THE IMPLICATIONS OF FOREIGN-TRADE ZONES FOR U.S. INDUSTRIES AND FOR COMPETITIVE CONDITIONS BETWEEN U.S. AND FOREIGN FIRMS

(Supplement and Expansion)

Report to the Committee on Ways and Means, U.S. House of Representatives on Investigation No. 332-248 Under Section 332 (g) of the Tariff Act of 1930

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Preface

On June 22, 1987, the Chairman of the Committee on Ways and Means, U.S. House of Representatives, requested the United States International Trade Commission to institute an investigation pursuant to section 332 of the Tariff Act of 1930 into the implications of foreign-trade zones for U.S. industries and for competitive conditions between U.S. and foreign firms. 1/ The Chairman requested that the Commission update and supplement investigation No. 332-165 done by the Commission at the request of the Committee during 1983-84, The Implications of Foreign-Trade Zones for U.S. Industries and for Competitive Conditions between U.S. and Foreign Firms, USITC Publication 1496, February 1984. 2/ In addition to providing a supplement to the previous report, the Committee requested that the Commission expand the study with respect to foreign-trade subzones to enable the Committee to analyze these subzones and to assess their implications for the U.S. economy and U.S. international trade. The Commission's notice of investigation was published in the Federal Register of August 5, 1987 (52 F.R. 29076). 3/ Because the Committee on Ways and Means requested the Commission to provide its report under an accelerated delivery schedule for use in the Committee's hearings, the Committee asked the Commission to rely on written submissions from the public rather than to hold separate hearings.

On September 29, 1987, the Chairman of the Committee on Finance, U.S. Senate, noting that the study was underway, requested that the Commission give particular attention to oil refineries. Among the issues requested to be examined were whether subzone status tends to encourage employment and other economic benefits that would not otherwise exist, whether subzone status for refineries leads to increased sourcing of oil from abroad, and the effects of subzones on the tariff structure for crude oil and petroleum product imports. 4/

The information in this report was obtained from fieldwork, the Commission's files, the Foreign-Trade Zones Board, the U.S. Customs Service, private individuals and organizations, and responses to the Commission's questionnaire. Information obtained from the Foreign-Trade Zones Board include that for all users of both general-purpose zones and subzones that operated during 1983-86. 5/ Responses to the questionnaire by 65 producers that operated principally in subzones for a 4-3/4-year period beginning in 1983 represented well over 90 percent of all manufacturing activity that occurred in foreign-trade zones in recent years; further, manufacturing in zones accounted for around 90 percent of the total value of shipments from all zones in recent years.

Much of the data in this report is confidential. Thus, the report cannot be released to the public in its current form without revealing operations of individual firms.

1/ The request from the Ways and Means Committee is reproduced in app. A.
2/ The 1983 request from the Ways and Means Committee is reproduced in app. A.
3/ A copy of the notice of the Commission's investigation is reproduced in app. B.
4/ The request from the Chairman, Committee on Finance is reproduced in app. A.
5/ Yearly references are on a fiscal-year basis (October-September) unless otherwise stated.

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Executive Summary

Foreign-trade zones (FTZ's) were created by the Foreign-Trade Zones Act of 1934 (FTZA) for the purpose of expediting and encouraging foreign commerce. Changes in the FTZA in 1950 (authorizing manufacturing), a Board decision in 1952 (allowing special-purpose zones or "subzones"), and a Treasury decision in 1980 (removing from the dutiable value of such merchandise the cost of processing nonprivileged merchandise in zones and profit realized) have broadened the objectives and functions of the program.

Data gathered by the Commission on zone operations demonstrate that zone shipments account for a rapidly growing volume of trade, but the total dutiable foreign merchandise component remains below 5 percent of total U.S. imports. The domestic share of purchased inputs received is now over 70 percent. Employment directly and indirectly related to zone facilities has grown substantially, but much of the increase relates to conversion of existing plants and jobs to zone status. The net gain or loss of jobs resulting from FTZ status varies from industry to industry. Only one-tenth of zone shipments represents exports or transshipments to foreign ports (the original purpose for which zones were envisaged), while manufacturing and assembling domestic and foreign materials and components for import into the United States has become the dominant activity. Most economic activity now taking place in zones would continue to occur within the United States in the absence of foreign-trade zone status.

HIGHLIGHTS OF THE COMMISSION'S STUDY OF FTZ'S

Profile of General FTZ Activity, 1983-1987

- From 1983 to early December 1987, the number of general-purpose zones authorized to operate grew from 91 to 138, and subzones from 30 to 106.

In early December 1987 there were 138 general-purpose zones and 106 subzones, up from only 26 zones in 1976, 21 of which were general-purpose zones. Recent proliferation of FTZ's is due to a combination of factors most of which also were leading factors in the early 1980's when the Commission conducted its 1984 study of FTZ's: (1) enactment in 1950 of the Boggs amendment permitted manufacturing, which has been the dominant area of FTZ growth; (2) the 1952 amendment to the Board regulations authorizing subzones which made possible the use of special-purpose zones for manufacturing; (3) the 1980 change in customs valuation practice which lowered the value of the merchandise upon which duties are collected; and (4) rapid appreciation of the U.S. dollar in the early 1980's and the pressure of increasingly competitive imports in the U.S. market which increased interest in FTZ duty reductions as a cost-reducing alternative to imports, foreign assembly, or production abroad. The Commission also noted in its 1984 study of FTZ's that most zone growth in the past decade has been in the interior of the United States, probably as a result of communities seeking ways to expand their economic base by expanding their international trade.

- o Shipments from both general-purpose zones and subzones is concentrated in relatively few zones. However, concentration has decreased since the 1984 Commission study.

In 1986, 9 general-purpose zones of the 127 approved together accounted for 77 percent ($2.4 billion) of shipments from such zones. Of the 93 approved, 10 subzones accounted for 60 percent of all subzone shipments ($28.8 billion). The 10 were operated by 3 traditional U.S.-based automobile manufacturers.

- o FTZ Board data registered an 85 percent annual average rate of growth in FTZ shipments during 1983-86, from $8.1 billion (83 percent from subzones) to $51.2 billion (94 percent from subzones). New manufacturing subzones accounted for the vast majority of this growth.

Subzone shipments increased without interruption, from $6.7 billion to $48.2 billion. Because some firms had not reported data to the FTZ Board, the data supplied to the Commission recorded even greater growth in subzones than that reported to the Board; questionnaire responses showed increases from $6.7 billion in 1983 to $59.9 billion in 1986, representing a 107 percent average annual rate. Commission data were $11.7 billion (24 percent) higher than reported to the Board.

- o Automobiles accounted for 87 percent ($52.1 billion) of all subzone shipments in 1986, up from 74 percent ($5.0 billion) in 1983. Domestic share of purchased inputs received increased during 1983-86, from 64 percent to 72 percent.

After peaking at 77 percent in 1984, domestic share of purchased inputs received dropped back to 72 percent in 1986. This occurred because more foreign-owned (mainly automobile) companies began operating in subzones, using a high percentage of imported parts, and certain domestic auto and nonauto firms increased their use of imported parts in line with efforts to find the lowest cost source that would provide the best quality and delivery.

- o U.S. imports of dutiable foreign merchandise from FTZ's, led by autos, auto parts, and auto components, experienced an upward trend during 1984-86.

According to the U.S. Bureau of the Census, U.S. imports of dutiable foreign merchandise from FTZ's was $3.6 billion in 1984, $4.5 billion in 1985, and $11.4 billion in 1986. About *** percent of these imports were metals and metal products (TSUS schedule 6), mainly autos, auto parts, and auto components. An additional *** percent was accounted for by chemicals and related products (TSUS schedule 4). As a share of total U.S. imports of all merchandise, the reported dutiable merchandise from FTZ's averaged about 1.7 percent annually. * * * were the major suppliers of FTZ imports. Overall FTZ shipments to the U.S. market (domestic and foreign content), as reported to the Board, rose from $17.8 billion in 1984 to $45.6 billion in 1986.

- o Total U.S. exports from FTZ's increased at an annual average rate of 43 percent, from 1983 to 1986; the domestic share of purchased inputs received of these exports is estimated at roughly two-thirds of total value.

On the basis of Board data, U.S. exports from FTZ's increased annually, from $1.7 billion in 1983 to $4.9 billion in 1986. However, based upon estimates from questionnaire data, domestically produced merchandise accounted for a somewhat lower proportion of these FTZ exports than the Board-reported export data.

- o Since 1983, the number of firms and of persons employed in FTZ's increased. However, much of this increase is attributable to conversion of preexisting plants to subzone status, particularly by the traditional U.S.-based auto firms.

The number of firms using zones rose from 1,531 (of which 826 were in zones on a non-continuous basis) in 1983 to 2,101 (of which 1,015 were in zones on a non-continuous basis) in 1986. Employment of firms in their zone operations, particularly subzones, also rose sharply. Total full-time and part-time FTZ employment in 1983 was 32,509 (27,978 in subzones); in 1986, such employment was 137,538 (130,488 in subzones). Although data after 1986 for general-purpose zones are not available, employment in subzones in October 1986-June 1987 totaled 151,219. Of total U.S. employment of about 118 million in 1986, employment in zones is 0.1 percent. Little of this increase in zone-related employment can be attributed to FTZ advantages. In many cases, employment in a particular zone would remain the same or be little changed without FTZ status; for example, there are many instances where preexisting plants were converted to subzone status, particularly in traditional U.S.-based automobile manufacturing and assembly.

Petroleum Refinery Operations In Foreign-Trade Zones

- o Two small mainland U.S. petroleum refiners have acquired subzone status; their shipments account for less than 1 percent of all subzone shipments.

Several applications from other refineries for subzone status are pending but under close review because present depressed conditions in domestic refining make advantages of subzone status for importing crude petroleum and petroleum products an attractive option for struggling refiners. Other refiners oppose the granting of additional zone status for refining or blending. They stated it provides an incremental incentive to crude petroleum imports.

- o The U.S. Customs Service (Customs) is concerned about the effectiveness of its control over refinery operations in FTZ's partly because of difficulties in identifying products and their relative values at the time of separation, as required by the FTZA.

Customs is conducting a study of petroleum refineries in FTZ's. Customs has delayed activation of zones that had been authorized to operate and has asked the Board to delay authorizing new subzones for refineries. In July

1987, Customs issued a report that suggested methods of zone operation for refineries that would be appropriate for adequate Customs supervision and control. Customs intends to develop, in cooperation with the affected parties, a mutually acceptable method that would permit refineries to operate in zones while allowing Customs to protect the revenue, to exercise effective control of zone operations, and to enforce the Customs laws. As of December 1987, the result of the study and proposals was a series of discussions or negotiations between Customs and the affected interested parties to develop a suitable regulatory regime for refineries. The new regime being developed will apply to the mainland refineries that are currently activated and operating and to any other applicants that receive Board authorization and Customs activation approval. The new regime will be used for a 3-year period, at which time Customs will make any necessary corrections to improve the effective oversight of the operation of refineries in FTZ's.

- o As a result of an anomaly in the Tariff Schedules of the United States (TSUS), FTZ's can be used to avoid existing tariff provisions for catalytic naphtha and other motor fuel blending stocks and enter U.S. Customs territory at a lower rate when blended.

Currently, these mixtures are dutiable at the highest rate of duty of the components of the mixture to discourage further processing into industrial organic chemicals. However, catalytic naphtha and other blending stocks can be imported into the subzones, which are, for tariff purposes, outside the U.S. customs territory, thereby preventing these imports from being subject to U.S. customs procedures. Within the subzone, these mixtures may be combined with foreign and/or domestic merchandise. The resulting product can enter into U.S. Customs territory dutiable at the lower motor fuel duty rate of 1.25 cents per gallon, rather than at the higher rates applicable to components of the mixture.

- o Some argue against subzone status for refineries and blending operations. They believe subzone status should be granted only if the refined petroleum products or byproducts are exported.

However, the United States is a net importer of petroleum products, primarily residual fuel oils and motor fuel. It is not a substantial exporter of petroleum products. Subzone status tends to increase imports of both crude petroleum and petroleum products. For instance, since typically about 10 percent of a refinery's crude petroleum input is used as plant fuel, refineries operating in subzones can use imported crude for that purpose without paying the duty otherwise applicable.

FTZ Administration Developments Since the 1984 Commission Study

- o No significant legislative changes have occurred since 1983, and the Foreign-Trade Zones Board has issued no new regulations.

The Department of Commerce, under whose responsibility the Board operates, is reviewing the purpose and policies of the program in light of the 1984 Commission and General Accounting Office studies, comments on proposed regulations, and input from interested industries and government entities.

The Board's staff remains small and its procedures relatively informal, with senior Commerce Department officials expressing to other Board members and the public Commerce's positions on most matters before the Board. Critics continue to seek more detailed and more rigorous examination of the Board's net public interest criteria on a national basis and not just a local or regional basis in the application process. They also seek more formal procedures in handling applications, such as Board adoption of the Administrative Procedures Act.

- o Many more special-purpose (manufacturing) subzones have been approved since 1983, some of them with restrictions on the types of activities permitted, shipment destinations, or customs treatment of the products produced.

Many comments received during this investigation express the view that the Board applies different criteria in considering subzone-related petitions than are formally provided in Board regulations. Opponents to subzones claim that these criteria have the intent and effect of promoting imports, contrary to Congressional intent and regardless of the impact on domestic producer and supplier firms. However, although the legislative history is neither extensive nor clearcut, both Congress and the Executive Branch acknowledge that the zone program, following the statutory amendment permitting zone manufacturing, encourages some imports. Since 1983 the Board has considered 53 applications in which petitioners sought restrictions on zone operations and has imposed a variety of restrictions.

- o Since the previous Commission study of FTZ's, customs regulations relating to FTZ's have been revised to provide for a new audit-inspection method of zone supervision by Customs.

The linchpins of the audit-inspection system are operator responsibility and liability for physical and documentary supervision of zones, and spot checks and audits of records by U.S. Customs. The new regulations contain significant additional enforcement provisions dealing with liquidated damages, penalties, suspension of activation and recommendation of revocation.

Industry and Labor Concerns and Recommendations

- o U.S. industry and labor raised a number of concerns about the foreign-trade zones program.

The Commission solicited comments from all current subzone users and all sources known to have views on FTZ issues. Concerns raised by representatives of industry and labor centered on the same issues raised during the previous Commission study. These focused around manufacturing in subzones, particularly so-called Japanese "transplants" (including joint ventures with traditional U.S.-based firms), where reduced duty liabilities were occurring owing to inverted tariffs (tariffs on finished products that are lower than those on parts). Those raising these concerns contended that the FTZ program has resulted in a net decrease in U.S. employment and has stimulated imports, rather than exports, causing injury to domestic industries, their suppliers, and the employees of both. Some critics are concerned that once a single firm in an industry has been given subzone status, then every firm must seek that

status to be competitive. They consider this a costly process that ultimately favors transplant firms more than domestic firms. A great majority of the comments received related to how the Foreign-Trade Zones Board responds to tariff issues and their potential for injury to domestic industry, but some were also directed to U.S. Customs Service operations.

Critics expressed concerns about the Board, including the ability of the Board to perform its job, given its small staff; the informal manner in which it conducts its business; the rigor of its approval process; and the competence of the Board to apply "potential injury" and "net production and employment benefits" tests to applications for subzone status. Some critics raised other more fundamental issues: (1) Did the Customs Service err in promulgation of its original regulations implementing the FTZA when it created the distinction that allows manufacturers to claim nonprivileged foreign status and receive lower rates of duty in inverted tariff situations? (2) Was there a basis in the FTZA for the Board's 1952 regulations allowing subzones? and (3) Did Customs have the authority to promulgate 1980 regulations which eliminated zone-added labor and overhead from the dutiable value of the foreign merchandise, effectively reducing the duties without Congressional approval on an item-by-item basis? Some critics also questioned whether the Board is fully complying with Federal laws and executive directives in considering restrictions on zone activities; others ask whether the Board should be applying any restrictions on zone and subzone grants. Finally, critics wondered if Customs can control zone merchandise flows effectively because it has progressively reduced its on-site presence in favor of automated inventory control systems and spot compliance checks.

o Respondents recommend changes to the FTZ program.

The changes differed little from those suggested during the 1984 Commission study. They include: (1) elimination of the FTZ program; (2) prohibition of zone manufacturing, or limiting it to products for export; (3) clarification of the standards for "public interest" findings (including the economic impact analysis) in the application process performed by the Board for controversial or "import sensitive" industries; (4) processing of applications (including holding public hearings) for zone and subzone status under the Administrative Procedures Act; (5) requiring that the economic impact analysis be conducted by another government agency or by the private sector using more sophisticated economic analysis than that currently used by the Board; (6) more clearly defined criteria for assessing the potential impact of zone operations; (7) a clearly defined minimum domestic content requirement for subzone manufacturing operations in the automobile industry; (8) cessation of duty savings in inverted tariff situations when the value of the U.S. dollar reaches a certain predetermined level; (9) an increase in the staff of the Board to aid it in carrying out its administrative and oversight functions; and (10) better direct notification and identification of all potentially affected parties about zone and subzone applications, including, but not limited to better indexing (including identification of companies seeking to manufacture a product) in the Federal Register notices notifying the public of applications for manufacturing in zones and subzones.

- o Zone users and proponents indicate that FTZ's have a positive indirect impact on the U.S. economy and on state and local areas.

Basic arguments raised by users and proponents are also little changed from those raised during the Commission's previous study. According to FTZ users and proponents, location of an FTZ in a community has a ripple economic effect on both the local and U.S. economies: the availability of a general-purpose zone broadens the inducements of the overall development package that an area can offer to attract firms; substantial amounts of money are invested in new zone plant and equipment, the majority by foreign firms; some firms locating in zones have in turn brought about further expansion by urging supplying firms also to locate in zones (including other foreign firms locating in the United States for the first time); zone users purchase some components and materials from U.S. vendors; and employment and equipment utilization is stimulated in the U.S. trucking, railroad, and airfreight industries. Zone users also claim that for every worker employed in a zone, roughly two additional workers are employed outside the zone. They further assert that zones have a positive impact on the U.S. balance of payments.

Impact of FTZ's on the U.S. Economy

- o The net effect of zone operations on customs revenue has been small, averaging 1 percent savings on the relevant product entries. Due mainly to the effect of zone provisions on inverted tariffs, but also to interest savings on duty deferral, FTZ users have reduced or postponed tariff liabilities on goods entering into the U.S. customs territory.

Through use of the inverted tariff (principally affecting manufacturing operations in subzones) and duty payment deferral (used principally in general-purpose zones, but also in subzones), importers can reduce or postpone their duty payments on goods entering the U.S. customs territory. Faced with inverted duty rates, zone manufacturers can reduce tariff liability on components or raw materials with higher rates of duty by zone processing or assembly into finished products that enter at a lower rate of duty. Firms manufacturing in subzones accounted for 90 percent or more of total FTZ shipments in recent years, and their duty savings resulting from the use of inverted duty rates increased from $7.4 million in 1983 to $38.2 million in 1986, during October 1986-June 1987, such savings amounted to $38.8 million. For 1986, this is equivalent to nine-hundredths of 1 percent of the total value of merchandise entered into the United States from FTZ's in 1986. For automobile plants, which accounted for the great bulk of these saving, the average duty savings per car for all plants operating in subzones decreased from $9.91 in 1983 to $5.54 in 1985 and then rose to $8.57 during October 1986-June 1987.

Duty deferral postpones duty payment until merchandise enters the U.S. customs territory. Savings from duty deferral for firms in subzones was small, amounting to an estimated *** in 1986. The amount saved by users of general-purpose zones could not be determined from available information, but is believed to be larger because storage and warehousing is the dominant use of these zones, in contrast to the dominant manufacturing uses of subzones.

Duties collected on merchandise imported from FTZ's in 1986 amounted to an estimated $293 million, compared with total customs duties collected that year of $13.3 billion, or about 2 percent of all duties collected.

- o Firms have increasingly chosen FTZ operations to become more competitive.

In selected industries, firms have increasingly chosen zone status, citing the need to reduce costs. Users and proponents argue that the ability to reduce costs helps sustain and create employment by encouraging the retention or shifting from overseas of production activity that might otherwise have been conducted abroad. This increase in the use of zone status to be competitive is most evident in the automobile industry, where growing numbers of manufacturers (both U.S. and foreign) have sought zone status in recent years. These producers see in zones a mechanism to reduce costs on imported components, mainly from duty savings on inverted tariffs, but also from savings through duty deferral and from the avoidance of cumbersome drawback procedures. Although the savings resulting from zone operations may not be substantial, firms involved in manufacturing view FTZ's as a significant means of reducing unit costs.

- o Economic analysis of the expanded FTZ program indicates that the auto parts industry has been adversely affected, and the auto assembly industry has benefited.

However, conclusions regarding the direction of net employment effects, depend on assumptions regarding the relative degree of supply response to price changes associated with FTZ duty effects. Estimates of supply response are very imprecise. Taking account of factors that determine such responses, this study estimates that expansion of the FTZ program has resulted in net employment losses that range from zero to a maximum of 10,300 jobs. The maximum number of jobs lost results from the combined effects of estimated employment gains in assembly plants of approximately 4,400 jobs, and estimated losses in the domestic auto parts industry of roughly 14,600 jobs. The maximum net employment loss is therefore estimated to be 10,300, representing a 3.5-percent decline in auto parts employment, and a 3-percent increase in auto assembly employment. Estimated employment effects are not to be construed as affecting overall U.S. employment. Rather, estimated job losses or gains represent redistribution of employment among industries.

CHAPTER 1. THE FOREIGN-TRADE ZONES ACT AND ITS RECENT ADMINISTRATION

Main Features of Foreign-Trade Zones

Foreign-Trade Zones (FTZ's) are secured areas under U.S. Customs Service (Customs) supervision that are considered outside the customs territory of the United States. Importers may move merchandise into zones for storage, exhibition, manufacture, or other operations not otherwise prohibited by law. Customs does not collect import duties on foreign merchandise until the merchandise leaves the FTZ and enters the U.S. customs territory. The importer has a choice of paying duties on goods in their condition as admitted into a zone or in their condition at the time of entry into the customs territory. No duties are assessed on identifiable domestic merchandise which re-enters the United States from an FTZ, nor are any customs dities assessed on any merchandise exported from a zone.

FTZ's are authorized by the Foreign-Trade Zones Act of 1934 (FTZA) for the purpose of expediting and encouraging foreign commerce. 1/ The FTZA provides the framework for the creation and supervision of FTZ's in the United States and established the Foreign-Trade Zones Board (Board) to implement and oversee the Act. Changes to the FTZA in 1950 (authorizing manufacturing), a Board decision in 1952 (allowing for special-purpose zones or subzones), and a Treasury decision in 1980 (removing the cost of processing nonprivileged merchandise in zones and profit realized from the dutiable value of such merchandise) have broadened the scope of the FTZ program.

Zones are either general-purpose or special-purpose (subzones). In practice, the latter are single-firm manufacturing sites, whereas there is no limitation on the number of firms that can operate in a general-purpose zone. FTZ's are generally sponsored by qualified public corporations which either operate the facilities themselves or through contracts with public or private firms.

The Board authorizes and supervises FTZ's and reports annually to Congress on the FTZ program. Created by the FTZA, the Board consists of the Secretaries of the Departments of Commerce, Treasury, and the Army. The Board is responsible for receiving and investigating applications for new zones, including their impact on U.S. commerce, to ensure compliance with Federal laws, regulations, and administrative actions. In its administration of existing zones, the Board relies heavily on the U.S. Customs Service. The Board has the authority to penalize violations of the terms of the zone grant or of the FTZA, certain other provisions of Federal law, and related Federal regulations through fines or revocation of the grant to operate the FTZ.

The U.S. Customs Service is responsible for protecting U.S. revenues and providing for the admission of merchandise into zones, processing of zone merchandise, inventory control of zone merchandise, and admission of zone merchandise into the U.S. customs territory. The local district director of

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1/ For further information on the FTZA, see The Implications of Foreign-Trade Zones for U.S. Industries and for Competitive Conditions Between U.S. and Foreign Firm, Report to the Committee on Ways and Means, U.S. House of Representatives, on Investigation No. 332-165 Under Section 332(g) of the Tariff Act of 1930, USITC Publication 1496, February 1984, pp. A-1-A-2.

Customs carries out the responsibilities of the Secretary of the Treasury under the FTZA.

General-purpose zones are generally pursued as an area economic development tool. Most subzone operations, however, exist to take advantage of so-called inverted tariff situations. These situations exist when the rates of duty on zone-manufactured articles are lower than the rates applicable to the foreign components contained in the articles. Proponents of zone usage believe that FTZ's allow firms to make the most economically rational choice as to where to source parts because they can alleviate the negative tariff effects of these inverted tariff situations. However, considerable controversy exists over whether subzones work to displace or encourage imports overall. Much of the controversy focuses on manufacturing and assembly operations, where the comparative tariff advantages have the most significant overall economic effect. General-purpose zones, used largely for storage, distribution, transshipment, and similar operations of the kind originally envisaged by the FTZA have not attracted many such manufacturing operations. By contrast, the number of applications to perform subzone manufacturing operations (primarily in existing plants) has grown significantly over the recent past, and this growth will probably continue as more firms become aware of duty savings they can have in inverted tariff situations. The backlog of pending applications at the Board, which will be discussed later, also suggests probable growth.

