturer could use a different trademark in each country to discourage gray market trade. The manufacturer could also discourage gray marketing by producing goods with obviously different features for different countries. Other remedies may be more effective in the international context, although they are available domestically as well. For example, the

---

[13] See the recent Supreme Court decision in the case of Spray-Rite (Monsanto Co. v. Spray-Rite Service Corp. (1984)).

[14] Japan has also ruled against limits on gray market activity, although the Japanese Fair Trade Commission is currently reviewing its policies toward gray market imports (interview session with Japanese FTC staff, December 1986). For a brief discussion, see Business Week (1985).

[15] The U.S. trademark holder may also have alternative legal remedies available. Recent legal research suggests that free-rider issues in gray markets could be pursued in U.S. courts under legal theories of unjust enrichment, third party beneficiary, and/or interference with contractual relations. The Court of International Trade could also be approached on a usurpation or infringement theory. (B. Coggio, J. Gordon, and L. Coruzzi (1985).)

manufacturer could promote the effectiveness of its authorized distribution system in maintaining quality over long shipping distances. The manufacturer could find that its efforts to identify the distributors that sell to gray market importers (and to terminate these distributors or limit shipments to them) are more effective when the goods have to cross national boundaries.

B. Price Discrimination

Rather than charging the same prices relative to costs in all locations,[16] some firms might find it feasible to charge higher relative prices to U.S. consumers, particularly as their costs fall relative to the costs of their U.S. competitors.[17] For an individual firm to find geographic price discrimination of this sort to be profitable, it must be able to exercise some market power with its particular brand(s) in the U.S.[18] To exercise such market power, the seller would have to differentiate its brand from other brands in the U.S. and restrict international arbitrage or trade, including gray market imports of substitute goods. Even then, market power would be short lived unless barriers to entry were high or entry lags were long.

---

16 See W. Landes and R. Posner (1981). For a critique, see R. Schmalensee (1982).

17 In considering the price discrimination explanation, it is important to note that price discrimination can produce greater harm to consumers in the international context than in the domestic context. When price discrimination takes place domestically, the profits remain in the U.S. In contrast, when the price discriminating firm is foreign, the profits from the price discrimination are transferred out of the U.S. economy entirely.

18 Evidence of price discrimination in the sale of premium priced automobiles within Europe is presented in Y. Martens and V. Ginsburgh (1985).

Another potential source of price discrimination that might give rise to gray market goods is cartelization imposed, encouraged, or tolerated by foreign governments. Foreign governments may assist cartelization simply to transfer wealth from the importing nation to the exporting nation. In fact, government involvement protects foreign suppliers from monopolization charges that might otherwise be filed against them. Political pressure on the exporting nation to limit the volume of exports may also lead the foreign government to limit exports to the U.S. Ironically, the discrimination and emergence of the gray market in this case would stem from U.S. pressure to limit imports.[19]

Whatever the source of the price discrimination, gray markets develop as independent importing firms, retailers, or even individuals, purchase at lower prices abroad and sell in the U.S. Since price discrimination may harm U.S. consumers and impose efficiency losses on the U.S. economy,[20] gray markets benefit consumers under this explanation.

---

[19] Japanese construction equipment manufacturers were reportedly reluctant to lower their U.S. prices for this reason while the dollar was rising. (Construction Equipment (1985).)

[20] Price discrimination has a variety of potential welfare effects. The maximum loss of efficiency would occur if price discrimination is perfect, but all of the transfer to producers is consumed in enforcing the discrimination. No efficiency loss would occur if price discrimination were perfect and no resources were consumed in enforcing the discrimination. If these resources were transferred out of the country, however, U.S. consumers would be harmed without any compensating gain by U.S. producers. In this case, although there would be no efficiency loss, there would be a loss in U.S. welfare. Other varieties of price discrimination and other levels of enforcement costs or international transfers would produce intermediate levels of social loss or inefficiency in the U.S.

C. Disciplining Exclusive Distributors[21]

A potential source of conflict between manufacturers (or their vertically integrated wholesalers) and retail distributors is the size of the distributors' margins. A distributor with exclusive geographic distribution rights for a differentiated imported brand may seek to widen its margin (in response to an unanticipated increase in market power, for instance) when the dollar appreciates and the manufacturer's costs and prices therefore decline. In this case, manufacturers may have incentives to discipline their exclusive distributors to encourage them to pass any decline in the manufacturer's price.[22] In some cases, manufacturing firms may find that gray markets are a preferable nonpublic way to discipline their retailers, particularly where contractual obligations or legal restrictions prevent the manufacturer from explicitly establishing additional distributors, from

---

[21] For discussions of this argument, see Overstreet (1983) pp. 25-32, and R. Steiner (1984).

[22] Some evidence consistent with pass through problems has been reported in camera sales. Hasselblad Camera Company decided it needed to reduce consumer prices in the U.S. to offset gray market imports. It chose not to reduce its price to dealers, but rather to offer direct consumer rebates on authorized imported cameras. See Advertising Age (1983). The use of direct rebates to consumers rather than wholesale discounts may indicate uncertainty that wholesale discounts would be fully passed along to consumers.

Porsche, another company with significant gray market imports, announced plans to abolish its traditional franchise system, although it later reconsidered its plans after being sued by the Porsche dealer association. See Automotive News (1985).