Whereas one of the stated intentions of the 1934 act establishing zones was to increase the competitiveness of U.S. products in foreign markets, zone status (particularly subzone status) is now being used mainly to maintain or improve the competitive posture of firms operating in domestic markets. Much of the reported growth in zone operations is due to the increased usage of subzones by the automobile industry where major foreign and domestic companies have obtained or intend to obtain subzone status for certain new and existing assembly plants. This practice provides an economic benefit to zone manufacturers and the local area, but it does result in a loss of some tariff protection to domestic suppliers and has an impact on domestic conditions of competition.

Up to the time of the Commission's 1984 report, the FTZA had rarely been amended, partly because of the small number of zones and mainly because of the generally favorable position of the United States in world trade. The zones authorized prior to 1980 were general-purpose facilities focusing on storage, testing, and distribution, and they provided users a means of avoiding the posting of bonds and the payment of brokerage and customs fees. These zones provoked little controversy and had little or no effect on nonzone firms.

By 1983, the special-purpose subzones authorized for manufacturing began to draw the attention of domestic interests all of which were experiencing increased competition from foreign firms. It was noted that reduced customs duties were available to zone manufacturers importing into the United States. Some of these interests, such as U.S. labor unions, the U.S. steel industry, and domestic bicycle producers, began to express their concerns about the effects of the FTZ program. Because of the number of automobile assembly plants obtaining subzone status, a key group which asserts the injurious effects of the program is the suppliers of automotive parts and components. These domestic interests have prompted both amendments to the original legislation and a further examination of the entire program, including

increased attention on the part of the U.S. Department of Commerce to issues of the underlying purposes of and guiding policies appropriate for the program.

Legislative History

Following amendment of the original statute to permit manufacturing in zones, considerable discussion of the intent of Congress regarding the purposes of the FTZ program had not resulted in a consensus. It is clear that the FTZA contemplated that a zone would serve--

> to encourage and expedite that part of a nation's foreign trade which its government wishes to free from the restrictions necessitated by customs duties. In other words, it aims to foster the dealing in foreign goods that are imported, not for domestic consumption, but for reexport to foreign markets and for conditioning, or for combining with domestic products previous to export. 1/

The report on the FTZA issued by the Senate Committee on Commerce added that--

> The creation of devices such as the bonded warehouse and the drawback indicates that it is not the policy of our Government to subject to our tariff laws those goods not destined for domestic use. However, in its attempt to free them from the operation of our tariff laws, the method adopted has proven burdensome and expensive, and has prevented the United States from building up a large transshipment commerce. The establishment of foreign-trade zones will liberate the transshipment trade from the burden and expense now imposed upon it, and will do much to assist in building up the United States as a transshipment center. 2/

Thus, although the statute originally prohibited manufacturing in zones, zones did serve as an alternative to the use of bonded warehouses and drawback procedures in order to facilitate the transshipment and export trade. These goals were to be sought under the undefined "public interest" standard, as discussed below.

The scope and purpose of the so-called Boggs amendment, enacted in 1950 3/ after lengthy committee review, is less clear. Because the Boggs amendment authorized manufacturing in zones, it has become a focal point for both supporters and critics of the FTZ program as zone manufacturing has grown dramatically and now involves foreign as well as domestic firms. Both sides in the debate are invoking the intent of Congress in assessing the Board's criteria for zone establishment and activities. The statute itself states--

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1/ S. Rept. No. 905, 73d Cong., 2d Sess. 2 (1934) (quoting a 1918 Tariff Commission study).
2/ Ibid., p. 3.
3/ Act of June 17, 1950, ch. 296, 64 Stat. 246.

> Foreign and domestic merchandise of every description, except such as is prohibited by law, may, without being subject to the customs laws of the United States, except a otherwise provided in this chapter, be brought into a zone and may be stored, sold, exhibited, broken up, repacked, assembled, distributed, sorted, graded, cleaned, mixed with foreign or domestic merchandise, or otherwise manipulated, or be manufactured except as otherwise provided in this chapter, and be exported, destroyed, or sent into customs territory of the United States therefrom, in the original package or otherwise; but when foreign merchandise is os sent from a zone into customs territory of the United States it shall be subject to the laws and regulations of the United States affecting imported merchandise: Provided, That whenever the privilege shall be requested and there has been no manipulation or manufacture effecting a change in tariff classification, the appropriate customs officer shall take under supervision and lot or part of a lot of foreign merchandise in a zone, cause it to be appraised and taxes determined and duties liquidated thereon. 1/

Critics of the FTZ program (See appendix C for a complete list of these known opponents of indiviual zone applications) have frequently asserted that the Boggs amendment did not change the FTZA's original purpose and scope (in their view, promoting employment through increasing exports and transshipment). Further, they argue that the Board is not meeting its responsibility in its net public benefit assessments for ensuring that each zone will increase or facilitate U.S. exports. Zone users and other supporters of the program have cited language in hearing reports or other documents as apparently indicating a Congressional intent to utilize the term "commerce" to include both imports and exports. 2/

The available legislative history indicates that, although Congress recognized that the amended FTZA might encourage the importation of foreign goods, it did not expect large volumes of goods manufactured in zones to enter the customs territory. In addition, in the opinion of the Commission's staff, the prevailing view in the 1950 Congressional debate seems to have been that the Board would not permit any zone operation that would injure domestic industry. In terms of executive branch views on the amendment, the Secretary of Commerce, in a letter dated March 18, 1949, addressed to the chairman of the Committee on Ways and Means, focused on the export promotion aspect:

> The existence of the present trade zones has done much to stimulate American commerce both import and export. The proposed permission of manufacturing in the zones is

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1/ 19 U.S.C. 81c.

2/ Some even advocate the view that the Boggs amendment was intended to shift the program's purpose to one of import facilitation and encouragement, with little concern for export levels from zones.

> expected further to assist American business by enabling it to manufacture certain types of products for export under minimum cost conditions. 1/

The Ways and Means Committee reports, however, state only that the original FTZA was being amended to permit manufacturing, with full regard for the "public interest," but they do not directly address the export-import issue. Earlier hearing reports on proposed bills contain statements by the proponents concerning the expected effects of the amendment. In commenting on a measure similar to the eventually adopted Boggs amendment (introduced as H.R. 5332), Representative Ellsworth Buck stated that his H.R. 6159 (identical to H.R. 6160, introduced by Representative Emanuel Celler and effectively withdrawn by him in committee as he endorsed H.R. 6159 and the comments by its sponsor) would--

> . . . remove the restrictions on manufacture and exhibition to the extent consistent with protection of the revenue and security of the national economy. 2/

He added--

> . . . that where a foreign-trade zone offers facilities completely to prepare commodities for the markets to which they are destined, such facilities are more desirable than those which allow partial activities only. This manufacture would permit not only the importation of foreign merchandise [into the zones] and work thereon by American labor, but would also provide opportunity for American raw materials and partly manufactured goods to be joined with foreign commodities in the production of final products ready and useful either for home consumption or for markets abroad. . . . It is not intended that foreign-trade zones will supplant domestic factories for the manufacture of domestic products out of wholly domestic materials. The zones will offer neither facilities nor particular advantages for that type of operation. The zones definitely will offer opportunities for American manufacturers interested in foreign trade to utilize American labor and American materials, in combination with foreign materials, to produce commodities which may be sold for domestc [sic.] consumption or exported for foreign markets in accordance with their current needs and opportunities. 3/

1/ Quoted in S. Rept. No. 1107, set forth at 1950 U.S.C.C.A.N. 2533 et seq., p. 2534.

2/ Foreign-Trade Zones: Hearing on H.R. 6159 and H.R. 6160 Before the House Comm. on Ways and Means, 80th Cong., 2d Sess. 7 (1948) (referred to hereafter as "Hearing Report").

3/ Hearing report, p. 8.

In his statement in support of Representative Buck's bill, Representative Celler (the sponsor of the FTZ program) stated--

> Much new commerce, going and coming, exports as well as imports, will result with the passage of these amendments, with consequent additional cargoes for American ships, new opportunities for labor and industry, more business for our banks and insurance companies, and more revenue for our Treasury.
>
> No question of tariff is involved here. Whether a man is a high protectionist or a low-tariff man, there is no conflict between the principle of the foreign-trade zone and our tariff laws. The Foreign Trade Zone Act synchronizes with the tariff law. The former is set up to "expedite and encourage foreign commerce," and the latter is set up to provide revenue and to regulate commerce with foreign countries, to encourage industries, and to protect American labor. 1/

The last sentence sets forth succinctly the difficult balancing of interests that the Board must accomplish in zone administration. Representative Celler voiced his confidence that the Board would do so in a fair and just manner. 2/

Legislative Changes Since 1984

In the last few years, Congress has enacted several amendments to the FTZA. First, in the Trade and Tariff Act of 1984, (the 1984 Act) (Public Law 98-573, 98 Stat. 142), a subsection was added to section 3 of the FTZA (19 U.S.C. 81c) with the goal of limiting the benefits of FTZ use in bicycle production. Specifically, the amendment stated that until June 30, 1986, FTZ operations using (presumably, though this is not stated) imported component parts were restricted, so that the parts were required to be exported from the United States as complete bicycles, either in their original package or otherwise. Previous to the 1984 act, it would have been possible to undertake zone assembly operations and to obtain thereby the lower rate of duty applicable to finished bicycles (relative to the higher rates of duty on parts), by choosing nonprivileged status 3/ for the parts. The amendment,

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1/ Hearing Report, p. 12.

2/ Ibid., p. 16.

3/ Foreign merchandise (goods of foreign origin that have not been released from customs custody within the customs territory) in an FTZ may have either privileged or nonprivileged status. If such articles have not been manipulated or manufactured so as to effect a change in tariff classification (19 CFR 146.21), an application may be made to the district director of Customs to treat the goods as privileged. If the application is accepted, the goods are classified and appraised and the duties liquidated according to their condition and quantity on the date of filing (while the goods are still in the FTZ), though the duties need not be paid until entry into the customs territory. Other foreign merchandise is afforded nonprivileged status, and duties are payable at entry into the customs territory in the condition and quantity [footnote continued on next page below.]

which became effective November 14, 1984, was a response to the application by Huffy Corp. for a foreign-trade subzone, in order to prevent Huffy from obtaining the potential duty benefit and arguably harming the U.S. industry. 1/ At present, a renewal of this FTZ bicycle restriction through December 31, 1990, is under Congressional consideration. 2/

A second and more far-reaching change was also made by way of the 1984 act in its section 231(b)(1)--namely, an amendment to section 15 of the FTZA, 3/ which covers various regulatory matters such as zone residence, retail trade, and so forth. The new subsection, effective as of January 1, 1983, exempts from State and local ad valorem taxation all "tangible personal property" imported into an FTZ from outside the United States for "storage, sale, exhibition, repackaging, assembly, distribution, sorting, grading, cleaning, mixing, display, manufacturing, or processing." Likewise, all tangible personal property produced in the United States and retained in an FTZ for eventual exportation is similarly exempt from such taxation, regardless of any zone alteration of the U.S. goods through one or more of the enumerated processes. This provision thus bars the imposition of personal property, inventory, sales, and other taxes based on value. While such forms of taxation are a major source of revenue for local and State governments, and the revenues foregone on FTZ goods because of this amendment might be significant, the loss is potentially balanced by gains in employment and other public and private sector economic activity generated by an FTZ; it may encourage both FTZ use and the exportation of goods therefrom. The amendment draws a parallel between a zone's status for customs purposes and that for tax purposes, indicating that a FTZ has a special status for more than the former.

The third amendment added yet another new subsection to section 3 of the FTZA. 4/ It created an exception to the proviso in subsection (a) of section 3 that prohibited any FTZ operations using or involving the manufacture of any

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[footnote continued from page 1-6.]

imported. The choice of declaring privilege can result in a significant difference in applicable customs duties, particularly if duty rates are about to change or if duty rates for parts are significantly different from those on finished articles. In the case of bicycle parts now subject to duty, privileged status would likely not be declared, since the duty rate for most bicycles is lower than duty rates on most "competitive" (having U.S. production) parts. Parts now afforded temporary duty-free entry might be declared privileged to retain their identity as parts; under customs regulation 19 CFR 146.48(e)(1), such parts would not be subject to the finished bicycles rates. Bookkeeping and other administrative costs would be included in the analysis of whether to declare privilege. None of these concerns would be relevant to parts or articles intended to be exported outside the FTZ and not entered into the customs territory.

1/ Congressional Record, Mar. 8, 1983, p. S 2316, comments by Senators Ford and Huddleston on S. 722.

2/ Sec. 881 of the Omnibus Trade and Competitiveness Act of 1987, under consideration in the House-Senate conference committee.

3/ 19 U.S.C. 81o.

4/ See Public Law 99-514 (100 Stat. 2931).

alcohol or beverage or other products containing alcohol and subject to U.S. Federal taxation. Under the amendment, certain products, defined in a paragraph of the Internal Revenue Code, "may be manufactured or produced from domestic denatured distilled spirits, and articles thereof, in a zone."

The significance of the first and the third amendments described above is that they allow product-by-product treatment in the FTZA, and restrictions on a product or sector basis. Prior to their enactment, the Board perceived that Congress had granted it the discretion to resolve any such specific matters. The Board dealt with problems arising out of a zone application by negotiating agreed restrictions on zone usage, imposing its own restrictions, or persuading the application's withdrawal. In the case of opposition to a Board action or a potential zone grant, it tried to develop a consensus or compromise. However, opponents of manufacturing or assembling of bicycles in FTZ's sought legislation even before the Board could consider the application or develop a consensus or compromise.

Board Regulations

Despite efforts under way at the time the Commission's 1984 report was issued to revise existing provisions, the Board has not changed its promulgated regulations since 1983. Board officials stated that in view of the Commission's 1984 study on FTZ's and a study by the General Accounting Office (GAO) done at the same time, they believed that (1) the Board might wish to review the new regulations it planned to propose (discussed in the Commission's 1984 report at pp. 6-7) after reading the two new reports from the Commission and GAO, and (2) Congress might conduct oversight hearings after examining the information provided to it and provide direction for future Board modifications. 1/ Thus, the proposed regulations did not continue through the formal review process; instead, and until the present time, the Board has been analyzing and editing the proposed rules. According to Board officials, this review process is reportedly likely to continue until after this report by the Commission is submitted and any accompanying Congressional hearings have been completed, in order to take into account all potential "input" (including comments by the private sector). Accordingly, Board officials stated, at some point the Board's proposed regulations, in revised form, may again be released for comment and action may be taken. In light of the growing attention to FTZ's, Department of Commerce officials are reviewing both the broader context of the zone program within the area of overall international trade policy and the Board's appropriate role and procedures, as discussed below. 2/

Under the proposed regulations, in the form last published, the Board would weigh the possible adverse effects of a zone grant or operation compared with potential benefits. The analysis would include several factors, such as

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1/ Interview with Mr. John DaPonte, Executive Secretary of FTZ Board, on Oct. 7, 1987, and telephone conversation with Mr. Dennis Puccinelli of the staff of the FTZ Board, Sept. 11, 1987.

2/ See remarks of Deputy Assistant Secretary Gilbert Kaplan given at the 15th Annual Conference of the National Association of Foreign-Trade Zones, Sept. 29, 1987, p. 7 et seq. (obtainable from Association). See also 48 F.R. 7194 et seq. (Feb. 18, 1983).

whether exports would increase, whether imports would be displaced or encouraged, whether employment and investment in the United States would be generated or retained, and whether a zone could undercut a U.S. Government policy or action or harm a U.S. industry. The weight to be afforded such factors is not clear, and the regulations do not appear to favor (or treat differently) any "new" operations over ones merely being relocated within the United States.

Board Operations and Procedures

Board staffing and resources

The Board, which is in essence an interagency committee, continues to function with the small staff described in the Commission's earlier report. The staff numbers fewer than 10 professionals and support staff combined, all at the Department of Commerce; a handful of employees at the Departments of the Treasury and the Army serve as agency representatives, while other such employees have responsibilities in administering the program. As described by Joseph Spetrini, Deputy to the Deputy Assistant Secretary for Import Administration--

> All three Board agencies have designated Assistant Secretaries to serve on a Committee of Alternates that represents the Board. The Commerce Alternate is the Assistant Secretary for Trade Administration, who has authority to act in all zone matters except the issuance of grants of authority for new projects. The other Alternates have full authority to act for their principals. 1/

The staff of the Board office at Commerce, headed by the Executive Secretary, handles all paperwork and ensures the flow of communications among the three agencies and their staffs, as well as interested parties and agencies. The Executive Secretary is empowered to act alone upon technical and procedural matters before the Board and on requests such as changes in zone boundaries. 2/ In these decisions and in other work of the Board, other personnel of the three agencies are involved on an as-needed basis to address matters raised by applications or comments. According to the Executive Secretary, the Board consults with any official or party who might have knowledge of an issue raised by an application and seeks the input of all government agencies that may be concerned about a zone's possible impact on trade or on

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1/ Statement before the House Commerce, Consumer and Monetary Affairs Subcommittee on June 12, 1987.
2/ Interview with Mr. John DaPonte, Executive Secretary of FTZ Board, on Oct. 7, 1987.

government programs or policies. 1/ In all cases, the advice of the U.S. Customs Service is sought and is generally given considerable weight in the application review process; this advice can be based on information from any Customs staff member, from an officer at the port of entry or from headquarters officials responsible for a program or area.

Administrative process and standards for zone and subzone establishment

On paper the Board's procedures for zone and subzone establishment have not changed in several years. In practice, however, the interpretation of those procedures has taken a new direction as both zone trade and zone trade controversies have grown. Moreover, with increasing domestic industry and labor involvement, and scrutiny by Congress, senior officials of the three agencies have begun an extended examination of the program's development and future. In addition, the Board imposes restrictions on zone grants in more cases than it did previously. 2/

The current process for handling zone matters has been described as follows:

> Zone applications and other petitions for Board decisions are filed with and processed by the Commerce FTZ Staff Office. Decisions on proposals for new zones and major changes to projects are made on the basis of a public record. An interagency committee of examiners, chaired by the Commerce member, is assigned to review proposals and make findings and recommendations to the Board. Cases are announced in the Federal Register for comment, and local hearings are held by the examiners on new projects and when otherwise needed. Each agency views zone issues from the perspective of its function and expertise. Commerce tends to take the lead role on the economic development and industry impact aspects of zones.
>
> The examiners' reports are circulated to the Alternates and Customs headquarters during the final interagency review process. We try to complete the processing within one year, but it can take longer to reach an informed decision in controversial cases. Controversies tend to arise in cases involving manufacturing for importation, especially when import sensitive products such as steel and textiles are involved.

1/ The extent to which foreign-trade zone procedures may have resulted in the circumvention of antidumping and countervailing duty orders was not pursued during the course of this investigation because no parties raised the issue. Further, no allegations of possible circumvention were presented to the Commission. It is the policy of the Board to handle alleged or potential violations of such orders on a case-by-case basis when affected parties or any other government officials bring evidence to its attention. This was stated in an interview with Mr. John DaPonte, Executive Secretary of the FTZ Board, on Oct. 7, 1987; telephone conversation with Dennis Puccinelli of the Board's staff on Sept. 11, 1987.

2/ See app. C.

> . . . In reviewing applications for the establishment or expansion of foreign-trade zones, the FTZ Board looks for (1) a showing of need for the zone or additional site within the community in question, taking projected international trade-related activity into account, and (2) a suitable operational plan that includes appropriate sites, and the method for financing the project. Manufacturing activity is reviewed on a case-by-case basis under stricter criteria, which includes consideration of trade policy and domestic industry comments. 1/

Commission staff have received conflicting opinions as to whether proposed manufacturing activity should be considered under different terms than apply to other zone operations. The Board's own regulations do not so differentiate. However, while hearings are generally conducted in relation to the establishment or modification of general-purpose zones, only recently have public hearings been conducted for subzones. 2/

The Executive Secretary stated that the Board's focus under the FTZA is on the question of whether or not a given zone would be in the public interest, and that two chief criteria used in that decision are the employment impact of the zone and any increase in imports it would most likely generate. 3/ As to the first factor, he cited the difficulty in projecting changes in employment levels, particularly where approval for new or potential zone operations is being sought. The Board must largely accept the word of the applicant--including statements that, absent a zone grant, current U.S. jobs would move offshore. The second factor perhaps lends itself more readily to quantification but is still difficult to establish in many cases. Based on these statements, it would seem that any increase in exports that could result from a proposed zone is afforded less weight than the two factors noted, in spite of the program's stated intent. As to the "public interest" factor, it should be observed that the statute and legislative history thereto provide only vague guidance to the Board as to the appropriate definition of "public interest." This fact has frequently been cited as a problem, since the Board is not required by law to consider more than the effects of a particular zone or operation on a local or regional basis. It is only required to find that new jobs--not just relocated ones--would be created, and to take into account the impact on related and supplier industries.

One analysis of the zone program has summarized the Board's status as follows:

> The Board's role as chief promoter of zone usage appears to conflict with its role as regulator of the zone program. . . . This latter role requires the Board to balance local benefits of a particular proposed operation against the political resistance of industry and labor groups to any diminution of their tariff protection. This task is complicated in cases such as auto manufacturing,

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1/ See note 1, p. 1-9, at pp. 4-5.
2/ See note 1, p. 1-12, and summaries of various comments below.
3/ See note 2, p. 1-12.

which pit different "domestic" interests against each other. In these situations the Board tends to make those decisions that minimize adverse political consequences. Although this approach has not silenced domestic industry and labor critics, it seems to have temporarily averted Congress from attempting to curtail the zone program. 1/

Regulation of ongoing subzone operations

Available information indicates that no significant changes in the method of regulating subzone operations have occurred. However, because of the proliferation of subzones and the increase in shipments--particularly in products other than automobiles--the Board's regulatory responsibilities have definitely expanded.

Given the Board's small size and the greater expertise and access to the subzones of the U.S. Customs Service, the latter agency plays a much larger role in the control of goods in or moving into or out of subzones (see discussion below and in the Commission's earlier report on customs procedures). The Board receives the annual reports of the zone grantees and publishes its annual report on zone operations. It also hears complaints about zone operations and on occasion takes action in response to information indicating that U.S. trade measures, such as import quotas, are being circumvented by zone users. According to most sources, however, the Board does not generally take restrictive or otherwise adverse actions regarding ongoing operations. Much of the day-to-day "enforcement" responsibility lies with the Customs Service, which attempts to achieve its regulatory goals without shutting down an offending operation. According to customs officials, the Customs Service must deal with problems with little or no formal written direction from the Board or changes in zone grants. This situation poses difficulties for Customs, since the programs or measures of another government agency may conflict with the Board's zone grant and the Customs Service must decide how this conflict should be resolved. Officials of both Customs and the Board, however, agree that they do communicate on a regular basis concerning both new and ongoing operations.

Operational constraints

As noted above, the Board reviews complaints and decides whether to impose restrictions on the activities that may occur in a particular zone. The restrictions often require the exportation of any goods manufactured in the zone. A table of 46 completed or pending cases, with zones restrictions listed when applicable, appears in appendix C.

1/ "Political and Policy Dimensions of Foreign Trade Zones: Expansion or the Beginning of the End?", Donald E. deKieffer & George W. Thompson, 18 Vand. J. Transnat'l L. 481, 508-09 (Summer 1985).

Revocation

To date, according to the Board staff in conversations with Commission staff, no active zone has been shut down by the Board, although it has changed the terms of the original grant in some cases. Other enforcement measures, largely those taken by the U.S. Customs Service (such as penalty actions), have been implemented where appropriate. As indicated in many of the comments received by the Commission during the course of this investigation, many interested parties do not believe the Board has gone far enough in taking action to revoke or restrict grants.

State regulation

Apart from the elimination of State and local ad valorem taxation on personal property, because of the Federal statutory change noted on pages 1-7, no notable changes in State regulation of zones have come to light during the course of this investigation. State and local authorities continue their sponsorship and advocacy of zones and the overall program, on grounds that they add flexibility in trading and manufacturing arrangements and provide an incremental incentive for investment in industrial and trade development programs.

CHAPTER 2. CUSTOMS SERVICE, ZONE GRANTEE AND OPERATOR ROLES IN ZONE ADMINISTRATION, OPERATION, AND OVERSIGHT

New U.S. Customs Service Regulations Applicable to Foreign-Trade Zones

The establishment of an FTZ is authorized by the Board under the provisions of the FTZA and general regulations and rules of procedure of the Board. Customs regulations (i.e., 19 CFR Pt. 146) govern the admission of merchandise into a zone; the manipulation, manufacture, destruction, or exhibition of merchandise in a zone; the exportation of merchandise from a zone; and the transfer of merchandise from a zone into the customs territory.