Several respondents to the Commerce Department survey (1985) noted strained relationships with retailers as a result of gray market imports. See survey question B.5.

imposing maximum price limitations, or from establishing volume requirements.[23]

D. Consumer Deception

If authorized imports and gray market goods are identical, then it seems unlikely that any risk of consumer deception exists. Similarly, if differences between gray market and authorized imports are obvious, well known, or easily discoverable, little risk of deception exists. A risk of consumer deception arises, however, if consumers are not aware of actual material differences between gray market goods and authorized imports. Such differences could conceivably arise from differences in services provided with the product, other products included in the transaction, or the variations in the product itself.[24]

Consumer confusion about the actual characteristics of gray market goods causes both immediate and longer term injury to consumers. Immediate injury results if consumers pay for a characteristic that is not actually included in the product. Longer term injury occurs if consumers dissatisfied with gray market goods cannot differentiate higher quality authorized imports. In such circumstances, consumers eventually might be

[23] For an treatment of dealer's locational market power and the welfare losses induced by government restrictions on (automobile) manufacturer's efforts to discipline dealers, see R. Smith II (1982).

[24] The most serious potential problem with gray market goods is incompatibility for use in the U.S. In some cases, such as automobiles, these problems are addressed by changing the product once it has arrived in the U.S. In other cases, where the value of the product is not high enough to warrant such modifications, gray markets have not generally emerged. An example is cellular phones where frequency differences have discouraged gray market imports despite reportedly attractive price differences between countries. (Consumer Electronics (1985).)

unwilling to pay a price premium sufficient to cover incremental costs associated with producing or distributing the higher quality authorized import, and the higher quality product might disappear from the market.[25]

E. Distributor Collusion

Imposition of geographic restrictions by manufacturers might conceivably stem from the insistence of national or regional groups of colluding retailers or wholesalers who are seeking to raise their margins.[26] By limiting intrabrand competition from gray market goods, across-the-board restrictions on gray market goods might allow retailers or wholesalers to raise their margins for all brands in an industry. Since excessive retail or wholesale margins would reduce the demand experienced by manufacturers, manufacturers might be expected to resist retailer or wholesaler collusion. Facilitating gray market imports might be a way in which manufacturers resist distributor collusion of this type. If so, gray market imports benefit consumers by helping manufacturers to limit distributors' markups.

---

[25] See, for example, G. Akerlof (1970).

[26] To do this, distributors must be able to coerce the manufacturer into adopting policies that would be against its best interests absent the threat. See Overstreet (1983). Several accusations of such behavior have recently arisen in the beer distribution business. (Antitrust and Trade Regulation Report (1986).)

F. Exchange Rate Adjustment Lags

Manufacturers' output constraints,[27] strategic output and pricing considerations,[28] barriers to entry,[29] and long-run marketing considerations[30] may make foreign suppliers reluctant to change their U.S.

---

[27] If a foreign producer faces contractual (or political) obligations in its home market with respect to price or price and quantity, is producing at capacity, and faces a lag in adding new capacity, it may be forced to price discriminate against U.S. consumers. These are the conditions necessary to preclude diversion from one country to another as envisioned by R. Landes and R. Posner (1981). Also see Antitrust & Trade Regulation Report, Special Supplement, #1169 (1984).

[28] A foreign supplier cooperating in a cartel with U.S. producers might price discriminate against U.S. consumers to avoid disrupting the cartel. A territorial division of markets between foreign producers and U.S. firms might also promote price discrimination. Foreign producers might similarly price discriminate against U.S. consumers to avoid political action by U.S. producers directed at increasing tariffs or other trade restrictions. (The fact that trade restraints can be imposed on a country-by-country basis may remove much of the free rider problem in organizing voluntary export restraints of this type.)

Other strategic considerations might also be important. For example, efforts to establish first-mover advantages in a particular geographic area may encourage geographic price discrimination. For an example of such first-mover advantages, see M. T. Flaherty (1984).

[29] Barriers to entry or exit may give importing firms an incentive to dampen exchange rate changes in their pricing. When the importing country's currency is appreciating, such barriers may make importers reluctant to expand their distribution networks or to build additional capacity to meet increases in demand that may be temporary, especially when these expansion efforts involve sunk costs. When the importing country's currency is depreciating, barriers to entry or exit may make the importers reluctant to effectively abandon their home market by allowing their prices to fully reflect the exchange rate changes. The reason is that they realize that the decline in demand may be temporary and that the firm's expected present value may be higher by staying in the market during the low demand period because it allows them to avoid exit costs or later reentry costs. For a discussion of the role of sunk costs in determining responses to demand changes, see, for example, W. Baumol (1982).

[30] Some retailers of imports may be risk averse with respect to price variations. A seller facing such customers may find it attractive to offer long-term supply contracts in which the seller insures the buyer against changes in exchange rates. The premium on this type of contract takes the form of higher than short-run competitive prices when the buyer's currency is appreciating and lower than competitive prices when the buyer's currency

prices in lock step with changes in exchange rates. To the extent that foreign suppliers base their decisions on these longer-run considerations, their pricing decisions may differ from those of independent middlemen. The available evidence on trade reactions to changes in exchange rates suggests that lags are extremely common.[31] Some degree of lag may also arise from differences in the inventory positions of potential arbitragers.[32]

---

is depreciating. Alternatively, there may be substantial costs associated with frequently changing prices. For instance, if retailers have printed catalogs or have customers, such as the U.S. government, that demand long-term supply contracts, frequent price changes may be quite costly. Consistent with this hypothesis, D. Carlton (1986) reports that price stability is positively related to the length of association between buyers and sellers.

In a macroeconomic context, gray markets help internationalize the market by increasing the rate of response to exchange rate changes. To the extent that such trade changes are necessary to balance financial flows, rapid trade changes help to dampen exchange rate fluctuations. Slowing the trade response will accentuate swings in exchange rates which presumably harms consumers, but it also shifts the adjustment process into industries where producers do not find it worthwhile to insure against exchange rate fluctuations.

Two respondents to the U.S. Commerce Department survey (1985) indicated that dampening exchange rate fluctuations was necessary to stabilize their distribution system. See survey question A.6.e. Gray market importers apparently cannot offer this type of price stability. Gray market importers do not participate in bids to supply GSA for this reason, for example.

[31] See, for example, R. Dornbusch (1976); F. Giavazzi and C. Wyplosz (1984); and C. Wilson (1979).

[32] Some gray market suppliers are professional arbitragers who focus their entire attention on responding quickly to exchange rate adjustment imperfections. Firms concerned with manufacturing and distribution arrangements might not be as proficient in detecting and responding to exchange rate adjustment situations. Arbitragers generally perform the role of identifying adjustment problems by executing trades that take advantage of the problem. In accord with this explanation, many gray market goods reportedly are bought and sold in several currencies before reading the U.S. See The New York Times (1982). Lags in adjusting to exchange rate changes apparently occur with airline tickets, where failure of the airlines to adjust ticket prices to reflect exchange rate changes prompts the emergence of travel agencies that specialize in arbitraging these differences. See Wall Street Journal (1986).

Where suppliers either individually or collectively do not respond to exchange rate changes with prompt price adjustments, sufficient price differences may emerge to encourage gray market imports. Whether the emergence of a gray market is good, bad, or indifferent for consumers in these situations depends on the cause of the lag in the supplier's response to exchange rate changes.

G. Inefficiencies Induced by Regulation

Some retailers or wholesalers may be more efficient in carrying out some distributional functions that are usually provided by the manufacturers. If so, overall distributional costs and prices could be reduced if manufacturers were able to offer their products at a lower price to retailers who would undertake such distributional functions. Such cost-related discounts, however, could be discouraged 1) by perceptions of U.S. pricing regulations,[33] which may make the process of justifying a price difference of this type both costly and problematical, 2) by threats (from high cost dealers who still represent a large portion of the manufacturer's business) to

[33] The Robinson-Patman Act bars price discrimination between retailers that is not cost-justified. Several commentators have suggested that the burden of proving that price differences are cost-justified has been quite onerous. See, for example, R. Posner (1970); U.S. Justice Department (1977); and F. Scherer (1980).

drop the manufacturer,[34] or 3) by previously established contractual restrictions.

The gray market might provide an avenue through which manufacturers with foreign operations can offer lower prices to retailers who assume more of the distributional costs.[35] If so, retailers of gray market imports would be substituting some of their own services for the manufacturers' services that are not provided for gray market goods. This arrangement would not be economically attractive to gray market importers unless they could provide these services at a lower cost than the authorized distributor.[36]

---

[34] In the evolution from one type of retail outlet to another, there may be points in time where the lower cost outlet has achieved critical mass (large enough market share to allow the manufacturer to switch the type of outlet it sells to without loosing substantial volume) in some areas of the country but has not in other areas. In this situation, the manufacturer may be understandably reluctant to sacrifice distribution in the areas dominated by traditional outlets by offering discounts to the lower cost outlets, although it would be efficient to do so if it could be done exclusively in the areas dominated by the low cost outlets. Gray market imports may represent a solution to such an impasse by providing sources of supply without the high cost services attached, but which do not necessarily violate either price discrimination laws or exclusive supply agreements.

[35] To the extent this scenario is true and manufacturers are not constrained by contractual obligations left from an era when no lower cost distributors were active, one would not expect foreign manufacturers to be enthusiastic about restrictions on gray market imports.

[36] It is possible that a whole class of retailers will fit into this category and that this class of retailers will be in competition with another class of retailers that require the higher cost services provided by the manufacturer. During the evolution of retailing from one type of retailer to another, manufacturers might be under pressure from the older form of retailer not to offer the cost-justified discount to the newer form of retailer. (This sort of conflict over retail innovations in the grocery business contributed significantly to passage of the Robinson-Patman Act.) See M. Adelman's well known analysis, <u>A&P: A Study in Price-Cost Behavior and Public Policy</u> (1959). See also Overstreet, <u>supra</u> note 3 at pp. 25-32 and the case studies described on pp. 106-160. Consistent with this interpretation, many retailers of gray market goods are discount or mail order firms. For example, some large retail chains provide their own warranties and other services. See the U.S. Commerce Department survey (1985) results, p. 6.

## IV. THE NATURE AND EXTENT OF THE GRAY MARKET

Information about gray market imports is too fragmented and anecdotal to present in systematic tabulations. The best that can be done is to develop descriptive materials along with scattered price and cost information. On the basis of the Commerce Department survey (1985), news articles, FTC staff investigations of alleged consumer deception in gray markets, and additional empirical data provided to the FTC by GSA and Defence Department Post Exchange buyers, the following are characteristics of gray market imports:

1. The volume of gray market imports into the United States has increased and decreased with the relative value of the dollar[37]. Few gray market goods were imported into the United States prior to 1981, except for photographic equipment, which appeared in substantial quantities beginning in

---

[37] The U.S. Commerce Department survey (1985) asked for the time path of gray market imports. Respondents indicated that gray market goods increased dramatically in both unit volume and dollar value after 1981 while the value of the dollar was increasing. This pattern has also been noted in numerous press accounts. For example, Business Week (1985); The National Law Journal (1985); Wall Street Journal (1982); Advertising Age (1980); and Construction Equipment (1985). Active gray markets for construction and other industrial equipment did not appear until fairly late in the rise of the dollar in the 1980s. (Inc. (1985).)