Since the previous Commission study of FTZ's was issued, customs regulations relating to FTZ's have been revised to provide for a new audit-inspection method of zone supervision by the U.S. Customs Service (Customs). In order to implement this change, Customs substantially revised Part 146 of the Customs Regulations, which concerns the administration of FTZ's, and Customs revised to a much lesser extent certain other CFR Parts. 1/ 2/

Although the old regulations focused on definitions, the revised regulations greatly reorganize the old regulations, focus on operations and provide greater guidance to zone grantees, operators, and users. Indeed, some provisions in the revised regulations reflect radical departures from prior zone administration. Certain provisions in the revised regulations are entirely new, although the legal basis for promulgating such provisions has always existed in the FTZA. The audit-inspection method was not an untested regulatory regime that appeared unexpectedly; rather, it was modeled on the system already used by Customs to administer bonded warehouses, 3/ and it was used on a "voluntary" basis in certain zones prior to the issuance of the final revised regulations. 4/

Under the previous regulatory regime, Customs administered FTZ's through the physical presence of customs officers who supervised the actual admission, transfer, or processing of merchandise in FTZ's. As the number of zones and subzones, as well as the operations conducted therein, increased dramatically in recent years, Customs has had to resort to different administrative procedures for supervising zones operations. Delays in the approval of activation of some zones occurred, and Customs experienced difficulty in exercising control over some zone operations, including, notably, subzone

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1/ See Treasury Decision 86-16, 20 Customs Bulletin 34 (1986), which became effective May 12, 1986.

2/ These were 19 CFR Parts 18, 24, 112, 113, 141, 144, 178 and 191 which were changed to conform with the revision of Part 146.

3/ Treasury Decision 82-204, 16 Customs Bulletin 520 (1982).

4/ Customs initiated the use of the audit-inspection method in FTZ's in August 1983, on the basis of "voluntary" agreements between Customs and zone operators. At the time the revised regulations were proposed (i.e., July 1984), four subzones and one general-purpose zone had entered into "voluntary" agreements to use the audit-inspection method to administer their operations. At the time the final revised regulations were issued, 12 subzones and 6 general-purpose zones had entered into "voluntary" agreements to use the audit-inspection method to administer their operations.

manufacturing activities. Additionally, the old regulations were thought to lack adequate and flexible regulatory powers suitable for enforcing the various requirements applicable to FTZ's. 1/ As a result, the revised regulations, which were the result of a 2-year review process, contain new enforcement provisions. The new regulations address liquidated damages, penalties and recommendations to the Board that the zone or subzone grant be revoked for willful and repeated violations of the Act. Moreover, the revised regulations permit Customs to "activate" a zone after the Board has authorized the zone to operate, and the revised regulations permit Customs to "suspend" such activation as well.

The linchpins of the audit-inspection method of administering FTZ's are spot checks, audits of records, and operator responsibility and liability. According to Customs, the advantage of the audit-inspection method is that it requires fewer customs personnel to administer the zones, without endangering the revenue or the law enforcement priorities of the Customs Service. It should be noted, however, that Customs used to be reimbursed by zone users for the costs of maintaining customs personnel to administer zones. Thus, although the audit-inspection method requires fewer personnel, thereby enabling Customs to allocate its existing personnel to other priority activities, Customs will no longer be reimbursed by zone users for the costs of maintaining those personnel. Nevertheless, zone users must still pay Customs an annual fee for the cost of spot checks and audits, which covers the cost of personnel and other related services. The inclusion of the new enforcement provisions in the revised regulations indicates that regulatory oversight and enforcement priorities have been enhanced greatly. The principal advantages for the importing community, according to Customs, are that merchandise may be admitted, transferred, or processed without a customs officer being present, thereby allowing greater flexibility in zone operations and that, in many cases, the reimbursable cost paid to Customs is reduced.

In the final revised regulations, Customs stated that the audit-inspection method is based on several procedures that are essential for its proper functioning and success:

1. The determination by Customs of the identity and nature of the merchandise through examination before or upon admission to the zone so that the initial responsibility of the operator for the merchandise can be determined.

2. The issuance of a prior permit by Customs to the zone operator for admission, transfer to the customs territory, and processing in the zone.

3. The assumption by the zone operator of responsibility for the merchandise, maintaining records concerning the merchandise, and physical supervision of the zone. Quantities of merchandise received at the zone and transferred to the customs territory are determined jointly by the zone operator and the carrier.

1/ See Treasury Decision 86-16, 20 Customs Bulletin 34 (1986).

4. The performance by Customs of spot checks and audits to determine whether the zone operator is properly supervising the zone and maintaining records of the merchandise. The cost of the spot checks and audits is reimbursed to Customs through an annual fee charged the zone operator for this service.

5. The assessment of liquidated damages in an amount sufficient to ensure performance of the operator's duties and responsibilities under the rules and regulations needed for proper zone supervision and recordkeeping.

6. The temporary suspension by Customs of zone operations that do not comply with the rules and regulations. 1/

Zone Supervision and Control

Customs, grantee and operator responsibility

The implementation of the new audit-inspection method of zone supervision has substantially changed the way zones are administered. Under the new regulatory regime, the zone operator 2/ has greatly increased responsibility for supervising "all admissions, transfers, removals, recordkeeping, manipulations, manufacturing, destruction, exhibition, physical and procedural security, and conditions of storage in the zone as required by law and regulations." 3/ The operator is responsible for the safekeeping of merchandise and records regarding merchandise admitted to a zone. The regulations require the operator to maintain the inventory control and recordkeeping system in accordance with the provisions of the regulations. 4/ The operator is required to maintain the zone and to establish procedures adequate to ensure the security of merchandise located in the zone. The operator is required to store and handle merchandise in a zone in a safe and sanitary manner to minimize damage to the merchandise, to avoid hazard to persons and to meet local, State and Federal requirements applicable to such merchandise. The operator is responsible for complying with the requirements for admission, manipulation, manufacture, exhibition, or destruction, shortage, or overage; inventory control and recordkeeping systems, transfers to the customs territory, 5/ and other requirements in the regulations. The regulations provide that the term "operator," where used in the regulations, also applies to a zone "grantee" that operates its own zone. 6/

1/ Treasury Decision 86-16, 20 Customs Bulletin 34 (1986).
2/ 19 CFR 146.1(b)(15) defines operator to be a corporation, partnership or person that operates a zone or subzone under the terms of an agreement with the zone grantee.
3/ 19 CFR 146.4.
4/ Customs Directive 3210-19, dated Jan. 21, 1987.
5/ 19 CFR 146.1(b)(18). See also Customs Directive 3210-22, dated Aug. 17, 1987.
6/ Section 1 of the FTZA, as amended (19 U.S.C. 81a), defines grantee to be the corporation to which the privilege of establishing, operating, and maintaining an FTZ has been granted.

The removal of customs officers from zone locations and the increased operational, administrative, and supervisory responsibility of the operator or grantee do not reduce the authority of the U.S. Customs Service to supervise FTZ's. Indeed, under the new regulatory regime, Customs retains all of its previous powers to oversee the administration of the zone program. The district director of Customs in whose district the zone is located is still in charge of the zone as the representative of the Board. 1/ The authority of Customs to supervise any zone, or activity or transaction conducted therein, may be exercised under the residual, general supervisory powers of the U.S. Customs Service. 2/ Customs officers may be assigned to a zone as necessary to maintain appropriate supervision of merchandise and records and to protect the revenue. 3/ The district director may direct that any transaction or procedure at a zone be supervised. Such supervision may be performed through a periodic audit of the operator records, a physical inventory of zone merchandise, spot checks of transactions or procedures, or a review of recordkeeping, security, or conditions of storage in a zone. 4/ According to Customs, a complete zone audit, which includes an exhaustive examination of merchandise, inventory records and financial records, is conducted every two to three years, while a spot check is conducted about three times per year. Additionally, the district director may cause any merchandise to be examined before or at the time of admission to a zone, or at any time thereafter, if the examination is considered necessary to facilitate the proper administration of any law, regulation, or instruction which Customs is authorized to enforce. 5/

The revised customs regulations establish a procedure for the "activation" of a zone by Customs after the Board has "authorized" the zone to operate. The activation requirement is entirely new. The revised regulations require the zone operator or grantee to file a written application with the district director to obtain approval of activation of a Board-approved zone or zone site, or a portion thereof. 6/ Upon the district director's approval of the application and the acceptance of the requisite Foreign-Trade Zone Operator's Bond, the zone or zone site will be considered activated, and merchandise may be admitted to the zone. The power to approve the activation of a Board-authorized zone is yet another means by which Customs may supervise and control zones, despite the physical removal of customs officers from zone locations.

During the rulemaking process, Customs received several comments questioning the legal authority of Customs to "activate" a zone. In the final revised regulations, Customs responded to these concerns as follows:

1/ 19 CFR 146.2; 15 CFR 400.1000.
2/ 19 CFR 146.3(b), which refers expressly to 19 CFR 161.1.
3/ 19 CFR 146.3(a).
4/ 19 CFR 146.3(b).
5/ 19 CFR 146.10.
6/ 19 CFR 146.6. See also Customs Directive 3210-10, dated June 12, 1986. The application must describe the zone, the operation to be conducted therein and the general character of the merchandise to be admitted. The application must be accompanied by certain supporting documents, including a procedures manual describing the inventory control and recordkeeping system to be used in the zone and the written concurrence of the grantee to the requested zone activation.

Authority for Customs approval of activation of zones is found in the individual grants to the zones and subzones, as well as the Act itself. The grant contains provisions to the effect that operations at the zone shall not commence until the grantee obtains all the necessary permits from Federal authorities, and that the grant is subject to an agreement between the grantee and Customs regarding compliance with requirements for the protection of the revenue.

Section 15(b) of the Foreign-Trade Zones Act (19 U.S.C. 810(b)) gives the Secretary of the Treasury broad authority to approve regulations for the protection of the revenue under the Act, while section 9 (19 U.S.C. 81(i)) directed the Board to cooperate with Customs. The activation procedure is the method which Customs has chosen for protecting the revenue. Through this procedure Customs is assured that the zone is ready to receive merchandise in zone status. 1/

An additional means by which Customs exercises regulatory supervision in administering the FTZ program is through the power to cancel a so-called sham consumption entry. As a general rule, no merchandise may be transferred from a zone without a Customs permit on the appropriate entry or withdrawal form or other requisite document. 2/ Such a transfer may be authorized to occur without physical supervision or examination by a customs officer. The revised regulations authorize district directors to reject or cancel consumption entries from zones when merchandise is not removed in a specified time period or the merchandise is removed but does not enter the commerce of the United States and is subsequently readmitted to the zone in domestic status. 3/ This new regulatory provision is intended to preclude a sham consumption entry whereby a series of transactions are constructed to circumvent high duty rates or import restrictions in a manner inconsistent with the FTZ. 4/ The rationale for this new regulatory authority, according to Customs, is that the FTZA permits only two choices in the rate of duty applicable to foreign merchandise that is utilized in a zone: either the rate applicable to the merchandise as admitted to the zone or the rate applicable to the merchandise as transferred to the customs territory from the zone.

1/ Treasury Decision 86-16, 20 Customs Bulletin 34 (1986).
2/ 19 CFR 146.71(a).
3/ 19 CFR 146.71(d)(1).
4/ The following series of transactions would most likely constitute a sham consumption entry. Merchandise in an intermediate, and possibly very temporary, stage of processing is entered for consumption (i.e., entry documentation is filed), while a relatively favorable or free rate of duty applies, despite the fact that there is no intent by the importer that the intermediate stage merchandise enter the commerce of the United States. Immediately thereafter, the intermediate stage merchandise is further processed in the zone into a final product with a relatively unfavorable rate of duty. That final product is then actually introduced into the commerce of the United States free of duty as a domestic product. Under the revised regulations, the entry of such intermediate stage merchandise would more likely be subject to rejection or cancellation by Customs.

Grantee and operator liability

Under the revised regulations, operators and grantees have increased responsibility for physical and documentary supervision of zones. In order to ensure that operators and grantees fulfill their increased responsibilities, the revised regulations contain entirely new enforcement provisions providing for liquidated damages, penalties, suspension of the activation of a zone and recommendation of revocation of authorization to the Board. Customs believes that the deterrent effect of these various potential liabilities for violations of the requirements of the FTZA or regulations will provide for better enforcement and protection of the revenue than the prior system of physical supervision. 1/

Liquidated damages for merchandise and nonmerchandise-related defaults of the zone operator's bond may, depending on the particular facts of the default, equal the value of the merchandise involved, three times the value of the merchandise involved, $1,000 for each default, or such other amount as may be authorized by law or regulations. 2/

In the revised regulations, the person responsible for or permitting a violation of the FTZA, or regulations issued thereunder, shall be subject to a fine of not more than $1,000. 3/ Each day during which a violation continues constitutes a separate offense, and liquidated damages under the operator's bond will be imposed in addition to the fine. The penalty provision in the revised regulations is derived from section 19 of the FTZA. 4/

The revised regulations provide that "[t]he district director may suspend for cause the activated status of a zone or zone site, or the privilege to admit, manufacture, manipulate, exhibit, destroy, transfer or remove merchandise at a zone or zone site for a period not to exceed 90 days." 5/ The enforcement power of suspension may be restricted to apply to an individual user or a particular activity. Suspension or partial suspension gives Customs a flexible method for dealing with improper activity in a zone.

In addition, the revised regulations provide that the district director may recommend to the Board that the zone or subzone grant be revoked by the Board for willful and repeated violations of the FTZA. 6/ Such a recommendation may be made in addition to any applicable liquidated damages, penalties, or the suspension of activation for cause.

During the rulemaking process, Customs received several requests to clarify the respective liabilities to Customs of grantees, operators, and users of zones. In the final revised regulations, Customs responded to these inquiries as follows:

> As the privilege of establishing, operating, and maintaining a zone is given to a grantee, Customs is of the opinion that all liabilities to Customs involving zone

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1/ Customs Directive 3210-21, dated Apr. 24, 1987.
2/ Customs Directive 3210-12, dated June 24, 1986.
3/ 19 CFR 146.81(a).
4/ 19 U.S.C. 81(s).
5/ 19 CFR 146.82(a).
6/ 19 CFR 146.83(a).

activities reside ultimately with the grantee of the zone. If the operator is not the grantee, these liabilities can be minimized by the operator's (sic) being named as principal on the zone operator's bond. There is no liability to Customs on the part of zone users, other than users that are also operators. It is the grantee or the grantee and operator who have responsibilities to Customs with the attendant liabilities. Grantees are free to make whatever contractual agreements regarding indemnification with operators and users that they chose. Furthermore, Customs is not aware of any way that a grantee can divest itself of all liability, or limit its liability, in the event of loss or damage to Customs resulting from zone activities. 1/

Inventory control

The audit-inspection method of zone supervision gives operators the responsibility for maintaining a manual or automated inventory control and recordkeeping system. 2/ The operator is required to provide the district director with a current version of the zone's inventory control and recordkeeping procedures manual. The revised regulations provide that the system must be capable of accounting for all zone merchandise, producing accurate and timely reports, identifying shortages and overages of merchandise, providing information necessary for entry to the customs territory and providing an audit trail. After zone activation approval, the operator is liable for complying with system requirements as provided in the regulations and is subject to the various enforcement measures for violations of the regulations.

The audit-inspection method provides for the physical examination and the documentation of zone-destined merchandise prior to or at the time of admission in order to establish the initial responsibility and liability of the operator. The operator must record all admissions of merchandise to the zone; the operator is accountable for, and must be able to trace, all merchandise while it is within the zone; and, the operator is accountable for zone-status merchandise transferred from the zone. The physical and record systems of identifying merchandise are complementary record systems that are to be reconciled annually by the operator. Customs supervision is exercised through the issuance of a customs permit for the release and removal of merchandise from the zone, a periodic audit of the operator's records, quantity counts of goods in zone inventory, spot checks of selected transactions or procedures, 3/ and review of recordkeeping, security, or conditions of storage. 4/

1/ Treasury Decision 86-16, 20 Customs Bulletin 34 (1986).
2/ 19 CFR 146.21.
3/ Customs Directive 3210-18, dated Dec. 16, 1986.
4/ 19 CFR 146.3(b).

Admission of merchandise into a zone 1/

Any merchandise may be admitted into a zone unless prohibited by law on grounds of public policy or morals. 2/ Except in certain specified cases, merchandise may be admitted upon application on customs form 214 and the issuance of a permit by the district director. 3/ A proper application must indicate the zone status desired for the merchandise and the operator's approval. 4/ Special admissions procedures are provided for merchandise temporarily deposited for manipulation, 5/ merchandise transiting a zone, 6/ and domestic merchandise admitted without permit. 7/

In special cases, the revised regulations provide an exception to the prior application and approval procedure for admission of merchandise to a zone. 8/ The district director must approve an application by an operator to use the "direct delivery procedures," which will speed admission of merchandise into a zone. 9/ In practice, the direct delivery procedures most likely will only be available to subzones.

Handling of merchandise in a zone

Zone merchandise may be stored, sold (except at retail), 10/ exhibited, broken up, repacked, assembled, distributed, sorted, graded, cleaned, mixed with other merchandise, or otherwise manipulated, or manufactured, except as otherwise provided in the FTZA. 11/ Thereafter, the zone merchandise may be exported, destroyed or transferred to the customs territory. A permit is required for merchandise to be manipulated, manufactured, exhibited, destroyed or transferred from a zone. 12/ Approval of a blanket application is available for continuous or repetitive operations. The operator is required to maintain a record of such approved operations so as to provide an

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1/ Customs Directive 3210-15, dated Sept. 22, 1986.
2/ 19 CFR 146.31.
3/ 19 CFR 146.32.
4/ The application must include the following supporting documents: an examination invoice (i.e., commercial invoice), including a notation of the tariff classification and value of the merchandise if it is to be admitted in privileged status; a document evidencing the right to make entry; a release order executed by the carrier, where necessary; an application to unlade, where necessary; and other information or documentation as required by the district director.
5/ 19 CFR 146.33.
6/ 19 CFR 146.34.
7/ 19 CFR 146.43(b). See also Customs Directive 3210-11, dated June 16, 1986.
8/ 19 CFR 146.39.
9/ Such an application must describe the merchandise to be handled or processed and the kind of operation occurring in the zone. The application must establish that the operator is the owner or purchaser of the goods, that the merchandise is not restricted or of a type requiring examination, and that the shipments and operations are known well in advance, predictable, repetitive, and relatively unchanging.
10/ Customs Directive 3210-22, dated May 11, 1987.
11/ 19 U.S.C. 81c(a).
12/ 19 CFR 146.51.

accounting and audit trail. The operator is directed to record and report shortages and overages and is responsible under its operator bond for any losses that cannot be accounted for. Moreover, the operator is liable for the duties and taxes owing for such missing merchandise.

Statistical reporting of FTZ merchandise

The U.S. Customs Service and the Bureau of Census (Census) have established a comprehensive program for the reporting of statistical information regarding FTZ's. The program provides for the full reporting of import statistics upon the admission of merchandise to a zone and for reduced reporting requirements when zone merchandise is subsequently entered for consumption in the customs territory. 1/ The applicant for admission is responsible for obtaining and reporting information for statistics on goods admitted to an FTZ on Customs Form 214-A. Customs responsibility in connection with CF 214-A is limited to a cursory check of the form and transmittal of the form to Census. 2/ Information for statistics on merchandise entering the United States from FTZ's is required to be reported by importers on CF 7501. 3/

A Shipper's Export Declaration (SED) should be filed by exporters for commodities shipped to foreign countries from FTZ's. 4/ Information for statistics on all merchandise, foreign or domestic, removed from zones for exportation should be reported at the port of exportation only on Commerce Form 7525-V or 7525-V-Alternate (Intermodal), or on a monthly statistical report authorized by Census under 15 CFR 30.39. 5/

1/ Customs Directive 3210-16, dated Oct. 7, 1986, provides instructions and guidelines for the reporting of information to Census for statistics on foreign goods admitted into, and removed from, FTZ's.
2/ CF 214-A must include the following information: the zone number and address; the Customs District and Port codes; the name and flag of the importing vessel; the export date; the import date; the U.S. port of unlading; the foreign port of lading; the country of origin; a description of the merchandise; the appropriate 7-digit duty/statistical item number from the Tariff Schedules of the United States Annotated (TSUSA); net quantity; gross shipping weight; the value of the merchandise; and the designated zone status of the merchandise. CF 214-A is not required for the admission of--merchandise in domestic status; merchandise of U.S. origin that has been admitted in zone-restricted status; merchandise of foreign origin that was entered for consumption prior to admission in zone-restricted status; merchandise when the applicant has an agreement for the direct transmittal of statistical information to Census; and merchandise transferred from another FTZ where it has been admitted and reported for statistical purposes.
3/ 15 CFR 30.70. CF 7501 must include the Customs District and Port codes, the zone number, the country of origin, a description of the merchandise, gross weight in pounds, net quantity, the value of the merchandise, and the TSUSA reporting number.
4/ 15 CFR 30.1(a).
5/ As noted in 15 CFR 30.7 such SED's must include: the port of exportation; the method of transportation; the exporting carrier; the name of the exporter and the exporter's employer identification number; the name and address of the

[footnote continued on next page.]

Although FTZ's are deemed to be outside the U.S. customs territory, zones are treated as part of the United States for statistical purposes. The use of CF 214-A, CF 7501 and SED's for zone shipments has enabled Census to compile the official U.S. merchandise trade balance statistics on the basis of the geographic territory of the United States (i.e., the so-called general trade system). The compilation of such statistics does not reflect the anomalous distortions reflected in the former so-called special trade system, which included statistics only on merchandise imported into and exported from the U.S. customs territory, thus excluding all FTZ transactions outside the customs territory. Nevertheless, Census continues to compile data which are included in the imports for consumption trade statistics series, which is based on merchandise imported into the U.S. customs territory. Although foreign trade statistics include FTZ shipment statistics with specific identifiers, separate data on these shipments are not presently compiled and released due to funding and disclosure limitations.

[footnote continued from page 2-9.]

ultimate consignee and any forwarding agents or intermediate consignees; the foreign port of unloading; the country of destination; the marks, numbers or other commercial identifiers that link the SED with the merchandise that it covers; the number and kind of packages; the correct commodity number as provided in Schedule B, Statistical Classification of Domestic and Foreign Commodities Exported from the United States and a description of the merchandise sufficient to permit verification of the Schedule B commodity number; the export license number and expiration date, or general license symbol; the net quantity; the gross shipping weight; whether the merchandise is foreign or domestic; the value of the merchandise; the date of exportation, in certain circumstances; the FTZ number; whether the cargo is containerized; and whether the transaction is between related parties.

For purposes of determining whether merchandise is foreign or domestic, 15 CFR 30.7(p)(1) and (2) provide:

> (1) The export declaration covering exports to foreign countries shall show foreign goods separately from goods of domestic production. Exports of foreign merchandise include those commodities which are the growth, produce, or manufacture of foreign countries which entered the United States, including U.S. Foreign Trade Zones, as imports and which at the time of exportation have undergone no change in form or condition or enhancement in value by further manufacture in the United States, including U.S. Foreign Trade Zones, Puerto Rico, or U.S. Possessions.
>
> (2) Exports of domestic merchandise include those commodities which are the growth, produce, or manufacture of the United States, including U.S. Foreign Trade Zones, Puerto Rico, or U.S. Possessions (including commodities incorporating foreign components), and those articles of foreign origin which have been enhanced in value or changed from the form in which imported by further manufacture or processing in the United States, including U.S. Foreign Trade Zones, Puerto Rico, or U.S. Possessions.

Country-of-origin rules

Origin rules are established for a variety of purposes, including, principally, for duty determination purposes, for marking and statistical purposes and for country-specific purposes (e.g., preferences, quotas, market sharing arrangements, antidumping and countervailing duty orders). Origin determinations are made on a case-by-case basis. In general, the zone program does not create any unique origin determination problems (i.e., the manipulation of origin for tariff avoidance purposes or for the circumvention of trade restrictions is not unique to the zone program). Both the Board and Customs exercise oversight of zones to make sure that zones are not used to facilitate the manipulation of origin for circumvention purposes.

Zone merchandise is treated as a product of the zone for purposes of zone shipment statistics. If foreign merchandise is brought into a zone and substantially transformed, then the resulting article may be marked as U.S. origin merchandise. Nevertheless, for statistical purposes the foreign merchandise is always treated as foreign merchandise. If foreign merchandise is brought into a zone from a number of different countries and commingled in the zone or processed into a completely different product, then the chief value of the foreign components of the finished product determines the country of origin for statistical purposes.