Some firms involved in gray market imports of construction equipment into the U.S. were active in 1970s in gray market exports from the U.S. to Japan. (Construction Equipment (1985).)

the mid-1970s.[38] Since the value of the dollar began falling against other major currencies in 1985, gray market imports have declined significantly.[39]

2. The brands involved in gray markets are usually premium brands that are among the most highly differentiated in their category in the United States[40]. Some of these brands are promoted with substantial media advertising.[41] Some of these brands exclude mass merchandizers and

---

[38] Several respondents to the U.S. Commerce Department survey (1985) indicated that they knew of no gray market activity prior to the increase in the value of the dollar in the 1980s. For cameras, Pentax and Hasselblad found no gray market activity until after 1980. Nikon experienced gray market activity earlier. The earlier advent of gray markets in cameras may have stemmed from a tactical shift in the distribution policies of Canon, a Japanese manufacturer. In the mid-1970s, Canon discontinued using Bell and Howell as its U.S. distributor and simultaneously undertook a major expansion of output in Japan. This shift apparently resulted in expanded output by several Japanese manufacturers (because of their concern about maintaining their market shares) and substantial pressure on Japanese distributors to increase Japanese sales. This pressure to sell may have reduced prices in Japan generally and led to gray market exports before the currency revaluations of the 1980s. (New York Times (Dec. 11, 1982).)

[39] See, for example, Washington Post (1986), Modern Tire Dealer (1985). In fact, many gray market automobile importers have reportedly exited. (Journal of Commerce and Commercial (1986).)

[40] That is, the brands have no very close substitutes. (For a recent discussion of product differentiation, see R. Caves and P. Williamson, (December 1985).) Reported gray market activity has been particularly intense in brands that have the highest prices relative to other brands in the category. See generally, Insight (1985). The respondents to the U.S. Commerce Department survey (1985) emphasized gray market imports of these products too. See survey question A.1. for a listing.

Although gray market goods have predominantly been highly differentiated premium products, gray markets have also arisen in some industrial products where an unexpected supply situation in one country has developed. This reportedly occurred for computer chips and construction equipment in 1985. In both cases, unanticipated declines in world demand were followed by growth in U.S. demand relative to foreign demand. (Business Week (1985), and Construction Equipment (1985).)

[41] See the U.S. Commerce Department survey results (1985), question B.3. Camera, perfume, and ski boot respondents reported advertising and promotion costs as 15% to 30% of sales. Consumer electronics respondents reported advertising costs of 5% of sales.

discounters from their lists of authorized retailers. The value of gray market imports has apparently been greatest in the premium priced automobile, watch, and photographic equipment businesses. Gray market imports are also commonly reported in premium tires, perfumes, ski equipment, wines, and consumer electronics.

3. U.S. wholesale prices for products with significant gray market activity were commonly substantially higher than comparable foreign wholesale prices when the dollar was appreciating.[42] Cost differences were often insufficient to explain these wholesale price differences.[43] However,

---

[42] Several firms replying to the U.S. Commerce Department survey ((1985) question 6.d.) confirmed charging different prices in different countries. None of the respondents denied following this practice. Nikon, Nordica, Minolta, and Evinrude each noted wide differences in the prices that they charge at the wholesale level at least partly based on demand differences. K-Mart responded that price differences were the primary incentive for its gray market imports.

At the request of FTC staff, military exchange-post buyers reported the wholesale prices paid in different countries for products that have been subject to gray marketing. Although the number of observations is limited, the data confirm that wholesale prices did differ across countries in several instances. (U.S. Federal Trade Commission Staff (1986).)

Numerous press accounts note large wholesale price differences across national boundaries. See, for example, Washington Post (1985); Business Week (1986); and Forbes (1984).

When some foreign manufacturers have equalized prices across areas, gray markets have largely disappeared. For example, Michelin tires were widely gray marketed until Michelin equalized prices across areas. Since this pricing action, gray market imports of Michelin tires have been nearly eliminated. (Modern Tire Dealer (1986).)

[43] Consistent with this interpretation, foreign manufacturers were reported to have earned unusually high profits by not lowering their U.S. wholesale prices as the dollar rose in value. (Fortune (1985).) Wholesale prices have also reportedly differed by enough to make it profitable to buy at retail in Europe for export to the U.S. (Business Week (1986).)

With the recent drop in the value of the dollar, Japanese firms, in particular, are reportedly taking much lower profit margins, transferring production to other countries, or making extra cost cutting efforts to protect their market shares in the U.S. The stature of U.S. competitors appears to play a role in these decisions. For example, Fuji has apparently raised its prices for film across the world except in the U.S. where Kodak has its most dominant position. (Wall Street Journal (July 30, 1986).)

in some industries reporting gray market imports, wholesale prices were similar, but U.S. retail margins were higher than those abroad.[44]

4. Manufacturers have engaged in varying degrees of private efforts to curtail gray market imports[45] under the current Customs Service policy. While some manufacturers have made efforts to discourage gray market trade, several available private remedies have not been widely utilized.[46]

---

[44] Some veteran gray market importers attribute gray marketing to higher distributor profits for authorized dealers as well as to currency fluctuations. See "Conversation with a Gray Marketeer," Consumer Electronics (1985). Some of the data supplied for the U.S. Commerce Department survey (1985) showed both higher wholesale and higher retail margins in the U.S. (See survey question A.6.b.)

[45] Some manufacturers present a somewhat split policy on gray market goods. For example, although Mercedes makes efforts to discourage gray market goods through publicity and contacts with financial and insurance institutions, it provides a delivery center, factory tours, and dining facilities for U.S. citizens buying their cars at the factory. (Insight (1983).) Camera manufacturers reportedly undertook substantial enforcement efforts to find and dismiss dealers in Hong Kong who sold to the U.S. gray market during the mid-1970s. Since then, supply sources have shifted to Europe. (Business Week (1986).) At the same time, the presence of various export licensing requirements in Japan suggests that Japanese manufacturers who were intent on monitoring gray market exports from Japan could do so. (Consumer Electronics (1985).)