CHAPTER 3. GROWTH OF FTZ'S

Increased Zone Usage

From 1934, when the act was passed, until early December 1987, the FTZ Board authorized 144 general-purpose zones and 116 special-purpose zones (subzones). Because of voluntary relinquishment or termination of zone status due to insufficient activity, there remained 138 general-purpose zones and 106 subzones authorized to operate under zone procedures by early December 1987. The map in appendix D shows the zone designation and location of each of these zones. In addition, as of early December, there were 63 pending applications for zone status (11 general-purpose and 52 subzones), 9 for existing zone expansion, and 4 for miscellaneous procedures. Of the 52 pending subzone applications, 8 were for automobiles, 14 for auto parts, components, and accessories, 5 for petroleum products (3 refineries and 2 blenders), 4 for specialty steel products, 4 for shipyards, and the remaining 17 for a variety of other products. With regard to the automobile subzones, four were requests by American companies, three by Japanese companies, and one by a joint venture between a Japanese and an American company. In the auto supplier area, 10 subzone applications were by American firms, 3 by Japanese firms, and 1 by a West German firm. The tabulation below, compiled from data of the Foreign-Trade Zones Board, shows the number of general-purpose zones and subzones authorized to operate by the Board at the end of each of the periods shown.

Period	General-purpose zones	Subzones
1936-40	1	0
1941-45	1	0
1946-50	6	0
1951-55	4	0
1956-60	6	0
1961-65	7	2
1966-70	10	7
1971-75	18	5
1976	21	5
1977	30	6
1978	41	8
1979	49	10
1980	59	11
1981	67	1/ 13
1982	74	1/ 18
1983	91	30
1984	108	59
1985	118	83
1986	127	93
1987 (January-November) 2/	138	106

1/ Revised.
2/ According to the Board, 60 general-purpose zones and 49 subzones had reported activity during this year, as of early December 1987.

In its 1984 report, the Commission made several points which are still valid. Growth in FTZ's was small until the late 1970's and early 1980's. 1/ Growth of FTZ's in recent decades was due, in large part, to several factors: approval in 1950 of the Boggs amendment permitting manufacturing, the dominant area of growth in zone use; the 1952 amendment to the Board regulations authorizing subzones; the 1980 change in customs valuation practice; and "the emerging realization by U.S. firms of the importance of international trade and the increasing competitiveness of imports in the U.S. market." In addition, the high value of the dollar in the early 1980's caused firms to seek every cost reduction, including savings in FTZ's. Most of the growth in the past decade has been in the interior of the country, probably as a result of communities seeking to expand their economic bases, to encourage industry, and to expand into international trade. 2/ Based on information obtained during this investigation, these four factors are still the major considerations in the continued growth of zone applications.

Merchandise Handled in FTZ's

For its data, Foreign-Trade Zones Board defines the value of merchandise handled in FTZ's as the total value of merchandise received in FTZ's from foreign and domestic sources plus the value of merchandise later shipped from FTZ's to foreign or domestic markets. A clear trend has been the increasing predominance of domestic merchandise over foreign merchandise. The domestic share of merchandise received increased from 55 percent to 79 percent during 1983-86. The domestic share of merchandise shipped increased from 79 percent to 89 percent during the same period. Table 3-1 shows the value of merchandise received and shipped (merchandise handled) for 1983-86.

Although 61 general-purpose zones and 48 subzones received and shipped merchandise in 1986, 3/ 10 subzones accounted for almost 70 percent of the total goods handled. Profiles of the leading general-purpose zones, which accounted for 77 percent of merchandise handled by such zones in 1986, are provided in appendix F. The principal subzones, which accounted for 64 percent of the merchandise handled by such zones in 1986, are discussed in appendix G.

Shipments from FTZ's

Table 3-2 shows the total value of merchandise shipped from FTZ's during 1983-86, including shipments to the U.S. customs territory and abroad. It demonstrates not only the growth in economic activity of the general- purpose zones (shipments from general-purpose zones more than doubled between 1983 and 1986); but it also reveals the rapid growth and economic dominance of the subzones. Their shipments rose more than 7-fold between 1983 and 1986, and their share of total zone shipments increased from 83 percent in 1983 to 94 percent in 1986.

1/ The Implications of Foreign-Trade Zones for U.S. Industries and for Competitive Conditions Between U.S. and Foreign Firms (Investigation No. 332-165), USITC Publication 1496, February 1984, p. 20.
2/ Ibid., pp. 20-1.
3/ 1986 is the most recent year for which data are available showing both the value of merchandise handled plus commodity and country source detail for merchandise received.

Table 3-1
Foreign-trade zones: Merchandise received and shipped (merchandise handled), 1983-86

(In millions of dollars)

Item	1983	1984	1985	1986
Received:				
Foreign	2,904	4,469	5,532	8,819
Domestic	3,609	10,910	17,631	35,147
Merchandise in transit 1/	0	0	372	464
Total	6,513	15,379	23,535	44,430
Shipped:				
Foreign	1,671	3,837	3,812	4,871
Domestic	6,454	17,790	30,083	45,599
Merchandise in transit 1/	2	64	555	778
Total	8,127	21,691	34,450	51,248
Total	14,640	37,070	57,985	95,678

1/ Certain domestic articles and certain in-bond imported articles physically pass through the zone but are not technically zone status merchandise because zone entry procedures were not completed.

Source: Foreign-Trade Zones Board.

Note.--Because of rounding, figures may not add to the totals shown.

Table 3-2
Shipments: Merchandise shipped from FTZ's, by types of zones, 1983-86

(In millions of dollars)

Year	Total shipments	General-purpose zones	General-purpose as a share of total	Subzones	Subzones as a share of total
	Million dollars	Million dollars	Percent	Million dollars	Percent
1983	8,127	1,387	17	6,741	83
1984	21,691	1,587	7	20,103	93
1985	34,450	2,184	6	32,266	94
1986	51,248	3,090	6	48,158	94

Source: Foreign-Trade Zones Board.

Shipments from general-purpose zones

The data in table 3-3 illustrate the substantial growth in the value of shipments from general-purpose zones; such shipments more than doubled during 1983-86. As in previous years, the McAllen, TX, foreign-trade zone accounted for the largest share, 20 percent of the total value of shipments from general-purpose zones in 1986. However, because of the large number of general-purpose zones in 1986 compared with those in previous years, McAllen's

Table 3-3
Shipments from general-purpose zones, by principal zones, 1983-86

(In millions of dollars)

Zone and number	1983	1984	1985	1986
McAllen, TX (12) 1/	525	600	674	612
Tacoma, WA (86)	2/	2/	34	532
Ellis County, TX (113)	2/	2/	176	480
Miami, FL (32)	243	191	215	298
New Orleans, LA (2)	101	88	107	108
Long Beach, CA (50)	3	8	99	105
Port Everglades, FL (25)	77	78	87	90
Indianapolis, IN (72)	23	26	40	80
Wilmington, DE (99)	2/	6	77	69
All other	415	590	675	716
Total	1,387	1,587	2,184	3,090

1/ Certain domestic articles and a limited amount of in-bond imported articles physically pass through the zone but are not technical zone status merchandise because zone entry procedures were not completed.
2/ Tacoma, WA, FTZ activated in August 1985; Ellis Co., TX, FTZ activated in February 1985; Wilmington, DE, FTZ activated in July 1984.

Source: Foreign-Trade Zones Board.

share declined from 38 percent in 1983. An additional eight zones (in Tacoma, WA; Ellis County, TX; Miami, FL; New Orleans, LA; Long Beach, CA; Port Everglades, FL; Indianapolis, IN; and Wilmington, DE) together accounted for 57 percent of such shipments in that year. Aggregated, these nine zones accounted for 77 percent of the value of total shipments from general-purpose zones in 1986, down from 83 percent for the top nine zones in 1983. Brief profiles of the nine principal general-purpose zones, in 1986, as well as a synopsis of all other such zones, are provided in appendix F.

Shipments from subzones

Table 3-4 shows that shipments from subzones rose over sixfold in the 4 years from 1983 to 1986, from $6.7 billion to $48.2 billion. 1/ The largest percentage increase in subzone activity occurred between 1983 and 1984. In 1986, 48 firms were engaged in subzone activities, up from 19 in 1983. Table 3-4 shows that 10 subzones accounted for 60 percent of all shipments of merchandise by 1986. All 10 subzones manufactured automobiles.

Economic Activity in Subzones

As was evident at the time of the Commission's 1984 report, manufacturing continues to account for, by far, the largest share of total shipments of merchandise from FTZ's. On the basis of Board data, 94 percent of FTZ

1/ As reported to the Board and to the Commission (the latter data were made public by the companies affected).

Table 3-4
Shipments from special-purpose subzones, 1983-86

(In millions of dollars)

Subzone and number	1983	1984	1985	1986
Ford (40A)	0	0	2,527	5,568
Ford (70D)	0	1,344	3,409	3,619
General Motors (40B)	0	0	0	3,196
General Motors (41C)	0	0	0	2,747
General Motors (53A)	0	0	524	2,665
General Motors (37A)	0	0	90	2,438
Ford (70E)	0	722	1,790	2,407
Chrysler (31A)	404	4,245	4,433	2,277
Ford (70C)	936	2,159	2,083	2,009
Ford (15A)	102	2,934	2,152	1,863
All other	5,299	7,783	15,348	19,369
Total	6,741	20,103	32,266	48,158

Source: Foreign-Trade Zones Board and certain questionnaires submitted to the U.S. International Trade Commission. The certain questionnaire data were made public by the affected firms because these were data which should have been reported to the Board and not including them would have significantly distorted the data.

manufacturing in 1986 took place in subzones. In that year, automobile subzones alone accounted for 87 percent of merchandise shipped from subzones. 1/ Other principal products manufactured in subzones included truck/vans (including jeeps), certain auto components, certain sugar-related products, all-terrain vehicles, bakery mixes, copy machines, home appliances, jet skis, laser printers, microwave ovens, motorcycles, televisions, large-diameter steel pipe, printing ink, certain petroleum products, ships, tin cans for pineapple products, tractors, and typewriters. To measure major manufacturing activity, the Commission sent a questionnaire to 100 establishments--every subzone and Berg Steel Pipe (the only major manufacturer operating in a general-purpose zone)--known to have been approved and which might have been operating at the time of the mailing. 2/ The Commission received 65 responses with usable statistical data. 3/ Information on these responses is summarized below. Although manufacturing does take place in Berg and some other general-purpose zones, it is generally minor.

1/ On the basis of questionnaire data.
2/ The establishments are listed in appendix E.
3/ The remaining 37 establishments include some establishments within the same company which were approved but not yet operational as subzones and 2 approved after the cutoff used by the Commission and not yet operational but were submitted by the firm. None of these 37 establishments was active during the survey period.

Total economic activity in subzones

Table 3-5 shows selected data on total economic activity in subzones gathered in the Commission's questionnaire. As more firms began operations in subzones, particularly automobile firms establishing new plants or converting existing facilities to subzone status, the value of total shipments from subzones increased sharply during 1983-86 by nearly 800 percent, from $6.7 billion to $59.9 billion. Such shipments reached $53.0 billion for the nine months of October 1986-June 1987. Throughout the 4.75-year period, the United States continued to be the primary destination for these shipments; its share increased from 82 percent of the total in 1983 to 92 percent in 1986, and decreased slightly to 91 percent in the part-year 1987 period. Out of total shipments of $176.5 billion during the 4.75-year period, $159.8 billion (91 percent) were destined for the U.S. market.

Table 3-5
Selected data on total subzone and Berg Steel Pipe operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)	5,508,970	19,447,704	31,904,854	54,968,101	47,958,280
Exports (1,000 dollars)	1,234,034	2,178,718	3,374,127	4,958,610	4,998,666
Total	6,743,004	21,626,422	35,278,981	59,926,711	52,956,946
Total employment	27,978	55,357	81,552	130,488	151,219
Production and related workers	23,210	47,850	72,227	119,419	134,565
Hours worked by production workers (1,000 hours)	38,634	92,756	136,656	241,761	220,762
Share of total value of purchased inputs received of--					
Domestic content (percent)	64	77	70	72	72
Foreign content (percent)	36	23	30	28	28

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

The Commission also gathered information, to the extent that it was available in the records of the responding firms, on the national origin of the components, parts, and raw materials used in the manufacture of the finished products by the subzones and Berg Steel Pipe. This information allows an estimate of the share of foreign and domestic purchased inputs received at each subzone. The domestic share of purchased inputs received increased from 64 percent in 1983 to 77 percent in 1984, before dropping back to about 70 percent for each of the remaining time periods. This occurred because more foreign-owned companies began operating in subzones using a high percentage of imported parts and certain domestic firms increased the share of imported parts they were using.

Total employment also increased sharply, from 27,978 workers in 1983 to 130,488 workers in 1986, and to 151,219 in October 1986-June 1987. A more detailed analysis of employment data is given later in this report.

Table 3-6 shows questionnaire data collected in the current study on the firms included in the previous questionnaire survey. Their shipments increased from $5.6 billion in 1983 to $7.2 billion in 1984, and then decreased gradually to $6.4 billion in 1986. Exports were just over $1 billion during 1983-85, but decreased to $809 million in 1986. During the entire 4.75-year period the domestic share of purchased inputs received decreased without interruption, from 59 percent to 51 percent. Total employment increased from 21,393 in 1983 to 23,138 in 1984, and then decreased to 17,585 in 1986. Although shipments continued to fall, employment increased to 20,796 in 1987. This latter figure was still 2,342 employees lower than in 1984. Similar trends occurred for production and related workers and for hours worked by them. The decreased shipments accompanied by increased employment primarily reflects developments * * * . * * *.

Motor Vehicles and Parts

Introduction

Because automobile subzones alone accounted for 87 percent of merchandise shipped from subzones in 1986, a closer examination of the motor vehicles and parts industry is warranted. Automobile firms have sought FTZ status for their establishments primarily to reduce tariff liabilities in inverted tariff situations. To the extent they export from subzones, such firms also avoid having to use drawback procedures. Since most automobile firms are now using the just-in-time inventory system, deferral of duty payments on imported purchased inputs is minimal.

A substantial proportion of the establishments operated by General Motors Corp., Ford Motor Co., and Chrysler Motors Corp. are now subzones or have applications pending. These firms all either have joint ventures in subzones with foreign firms or have such an application pending. For example, New United Motors Manufacturing, Inc., (NUMMI) is a joint venture between General Motors and Toyota Motor Corp. of Japan. Other foreign-owned firms such as Volkswagon of America, Honda of America Manufacturing, Inc., and Nissan Motors

Table 3-6
Selected data on total FTZ for the 9 firms surveyed by questionnaire in the 1984 Commission study on FTZ's, 1983-86 and October 1986-June 1987 1/

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)	4,496,741	5,969,541	5,488,837	5,636,381 2/	4,610,812
Export (1,000 dollars)	1,149,081	1,218,070	1,140,265	809,460 2/	476,491
Total	5,645,822	7,187,611	6,629,102	6,445,841 2/	5,087,303
Total employment	21,393	23,138	19,772	17,585	2/ 20,796
Production and related workers	18,415	20,095	16,881	14,801	18,818
Hours worked by production workers (1,000 hours)	32,896	38,239	29,984	27,958	29,289
Share of total value of purchased inputs received of--					
Domestic content (percent)	59	56	55	54	2/ 51
Foreign content (percent)	41	44	45	46	2/ 49

1/ Berg Steel Pipe Corp. (FTZ 65); Hawaii Independent Refinery, Inc., and Enerco, (Subzone 9A); Sanyo Manufacturing Corp. (14A); Kawasaki Motors Manufacturing Corp. U.S.A. (59A); Chrysler Corp.(70B); Honda of America Manufacturing, Inc. (46B); Ford Romeo Tractor (70A); American Motors Corp. (41A); and Volkswagon of America (33A).
2/ Data not available for Ford Romeo Tractor.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Manufacturing, Inc., are operating in subzones. Other foreign-owned firms have applications pending.

Because both domestic and foreign firms are active in the FTZ program and because there is increasing internationalization of the markets for both motor vehicles and parts, an examination of the broader competitive conditions is needed. This also complies with the Committee's mandate in its May 20, 1983 request letter asking the Commission to study "the implications of foreign-trade zones for U.S. industries and for competitive conditions between U.S. and foreign firms." 1/ A general discussion of such competitive conditions for motor vehicles and parts follows. The information developed about automobile subzones from the Commission's questionnaire will follow.

1/ Since this study is an update and supplement to the 1984 Commission FTZ study, the letter requesting that study applies to this study.

Overview of motor-vehicle and parts industry

World production.--In 1986, 45.3 million automobiles and trucks were produced in the world, representing a 26-percent increase over those in the world recession year of 1982 when 36 million motor vehicles were produced. The United States, Japan, West Germany, France, Italy, Spain, the United Kingdom, and Canada accounted for 82.6 percent, or 37.4 million units, of total world motor-vehicle production in 1986, as shown in the following tabulation (in thousands of units): 1/

Country	1986 production (1,000 units)	Percent of total
Japan	12,260	27.1
United States	10,909	24.1
West Germany	4,597	10.2
France	3,195	7.1
Canada	1,854	4.1
Italy	1,831	4.0
Spain	1,532	3.4
United Kingdom	1,247	2.8
All other	7,844	17.2
Total	45,269	100.0

Domestic industry: motor vehicles.--The U.S. motor-vehicle industry consists of three major U.S.-owned companies that produce not only automobiles and trucks, but many products unrelated to the automotive industry. The three principal motor-vehicle producers are General Motors Corp., Ford Motor Co., and Chrysler Corp. In addition to the three largest producers, there are three U.S. auto producers that are Japanese-owned (Honda of America Manufacturing, Nissan Motor Manufacturing Corp. and Mazda Motor Manufacturing Corp.); one joint venture between General Motors and Toyota (New United Motors Manufacturing, Inc.); and Volkswagen of America (scheduled to cease U.S. production in mid-1988). Four other Japanese-owned manufacturers will be starting automobile production by 1990, either operating their own production facilities, or manufacturing in a joint-venture agreement with another auto producer. 2/

U.S. production of automobiles and trucks increased from 6.9 million units in 1982 (the lowest year for U.S production in over 20 years) to 10.9 million in 1986, as shown in the following tabulation (in thousands of units): 3/

1/ Ward's Automotive Yearbook, 1987, p.64, and Motor Vehicle Manufacturers Association of the United States, Inc.

2/ Toyota will begin producing a compact model in 1988; Mitsubishi, in joint operation with Chrysler, will commence production in late 1988; and Fuji, in a joint operation with Isuzu, will begin producing both autos and lightweight trucks in late 1989.

3/ Motor Vehicle Manufacturers Association of the United States, Inc.

Year	Automobiles	Trucks	Total
1982.....	5,049	1,879	6,928
1983.....	6,739	2,388	9,127
1984.....	7,621	3,043	10,664
1985.....	8,002	3,357	11,359
1986.....	7,516	3,393	10,909

Although U.S. shipments of motor vehicles increased each year from 1982 to 1985, and then declined in 1986, U.S imports of motor vehicles increased each year during 1982-86. Table 3-7 shows the general trends of U.S. shipments, exports, imports, and U.S. consumption of motor vehicles during 1982-86.

Table 3-7
Automobiles and trucks: U.S shipments, exports, imports, and apparent consumption, 1982-86

Year	U.S. shipments	Exports	Imports 1/	Apparent consumption	Ratio to imports to consumption
		(1,000 units)			Percent
1982...	6,928	480	3,608	10,056	35.9
1983...	9,127	652	3,900	12,375	31.5
1984...	10,664	740	4,560	14,484	31.5
1985...	11,359	807	5,620	16,172	34.8
1986...	10,909	860	6,021	16,070	37.5

1/ Include imports from Canada and exclude imports from Foreign-trade zones.

Source: Data derived from official statistics of the U.S. Department of Commerce and the Motor Vehicle Manufacturers Association of the United States.

Domestic industry: motor-vehicle parts.--U.S. shipments of motor-vehicle parts for the corresponding period shows basically the same trend as U.S. shipments of motor vehicles, with shipments increasing each year from 1982 to 1985 and then declining slightly in 1986 compared with those in 1985 (table 3-8). U.S. imports of motor-vehicle parts, however, increased each year during 1982-1986, but at a much more dramatic pace than U.S. shipments of vehicles. Total imports of automotive parts almost tripled during this 5-year period, expanding from $6.9 billion in 1982 to $19.0 billion in 1986.

Much of this increase can be attributed to increased foreign outsourcing by the three principal U.S.-owned motor-vehicle producers, and the increase in production of autos and lightweight trucks by Japanese-owned, U.S.-based assembly plants which are often referred to as "transplants." U.S. imports by

Table 3-8
Motor-vehicle parts: U.S. shipments, exports, imports, and apparent consumption, 1982-86

Year	U.S. shipments	Exports	Imports	Apparent consumption	Ratio of imports to consumption
		(Million dollars)			Percent
1982...	51,146	5,773	6,941	52,314	13.3
1983...	61,605	7,060	8,238	62,783	13.1
1984...	75,187	8,922	14,001	80,266	17.4
1985...	84,459	9,357	15,396	90,498	17.0
1986...	82,992	8,914	18,950	93,028	20.4

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission for investigation No. 332-232, U.S. Global Competitiveness: The U.S. Automotive Parts Industry, USITC Publication 2037, December 1987, p. xviii.

these firms increased from $2.7 billion in 1982 to almost $7.2 billion in 1986, as shown in the following tabulation (in millions of dollars):

Year	Big Three 1/	Japanese owned 1/	Total
1982...	2,662	2/	2,662
1983...	3,646	2/	3,646
1984...	5,132	486	5,618
1985...	5,341	860	6,201
1986...	5,595	1,552	7,147

1/ U.S. International Trade Commission, U.S. Global Competitiveness: The U.S. Automotive Parts Industry, USITC Publication 2037, December 1987, p. 3-52.
2/ Withheld to avoid disclosure of business confidential information; totals for each year, however, accounted for less than 5 percent of total U.S. imports.

U.S. employment

U.S. employment in the motor-vehicle industry and the motor-vehicle parts industry increased from 762,000 workers in 1982 to 957,000 workers in 1986, or by 26 percent. The following tabulation shows the employment levels in both the motor-vehicle and parts industries for 1982-86 (in thousands of workers): 1/

1/ Data derived from U.S. Industrial Outlook, 1987, published by the U.S. Department of Commerce, p. 36-1, 36-4, 36-9, and 36-11.

Year	Motor-vehicle workers	Parts workers	Total
1982...	240	522	762
1983...	261	547	808
1984...	296	619	915
1985...	298	653	951
1986...	271	686	957

U.S. unemployment in the automotive industry declined substantially between 1982 and 1986, from 20 percent to 7 percent. 1/

Recent structural changes in the U.S. automotive industry

During the last 5 years, 7 Japanese-owned auto producers, approximately 140 Japanese automotive parts producers, and an additional 140 European and Canadian parts producers have either established, or announced plans to build, production facilities in the United States. 2/ At the same time, the largest U.S.-owned motor-vehicle and parts producer (General Motors Corp.) announced plans to close at least 16 U.S. production facilities, and possibly more at a later date. 3/ The 7 Japanese auto producers that have announced plans to manufacture automobiles and/or lightweight trucks in the United States are-- 4/

Company	Begin production	Projected capacity	Projected employment
		1,000 units	
Honda.....	November 1982	360,000	3,600
Nissan.....	June 1983	265,000	3,000
Toyota/GM.....	December 1984	250,000	2,500
Mazda.....	September 1987	240,000	3,500
Toyota.....	Spring 1988	200,000	3,000
Mitsubishi/Chrysler..	Fall 1988	240,000	2,900
Fuji/Isuzu.....	Fall 1989	200,000	2,000

Voluntary restraint agreement

Japanese automobile exports are currently restricted in virtually every major industrialized country of the world. United States restrictions came into being in 1981 following an unsuccessful trade complaint before the U.S. International Trade Commission. 5/ Following meetings with U.S. Government officials, the Japanese Ministry of International Trade and Industry (MITI), on May 1, 1981, announced a voluntary restraint agreement (VRA) on Japanese auto exports to the United States. The VRA reduced Japan's U.S. export sales

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1/ U.S. Department of Labor, U.S. Bureau of Labor Statistics.
2/ Foreign-Owned Auto Parts Manufacturers In the United States, Automotive Parts International, December 1987.
3/ "GM, UAW Pact May Face Tough Vote," Ward's, Oct. 12, 1987, p. 321.
4/ "Transplant invasion to boom by 1990," Automotive Industries' Insider, June 1987.
5/ (See Certain Motor Vehicles and Certain Chassis and Bodies Therefor, November 1980, USITC Publication 1110).

from the 1980 level of 1.82 million units to 1.68 million units. The Japanese later announced that exports to the United States of vehicles such as four-wheel-drive station wagons and jeep-type vehicles would be limited to 82,500 units, and exports to Puerto Rico would not exceed 70,000 units. Thus, total Japanese exports of autos and the above types of vehicles to the United States and Puerto Rico for the Japanese fiscal year 1981 were set at 1,832,500 units. There were no changes in these restraint levels during the next two Japanese fiscal years (1982-83).

In November 1983, the Japanese Government announced an increase in its voluntary export limit from 1.68 million to 1.85 million automobiles during its fiscal year 1984. It also announced that the four-wheel-drive and jeep-type vehicle limit would be increased to 90,848 units and exports to Puerto Rico would rise to 77,083 units. Thus, the total number of Japanese automobiles (excluding automobile trucks but including jeep-type vehicles and exports to Puerto Rico) exported to the United States and Puerto Rico increased to 2,017,931 units, or by 10 percent.

On March 1, 1985, the President announced that the United States would not ask the Japanese Government to renew the VRA for 1985. On March 28, 1985, the Japanese Government told the administration that it would limit annual (fiscal year) auto exports to the United States to 2.3 million units. This represented an increase of about 25 percent over the previous year's quota of 1.85 million. 1/ The restraints were extended at the same level of 2.3 million units in April 1986 and 1987. 2/

In October 1987, Japan's Ministry of International Trade and Industry (MITI) indicated that Japanese vehicle manufacturers may reduce car shipments to the United States by 10 percent in 1988. During 1981-86, the quantity of Japanese exports of autos to the United States closely followed the voluntary export limits. Japanese industry sources state that some Japanese automakers may not meet their current year quotas, and that a reduction in exports may only be a political gesture to the United States. 3/

"Overcapacity" issue

One of the principal reasons for the Japanese establishing U.S. motor-vehicle production facilities was the VRA that limited the number of automobiles the Japanese could export to the United States. The Japanese auto producers have exported their limit each year since the VRA has been in effect (1981-87), and would have sold more each year had there not been a quota. 4/ It has been reported that many Japanese manufacturers believe these quotas could remain in effect indefinitely, and possibly the quota could decline in

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1/ Limits on jeep-type vehicles and exports to Puerto Rico were also increased by about 25 percent for 1985.
2/ "Automobile Industry: Who Will Survive?" Tokyo Business Today, April 1987, p. 45.
3/ Geoff Sundstrom, "Japan Considers 10% Cut in '88 Auto Exports to U.S.," Automotive News, Oct. 12, 1987, p. 2.
4/ Francis J. Gawronski and Geoff Sundstrom, "1987 quota remains at 2.3 million," Automotive News, Feb. 2, 1987, p. 1.

the future. 1/ Thus, if the Japanese auto producers wanted to hold their current share of the world's most lucrative auto market, most believed that the best business decision was to establish U.S. production facilities. In addition, political pressure to "build where you sell" has been voiced by various administration officials since early 1980, and the fall of the U.S. dollar in relation to the yen also has encouraged Japanese vehicle producers to build production plants in the United States. 2/

In an average year, it is estimated that there is a demand for about 11.5 million automobiles in the United States. Since imports have captured about 30 percent of the U.S. market during the last two years, this means that there is a demand for about 8.0 million U.S.-produced automobiles in an average year. However, with the opening of the new Japanese-owned or joint-venture auto facilities, auto analysts estimate that there will be capacity in the United States to produce at least 10.5 million automobiles by 1990, or about 2.5 million more than U.S. consumers could absorb in a good year. 3/ One auto analyst even predicts that these new plants will steal so many sales from the "Big Three" that at least four more U.S. assembly plants will have to be closed. 4/

In addition to the projected overcapacity for automobiles, some auto analysts and parts' suppliers have also forecast a high level of unused capacity in the U.S. motor-vehicle parts industry by the mid 1990's. 5/ As additional foreign-owned parts suppliers set up production facilities in the United States, some of the lesser competitive U.S. parts suppliers will be forced to close or operate at a lower level of capacity.

Historical relationship between Japanese automobile assemblers and their suppliers

Most Japanese auto parts producers are affiliated with one of the 11 Japanese vehicle producers. Most of the auto producers are linked to larger networks of Japanese companies representing a wide range of industries. These networks are known as "keiritsu" industrial groups. Member companies generally have a strong tendency to purchase from other member companies; this structure makes it extremely difficult for potential outside suppliers, domestic or foreign, to sell to companies in the group. 6/

There are six major keiritsu groups in Japan. At the core of each is a major Japanese bank. Tied to the bank and to each other are such diverse operations as raw material producers, manufacturers of intermediary and final

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1/ Geoff Sundstrom, "Japan considers 10% cut in '88 auto exports to U.S.," Automotive News, Oct. 12, 1987, p. 2.
2/ John Holusha, "1988 Japan Car Limits Debated," The New York Times, Nov. 24, 1987, p. 1.
3/ Malcolm S. Salter and Alan M. Webber, "A World Awash in Autos," Washington Post, Aug. 23, 1987, p. A3, and A.E. Cullison, "Car Glut Forecast in U.S.," The Journal of Commerce, Aug. 5, 1987, p. A4.
4/ Holusha, op. cit., p. D7.
5/ "Congress Is Told U.S. Auto Parts Industry Is Headed for Disaster," Automotive Parts International, July 31, 1987, p. 2.
6/ The Structure of the Japanese Auto Parts Association, Dodwell Marketing Consultants, 1983.

products, and service providers such as trading companies, insurance firms, shipping lines, construction companies, and other ancillary service providers. In 1984, these six groups accounted for almost 18 percent of net profits for the Japanese economy as a whole, almost 17 percent of total sales, over 14 percent of paid-up capital, and almost 5 percent of the Japanese workforce. 1/ The groups and their affiliated auto producers are Mitsui (Toyota Motor Co.), 2/ Mitsubishi (Mitsubishi Motors), Sumitomo (Toyo Kogyo, commonly known as Mazda), Fuyo (Nissan and Subaru), 3/ Sanwa (Daihatsu), 4/ and Dai-Chii Kangyo (Isuzu Motors). Other Japanese auto producers are associated with smaller, less organized industrial groups such as Suzuki Motors, part of the Tokai group. The largest Japanese auto producer that has no apparent group affiliation is Honda Motor Co.

The Japanese auto producers, together with their affiliated auto parts producers, are typically large enough to be considered keiritsu style groupings. The major auto producing groups are the Toyota group (includes Daihatsu Motors and Hino Motors through equity interest), the Nissan Group (includes Fuji Heavy Industries Group or Subaru, and the Nissan Diesel Group through equity interest), the Toyo Kogo Group, Honda Motors, Mitsubishi Motors, Isuzu Motors, and Suzuki Motors.

Japanese auto producers rely more heavily on noncaptive suppliers (not a subsidiary or division of the firm) than U.S. auto producers. The U.S. average for outsourcing of parts by automakers is 50 to 55 percent; for Japanese automakers, the average is about 75 percent. 5/ Therefore, Japanese parts producers are very important partners to Japanese auto producers. The auto producers typically set up associations of their parts suppliers known as "Kyoryokukai" to enhance cooperation and solidarity. Although the recent trend has been towards a slight relaxation of group ties, members of these associations typically sell most of their output to their one, affiliated auto producer. Parts producers are usually very specialized, and produce only one or two types of parts. However, each particular automobile part used by an automaker is typically produced by several companies within each Kyoryokukai, so that the auto producer has at least two suppliers, thus encouraging competition in price and quality.

As a result of the move of Japanese automakers to the United States, there has been an increased incentive for Japanese auto parts firms to move to the United States. Japanese auto manufacturers located in the United States claimed they were having difficulty procuring parts from the U.S. companies at the price and quality they sought. Thus, many Japanese parts makers that were exporting parts to the U.S.-based Japanese automakers believed that they would be better able to supply them if they were also located in the United

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1/ Masaichi Hiogami, "Industrial Groups," Japan Economic Yearbook, 1986.
2/ Toyota is a significant grouping unto itself and only loosely connected to the Mitsui Group.
3/ Nissan is also a significant group unto itself and only loosely connected to the Fuyo Group.
4/ Toyota has equity interest in Daihatsu.
5/ "The Relationship Between Japanese Auto and Auto Parts Makers," prepared by Mitsubishi Research for the Japan Automobile Manufacturers Association, 1987, and USITC staff interview with the Ministry of International Trade and Industry officials, Tokyo, Japan, Apr. 20, 1987.

States. 1/ In addition, with the threat of domestic content legislation, Japanese firms making auto parts would have a better chance to continue to supply these firms if located in the United States.

Automobile Subzones

Table 3-9 shows data gathered in the Commission's questionnaire for all automobile firms operating in subzones. Total shipments increased significantly from 683,500 autos, valued at $5.0 billion dollars, in 1983, to 5.1 million autos, valued at $52.1 billion, in 1986. Except for 1983 when exports accounted for 14 percent of shipments, the share of shipments registered by exports ranged between 7 and 9 percent between 1984 and October 1986-June 1987. For the entire 4.75-year period, exports averaged 8 percent ($12.6 billion) out of total shipments of $150 billion. Domestic share of purchased inputs received peaked at 84 percent in 1984, up from 78 percent in 1983, and then declined to 72 percent in both 1986 and part-year 1987. Employment of production and related workers increased without interruption during 1983 through October 1986-June 1987, from 58,897 to 97,656.

Table 3-9
Selected data on FTZ operations for automobiles, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number)	585,869	1,950,217	2,966,541	4,703,405	3,797,727
Export (number)	97,631	207,083	309,578	400,005	307,901
Total	683,500	2,157,300	3,276,119	5,103,410	4,105,628
Shipments:					
Domestic (1,000 dollars)	4,309,784	16,714,620	27,672,751	48,321,722	40,371,582
Export (1,000 dollars)	698,004	1,544,696	2,620,344	3,827,877	3,904,369
Total	5,007,788	18,259,316	30,293,095	52,149,599	44,275,951
Production and related workers	58,897	79,950	88,435	93,009	97,656
Hours worked by production workers (1,000 hours)	117,138	167,473	180,630	186,638	159,199
Share of total value of purchased inputs received of--					
Domestic content (percent)	78	84	74	72	72
Foreign content (percent)	22	16	26	28	28

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

1/ USITC staff interview with U.S. Department of Commerce officials, July 22, 1987.

Ford Motor Co. (Ford) Overview

At the present time, 12 of Ford's U.S. plants have received foreign trade subzone status. Ten produce automobiles, 1 produces auto components, and the other produces tractors. Ten of these facilities are currently operational, one is scheduled to resume operations in January 1988, and the twelfth facility is awaiting a decision from corporate level to resume its operations. The first Ford subzone became operational in 1982. This zone was followed by three new zones in 1983, four in 1984, three in 1985, and the last in 1986. The lower rate of duty on finished motor vehicles, versus those on the parts used to assemble them, appears to have been the prime motivation involved in the establishment of each of Ford's automobile subzones and its tractor subzone. Duty deferral constitutes the principal benefit for its auto components subzone, as the duty is not paid on the components until they enter the United States in the finished auto. None of the Ford locations that were surveyed, however, indicated that they have changed their buying patterns for parts, materials, or components as a result of obtaining subzone status. Much of Ford's foreign purchases is from overseas affiliates. During 1983-86, Ford's total subzone shipments rose annually from *** in 1983 to *** in 1986, as shown in table 3-10. The foreign share of purchased inputs received * * * from *** percent of the total value in 1983 to *** percent of the total value in 1986. The share of shipments exported between 1983 and 1986 was about *** percent, but * * * to *** percent in part-year 1987. Table 3-11 shows separate data on automobile operations.

Chrysler Motors Corp. (Chrysler) Overview

The Foreign-Trade Zones Board has granted approval to Chrysler Corp. for 11 subzones, 6 of which were operating under the program during 1983-June 1987. Chrysler's subzone operations began in 1982 with two plants, followed by one plant each in 1983, 1984, 1985, and 1986. Passenger cars were the principal products manufactured at these facilities, accounting for * * * *** percent of the total value of shipments during the reporting period. Automotive trucks (jeeps) and parts were the other products manufactured. In response to the Commission's questionnaire, Chrysler indicated that the zone program permitted the company to pay duty on imported parts at the reduced rate of imported vehicles; consequently, allowing it to remain competitive with importers of finished vehicles. Chrysler also experienced inverted tariff duty savings as the principal benefit at its automobile parts subzone facility. Domestic share of purchased inputs received, by value, for all Chrysler subzone facilities * * * from *** percent in 1983 to *** percent in October 1986-June 1987 (table 3-12). Exports, as a share of total shipments, * * * from *** percent in 1983 to *** percent in October 1986-June 1987. The average number of production workers employed was *** percent higher in part-year 1987 over that reported in 1983. Data for all Chrysler automobiles operations are shown in table 3-13.

General Motors Corp. (GM) Overview

Currently, GM has 15 plants that have been granted subzone status. However, only 10 have begun to operate. Such status began in 1984 with two plants, followed by five plants in 1985, two plants in 1986, and one plant in 1987. Seven of these plants assemble automobiles, two plants assemble autos,

Table 3-10
Selected data on total FTZ operations of Ford Motor Co., 1983-86 and October 1986-June 1987 1/

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)..	***	***	***	***	***
Exports (1,000 dollars)...	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers 1,000 hours.....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

1/ All Ford subzones.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 3-11
Selected data on Ford Motor Co.'s FTZ operations for automobiles, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number).....	***	***	***	***	***
Exports (number).....	***	***	***	***	***
Total.....	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars).....	***	***	***	***	***
Exports (1,000 dollars)..	***	***	***	***	***
Total.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours)....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 3-12
Selected data on total FTZ operations of Chrysler Corp., 1983-86 and October 1986-June 1987 1/

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)..	***	***	***	***	***
Exports (1,000 dollars)...	***	***	***	***	***
Total.....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***

1/ All Chrysler subzones.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 3-13
Selected data on Chrysler Corp.'s FTZ operations for automobiles, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number).....	***	***	***	***	***
Exports (number).....	***	***	***	***	***
Total.....	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)..	***	***	***	***	***
Exports (1,000 dollars)...	***	***	***	***	***
Total.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

trucks and vans, and one plant produces and assembles automobile engines. Duty savings from inverted tariffs appear to be the principal reason for GM's automobile assembly plant subzone status. * * *.

Foreign share of purchased inputs received for these plants * * * from *** percent in 1984 to *** percent in 1985, then * * * to *** percent in 1986, before * * * to *** percent in October 1986-June 1987. Export shipments * * * about *** percent of total shipments * * * . Tables 3-14 and 3-15 show data on GM's total operations and its automobile operations in subzones.

Other Automobile Subzones Overview

Other firms operating in subzones during 1983-June 1987 included New United Motors Manufacturing, Inc. (NUMMI), Porsche Cars North America, Inc., 1/ Volkswagon of America (VW), Honda of America Manufacturing, Inc., and Nissan Motors Manufacturing Corp. NUMMI's subzone operations began in 1984, Porsche's in 1984, VW's in 1979, Honda's in 1982 (automobiles), and Nissan's in 1985 (automobiles). For all of these firms except Porsche, the principal subzone benefit was reduced tariff liabilities from inverted tariff. Porsche used its two subzone facilities primarily as storage and distribution centers. VW and Nissan also produced light trucks at their subzones and Honda produced motorcycles. Shipments of automobiles by these firms increased during 1983-86, from *** units, valued at *** million, to *** units, valued at *** billion (table 3-16). Such shipments further increased during October 1986-June 1987 to *** units, value at *** billion. The share of export shipments ranged between *** percent and *** percent during 1983-86. The share of such shipments decreased to *** percent during October 1986-June 1987. Total employment increased during 1983-86, from *** workers to ***. The foreign share of purchased inputs received * * * from *** percent in 1983 to *** percent in 1986. It * * * to *** percent in October 1986-June 1987.

Profiles of each of these subzones appear in appendix G.

Refined Petroleum Products

Introduction

On September 29, 1987, Senator Lloyd Bentsen requested that the Commission give particular attention in its ongoing FTZ study to the effects of subzone status on U.S. petroleum refineries. Because of this special request, the competitive conditions for the U.S. refining industry are examined to help better understand the global context for petroleum subzone operations.

An important issue affecting the future ability of petroleum refiners to use subzones involves Customs' concern about controlling petroleum feedstocks in subzones. Consequently, this issue will be examined first.

1/ A joint venture between Toyota Motor Corporation of Japan and General Motors Corp.

Table 3-14
Selected data on total FTZ operations of General Motors Corp., 1983-86 and October 1986-June 1987 1/

Item	1983 2/	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)...	***	***	***	***	***
Export (1,000 dollars).....	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent)..	***	***	***	***	***

1/ All General subzones.
2/ General Motors did not have any active subzones during 1983.
3/ No data provided for 1983 as the Commission only asked for employment data for the nonsubzone period.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 3-15
Selected data on General Motors Corp.'s FTZ operations for automobiles, 1983-86 and October 1986-June 1987

Item	1983 1/	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number).....	***	***	***	***	***
Export (number).....	***	***	***	***	***
Total.....	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)...	***	***	***	***	***
Export (1,000 dollars).....	***	***	***	***	***
Total.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent)..	***	***	***	***	***

1/ General Motors did not have any active subzones during 1983.
2/ No data provided for 1983 as the Commission only asked for employment data for the nonsubzone period.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 3-16
Selected data on automobiles FTZ operations for New United Motors Manufacturing Inc., Volkswagon of America, Honda of America Manufacturing, Inc., and Nissan Motors Manufacturing Corp., 1983-86 and October 1986-June 1987 1/

Item	1983	1984	1985	1986	October 1986-June 1987 1/
Shipments:					
Domestic (number).....	***	***	***	478,513	***
Exports (number).....	***	***	***	27,979	***
Total.....	***	***	***	506,492	***
Shipments:					
Domestic (1,000 dollars).....	***	***	***	3,494,091	***
Exports (1,000 dollars)..	***	***	***	189,467	***
Total.....	***	***	***	3,683,558	***
Total employment.....	***	***	7,301	9,281	11,330
Production and related workers.....	***	***	6,282	7,972	9,681
Hours worked by production workers (1,000 hours)....	***	***	12,880	18,830	15,212
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	28	27	24
Foreign content (percent).....	***	***	72	73	76

1/ Because Porsche reported no manufacturing in its subzone, the Commission questionnaire did not require it to report any data.

The benefits to operating refineries in FTZ's are the usual benefits derived from operating in such a zone, including tariff minimization, cash-flow benefits from duty deferral, avoidance of local inventory tax, and avoidance of duty altogether on intermediate products (often estimated to be 10 percent of the total intput) which are produced from imported crude and consumed in the zone under certain conditions. Refineries/blenders operating in subzones may be able to avoid the Superfund taxes paid by domestic refiners and could avoid petroleum import fees recently proposed in Congress.

Customs oversight of petroleum refineries in foreign-trade zones

In 1970, the Board first authorized an oil refinery to operate in an FTZ in Hawaii. Operations began in 1972. In 1985, the Board first authorized some mainland refineries to operate in subzones. In 1986, these subzones were activated by Customs. By 1987, there were three activated refineries operating in FTZ's. Two additional refineries had been authorized to operate in an FTZ by the Board, but such FTZ's had not been activated by Customs. Moreover, there was increasing interest by petroleum refiners and petrochemical producers in operating in FTZ's, and at the same time, there was

increasing opposition to the operation of refineries and gasoline blending facilities in FTZ's by many major domestic refiners, independent refineries, and by associations representing them.

Although Customs and the refinery zone users cooperated in developing mutually satisfactory operational procedures for administering the activated zones and subzones, by 1987 Customs became concerned about the effectiveness of its control over refinery operations in FTZ's. This was partly because of difficulties in identifying products and their relative values at the time of separation, as required by the FTZA. The concern was serious enough that Customs undertook a thorough study of control problems associated with the operation of refineries in FTZ's. During the period of the study, Customs requested the Board to delay the approval of new applications by refineries to operate in FTZ's and delayed the activation of zones which had been authorized to operate. These delays have prompted criticism by the interested parties.

The activated refineries are not each administered and operated according to the same regulatory, operational, and definitional provisions; rather, the refineries are subject to specific and particular restrictions provided for in either the zone grant, Customs rulings, or other operational agreements between Customs and the zone user. Each refinery was thought to present its own administrative and operational problems depending on the particular characteristics of the subject plant (e.g., grades of crude petrolum utilized, the processes employed, and the output produced for entry). In particular, the refinery in Hawaii was thought to present a unique situation because of its relative geographic isolation.

In general, Customs' concern about the effectiveness of its control of refineries in zones arose because of the complexity of refineries. Customs believed that it could not exercise effective control over a plant with unique and variable inputs. A crude petroleum refinery has complex and variable processes and numerous intermediate products awaiting further processing, either at the refinery or elsewhere, prior to final Customs entry. The resulting products lose their physical identity and may only be tracked by some record control identification method which may or may not be precise. These complexities make it difficult to exercise effective regulatory oversight sufficient to measure or account for such matters as zone status, tariff classification, valuation and duty liability.

Customs' study of the operation of refineries in FTZ's is ongoing. In July 1987, Customs issued a report that suggested methods of zone operation for refineries that would be appropriate for adequate Customs supervision and control. It is Customs' intention to develop, in cooperation with the affected parties, a mutually acceptable method that would permit refineries to operate in zones while allowing Customs to protect the revenue, to exercise effective control of zone operations and to enforce the customs laws. As of December 1987, Customs and the affected parties had begun discussions and negotiations to develop a suitable regulatory regime for refineries. A new regime is being developed. It will be applied to the two mainland refineries which are currently activated and operating, and any other applicants that receive Board authorization and customs activation approval. The new regime will be used for a 3-year period, at which time Customs will make any necessary corrections to improve the effective oversight of the operation of refineries in FTZ's.

The U.S. refining industry

The United States relies on the major international petroleum companies and the independent domestic refiners to supply its need for crude petroleum and petroleum products. According to the 1977 Census of Manufacturers, there were 349 refineries in operation; however, as of January 1, 1988, the number of operating refineries had fallen to 187, with a total capacity to refine 15.3 million barrels of crude petroleum per day. 1/ The decrease in the number of operating refineries since 1977 is the result of a combination of factors including decreased domestic demand, market shifts, increased transportation costs, consolidation of refineries, the end of the Federal entitlements program for small refineries, and the decontrol of crude petroleum prices in 1981.

The typical refinery that closed between 1977 and 1988 had a capacity to refine less than 50,000 barrels per day, and was relatively unsophisticated, that is with no cracking or other major upgrading facilities. Many of these refineries were built under the Government program of support for small refineries in the 1970's. 2/ The refineries remaining open were the more sophisticated units; however, they operated at 83 percent capacity in 1986 compared with 84 to 94 percent achieved in 1979. 3/ Another factor that contributed to the decrease in U.S. production of refined products, the shutdown of refineries, and the subsequent decline in capacity utilization is an increase in offshore refinery operations.

U.S. production of selected petroleum products has remained relatively stable during 1983-87. (Table 3-17).

U.S. imports.--The United States is a net importer of petroleum products, primarily residual fuel oils and motor fuels. The major sources of imports in 1986 and 1987 were Venezuela and Algeria. The following tabulation shows U.S. imports of petroleum products (in thousands of barrels per day):

1983	1,722
1984	2,011
1985	1,866
1986	2,045
1987 1/	1,861

1/ Estimated on the basis of 10 months of data.

As a result of decreasing crude petroleum prices, the value of U.S. imports of petroleum products decreased from $15 billion in 1983 to $10.8 billion in 1986 and were valued at $9.4 billion during the first 10 months of 1987.

1/ "Worldwide Report," Oil and Gas Journal, Dec. 28, 1987, p. 37.
2/ Resources System Institute, OPEC Downstream Project, "The Changing Structure of World Refining Industry: Implications for U.S. Energy Security," presented to the U.S. Department of Energy, Jan. 23, 1985, p. 23.
3/ Most U.S. refineries are designed for greatest efficiency and profitability when operating at capacity utilization of between 85 and 90 percent.

Table 3-17
U.S. Production: Selected petroleum products, 1983-87

(In 1,000 barrels per day)

Year	Motor gasoline	Distillate fuel oil	Residual fuel oil	Liquefied petroleum gases 1/	Other 2/
1983	6,340	2,456	852	1,642	3,460
1984	6,453	2,681	891	1,697	3,632
1985	6,419	2,687	882	1,704	3,721
1986	6,752	2,798	889	1,695	3,997
1987 3/	6,812	2,649	870	1,756	4,070

1/ Includes ethane, propane, normal butane, and isobutane.
2/ Includes pentanes, other hydrocarbons, alcohols, unfinished oils, gasoline blending components, and all finished petroleum products, except finished gasoline, distillate fuel oil, residual fuel oil, and liquefied petroleum gases.
3/ Estimated on the basis of 10 months of data.

Source: Derived from official statistics of the U.S. Department of Energy.

U.S. exports.--The exportation of petroleum products was, until 1981, restricted and may at any time in the future be restricted by the President under section 103 of the "Energy Policy and Conservation Act," Public Law 94-163, dated December 23, 1975. 1/ The President acts through the Secretary of Commerce. The Secretary enforces this provision of the Act through the requirement of validated export licenses. 2/

Distillate fuel oil is the major petroleum product exported; however, the United States is not a major world supplier of petroleum products. The following tabulation shows U.S. exports of petroleum products (in thousands of barrels per day):

1983	575
1984	541
1985	577
1986	631
1987 1/	607

1/ Estimated on the basis of 10 months of data.