Few efforts by authorized importers or manufacturers to use labels to distinguish authorized imports from gray market imports were reported in the Commerce Department survey (1985) of gray market practices. (See responses to question B.13 in the survey.) However, some camera manufacturers do require that retailer advertisements affirmatively state that the product is guaranteed by the manufacturer in order to be eligible for cooperative advertising incentives. See Vivitar Corp. v. United States (1984); National Law Journal (1985); and Wall Street Journal (1982). Pirelli tire company also reportedly decided to delete all of the DOT Codes from tires not designated for distribution in the U.S. (Tire Review (1985).)

[46] Manufacturers may develop separate trademarks in different countries, different product features for different countries, or different country codes on the packages that will help them enforce contractual arrangements with dealers. Alternatively, they can adjust pricing to dampen incentives to gray market the item.

5. Imported gray market products are usually physically close substitutes for the authorized imported products.[47] The principal differences involve services sold with the product,[48] particularly warranties, although slight model differences are common.[49] Several major retail chains that participate substantially in the gray market[50] supply their own services and warranties to substitute for those of the manufacturers that are not available on gray market goods.

---

[47] An exception is European automobiles. The automobiles available in Europe lack emission control devices required in the U.S. as well as several required safety features. All automobiles imported into the U.S. have to be refitted to include these items. Even with these adjustments, which usually cost several thousand dollars, European wholesale prices were considerably lower than U.S. wholesale prices during the early to middle 1980s. (Forbes (1984).)

[48] The most common bundling is with warranty or repair work. Submissions to the Commerce Department survey included a number of consumer complaints indicating that some consumers apparently assumed that warranty service was included when it was not. Consumer complaints received by the Better Business Bureau of Metropolitan New York, the center of U.S. gray market activity, have also focused on repair problems. Complaints of this type have involved calculators, typewriters, cameras, electronic keyboards, and electronic toys. (Wall Street Journal (1985).)

The May 1985 edition of Consumer Reports indicated that retailers stocking gray market photography goods now routinely offer products both with and without manufacturer warranties at different prices. In this way consumers have greater choice with gray market goods in the market. The same article also reported that a convention has emerged in advertising under which authorized imports are advertised as "U.S. warranty included" while gray market goods do not carry this message. Gray market retailers commonly offer their own warranties to replace the manufacturer warranty. See also Business Week (1985).

[49] Some automobile gray markets, in particular, are attributed to manufacturers' decisions not to sell a particular configuration in the U.S. (Advertising Age (1985).)

[50] In addition, some authorized retail distributors also buy gray market goods while some gray market dealers also buy from the authorized distributors to mollify them or to be able to offer consumers wider choice in warranty coverage. See Insight (1985); Business Week (1985); and Modern Tire Dealer (1986).

6. Systematic nondisclosure of material facts has not been found by the FTC staff in any of its investigations of gray market goods initiated in the 1980s. Although authorized importers have provided anecdotal evidence of consumer injury allegedly resulting from various practices associated with the sale of gray market goods, there was insufficient evidence of a systematic problem to warrant bringing a complaint. In addition, investigations of importers of gray market products conducted by the FTC's Division of Marketing Practices in 1983 and 1984 failed to substantiate claims of consumer injury resulting from the warranty practices of gray market importers.

## VI. EMPIRICAL EVALUATION OF ALTERNATIVE EXPLANATIONS

In the previous section, several alternative theoretical explanations for gray market imports were identified. Of these explanations, only the free rider and consumer deception theories imply that gray market imports harm consumers and are therefore consistent with restricting gray market imports. The five other theories suggest that consumers are more likely to be harmed than helped by restrictions on gray market imports. As Figure 1 below indicates, the available facts are consistent with a number of alternative explanations <u>and</u> differ by industry. Figure 1 is a matrix with reported characteristics of gray market imports (as discussed in Section V) on the vertical axis and with alternative explanations on the horizontal axis.

Despite the fact that a number of descriptive facts are consistent with several explanations for gray markets, characteristics tend to discriminate among the alternative explanations, but no single explanation is consistent with all of the characteristics. And many characteristics vary across

Figure 1

CONSISTENCY OF FACTS* ABOUT GRAY MARKET IMPORTS AND EXPLANATIONS

| | EXPLANATIONS | | | | | | |
|---|---|---|---|---|---|---|---|
| CHARACTERISTICS OF INDUSTRIES WITH EXTENSIVE GMI** | FREE RIDE | CONS. DECPT. | PRICE DISCR. | COL-LUSION | DISCIP. RETL. | REG. INEF. | EXCH. LAGS |
| GMI TRACK EXCH. RATES | YES | YES | YES | YES | YES | ? | YES |
| NO GMI PRIOR TO 1981 | NO | NO | ? | ? | YES | NO | YES |
| PRIMARILY HIGHLY DIFFERENTIATED PRODUCTS | YES | ? | YES | ? | YES | ? | YES |
| EXTENSIVE PROMO-TIONAL ACTIVITIES AT THE NATIONAL DISTR. LEVEL | YES | YES | YES | ? | YES | YES | ? |
| RETAIL SERVICES OFTEN CAN BE UNBUNDLED | NO | NO | YES | ? | YES | ? | ? |
| WHOLESALE PRICES DIFFERENT | NO | NO | YES | YES | NO | ? | YES |
| HIGHER U.S. RETAIL MARGINS | YES | NO | ? | ? | YES | YES | YES |
| LOW MANUFACTURER ENFORCEMENT IN SOME INDUSTRIES | NO | ? | ? | ? | YES | YES | YES |
| NO SYSTEMATIC CONS. DECEPTION | NPR | NO | NPR | NPR | NPR | NPR | NPR |

The individual cells in this matrix indicate whether the particular fact about gray market imports is generally consistent with the matching explanation. A question mark is used when the fact is not uniformly consistent or inconsistent with the explanation.