1/ Executive Order No. 12287, Jan. 28, 1981, decontrolled prices of crude petroleum and petroleum products. The Department of Commerce issued new regulations on Oct. 6, 1981, eliminating quantitative limits on exports of petroleum products while continuing the licensing requirement (46 F.R. 49108).
2/ The rules governing these exports are set forth in sec. 377.6, "Petroleum and Petroleum Products," of the Export Administration Regulations of the U.S. Department of Commerce (15.CFR sec. 377.6).

The value of U.S. exports of petroleum products decreased from $3.8 billion in 1983 to $2.5 billion during the first 10 months of 1987. The major markets for these exports are Japan, Canada, and Mexico.

Apparent consumption.--U.S. consumption of petroleum products varied since 1971 as a result of crude petroleum and petroleum products price changes, product availability, fuel switching, and conservation. In 1983, U.S. consumption of petroleum products was 15.2 million barrels per day and increased to 15.7 million barrels per day in 1984. Consumption increased to an estimated 16.5 million barrels per day in 1987, as shown in the following tabulation:

Year	Apparent consumption	Ratio of imports to consumption
	1,000 barrels per day	Percent
1983	15,231	11
1984	15,726	13
1985	15,726	12
1986	16,281	13
1987 1/	16,504	11

1/ Estimated on the basis of 10 months of data.

During 1983-87, the refiner acquisition cost for domestic and imported crude petroleum declined; however, in 1986, the refiner acquisition cost of a barrel of crude declined sharply, as shown in the following tabulation (in dollars per barrel):

Year	Domestic	Imported
1983	$28.87	$29.30
1984	28.53	28.88
1985	26.66	26.99
1986	14.83	13.98
1987 1/	17.67	18.00

1/ Estimated on the basis of 10 months of data.

The sharp decline in crude petroleum prices since late 1985 have resulted in a leveling of domestic crude petroleum production coupled with an increase in imports.

Petroleum refiners or blenders subzones overview

Four petroleum refiners or blenders subzones were operating during this study. Two of these were not mainland subzones. Pacific Resources, Inc., operated Enerco, Inc., and Hawaiian Independent Refinery, Inc. (HIRI), in Hawaii, both in subzone 9A, and Commonwealth Oil Refinery Co., Inc. (CORCO), operated in Puerto Rico. The two mainland subzones were Coastal Refining and

Marketing, Inc., and Southwest Refining Co. Inc., both located in Texas. Subzone status was granted to HIRI in 1972 and to Enerco in 1975. CORCO received its grant in 1985. Both Coastal and Southwest began subzone operations in 1986. Thus overall data an these firms primarily reflects the activities of HIRI and Enerco. Of these two, HIRI accounted for * * * of the shipments through the 1983-June 1987 period.

Shipments * * * from *** million in 1983 to *** million in 1986. Shipments increased sharply to *** in October 1986-June 1987 as subzones other than HIRI and Enerco were activated (table 3-18). The share of shipments exported * * * during 1983-86, from *** percent to *** percent. They amounted to *** percent in October 1986-June 1987. The foreign share of purchased inputs received * * * from *** percent in 1983 to *** percent in 1986.

Profiles of these subzones appear in app. G.

Table 3-18
Selected data on FTZ operations for petroleum refiners or blenders, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars).....	***	***	***	***	***
Export (1,000 dollars).....	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers...	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

The effects of subzone status on the tariff structure of petroleum products

Under current tariff provisions, FTZ's can be used to circumvent the existing tariff structure for products entering U.S. customs territory and the higher duties paid on certain components of blending stocks that can be processed further into industrial organic chemicals. Blending stocks and catalytic naphtha can be imported into the subzones, which are legally outside the U.S. customs territory, thereby preventing these imports from being subject to U.S. customs procedures. Within the subzone, these mixtures may be combined with foreign and/or domestic merchandise. The resulting product can enter into U.S. customs territory dutiable as motor fuel under TSUS item 475.25 at a rate of duty of 1.25 cents per gallon, rather than being dutiable at the higher duty rates applicable to the components of the mixture.

The following discussion examines efforts by Congress and the Commission to amend the tariff schedules to reclassify catalytic naphtha and motor fuel blending stocks/unfinished gasoline. A proposal recommended by a Commission study (discussed below) would eliminate certain duty savings on certain petroleum products in subzones in inverted tariff situations.

On November 26, 1985, the House Committee on Ways and Means and the Senate Committee on Finance jointly requested the Commission to conduct a study after the conference committee failed to reach a compromise between different proposals concerned with the tariff reclassification of catalytic naphtha and motor fuel blending stocks/unfinished gasoline. From late 1983 through July 1984, a number of bills were introduced in Congress pertaining to the reclassification of these products. H.R.4232 and S.2479 (98th Congress) were introduced with a duty rate of 0.25 cents per gallon for catalytic naphtha, which is a component used in the production of finished gasoline. While these bills were being considered by Congress, two additional bills pertaining to the reclassification of unfinished gasoline or motor fuel blending stocks, H.R.5455 and S.2900 (98th Congress) were introduced to create a new tariff item for these products with a duty rate of 1.25 cents per gallon, the same rate as that on finished motor fuels.

As a result of its study, the Commission determined that one of the most reasonable options for classifying these products was a single end-use provision instead of having a number of separate provisions based on physical and chemical characteristics. 1/ The difficulty in establishing for customs purposes a separate category for catalytic naphtha is in distinguishing those products that are used solely for gasoline blending from other benzenoid mixtures (i.e., catalytic naphtha) that are intended for further processing into industrial organic chemicals. The composition of the products to be classified in these categories can vary widely depending upon the type of crude petroleum and the refinery processes used. The main advantage of a tariff item combining catalytic naphtha and other motor fuel stocks that blend is that it would require only a certification by the importer of the end use of the imported material; no technical definition to distinguish motor fuel blending stocks from other mixtures is necessary. Such a provision should also capture all future imports of materials to be used as blending components for motor fuel. The Administration has inserted such a provision in the proposed HS conversion bill. However, no Congressional action has taken place to adopt the Commission's recommendation or any other solution.

This option may also be acceptable to importers of catalytic naphtha since under this "end use" option, the duty rate would be no higher than that for finished gasoline. This would be consistent with the past treatment of motor fuel blending stocks, which were classifiable with motor fuel under the provisions of U.S. Customs Service Treasury Decision (T.D.) 66-23(13).

The establishment of an end-use category for motor fuel blending stocks, dutiable at the motor fuel rate of 1.25 cents per gallon, would be consistent with the past practice of Customs to classify motor fuel blending stocks as a motor fuel (T.D. 66-23(13)). Imports of leaded blending stocks, especially from China and Mexico, continued to enter the United States as motor fuels

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1/ Possible Effects of and Recommendations Concerning the Proposed Tariff Reclassification of Catalytic Naphtha and Other Motor Fuel Blending Stocks, Investgation No. 332-203, USITC Publication 1686, April 1986.

under T.D. 66-23(13), although T.D. 83-173, which increases the RON for leaded gasoline to 87, was officially in force. Since these blending stocks were previously entering the United States under TSUS item 475.25, the staff did not feel that the technical recommendations would result in a significant rise in imports.

The classification of catalytic naphtha under the proposed end-use category was expected to stabilize the duty rate and the volume of imports. The U.S. refining industry therefore would not be adversely affected as a result of these technical recommendations.

Sugar

FTZ operations using sugar exist because of the U.S. price-support program for sugar (supporting the U.S. price substantially above the world price) and import quotas on sugar and sugar-containing articles to protect the price-support system. FTZ sugar operations have been in existence since the early 1980's, but because of concerns about the U.S. sugar program, their use has recently been limited. There were five sugar operations in general-purpose zones that began shortly after the imposition of import quotas on sugar in 1982 that are still in existence. The U.S. Department of Agriculture (USDA) allowed these operations to continue after a change in policy in 1984. However, these operations are subject to the limitation of 54,200 short tons per year (sugar content) that they can enter into the United States.

The subzone sugar operations approved in 1987--Ambrosia Chocolate Co. and Power Packaging, Inc.--are limited to producing articles subject to the limitations of the current U.S. import quotas on sugar-containing articles (imposed in 1983 and 1985). However, these subzone operations may cease to exist because of this limitation and the USDA opposition to their use. The USDA believes the use of FTZ's is intended to circumvent the sugar import quotas, and may undermine the sugar price-support program in the United States. This opposition is based on the awareness of the substantial discount of world to U.S. prices for sugar.

Profiles of sugar-related subzones appear in app. G.

Other Subzones

The remaining subzones cover a variety of products. The first four of these subzones fall in the textiles and apparel area. They were restricted by the board to nonmanufacturing activities because of opposition from representatives of the affected domestic industries and from the U.S. Department of Commerce's Office of Textiles and Apparel and, consequently, provide users with the benefits more often associated with general-purpose zones or bonded warehouses, such as storage, inspection, quality control, and duty deferral. For a more complete discussion of the opposition to, and restrictions in, these zones see appendix C.

The next eight subzones fall in the general area of steel products, and all have restrictions on their grants. The restrictions on the four shipyard grants are all the same. See appendix C for a more complete discussion of the opposition to, and restrictions on, these subzones.

The first four are shipbuilding, ship conversions and/or repair operations. Under the tariff schedules, ships are in general not dutiable; thus, there is a considerable inverted tariff benefit on imported parts, components, and materials. Because ships are treated for tariff purposes as "intangibles" and thus are not "articles" that never enter the U.S. customs territory, the nationality of the purchaser determines whether the ship is "imported" or "exported."

Other products included tinplate/pineapple, TV's, microwaves, bakery mixes, office copying machines, laser printers, nuclear power plant equipment, printers ink, motorcycles, jet skis, all-terrain vehicles, typewriters, and word processors.

CHAPTER 4. U.S. IMPORTS AND EXPORTS FROM FTZ'S

U.S. Imports from FTZ's

This section presents disaggregated data of imports from U.S. FTZ's during 1984-86. Table 4-1 shows that total imports of foreign-origin merchandise from FTZ's tripled between 1984 and 1986, from $3.6 billion to $11.4 billion. 1/ Imports under all eight tariff schedules increased during this period. Imports under schedule 6 (metals and metal products, including automobiles and parts) accounted for *** percent of the total; imports under schedule 4 (chemicals and related products) provided *** percent of the total, and imports under schedule 7 (specified products) accounted for *** percent. The main increase came in 1986 when foreign-origin imports * * * in five of eight tariff schedules and * * * in autos and auto parts.

During 1984-86, imports from FTZ's as a share of total U.S. imports for consumption of all merchandise averaged 1.7 percent annually. * * * were the major suppliers of FTZ imports.

Metals and Metal Products

Total FTZ imports entered under schedule 6 increased *** percent during 1984-86, from *** to ***. Of the total *** entered under schedule 6 during the 1984-86 period, the dominant share consisted of certain types of * * *. * * * comprised *** percent of total imports under schedule 6 during the period. Principal sources were * * *. Although FTZ imports of * * * were *** dollars and *** in 1984 and 1985, imports of these commodities * * * in 1986 and became the second leading category of products entered under schedule 6. In 1986, *** percent of * * * came from * * *. Certain types of * * * were the third major commodity category entered under schedule 6.

Chemicals and Related Products

Total FTZ imports under schedule 4 increased *** percent during 1984-86, from *** to ***. * * * accounted for *** percent of total imports under schedule 4 during the period. Although * * * continued to be the leading supplier of * * * in 1986, its share of total imports declined from *** percent to *** percent during 1984-86. * * * and * * * became new principal suppliers of * * * in 1986.

1/ U.S. import data of combined privileged and nonprivileged foreign merchandise entered into the U.S. customs territory, except for overall totals for annual imports, are not available to the public from the Department of Commerce for 1984-86. It should be noted that these aggregated data must be used with caution because Census has experienced difficulty in developing its data-gathering system. This has resulted in inconsistent reporting of data over the period. More detailed Commerce data were provided to the Commission on a confidential basis under an agreement with Customs. These data are considered business confidential because publication at a disaggregated level would reveal information about the individual operations of certain zone users.

Table 4-1
Privileged and nonprivileged foreign merchandise: U.S. imports for consumption from FTZ's, by tariff schedule numbers and items, 1983-86 and October 1986-June 1987 1/

(In millions of dollars)

No.	Tariff schedule No. and description	1984	1985	1986
1:	Animal and vegetable products.....	***	***	***
2:	Wood and paper; printed material....	***	***	***
3:	Textile fibers and textile products.....	***	***	***
4:	Chemicals and related products.....	***	***	***
5:	Nonmetallic minerals and products.....	***	***	***
6:	Metals and metal products.....	***	***	***
7:	Specified, miscellaneous, and nonenumerated products.....	***	***	***
8:	Special classification provisions--(duty-free products)....	***	***	***
	Total.....	3,610	4,458	11,406

1/ Data are on a fiscal-year basis. Data for 1984-86 are understated in that they do not include imports under TSUS items 806.30 and 807.00 or imports entered under the Generalized System of Preferences. These data were not reported by the U.S. Bureau of Census.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Note.--Because of rounding, figures may not add to the totals shown.

The seconds and third leading product categories imported under schedule 4 in 1986 were * * *
and * * * from * * *.

Specified, Miscellaneous, and Nonenumerated Products

Total FTZ imports under schedule 7 increased *** percent during 1984-86, from *** to *** . * * *
accounted for the largest share (*** percent) of imports. The principal supplier was * * * (*** percent). Other significant products imported under schedule 7 included * * * and * * *
(chiefly from * * * and * * *), * * *
(* * * and * * *), and * * * (* * * and * * *).

Animal and Vegetable Products

Reflecting the sharp rise in the use of foreign trade zones to process * * *, total imports under schedule 1 increased almost *** percent during 1984-86, from *** to ***. Certain types of * * * accounted for *** percent of

schedule 1 imports in 1986. Although * * *
(chiefly from * * *) comprised the second largest category of imports, they accounted for only *** percent of the total.

U.S. Exports from FTZ'S

The following tabulation (in millions of dollars), compiled from data from the Board, shows that subzones accounted for the rapid growth in exports from FTZ's during for 1983-86: 1/

Year	Total	From general-purpose zones	From subzones
1983.....	$1,671	$624	$1,047
1984.....	3,837	616	3,221
1985.....	3,812	573	3,239
1986.....	4,871	673	4,198

The share of total exports from FTZ's accounted for by subzones rose from 63 percent to 84 percent during 1983-86. Despite more than doubling during 1983-86, exports from FTZ's were small, about 2 percent, of the total exports of domestic merchandise, which, in calendar year 1986, totaled $206.4 billion.

General-Purpose Zones

Exports shipped from 42 general-purpose zones totaled $673 million in 1986. Ten zones (Miami, Port Everglades, McAllen, Indianapolis, El Paso, Oakland, New York, Brownsville, Houston, and Battle Creek) together accounted for 84 percent of the value shipped to foreign countries from such zones. Export activities were even more concentrated in a small number of zones in 1983 when five zones (Miami, McAllen, New York, Indianapolis, and Port Everglades) together accounted for 82 percent of the total $624 million in exports.

Subzones

Exports from the top 10 exporting subzones contributed 70 percent of total exports from the subzones of $4.2 billion in 1986; the top 5 subzones accounted for 95 percent of total exports of $1 billion in 1983. The number of subzones involved in exporting expanded from 14 in 1983 to 40 in 1986.

1/ Although the data reportedly show the value of exports from FTZ's, only a small portion are "U.S. exports of domestic merchandise." A significant, but undeterminable, share of exports from general-purpose zones during the 1983-86 period consisted of foreign merchandise that had been admitted into such zones and was subsequently reexported (transshipped). Furthermore, exports of domestic and foreign merchandise that had been commingled were reported as totally domestic. Data on subzone activity derived from responses to Commission questionnaires indicate that the domestic share of purchased inputs received of merchandise exported from subzones ranged from 64 percent in 1985 to 77 percent in 1984. Although the actual domestic share of the value of exports from FTZ's cannot precisely be determined, such exports were far less than those reported by the Board as exports.

CHAPTER 5. FIRMS AND EMPLOYMENT IN FTZ'S

Total direct employment resulting from operations in FTZ's increased from 32,509 workers at 1,531 firms in 1983, (826 operating on a non-continuous basis) to 137,538 workers at 2,101 firms in 1986, (1,015 operating on a non-continuous basis) (table 5-1). 1/

Table 5-1
Employment: FTZ employment, by types of zones, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
	Number				
General-purpose zones:					
Full-time	3,535	3,785	5,102	6,281	1/
Part-time	996	849	411	769	1/
Total	4,531	4,634	5,513	7,050	1/
Subzones: 2/					
Full-time	29,914	55,201	81,112	128,639	150,199
Part time	64	156	440	1,849	1,020
Total	27,978	55,357	81,552	130,488	151,219
Grand total	32,509	59,991	87,065	137,538	151,219
	Percent of total				
General-purpose zones:					
Full-time	11	6	6	5	1/
Part-time	3	1	0	1	1/
Total	14	8	6	5	1/
Subzones: 2/					
Full-time	86	92	93	94	1/
Part-time	0	0	1	1	1/
Total	86	92	94	95	1/
Grand total	100	100	100	100	1/

1/ Not available because Board data not published.
2/ Includes Berg Steel Pipe Corp., located in a general-purpose zone. These data report only the information on the reporting firms' activities while operating in a subzone.

Source: Annual reports of the Foreign Trade Zone Board and data submitted in response to questionnaires of the U.S. International Trade Commission.

1/ The last year for which employment data from the Board are available is 1986.

Between 1983 and 1986, the contribution by subzones (and Berg Steel Pipe Corp.) to total FTZ employment increased from 86 to 95 percent and the contribution by general-purpose zones declined from 14 to 5 percent. As additional subzones were established and began to operate in 1987, their contribution to FTZ employment can be expected to continue to increase. Employment in subzones (and Berg Steel Pipe Corp.) more than quintupled over the period, from 27,978 in 1983 to 130,488 in 1986, and to 151,219 in October 1986-June 1987. 1/

Despite the substantial continued increase in employment in FTZ's in recent years, the magnitude has remained small relative to total civilian employment. In 1986, direct zone employment of 137,538 comprised only 0.1 percent of the 118 million civilians employed in the United States.

Employment in general-purpose zones of both full-time and part-time workers increased from 4,531 in 1983 to 7,050 in 1986. In 1983, five zones, (Miami, Mayaguez, McAllen, New Orleans, and Honolulu) accounted for 78 percent of total employment in general-purpose zones. In 1986, seven zones (Miami, Mayaguez, McAllen, Corpus Christi, Harris City, Suffolk City, and Port Everglades) accounted for 76 percent of total employment in general-purpose zones. As in previous years, Miami remained the largest general-purpose zone employer. However, the number of employees at the Miami zone declined from 1500 to 1200 between 1983 and 1986 and its share of general-purpose zone employment declined from 33 percent to 17 percent. As in 1983, Mayaguez and McAllen continued to be major general-purpose zone employers throughout the period; their shares of total employment were 14 percent and 13 percent, respectively, in 1986.

Data on employment of production and related workers reported by questionnaire respondents parallels the trend of total employment for these firms, increasing from 23,210 workers in 1983 to 134,565 in October 1986-June 1987, representing a rise of 480 percent during the period, (table 5-2).

Hours worked by production workers rose sharply each year during 1983-86, from 38.6 million hours to 241.8 million hours, a total increase of 526 percent. However, data on the average number of hours worked by production workers indicate fluctuations between 1983 and 1986 with the average number of hours peaking at 2,024 in 1986.

The firms with the highest level of zone activity are those producing automobiles. The top 10 subzone employers and merchandise shippers manufacture automobiles. During October 1986-June 1987, nineteen out of the top 20 subzones, accounting for 60 percent of the total employment of production and related workers, were involved in the manufacture of automobiles.

1/ These data report only the information on the reporting firm's activities during operation in a subzone.

Table 5-2
Employment by Berg Steel Pipe Corp. and firms manufacturing in subzones, 1983-86 and October 1986-June 1987 1/

Item	1983	1984	1985	1986	October 1986-June 1987
Employment of production and related workers	23,210	47,850	72,227	119,419	134,565
Hour worked by production workers (1,000 hours)	38,634	92,756	136,656	241,761	220,762
Average number of hours worked by production worker	1,665	1,938	1,892	2,024	1,641

1/ These data report only the information on the the reporting firms' activities while operating in a subzone.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

CHAPTER 6. EFFECTS OF ZONE OPERATIONS ON U.S. CUSTOMS REVENUES

Firms operating in FTZ's receive duty savings in the following manner: zone grants of nonprivileged entry status permit importers to pay duties on foreign components entered as part of a finished product at the rate of duty applying to the finished product. This results in an effective duty reduction when duties on components are higher than those on finished products. An important example of inverted tariffs is certain auto parts. Other examples are all dutiable items imported for shipbuilding (since ships enter at a zero duty) and materials going into printers ink.

When tariffs are not inverted (privileged status merchandise), the savings on zone operations are not duty savings, but are interest savings from the right to postpone payment of duties (duty deferral) between the date of entry into the zone and the entry into the U.S. customs territory. The following discussion focuses on the duty savings derived solely from nonprivileged entry. The significance of the savings is measured as a percent of the total value of nonprivileged merchandise entered.

Duty Savings to Zone Users

Because of inverted tariff rates, firms in certain industries may reduce their tariff burden by operating in an FTZ when the duty rate on a manufactured article is lower than that on the raw materials, parts, and/or components making up the article. Table 6-1 shows data on the duty savings or losses 1/ to manufacturers operating in subzones and of Berg Steel Pipe Corp. These savings also represent a loss of revenue to the Government.

The duty savings rose from $7.4 million in 1983 to $39 million in October 1986-June 1987. The cummulative savings during 1983-86 was $88 million, 27 percent of the duty that would have been collected without FTZ status.

Another way to measure the revenue effect is to view the difference in revenue collected from that which would have been collected as a share of the value of total nonprivileged foreign (NPF) merchandise. This is a measure of the change in percentage points of the ad valorem rate of duty charged on the NPF merchandise. In 1983, this amounted to an extra 1.0 percentage point in duty. In 1984, the percentage points saved rose to 1.3, but in subsequent years the percentage remained at 1.0.

1/ These represent economic losses to the firm involved because it could not take full advantage of potential zone benefits, i.e., the firm inadvertently chose the wrong status for certain foreign merchandise or was required by Customs to declare a status which was to the firm's disadvantage because identification and control of the merchandise had been lost.

Table 6-1
Changes in revenue for Berg Steel Pipe Corp. and for firms operating in certain foreign-trade subzones, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Duty collected (1,000 dollars).....	22,443	46,806	63,427	103,484	99,079
Duty that would have been collected (1,000 dollars).....	29,867	68,006	84,721	141,671	137,875
Total savings (1,000 dollars).....	7,424	21,200	21,294	38,187	38,796
Duty savings as a share of duty which would have been collected (percent).....	25	31	25	27	28
Nonprivileged foreign merchandise (NPF) (1,000 dollars).....	737,126	1,686,602	2,199,759	3,780,702	3,783,882
Duty savings as a share of NPF (percent).....	1.0	1.3	1.0	1.0	1.0

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Automobile establishments accounted for 84 percent of total revenue savings in 1986, $31.9 million out of $38.2 million. The following tabulation shows the amount saved for each firm (aggregating establishments for the big three auto firms) in 1986 (in thousands of dollars):

Firm	Amount of revenue saved
* * *	***
* * *	***
* * *	***
* * *	***
* * *	***
* * *	***
* * *	***

Because there has been considerable discussion among interested parties about the average duty savings per car by each firm in the automobile industry, the Commission computed these data from questionnaire responses for each auto firm operating in a subzone.

The average amount of duty savings per automobile for all automobile establishments operating in subzones fluctuated from a high of $9.91 in 1983 to a low of $5.54 in 1985 (table 6-2). As would be expected, given the higher percentage of imported components used by the foreign transplants, they generally experienced the highest average savings per car. In 1986, such

Table 6-2
Selected data on average duty savings per automobile in FTZ operations, by companies, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Ford:					
Highest savings per car per plant...	***	***	***	***	***
Lowest savings per car per plant....	***	***	***	***	***
Average savings per car.....	***	***	***	***	***
Number of operating establishments..	2	6	7	9	8
Chrysler:					
Highest savings per car per plant...	***	***	***	***	***
Lowest savings per car per plant....	***	***	***	***	***
Average savings per car.....	***	***	***	***	***
Number of operating establishments..	2	3	5	5	5
General Motors:					
Highest savings per car per plant...	0	***	***	***	***
Lowest savings per car per plant....	0	***	***	***	***
Average savings per car.....	0	***	***	***	***
Number of operating establishments..	0	2	4	8	9
Other:					
Honda.....	***	***	***	***	***
Volkswagon.....	***	***	***	***	***
NUMMI.....	***	***	***	***	***
Nissan.....	***	***	***	***	***
Average savings per car.....	***	***	31.66	33.60	29.84
Number of operating establishments..	2	2	4	4	4
Average savings per car for all plants.....	9.91	6.54	5.54	6.78	8.57
Number of operating establishments....	6	13	20	26	26

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

savings ranged from a high of *** for * * * to a low of *** for * * * . At the same time, * * * registered a single-establishment high among traditional domestic producers of ***, and * * * recorded the low, ***. Averaging the duty savings per car for all establishments for each of the big three in 1986, * * * had the highest savings per car, ***; * * * the next highest; ***; and * * * lowest, ***.

Duty Payment Deferral

Through its questionnaires distributed to certain manufacturers and other zone-users operating primarily in subzones, the Commission gathered data necessary to make an assessment of the implicit amount of interest savings on duty-payment deferral accrued to these firms in FY 1986. The value of the interest saved through duty deferral was calculated using the average annual prime rate for that year as an estimated cost of money to these firms.

First, the average amount of duty due on goods entering the subzones for each firm was determined. Then, the weighted-average timelag between admission of this merchandise to the zone and its entry to the customs territory of the United States was applied against the duty due to estimate the average interest savings to each of the firms benefiting from duty deferral.

It should be noted that general-purpose zones, which were not surveyed, have duty deferral as one of their primary benefits because they often function as warehouses for zone users. Firms in subzones deriving the most savings from duty deferral were those that used the facilities primarily for storage, which is more common to general-purpose zone usage. Within these zones, the payment of duty on merchandise is delayed until the goods enter the customs territory of the United States. Manufacturing facilities operating in FTZ's often do not benefit substantially from duty deferral because most use just-in-time inventory practices that minimize the time which raw goods, work-in-process, and finished goods remain within the FTZ.

The * * * accounted for nearly *** percent of the duty-deferral interest-saving benefits in 1986. * * * . The third largest savings was to * * *, whose savings amounted to *** and accounted for slightly more than *** percent of the duty-deferral interest savings in that year. The total duty-deferral interest-saving benefits to all firms through FTZ operations in 1986 amounted to ***.

U.S. Customs Duties Collected

Another measure of the impact of zones on U.S. customs revenues is to compare the duties collected on merchandise imported from zones with duties collected on all dutiable merchandise. In 1986, the estimated duties collected in both general-purpose zones and subzones totaled $293 million, compared with total U.S. customs duties collected of $13.3 billion, or 2 percent of all duties collected on all U.S. imports.

CHAPTER 7. INDUSTRY CONCERNS AND RECOMMENDATIONS FOR MODIFICATION

Introduction

The Commission received submissions from many parties during the course of the investigation. 1/ They expressed a broad range of interests. These included both strong supporters and strong opponents. The major issues commenters on the program raised, which mostly reflect submissions made by opponents, will be examined first. Then the secondary or indirect impact on the U.S. economy reported by firms operating in FTZ's will be discussed. Finally, this chapter presents information reported by subzones users and state officials on how FTZ's affect state economic development.

In its 1984 report on FTZ's to the Committee on Ways and Means, the Commission found that the major concern with FTZ's was the use of subzones to reduce duty liabilities in inverted tariff situations. The concern was that the use of subzones could injure domestic firms not using FTZ's in each industry and their suppliers because of possible duty-saving inducements to increase imports. The report then outlined in some detail the nature of the criticisms raised by those supplying comments to the Commission on the program (pp. A-50 through A-55).

Little of the basic substance of the comments about the FTZ program summarized in the Commission's 1984 study has changed. Virtually all of the criticisms raised in that study related to the Board's role in addressing the tariff question as it related to potential injury, with some criticism also directed at the U.S. Customs Service. Critics expressed concern about the Board, including the ability of the Board to perform its job, given its small staff; the informal manner in which it conducted its business; the rigorousness of its approval process; and the competence of the Board to apply "potential injury" and "net production and employment benefits" tests to applications for subzone status. Some critics raised other more fundamental issues: (1) did Customs err in the promulgation of its original regulations implementing the FTZA when it created the distinction that allows manufacturers to claim nonprivileged foreign status and receive lower rates of duty in inverted tariff situations?; (2) was there a basis in the FTZA for the Board's 1952 regulations allowing subzones?; and (3) did Customs have the authority to promulgate regulations in 1980 which eliminated zone-added labor and overhead from the dutiable value of the foreign merchandise, effectively reducing the duties without Congressional approval on an item-by-item basis? Some critics questioned whether the Board is fully complying with other Federal laws and executive directives in considering restrictions on zone and subzone grants. Finally, critics wondered if Customs can control zone merchandise flows effectively because it has progressively reduced its on-site presence in favor of automated inventory control systems and spot compliance checks.

Virtually all of these earlier issues raised and outlined in detail in the previous report are still debated. However, the criticism is now more focused, much greater (in terms of numbers opposed to grants or seeking

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1/ See appendix E for lists of parties to whom the Commission sent questionnaires and from whom comments were directly solicited.

restrictions) and more vocal; and the variety of products involved has increased as the program has spread to many more sectors of the economy. As more foreign-owned auto firms have sought subzone status, opposition has been raised where little had been expressed during the previous study. Now even some applications by U.S.-based auto producers are facing opposition to their applications for their domestic facilities. If a domestic auto firm is involved in a joint venture with a Japanese firm, its application is almost certain to be opposed. Steel-related products still aroused the most concern, followed again by textile and apparel products and refined petroleum products. These were followed by sugar-related products and tin plate for canning pineapple products. Applications for subzones for bicycles, color TV's, printing ink, and carbon fiber (graphite) also had opposition during the period of this study. Steel-related products included automobiles, trucks, truck beds, ship construction and conversion and repair, forklift trucks, steel tubular products, oil rigs, pressure vessels, oil and gas piping systems, diesel engines, stainless and carbon steel for production of various products, outdoor power equipment, household appliances, steel wire for tubular tires, stainless steel sinks, large-diameter pipe, and cranes and related parts and equipment. The table in appendix C summarizes information about all known instances of zone applications to the Board which caused concern to industry and labor since the last study by the Commission.

In response to its request for comments about the FTZ program, the Commission received a number of statements from industry and labor representatives expressing their concerns about the foreign-trade zones program and providing their recommendations for changes to it. These concerns still related primarily to reduced duty liability connected with inverted tariffs, increased manufacturing in subzones, problems with the Board, and problems with Customs in controlling merchandise flow in zones. As noted above, little of the substance of the arguments raised in the last study has changed. Thus, the basic points made by those submitting comments will be summarized briefly and any new emphasis will be noted.

Congressional Intent

A fundamental theme of virtually all of the comments, especially of those opposed to the granting of subzones where inverted tariff benefits are allowed, was the question of the intended purpose of the Foreign-Trade Zones Act of 1934 (FTZA) and its 1950 amendment allowing manufacturing. Those opposed to subzones argued that the purpose of Congress was to increase employment by stimulating exports and transshipments and not to increase imports and/or to reduce duties on components for finished products. Those favoring zones contended that the FTZA was intended to facilitate all foreign commerce and to rationalize inverted tariffs (anomalies) and to allow U.S. producers to compete in increasingly international markets. The Commission examined the legislative history and summarizes its findings about Congressional intent beginning on page 1-3. Suffice it to say here that the the record is not entirely clear on this issue.

Features Related to Inverted Tariffs

Critics, proceeding on the premise that Congress intended zones only, or at least primarily, for exports and/or transshipments, alleged that the program should restrict approval of manufacturing activity for export only. Certainly, they contended, zones should not be used to allow the reduction of intended tariff protection on the parts, components, and raw materials used in the production of finished products where inverted tariff situations exist. The Specialty Steel Industry of the United States (SSIUS) opined that "An inverted tariff reflects a clear intention by the Congress to protect a particular segment of a domestic industry that produces raw materials or components of finished products. Where a subzone enables an importer--including an U.S. finished product manufacturer--to avoid the higher tariff to the detriment of another domestic producer, the use of the subzone for that purpose must be denied."

Critics further argued that denial of zone usage was especially appropriate in those industries where U.S. government policy dictated control of imports through quotas or other mechanisms such as for steel, textiles and apparel, and sugar. They concluded that the time and cost of fighting the ever-increasing number of applications and the burden of proving net public benefit (not just local or State benefit) should not have to be borne by those opposed, but by those seeking status. The above line of reasoning was held most strongly at the time of the last study by the AFL-CIO, and it has again recently recommended the abolition of the FTZ program in the following policy statements:

> The AFL-CIO has on more than one occasion in the past stated its opposition to the operation of foreign trade zones, because they encourage imports resulting in job losses to the United States and have been used to undercut U.S. trade and tax laws. Most recently, the 1987 AFL-CIO constitutional convention stated that "The Foreign Trade Zone Act of 1934 should be repealed. Any exemptions from this nation's trade laws must be proved on a case-by-case basis. At minimum, manufacturing operations should be prohibited within such zones."

Although not advocating outright abolition of the program, the Automotive Parts and Accessories Association, Inc., (APAA) stated that APAA's major policy objective is that "the U.S. government should end all programs that subsidize foreign firms with little regard for the effect on national interests." It also urged a "moratorium on the granting of automotive subzones, until the U.S. can determine whether they serve the public interest." Another variation of this theme was expressed by the United Auto Workers when it stated that it seeks to "reverse the 1950 amendment to the Foreign Trade Zone Act of 1934 that permitted manufacturing to take place in zones."

As alluded to above, an element of the debate over inverted tariffs that differs from the last study concerns foreign transplants, especially Japanese firms (including U.S.-based domestic-Japanese joint ventures) in the auto industry. At that time only Honda among Japanese firms had an active auto subzone facility, and Nissan was starting its truck production, with autos soon to follow.

There were three Japanese firms active, counting NUMMI, during the period covered by this study with several soon to be active and with a number of applications pending (critics never included VW among the transplants they are criticizing even though it undoubtedly has a foreign content higher than the traditional U.S.-based domestic facility in the cars produced at its subzone facility). These firms are in turn attracting Japanese suppliers to locate facilities in the United States to supply the auto firms' U.S. operations. The combination of higher foreign parts content than the traditional U.S.-based domestic auto producers and the increased competition from newly established Japanese parts suppliers has auto parts firms and their employees as well as some U.S. auto producers concerned about possible net production and employment losses. They asserted that at best transplants will cause the shift of auto assembly jobs from one sector of the United States to another. They believed the inverted tariff reduction may provide an incentive for transplants to import to maintain close relationships with suppliers in Japan that U.S. parts producers have found difficult to penetrate. Several commenters cited a UAW study of purchasing by transplants which showed that they "generate only about one fourth as many parts and supplier jobs as a traditional U.S. assembly plant." The UAW study assumed that transplant output will replace U.S. production at traditional plants rather than substitute for imports, and thus would cause a net lose of American jobs. It asserted the losses will be concentrated in the Midwest.

Several critics of the program noted that a clear definition of the term domestic content (a figure often proposed is 80 percent) is needed if an accurate economic assessment is to be made of the impact of the transplants. Most who commented would prefer that the definition (1) be based on the parts, raw materials, and components rather than including the cost of labor and other zone value added and (2) use the ex-factory value of the product. Another possible ramification pointed out by one critic is that when the original parts imported into zones wear out, the chances that replacement parts will also be imports is increased because of the higher proportion of imported parts used in the cars produced by the transplants.

Supporters of the program maintained that the inverted tariff and other incentives of the program allowed zone users to buy internationally in the most economically efficient manner and that this allowed the establishment or maintenance of some production and employment in the United States that otherwise would have gone partially or entirely offshore. They pointed out that zone benefits merely reduced the duty on the parts to the level of the parts incorporated in the imported finished auto. They alleged that a substitution principle applies, where some autos previously imported from Japan are produced in the United States, which they also believed is a general principle for the program as a whole. Furthermore, they contended that the duty reduction was not a determinative factor in purchasing decisions because the tariff reduction on autos is small in relation to the overall value of the parts. They stated that other considerations such as quality of the parts, ability to provide timely delivery of the parts, and whether the parts are provided by an overseas affiliate of the auto firm all took precedence over so small a duty differential, but that in a highly competitive market where all competitors have that small edge, the savings both relatively and in absolute terms can be important. In addition, they asserted, current exchange rate trends in the value of the dollar versus the yen will push Japanese companies increasingly to buy parts in the United States, and it would be easier for

U.S. firms to sell parts to such firms in the United States rather than in Japan or third countries. They concluded that market demand causes imports, not zones.

One supporter also claimed that the transplants have introduced the most modern technology and that the dynamic effects of competition will ensure greater efficiency through displacement of inefficient facilities, will eventually cause displacement of imports, and will lead to expansion of the size of the market. 1/ It further maintained that the complaints about the Japanese auto firms stemmed from other trade disputes with Japan such as the large trade imbalance in automotive products and the market-oriented, sector specific (MOSS) trade talks, where the United States sought access to the auto parts market in Japan. Furthermore, the supporter stated, application of a domestic content requirement in such an environment would be contrary to free-market principles, would be protectionist, and would be discriminatory, especially if applied only to those having applications pending or to future applications.

In this connection, this same supporter of the program asserted that internationalization of the world auto industries in purchasing of parts and finished vehicles was consistent with U.S. policy on trade to reduce tariff levels around the world. FTZ's further rationalize tariffs in inverted tariff situations such as that in the auto industry.

One new idea concerning exchange rate relationships just discussed was proposed by a party that no longer has a direct interest in the program but was critical of it at the time of the last Commission study. 2/ The firm believed that the present structure of the FTZ program may be inappropriate for a floating exchange rate world where FTZ's exacerbate an already deteriorating competitive situation caused by a strong currency. It recommended that, when the value of the dollar increases and reaches some predetermined level, the Government should suspend the duty reduction aspects of FTZ's on finished products entering the customs territory of the United States.

Customs Oversight

Among the numerous public comments received by the Commission, certain comments specifically addressed the audit-inspection method of zone supervision and Customs' role in exercising effective oversight in administering the zone program.

Many parties stated that the audit-inspection method of zone supervision resulted in greatly improved inventory control, recordkeeping, and security of facilities and inventory. Some commenters stated that the special procedures for subzones enhanced the inventory control practices and allowed for the successful implementation of just-in-time inventory control.
Other commenters stated that the system requirements imposed additional costs because the requirements do not rely on generally accepted accounting principles, existing business records, or usual reporting time frames.

1/ SIA, a joint venture of Fuji Heavy Industries, LTD., and Isuzu Motors, LTD., p. 8 of attachment to submission.
2/ Stewart-Warner Corp., p. 2 of submission.

Some commenters stated that current Customs safeguards are deficient or nonexistent. These commenters were concerned that the switch from on-site supervision to a reliance on spot checks and audits has weakened the supervision of FTZ operations, thereby undermining Customs' power to enforce quotas and to prevent the circumvention thereof. Indeed, some commenters stated that the audit-inspection method is needlessly complex, inefficient, ineffective, and imposes unnecessary additional costs. It was suggested that the Board, rather than Customs, should determine permissible zone operations, oversee zone activity, and wield enforcement power.

One commenter stated that inconsistent regulatory interpretation and enforcement by Customs throughout the United States creates difficulties and inequities for zone users. It was suggested that a greater standardization of policy and practice should be implemented. Another commenter stated that the enforcement provisions contained in the new Customs regulatory regime, and the threatened imposition thereof, are unreasonable and excessive. Another stated that the power to cancel a so-called sham consumption entry, as provided for in the new Customs regulations, unreasonably limits the potential benefits of operating in a zone. 1/ Still another stated that the need for prior Customs review of changes to an operator's inventory control system increases the lead time necessary to implement improvements effectively. Lastly, commenters noted that two recent Customs rulings, 2/ regarding temporary importations under bond (TIB) and duty drawback in the context of zone operations utilizing imported steel, have proven controversial and are being challenged by the affected industry. The issue raised by the rulings is whether a TIB may be cancelled or whether a claim for drawback may be perfected upon the transfer of merchandise from the customs territory to a zone or subzone for manufacture, whereupon the article manufactured in the FTZ from the transferred merchandise is subsequently admitted to the customs territory upon the payment of the proper duty.

Foreign-Trade Zones Board

One submission to the Commission stated that the zone application process is not efficient, citing delays of one to two years in the Board's handling of applications. It also argued that a clear definition of "public interest" is necessary to provide appropriate guidance to the Board, and that a consistent standard for measuring domestic content--if one is to be employed--should be created.

Similarly, another submission stated that the Board's staff is too small to permit effective operation, and that the application process is too long. It was noted that "political concerns" have in some instances intruded in the review of applications and stated that in general the act is poorly administered, citing the absence of hearings as one failing.

1/ See p. 2-5 for more on what constitutes a sham consumption entry.
2/ C.S.D. 84-97, 18 Cust. Bull. 1069 (June 24, 1984)(also published as C.S.D. 85-10) and Customs Ruling 218551 (Jan. 29, 1986).

Another statement also referred to the absence of hearings on the record on subzone applications, citing the treatment of a petition for a particular subzone that the commenter wished to oppose. Specifically, it noted that no potentially affected firms were notified about the application and expressed the view that "an obscure notice" in the Federal Register is insufficient to advise all interested parties. The commenter also stated that, although it was permitted to file written statements after the comment period had closed (since it had not been aware of the proceedings), it was not advised whether its comments became part of the official record or were considered by the Board. In addition, though ". . . required to respond to the points which the applicant had raised in its application," the commenter was denied access to information presented by the zone applicant; that is, the opportunity of viewing and confronting the applicant was not afforded by the Board. It pointed to the lack of independent Board studies of applications and opined that the degree of consideration afforded by the Board to the arguments of the opponents could not be found in the record. As to the petition the commenter was opposing, it noted that not all of the Board's members were present to hear the informal oral testimony of the applicant, and the Board did not require evidence that the total net number of jobs in the United States would be increased. Accordingly, the commenter advocated formal hearings on the record following independent Board studies, proof that there would be a net U.S. job increase from each zone, and evidence that the principal result of the zone would not be an increase in imports, along with improved procedures for monitoring zone operations.

In another submission, one commenter expressed its opposition to the Board's practice of reopening comment periods and accepting statements from those opposing zone applications after the dates specified in the original Federal Register notices.

One detailed comment stated that foreign-trade zone status should not be approved in order to enhance the competitive status of the applicant or user vis-a-vis other similarly situated domestic firms. It noted that such grants put pressure on other domestic firms to apply for zone status if possible in order to maintain their competitive position, and stated that new subzones should be permitted only where new jobs and trade would occur. This commenter also argued that the Board's closed process should be replaced with formal hearings under the Administrative Procedure Act; it cited the Board's statement, in response to the commenter's request for a hearing on a refinery application, that it "had no ability to hold a public hearing" and that only Congress could do so. Also, the commenter asserted that the Board had received more applications than had been disclosed in the Federal Register. Finally, it cited its opposition to the "special relationship" between the Board and the National Association of Foreign Trade Zones, which was permitted to comment upon Board draft policies in advance of public issuance.

Another submission expressed its opposition to the court-upheld principle that the Board has wide discretion in deciding what activities can occur in zones. It stated that, in determining whether a particular zone or subzone operation or the program as a whole serves this country's interests, the Board must inquire as to the net benefit that would accrue to the United States from the zone or subzone activities. The comment asserted that the relocation of an activity from one part of the United States to another should not by itself be considered as creating a net benefit to the United States.

Along the same lines, another commenter asserted that the current FTZ program is being operated in a manner inconsistent with its original purpose of assisting export-related activity, at least partly as a result of the Board's administration of the program.

In another statement, the relative vagueness of the FTZA and the absence of meaningful criteria in the Board's regulations to assist in the evaluation of applications were emphasized. In particular, the commenter referred to the absence of a requirement that the Board examine the zone's potential effect on competing domestic companies or related industries, or on overall U.S. employment. Indicating that the "burden of proof" is on the opponents of an application, the submission stated that the Board apparently would not reject or restrict an application of its own volition without explicit objections by the affected U.S. industries. The statement went on to make the observation that domestic suppliers face difficulties in opposing zone applications by the very industries to whom they market components. It noted that the concerns of some U.S. industries cited in the Commission's and the General Accounting Office's earlier reports on the zone program persist, and said that even the Board's proposed regulations would be helpful since they would serve as "more definite guidelines." In sum, the commenter said that the program must be reevaluated in view of the national interests and that improved monitoring of zone activities is needed. It was critical of the economic impact analysis usually performed by the Board, of its interpretation of the "adjacency" requirement for the location of zones, and of the perceived growth in circumvention of U.S. trade and tariff policies through zone activities. As to subzones, the submission stated that special-purpose subzones should be treated as an exceptional arrangement, instead of the norm for entire industries.

Several statements alleged that FTZ's are currently being used to circumvent certain U.S. import quotas, and that such operations are contrary to the "public interest" as used in the FTZA. One of these commenters asserted that, at least in part, this situation has resulted from the Board's interpretation of "quota circumvention," which the Board has stated it will not approve. The submission discussed this activity in detail and even cited views of several U.S. International Trade Commission Commissioners that zone imports of sugar were materially interfering with the domestic quota and price-support program. It also cited the difficulty in getting statistics on FTZ trade and the fact that some figures are viewed by the Board as confidential--both complicating the U.S. industry's efforts to assess and deal with the imports. Moreover, the commenter opposed the Board's action in halting all new zone operations in the pertinent product area but permitting old operations to continue at the previously authorized levels despite quota circumvention problems.

Arguments in Opposition to the Granting of Subzone Status for Petroleum Products 1/

Among the arguments in opposition to subzone status for refineries and blending operations, is that subzone status should only be granted if the refined petroleum products or byproducts are exported. However, as stated

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1/ See appendix E for a list of those parties known to have expressed interest in foreign-trade zones.

previously, the United States is not a major exporter of petroleum products and exports can be restricted at anytime. According to the submission of Ashland Oil, Inc., for each additional barrel of gasoline blended in a subzone and imported into the United States at a lower duty value than its components, two barrels of domestic crude petroleum refining capacity would be shut down, thus representing an economic loss to the United States.

Many domestic refiners have stated that subzone status also leads to increased imports of both crude petroleum and petroleum products at a time when some segments of the domestic industry are seeking to curb imports in order to prevent an over reliance on politically unstable sources of petroleum. Since about 10 percent of a refinery's crude petroleum input is used as plant fuel, refineries operating in the subzones have access to imported crude without paying the duty otherwise applicable.

Those opposed to the granting of subzone status feel that its use will provide those companies operating in the subzones a competitive advantage over the rest of the domestic refining industry and fear that if some refineries/blenders are allowed to operate in subzones then all refiners/blenders will have to obtain subzone status to be competitive with those firms operating in subzones.

Secondary or Indirect Impact of FTZ's on the U.S. Economy

In selected industries, firms have increasingly chosen zone status to become more competitive, citing the need to reduce costs. Users and proponents argue that the ability to reduce costs helps sustain and create employment by encouraging the retention or shifting from overseas of production activity that might otherwise have been conducted abroad. This increase in the use of zone status to be competitive is most evident in the automobile industry, where growing numbers of manufacturers (both U.S. and foreign) have sought zone status in recent years. These producers see in zones a mechanism to reduce costs on imported components, mainly from duty savings on inverted tariffs, but also from savings through duty deferral and from the avoidance of cumbersome drawback procedures. Although the savings resulting from zone operations may not be substantial, firms involved in manufacturing view FTZ's as a significant means of reducing unit costs.

In the Commission's questionnaire, manufacturers operating in FTZ's commented on the secondary or indirect impact on the U.S. economy they believed their FTZ operations had contributed or sustained. In their responses, zone users described a "ripple" or dynamic effect on the local and the U.S. economy because of their zone operations and the availability of the zone program.

Several firms indicated that the availability of the zone program had notable impact on their decisions to maintain production facilities in the United States. Ford Motor Co. suggested that without zone status, the company would possibly discontinue its electronics distribution center in Lansdale, PA, and perform inspection and quality audits at an offshore facility. The granting of zone status provided Power Packaging with the necessary incentive to close its Canadian operations and reopen its facilities in Illinois. Greater Buffalo Press stated that the FTZ program was, perhaps, the most

important factor in its decision to expand in the United States and not in Canada. According to Smith-Corona, the implementation of zone procedures at its plant in Cortland, NY, was the pivotal factor in returning that plant to profitability and intercepting tentative plans to move operations to Singapore. By encouraging firms to utilize their domestic production facilities, these subzone firms, as well as several others, pointed to the stabilization of their respective local economies as a result of the FTZ program.

Many firms noted that they invested substantial amounts of money in new plants and equipment in connection with location in an FTZ. In such investments, local construction contractors were used and substantial amounts of U.S. machinery and equipment were purchased. This point is most applicable to those firms establishing or expanding operations directly tied to location in a zone. After subzone approval, Power Packaging invested an additional *** in its three plants in Illinois. Mazda made a capital investment in excess of *** . NUMMI has invested a total of *** . Since its initial outlay of *** in 1983, Nissan has invested an additional *** in order to produce passenger cars as well as trucks. Honda's investment in the Marysville, OH facilities now totals *** . This figure includes a *** expansion of the automobile plant and a new *** engine plant.