* As noted in Section III, the available information on gray market goods is neither complete nor particularly systematic. Hence, the empirical analysis is subject to error. Although the exact distribution of gray market goods among various potential characteristics is unknown, the available information is sufficient to conclude that there is diversity in the characteristics of gray market goods. A question mark appears in the table where the fact has mixed association with the explanation. NPR appears where the fact does not have a predictable relationship to the explanation.

** GMI = Gray market imports.

industries. The most important characteristics for the purpose of this analysis are the ones that differentiate between the free rider and consumer deception explanations, which have been used to support restrictions on gray market imports, and the other explanations. Five of the characteristics do this: gray market imports were not observed in most industries before 1981; several types of gray market imports usually have very limited distribution services or distribution services that can be sold separately; manufacturers' wholesale prices and profits often have differed across countries when gray market imports have been prominent; in some industries, manufacturers' efforts to curtail gray market imports have sometimes been contradictory or less complete than one might expect if free riding were the main cause of gray market imports; and systematic and material consumer deception has not been found in Commission investigations of gray markets. These characteristics are discussed below.

A. Lack of Gray Markets before 1981

If gray market goods were largely a free rider or consumer deception phenomenon, appreciable levels of gray market imports would probably have been observed for many years, just as transshipment has been observed in many periods in domestic markets.[51] In particular, gray market imports should have been observed before the rapid appreciation of the dollar that began in 1980.[52] In addition, gray market flows both to and from the U.S.

---

[51] See Overstreet (1983) for a discussion of cases. Also see, D. Coursey (1986).

[52] For free riding to be the dominant cause of gray market imports, but for gray marketing to be dormant until 1981, all of the gray market industries must have had free rider incentives that were just shy of the shipping and related transaction costs of establishing channels of gray

most likely would have occurred regularly, since manufacturers and distributors would have found it profitable to free ride on promotion and services offered by distributors abroad or to deceive consumers abroad as well as in the U.S. Instead, in most industries, we find no mention of gray market imports prior to 1980-81, and reverse gray market flows have been observed in only a few markets and only when the dollar has declined in value.[53]

The reported lack of gray market imports before the 1980s suggests that free riding or consumer deception are unlikely to be the sole incentives underlying gray market imports in the 1980s and therefore that across-the-board government restrictions on gray market imports are inappropriate. However, there could be an interaction between free rider incentives and, for example, lags in exchange rate adjustments. For example, a product sold in both Europe and the U.S. might be promoted with extensive national

---

market distribution or free ridable services provided by foreign manufacturers would have had to have just become significant in the early 1980s. Such substantial similarities across so many industries seem highly improbable.

Alternatively, major expansions in free ridable promotions or services might have coincided with the appreciation of the dollar. For instance, the value of free ridable promotions to a gray market importer based abroad would increase with the value of the dollar even if nominal promotional levels in the U.S. were constant. Examination of actual promotional outlays, however, argues against this as an across-the-board explanation for gray market imports. The United States experienced a severe recession in the early 1980s making this a relatively unpropitious time for importers to initiate promotional efforts aside from the exchange rate changes. In accord with this situation, actual advertising promotional expenditures for several widely gray marketed brands declined substantially during the early 1980s. Of a sample of 26 widely gray marketed product lines, nine had advertising decreases between 1980 and 1981 of 20% or more. (<u>Leading National Advertisers</u> (1977 through 1986 issues).)

[53] Some small level of reverse gray market trade has been reported, but it has occurred only over the last few months as the dollar has declined (FTC staff discussions with camera distributors).

advertising only in the U.S. with costs per unit of 20 cents. If transaction costs were 25 cents per unit through gray market channels, no gray market activity would be observed. However, if a currency revaluation took place and prices in the U.S. were ten cents higher as a result, extensive gray market imports might occur. While the revaluation would have triggered the gray market imports, most of the reason would be incentives to free ride. There is insufficient data to absolutely refute this possibility, but it seems unlikely that so many diverse industries would be so similarly situated.

B. Industries with Low Free-Ridable Distribution Services

Although several activities and services of manufacturers and authorized distributors might be the focus of free riding complaints, most complaints voiced in the Commerce Department survey about free riding concerned warranty services. Retailers' reputations for good warranty work are conceivably subject to free riding, but this service can be and increasingly is being unbundled from sale of the physical products. Several major retailing chains that participate in the gray market, such as K-Mart and Wards, provide their own substitute warranties and other services.[54] Wholesalers and small retail establishments have taken this step as well.

Many of the products subject to gray marketing have been available for many years, so consumers are likely to be familiar with many aspects of these products. This generalization seems likely to be true of such products as tires, some consumer electronics, watches, batteries, some wines, and

---

[54] Some gray market retail distributors also buy from the authorized distributors to be able to offer consumers wider choice in warranty coverage. See Insight (1985); Business Week (1985); and Modern Tire Dealer (1986).

some automobile parts. In other cases, such as cameras, some consumer electronics, and ski safety-bindings,[55] many consumers are likely to need extensive demonstrations or similar services. However, gray market distributors do not necessarily provide services inferior to those of authorized dealers.[56] Reports that several types of gray market goods require few distribution services, or require distribution services that can be sold separately, suggest that the most widely alleged free rider problem in distribution, warranty coverage, may not have been substantial enough to motivate extensive gray market activity in several industries.[57] We conclude that some gray market products are unlikely to be the subjects of extensive free riding on pre- or post-sale services.[58]

C. Wholesale Price and Profit Differences

Wholesale price differences between countries (even after adjusting for cost differences including transportation and promotions) were apparently

---

[55] Of course, some consumers in these markets may already have enough information to wisely purchase these items without receiving such additional services and without wishing to pay for them. If so, the problem is separating the customers so that they can be charged prices that reflect the costs of serving them. Gray market imports seem to have encouraged unbundling of some consumer services such as warranties. Whether the market can develop other techniques for unbundling services such as demonstrations, remains a question.

[56] Several respondents to the U.S. Commerce Department survey (1985) indicated that gray market dealers provide support services that are in some cases faster and more complete than those of authorized dealers. (Questions C.5 and C.6.)

[57] The possibility remains that consumers would blame the manufacturer even if it is clear that faulty warranty service is the responsibility of the seller of the warranty. The manufacturers in such industries might benefit from promoting the quality of their warranty offers.

[58] This does not preclude the possibility that gray market sales free ride on advertising or other promotions in these or other industries.

common in several industries when the dollar was rising. In the Commerce Department survey, several respondents acknowledged that they have different price and profit margins depending on demand conditions. Thus there is at least some prima facie evidence of price discrimination in several industries, although this may be due to adjustment lags. Neither the free-rider nor the consumer deception theories predict these wholesale price and profit differences.

Within the severe limits of the available data, it appears that some form of geographic price discrimination, probably related to adjustment lags, took place in several gray market goods.

D. Modest Manufacturer Efforts to Curtail Gray Markets

Although some foreign manufacturers whose products are gray marketed have evidenced substantial interest in curtailing gray markets, manufacturers in some markets have failed to take actions (for example, applying different marks in different countries, incorporating readily traceable packaging or product features and would facilitate tracing gray market shipments) that might curtail the practice, at least to the same extent as the proposed Customs Service actions. Other manufacturers have taken actions that seem inconsistent with full opposition to gray market imports.[59] Under a free rider hypothesis, territorial restrictions are imposed because manufacturers want to avoid free riders. Consequently, manufacturers should oppose gray

---

[59] Firms with exclusive territorial arrangements could conceivably seek to allow modest amounts of territorial "cheating" while maintaining the exclusive territories in general. This sort of incomplete enforcement fits well with the concept of vertical restraints as a bargain between manufacturers and retailers where each has some degree of market power. See Caves (1984).

market imports, and ambiguous manufacturer behavior of this sort should be rare.

Available reports indicate that manufacturers of several gray market goods have not been consistent in their efforts to prevent gray market imports and that some manufacturers implicitly favor some degree of gray market activity. This inconsistency in manufacturers' behavior is consistent with the retail discipline and distributor collusion hypotheses.

### E. Lack of Substantial Systematic Consumer Deception

In the FTC staff's investigations of complaints about deception from gray market imports, insufficient evidence has been found to warrant intervention. This indicates that consumer deception has not been widespread and systematic enough to justify government intervention on this basis.

## V. CONCLUSIONS AND POLICY IMPLICATIONS

Although a theoretical case can be made that gray market imports are motivated by free riding on the promotional and service efforts of authorized importers, the available empirical evidence is inconsistent with the strong form of this hypothesis that links all gray market activity to free riding. The hypothesis that gray market imports are connected with lags in exchange rate adjustments is generally more consistent with the evidence in more industries. More definitive conclusions than these are not possible because of the limitations of the data.

The implication for policy from these conclusions is that a general ban on or general obstruction of gray market imports, particularly one imposed by the government is probably unjustified. There may be specific instances in which gray market imports are predominantly a result of free riding, but free riding does not generally seem to be the primary cause. If there are such free rider problems, private contractual arrangements similar to those allowed by the antitrust laws in vertical domestic trade are probably preferable to a program of government restrictions that might fall prey to private ends that harm consumers and might invoke foreign trade retaliation.[60]

---

[60] If a rule of reason were to be applied to gray market import cases, it might be useful to apply to two stage analysis in which the complaining party would first demonstrate that its pricing policies were not discriminatory before presenting evidence that free riding caused the gray market imports.

## REFERENCES


Adelman, M., A&P: A Study in Price-Cost Behavior and Public Policy, Cambridge, Mass.:Harvard University Press, 1959.

Advertising Age, "Importers See Red Over Gray Market," July 21, 1980, p. 57.

_____, "'Gray Market' Hits Camera, Watch Sales," Aug. 15, 1983, pp. 3 and 62.

_____, "Warranty War Next for Automobile Marketers?," Nov. 11, 1985, p. 40.

Akerlof, G., "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism," Quarterly Journal of Economics, August 1970, pp. 488-500.

Antitrust and Trade Regulation Report, Special Supplement, #1169, "Merger Guidelines Issued by the Justice Department, June 14, 1984, and Accompanying Policy Statement."

Antitrust and Trade Regulation Report, "Major Brewers and Wholesalers Face New York Claims on Territorial Allocation," 51 (July 17, 1986), 108-110.

Automotive News, "Lower Price Porsche Due for U.S. in 1986," May 20, 1985, pp. 1 and 62.

Baumol, W., "Contestable Markets: An Uprising in the Theory of Industry Structures," American Economic Review, 72 (May 1982), 1-15.

Business Week, "The $7 Billion Gray Market: Where It Stops, Nobody Knows," April 15, 1985, pp. 86-87.

Carlton, D., "The Rigidity of Prices," American Economic Review, 26:2 (September 1986), 637-658.

Caves, R., "Vertical Restraints as Integration by Contract: Evidence and Policy Implications," in R. Lafferty, R. Lande, and J. Kirkwood, Impact Evaluations of Federal Trade Commission Vertical Restraints Cases, Washington, D.C., FTC (1984).

Caves, R. and P. Williamson, "What Is Product Differentiation, Really?", Journal of Industrial Economics, 24:2 (December 1985), 113-132.

Coalition to Protect the Integrity of American Trademarks (COPIAT) decision of the U.S. Court of Appeals for the District of Columbia on May 6, 1986.

Coalition to Protect the Integrity of American Trademarks, "Comments to the U.S. Customs Service," October 19, 1986.

Coggio, B., J. Gordon, and L. Coruzzi, "The History and Present Status of Gray Goods," The Trademark Reporter, 75 (Sept./Oct. 1985) 433-496.

Consumer Electronics, July 1985, pp. 49-50.

Consumer Reports, May 1985, pp. 300-301.

Construction Equipment, "Gray Market: Boon or Bane for Equipment Users?", Sept. 15, 1985, pp. 55-60, especially p. 58.

"Conversation with a Gray Marketeer," Consumer Electronics, July 1985, pp 49-50.

Coursey, D., "Compaq's Canion: Micro Gray Mart Is IBM's Fault," Management Information Systems Week, April 7, 1986, pp. 21, 46.

Dornsbusch, R., "Exchange Rate Dynamics," Journal of Political Economy, 84 (1976) 1161-1176.

Flaherty, M.T., "Market Share Determination in International Semiconductor Markets," Harvard Business School Working Paper 1-782-04, Cambridge, Mass.: Harvard University School of Business, April 1984.

Forbes, "What Price Mercedes?", Aug. 27, 1984, pp. 134, 136, 139.

Fortune, "Watching from Abroad with Mixed Emotions," Aug. 19, 1985, p. 32.

Giavazzi F. and C. Wyplosz, "The Real Exchange Rate, The Current Account and the Speed of Adjustment," Essex Economics Paper #194, Essex, England: University of Essex, 1984.

Higgins, R. and P. Rubin, "Counterfeit Goods," Journal of Law and Economics, 22:2 (Oct. 1986), 211-230.

Inc., "Gray Market Expands to Industrial Goods," July 1985, p. 22.

Insight, "A Cheaper Way to Get the Goods," Oct. 21, 1985, pp. 56-58.

Journal of Industrial Economics, "What Is Product Differentiation, Really?", 24:2 (December 1985), 113-132.

Journal of Commerce and Commercial, "Dollar Dulls Auto Gray Market," (March 4, 1986), 1A(2).

Landes W. and R. Posner, "Market Power in Antitrust Cases," Harvard Law Review, 94 (March 1981), 937-996.

Leffler, K., "The Welfare Effects of Resale Price Maintenance," Journal of Law and Economics, 23:2 (May 1985), 381-404.

Martens Y. and V. Ginsburgh, "Product Differentiation and Price Discrimination in the European Community: The Case of Automobiles," Journal of Industrial Economics, 34:2 (Dec. 1985), 151-166.

Marvel, H., "Exclusive Dealing," Journal of Law and Economics, 25:1 (April 1982). pp. 1-25.

Marvel, H. and S. McCafferty, "The Welfare Effects of Resale Price Maintenance," Journal of Law and Economics, 23:2 (May 1985), pp. 363-380.

Modern Tire Dealer, "Is the Gray Market Dead or Alive?," July 1985, pp. 17-18.

Monsanto Co. v. Spray-Rite Service Corp., 104 S.Ct. 1464 (1984).

The National Law Journal, "'Gray Market' Fight Isn't Black and White," Oct. 28, 1985, pp. 1, 22, 23.

New York Times, "Camera Prices in a Shambles," Dec. 11, 1982, pp. L41, L43.

Overstreet, T.R., Jr., Resale Price Maintenance: Economic Theories and Empirical Evidence, Washington, D.C.: The FTC, 1983.

Posner, R., The Robinson-Patman Act: Federal Regulation of Price Differences, Washington, D.C.: American Enterprise Institute, 1970.

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

Schmalensee, R., "Another Look at Market Power in Antitrust," Harvard Law Review, 95 (1982), 1789-1816.

Steiner, R., "Basic Relationships in Consumer Goods Industries," Research in Marketing, 7 (1984), 165-208.

Survey of Current Business, July 1986 and July 1983, Table 4.2.

Tire Review, "Pirelli Ends DOT Code on Future non-USA Tires," Nov. 1985, p. 19.

U.S. Commerce Department, "Economic Effects of Parallel Imports: A Preliminary Analysis," Jan. 23, 1985.

U.S. Federal Trade Commission Staff, "Comments of the FTC Staff on Gray Market Policy Options Facing the U.S. Customs Service," Oct. 19, 1986.

U.S. International Trade Commission, "Certain Alkyne Batteries," 337-TA-165, 1984.

U.S. Justice Department, Report on the Robinson-Patman Act, 1977.

Wall Street Journal, "'Gray Market' in Camera Imports Starts to Undercut Official Dealers," April 1, 1982, p. 29.

_____, "No Guarantees for Guarantees in Gray Market," Feb. 5, 1985, p. 33.

_____, "As the Japanese Yen Grows Stronger, Why Aren't Import Prices Soaring?", July 30, 1986, p. 21.

_____, "Travel Agents Woo Clients by Offering Rebates and Other Money-Saving Deals," Sept. 3, 1986, p. 29.

Washington Post, "The Gray Market: Where a $200 Watch Can Be Bought for $140," Dec. 16, 1985, pp. L1-L2.

_____, "Dollar's Drop Drubs Gray Marketeers," May 4, 1986, p. F3.

Wilson, C., "Anticipated Shocks and Exchange Rate Dynamics," Journal of Political Economy, 87 (1979), 639-647.

Vivitar Corp. v. United States, 593 F.Supp. 420, 435 (C.I.T.) 1984).