According to some of the firms, the stimulation generated by their business activity often attracts supplier firms to the area. These firms, in turn, make investments in new plants and equipment, which enhances the multiplier effect associated with the zone users. Nissan, for example, reported that *** supplier firms with a total of *** employees have located in the area in order to meet Nissan's needs. Smith-Corona also cited several small local firms that were able to expand their investment opportunities because of the revived economic stimulus from Smith-Corona, attributable in part to the FTZ program. It should be noted, however, that when a foreign supplier firm locates its plant in the United States to supply a finished product producer that it supplied in the home country, the increased production and employment in that area may decrease employment in other parts of the country unless the size of the market for the product is growing.

Several zone users commented on the positive indirect impact that the FTZ program can have on their purchases from U.S. vendors. This is particularly the case for firms that formerly produced abroad exclusively from foreign inputs, but are now producing in a U.S. foreign-trade zone. Such U.S. vendor purchases usually include parts and raw materials necessary to produce the product. Nissan stated that *** percent of the value of the automobile parts used at the Tennessee plant were purchased from *** U.S. firms. The value of these purchasing contracts totaled over *** , according to Nissan. During 1986, Honda purchased more than *** in parts and materials for its automobile plant from over *** domestic suppliers. The company expects to spend approximately *** on U.S. parts and supplies in 1988. Kawasaki reported figures showing an average of over *** spent on U.S. supplies annually. Xerox commented that it spent *** annually on domestic goods and services. Some firms, particularly those who relocated here from abroad, indicated their commitment to increase domestic purchasing of parts and materials over time. For example, Honda projected that the domestic content of the automobile produced in Marysville, OH will increase from *** to *** percent by 1991. Increases in domestic buying are likely to further stimulate the "ripple" effects on the U.S. economy, according to these and other zone users.

Almost all questionnaire respondents used employment in assessing the secondary impact of the FTZ program. Respondents commented not only on direct employment increases at the firm, but also on indirect increases generated throughout the local, regional, and national economies. Greater Buffalo Press added *** workers to its plant after the granting of zone status in August 1986. Local officials claim that at least *** additional jobs have been created throughout the community as a result of the firm's expansion. Power Packaging, which now employs *** workers at the reopened facilities in Illinois, estimated that for every dollar of primary payroll, 6 dollars of additional spending power is created in the local community. With a payroll of ***, it is therefore calculated that *** jobs will generate approximately *** in new economic activity. Mazda, which has an immediate labor force of ***, stated that over *** construction jobs were created to build the plant, and, in turn, for every one construction job, two additional jobs were generated in the construction supply industry. NUMMI submitted the results of a university study which illustrated that the plant had led to an incremental increase of *** jobs in California, and *** jobs in the United States at large, with a total generated income of ***.

Other firms, such as Chrysler and Ford, noted that the FTZ program is one of several Government-sponsored tools that has helped them to remain competitive against imports and retain jobs that might otherwise have been lost. As the sole remaining U.S. producer of portable typewriters, Smith-Corona reported that the firm had reduced its workforce from *** to *** in the early 1980's, allegedly owing to import competition. Since the activation of the zone in July 1985, *** jobs have been restored, and the local payroll has increased from *** to ***.

Most firms commented on their contribution to Federal, State, and local taxes. Since the approval of its zone application in July 1987, Power Packaging reported that the firm had already paid *** in real estate taxes and *** in payroll taxes to the State of Illinois. Honda in Ohio projects that the company will pay close to *** in State and local taxes for 1987. In its questionnaire, NUMMI supplied the Commission with an econometric estimate of the net effect of its zone operations on Federal tax revenue. For every *** foregone in tariff revenue, it is stated, the subzone at NUMMI yields an additional *** in other Federal revenue.

Several questionnaire respondents also commented on the actual and/or potential impact their zone operations might have on the U.S. balance of payments. Foreign automobile transplants, such as Honda, Nissan, and Mazda contend that the vehicles produced at their U.S. facilities help to displace imported finished vehicles with 100-percent foreign content. Since the domestically produced cars contain U.S. labor and parts, the result is a net decrease in imports. Some firms either actively export their products or have specific plans to do so in the near future. NUMMI reported that the duty savings as a result of zone status helped the firm to establish a competitive transfer price on *** vehicles exported to Canada. The Honda motorcycle plant in Ohio is the exclusive worldwide producer of several of Honda's major models, and it now exports these motorcycles to *** countries. In January 1988, the company plans to begin exporting automobiles to Japan, with a goal of *** cars exported per year to that country, Taiwan, and other countries by 1991. Toshiba indicated that it also plans to utilize zone savings in order to export its products, particularly to Japan. In fiscal year 1987, Hawaiian Flour Mills, which exports all of its FTZ produced products, reported that it contributed over *** to the U.S. trade balance.

In addition to the questionnaire respondents, the Commission also received a small number of comments from other interested parties detailing similar positive secondary or indirect benefits of the FTZ program. The list includes the following: Port of Houston Authority, TX; Midlothian Chamber of Commerce, TX; Port Panama City U.S.A., FL; Port of Tacoma U.S.A., WA; American Association of Exporters and Importers, NY; and the American Association of Port Authorities, VA.

FTZ's and State Economic Development

In order to ascertain the impact or anticipated impact of FTZ's on economic development at the State level, letters were sent to representatives in each of the 50 States to the National Governor's Association, and the U.S. Conference on Mayors. 1/ The respondents were asked to comment on how FTZ's and subzones were viewed in the context of each State's economic development program. More specifically, representatives were requested to comment on how FTZ's fit into a State's economic development package of economic and noneconomic inducements, the degree of importance that FTZ's and subzones had in relation to other elements of the State economic development package, and on any problems that had been encountered with respect to FTZ's. Response were received from representatives of 13 States: Alaska, Arkansas, California, Hawaii, Illinois, Kentucky, Louisiana, Minnesota, Mississippi, Nevada, New Mexico, Oregon, and Rhode Island. Although the responses were quite varied, each State that responded was very positive in its comments about the economic effect of FTZ's on the local economies. A substantial number of the States indicated that the existence of FTZ's within their borders represented a significant incentive to both domestic and foreign companies seeking to locate new facilities. A few responses indicated the increased domestic activities that resulted from adding value in the United States versus importing completely finished products from offshore. One State respondent noted significant administrative and procedural difficulties which it had encountered with Federal officials during the course of seeking approval for an FTZ which was subsequently approved.

Table 7-1 displays the results of a section in the questionnaire that was designed to assess the relative impact of FTZ's on state economic development. Questionnaire respondents were asked to rank each factor in Column 1 on a scale of 1 to 5, from least to most important, based on the influence of that factor on the firm's decision to locate, relocate, or remain in the State. The factors have been sorted in descending order according to their average scores, shown in Column 2. Column 3 shows the number of respondents that ranked a given factor, and Columns 4 and 5 display the maximum and minimum values assigned by respondents to each factor, respectively. The standard deviation and the statistical variance have also been calculated.

1/ Letters for South Dakota, West Virginia, and Wyoming, the only states which currently have no FTZ's, were directed to the appropriate official in the State's office for economic development. See appendix E for a list of State and local representatives solicited for comments.

Table 7-1
Factors influencing decision for plant location

No.	Factors	Average	Number in sample	Maximum value	Minimum value	Standard deviation	Variance
(1)	Location as it relates to distribution costs.....	3.56	32	5	1	1.22	1.50
(2)	Availability of a skilled labor force.....	3.22	32	5	1	1.14	1.30
(3)	Proximity of industrial inputs.....	3.06	32	5	1	1.14	1.31
(4)	Foreign-Trade Zone Program.....	2.97	31	5	1	1.64	2.68
(5)	State and local taxes.....	2.90	31	5	1	1.35	1.83
(6)	Education.....	2.78	32	5	1	1.17	1.36
(7)	Local wage level...	2.75	32	5	1	1.22	1.50
(8)	Health care.....	2.59	32	5	1	1.17	1.37
(9)	Technological innovation.....	2.56	32	5	1	1.17	1.37
(10)	Financing environment.....	2.50	32	5	1	1.15	1.31
(11)	State financing of employee training programs.....	2.44	32	5	1	1.27	1.62
(12)	State financing of plant infrastructure.....	2.42	31	5	1	1.39	1.92
(13)	Cost of living.....	2.38	32	4	1	1.05	1.11
(14)	State subsidies to promote business development.....	2.25	32	5	1	1.25	1.56
(15)	Level of unionized employment as a percent of total state employment.....	2.25	32	5	1	1.30	1.69

Table 7-1
Factors influencing decision for plant location--Continued

No.	Factors	Average	Number in sample	Maximum value	Minimum value	Standard deviation	Variance
(16)	State requirements for unemployment and workers' compensation.....	2.22	32	4	1	1.02	1.05
(17)	Income growth vs. state debt and expenditures.....	2.09	32	5	1	1.16	1.33
(18)	Other(s) 1/.....	4.33	3	5	3	.94	.89

1/ These included climate, establishment of a facility before obtaining zone status, and the expectation of enhanced competitiveness and expansion potential obtainable at that location.

The Chicago-based consulting firm Grant Thornton publishes a more thorough study of this topic each year entitled General Manufacturing Climates of the 48 Contiguous States of America, in which manufacturing associations rank the States according to a set of criteria, several of which are similar to the ones shown in the table. Therefore, in evaluating the scores above, a useful approach might be to compare the results of the two surveys, where applicable. It should be noted, however, that the U.S. International Trade Commission (ITC) survey illustrates the responses of FTZ user firms only, whereas the Grant Thornton index incorporates the responses of over 90,000 manufacturers across the United States. As a result, some statistical bias in the representation of the FTZ program in this study is likely. It should also be noted that, out of the 102 questionnaires received by the Commission, only 32 responded to the section on State economic development and plant location decisions.

Availability of resources, as well as proximity to adequate means of transportation, ranked high among zone users, as illustrated by the three highest scoring factors in the survey. Geographic location as it relates to distribution costs, which received the highest average score over all, refers to the necessity of having efficient modes of output distribution. Availability of a skilled labor force and proximity of industrial inputs together indicate the importance to a firm of choosing a location based on the availability and productivity of material and human resources. These two factors ranked second and third, respectively.

According to the firms responding in this survey, the FTZ program ranked fourth in importance when choosing a location for a production facility. However, the variance score of 2.68, which is the highest of all, indicates that some firms assigned the program a relatively low score, with only two firms giving it a neutral score of 3. In addition, some firms gave the program a score of 5 and assigned a value of 1 to each of the other factors.

Out of those factors appearing in both the ITC and the Grant Thornton surveys, several received comparable ratings. Education, which includes such statistics as literacy rate and State expenditures on public education, ranked 6 out of 17 in the ITC survey, and 6 out of 21 in the Grant Thornton index. Cost of living, State subsidies to promote business development, and State requirements for unemployment and workers' compensation all received comparably low ratings in both surveys. Income growth verse State debt and expenditures, which is one indicator among several used in evaluating State fiscal responsibility, received the lowest rating in both studies.

A few factors ranked differently in the cross-study comparison. In the Grant Thornton study, manufacturers ranked the State wage level as the most important factor in selecting a site location, whereas FTZ firms gave it a collective ranking of seventh in the ITC survey. The level of unionization, which is usually tied to wage level considerations, ranked second in the Grant Thornton index, but in the bottom fifth of the ITC survey. Health care, which ranked in the top half of the ITC survey, ranked 20 out of 21 in the Grant Thornton index. Finally, State and local taxes ranked fifth in importance according to FTZ firms, but ranked in the bottom third of the Grant Thornton ratings.

The following factors were not included in the Grant Thornton's publication but were incorporated into the Commission's survey, based on additional research; technological innovation; financing environment; State financing of employee training programs; and State financing of plant infrastructure. According to survey results, these factors had only a marginal impact on the individual FTZ firm's decision to locate in a given State.

Some questionnaire respondents offered a few additional factors that might influence a firm's decision to locate a facility in a given area. These included: climate, the establishment of a facility before obtaining zone status, and the expectation of enhanced competitiveness and expansion potential obtainable at that location.

CHAPTER 8. FTZ EMPLOYMENT EFFECTS

Introduction

A large majority of the firms seeking FTZ status have done so to obtain relief from an "inverted" tariff schedule that places higher rates of duty on imported inputs than on the industry's final product. Tariffs provide a price advantage to domestic firms selling products that compete with imports. However, they impose a cost disadvantage to domestic firms that use imports as inputs in their production process. The total effect of a tariff combines these two opposing effects. For most manufactured products tariff rates tend to increase at higher stages of processing. In such cases the price advantage provided by the tariff on the output products more than offsets the cost disadvantage from the lower tariff on imported inputs. However, for some product sectors the process of negotiating tariff reductions in multilateral tariff rounds under the auspices of the General Agreement of Tariffs and Trade (GATT) has resulted in an inverted structure of tariff rates. In this case the cost disadvantage imposed by the tariff on imported inputs reduces the protective effect of the tariff on the output product. It is also possible that the cost disadvantage because of the tariff on the input more than offsets the price advantage of the tariff on the output product. In this case the structure of tariff rates imposes a competitive disadvantage on the domestic firm; such cases are said to exhibit "negative effective protection." Because this tariff profile fits a great majority of the firms that now operate under FTZ status, the economic analysis that follows focuses on this policy environment.

The possibility of duty savings on imported inputs under a FTZ program creates several incentives for firms facing inverted tariffs that have ramifications for domestic employment. An incentive is created for firms (whether domestic or foreign owned) that operate domestic assembly facilities using foreign inputs to reduce duty expenses by applying for FTZ treatment. In the short run this raises unit profits for industrial consumers of eligible foreign parts. To the extent that any of the duty savings is ultimately passed along to final consumers, there will be substitution in demand toward products assembled domestically using foreign parts. 1/ Perhaps the most significant effect is that duty relief shifts relative prices in favor of imported components, providing domestic assembly operators with an incentive to substitute imported components for domestic components.

Finally, FTZ status encourages firms that currently export finished products to the U.S. market to locate final assembly operations in the United States rather than abroad, and discourages domestic firms from relocating final assembly operations offshore. 2/ However, no attempt was made in this study to gauge the potential effect of the FTZ program on inward or outward investment.

1/ However, in general equilibrium, lost tariff revenue would require compensatory tax increases, reducing disposable income for consumers and weakening this result.

2/ Because of the relatively low rates of duty savings available through the FTZ program, decisions regarding direct foreign investment are much more likely to be motivated by productivity-adjusted labor costs, expected real exchange rate relationships, the availability of transport and communication links, proximity to markets, and strategic considerations (risk diversification, avoidance of quantitative trade restrictions, etc.)

Framework for analysis

The effects of the FTZ program can best be analyzed by dividing the industrial production process into two stages: a components manufacturing stage and an assembly stage. Although both operations may be integrated within a single firm, both are distinct activities in terms of labor and material requirements and production techniques. The framework adopted here clarifies that competition in the industry is between domestic and foreign firms engaged in each process, respectively. For example, foreign components producers compete with domestic components manufacturers, and offshore assembly operations compete with domestic firms that assemble.

The FTZ/subzone program is controversial because the reduction of duties on imported materials that is (implicitly) provided alters the structure of tariff protection against the domestic components manufacturing industry and in favor of the domestic assembly stage. Many of the firms that have requested FTZ status, for example, are part of the auto industry that is subject to an "inverted" tariff structure. Under this tariff schedule, imports of auto components are assessed higher import duty rates than are the final vehicles into which they are assembled. This duty scheme confers negative effective protection upon the auto assembly industry. 1/ Granting a firm approval to operate in a FTZ/subzone allows it to operate under a tariff structure more favorable to assembly processing, by replacing the existing "inverted" tariff schedule with a schedule that equalizes nominal tariffs. In simple language, instead of paying the higher tariff on imported components, the auto assembler imports the components duty-free into the FTZ subzone. When the auto is completed and "imported" from the FTZ subzone into the U.S. market, the components embodied in the finished auto are assessed duty at the lower tariff rate applicable to imported automobiles. Since the tariff on imported inputs is equal to that on the output product, the cost disadvantage of the first tariff is offset by the price advantage of the second; the structure of tariff rates is said to be neutral. This removes the negative effective protection for assembly activity without totally removing tariff protection for domestic producers of components.

1/ The effective rate of protection is the proportional change in an industry's value-added as a result of a tariff system compared with free trade. Algebraically, the effective rate of protection can be calculated as follows:

$$[8\text{-}1] \qquad r_Y = \frac{t_Z - a_{XY}t_X}{(1-a_{XY})}$$

where r_Y is the effective rate for assembly activity, the numerator is the difference between the duty on the assembly product (vehicles) and the weighted-average duty on imported inputs (parts) weighted by their share of total cost, and the denominator is the value-added per unit of assembly activity. Most vertically-segmented industries are protected by "escalating" nominal tariffs that confer positive rates of effective protection to successive downstream production activities. In general, such a tariff structure recognizes that downstream activities have higher value-added per unit of output.

Geometric model

Figure 8-1 provides a diagram of a partial equilibrium model for analyzing the effects of tariff policy on an industry characterized by two-staged production. The model is discussed using the motor vehicle industry for concreteness, given the industry's importance in FTZ activity. The model explicitly incorporates the voluntary restraint agreement on imported vehicles that was in effect while the recent expansion of FTZ-based activity occured. A complete discussion of the model can be found in appendix F.

The essential aspects of the model can be summarized as follows. Quantities of auto parts, units of assembly services, and fully assembled vehicles are measured on the horizontal axis. The three $S_X^*(\ )$ curves (asterisks denote foreign variables) are the foreign import supply curves for auto parts under alternate assumptions regarding the duty rate on components t_X relative to the rate on assembled vehicles t_Z: $t_X=0$, $t_X=t_Z$ (as under FTZ provisions), or $t_X>t_Z$, as if FTZ treatment is not applicable. The supply of imported vehicles is denoted by S_Z^*, and is inelastic at Q_0 in observance of the VRA. Otherwise, all foreign import supplies are assumed to be perfectly elastic.

The supply of domestically assembled vehicles is denoted by $S_Z(t_X>t_Z)$ if imported parts are fully dutiable, or $S_Z(t_X=t_Z)$ if FTZ status applies. The corresponding market supply curves (which includes imports) are denoted by $TS_Z(t_X>t_Z)$ and $TS_Z(t_X=t_Z)$.

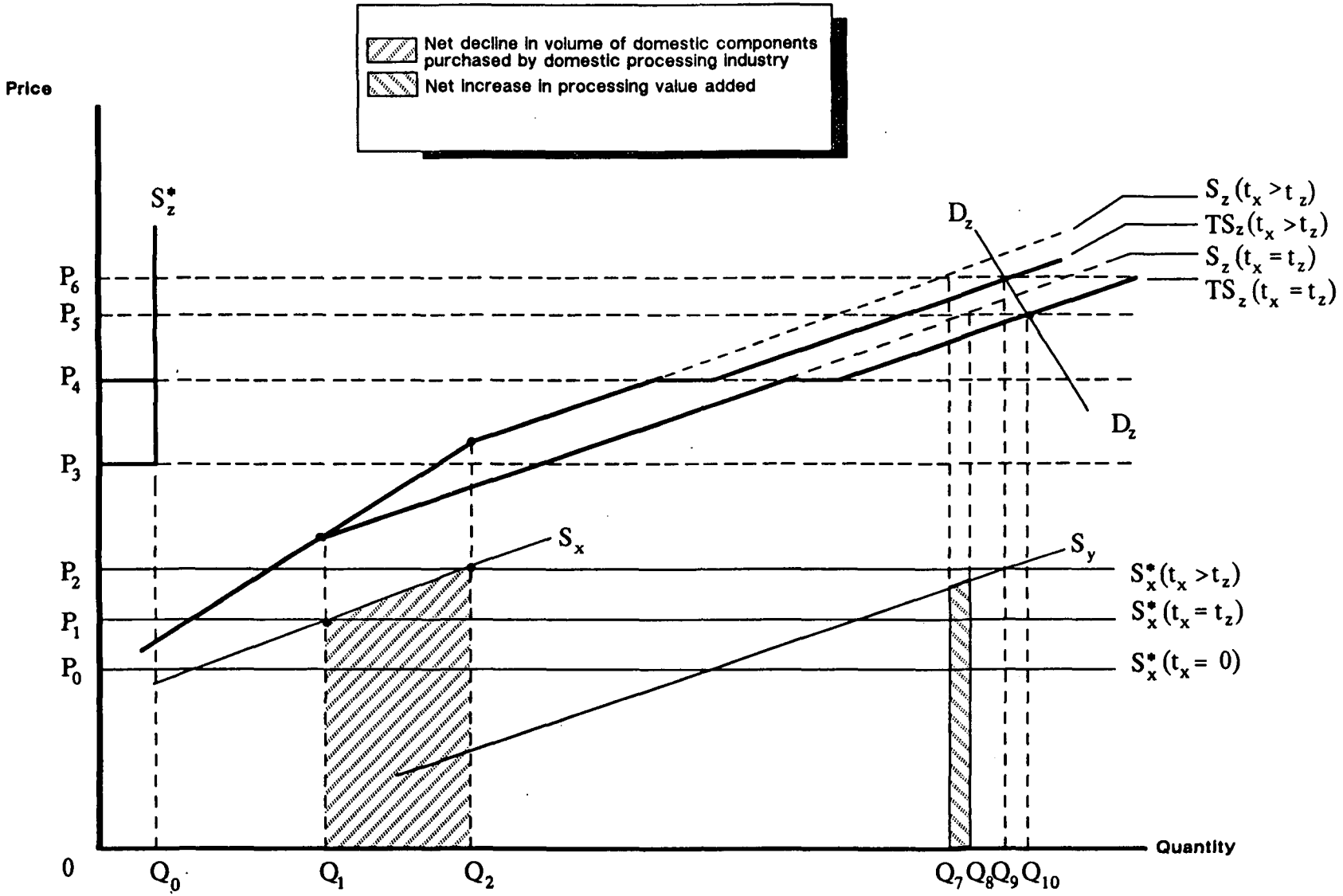
Given market demand for assembled vehicles D_Z, market equilibria are depicted under alternate assumptions that FTZ provisions are in effect or not. Without the FTZ program, import supply of parts is $S_X^*(t_X>t_Z)$, domestic supply of vehicles is $S_Z(t_X>t_Z)$, and total market supply of vehicles is $TS_Z(t_X>t_Z)$. Equilibrium price and quantity are P_6 and Q_9.

Now assume that the rates of duty on auto parts and assembled vehicles are equalized because of FTZ provisions. Duty relief shifts import supply of auto parts down to $S_X^*(t_X=t_Z)$, and the consequent reduction of costs rotates the domestic supply of assembled vehicles rightward to $S_Z(t_X=t_Z)$. The expanded FTZ program also shifts the market supply of vehicles outward from $TS_Z(t_X>t_Z)$ to $TS_Z(t_X=t_Z)$. This results in a decline in equilibrium price from P_6 to P_5 and an increase in equilibrium quantity from Q_9 to Q_{10}.

Tariff revenues collected on vehicle imports are unaffected, provided that the VRA remains binding. Tariff receipts on imported parts can increase or decrease because the declining rate of duty is accompanied by an increase in the quantity of imported parts, from (Q_7-Q_2) to (Q_8-Q_1).

In response to the falling market price for auto parts, the value of domestic auto parts declines from P_2Q_2 to P_1Q_1. For the domestic auto assembly industry, the reduced cost of domestic and imported parts raises the net price of auto assembly. This induces an increase in assembly output, resulting in more vehicles produced than consumers are willing to buy at the prevailing price. Only at a lower equilibrium price for vehicles can quantity demanded equal quantity supplied. Therefore, some of the duty savings is

Figure 8-1
Partial equilibrium model of protection with two-stage production:
Voluntary restraint agreement on final product, net effects of FTZ program



passed on to consumers. The greater the price elasticity of demand for vehicles relative to the price elasticity of assembly supply, the less of the duty savings that will be passed along to consumers, and the greater the net rise in the price of assembly. The more price elastic both curves are, the greater the increase in equilibrium output in response to the duty reduction.

Figure 8-1 also illustrates the net effects of the FTZ program on employment in the auto parts and assembly industries (not drawn to scale). Revenues earned by the auto parts industry decline from P_2Q_2 to P_1Q_1. In the short run, the revenue losses above the supply curve S_X include the loss of profits to firms in the industry, the loss of wages and temporary adjustment costs of workers in the industry, and the losses to firms and workers in supplier industries. The remaining revenue losses (the shaded area under S_X between Q_1 and Q_2) represent the opportunity value of resources that exit the industry, including employment losses.

For the assembly industry, it is certain that revenues rise under the FTZ program. Profits rise because of the falling cost of parts, but decline as the price of output declines with the declining market price of vehicles. The net effect is positive, however, as indicated by the upward movement along the assembly supply curve output from Q_7 to Q_8. The shaded area below S_Y between Q_7 and Q_8 corresponds to increased value-added, including employment gains. 1/

Estimates of employment effects

Estimates of the employment effects of the FTZ program for the automotive sector were constructed using data on the rate of duty savings, the shares of final product price attributable to parts and to value added in assembly, the current value of output in each industry, the number of workers employed in each industry, and their respective average annual salaries. Calculations also required values for the price elasticities of supply for the parts and auto assembly industries. Since these are known imprecisely, estimated employment effects are provided based on a range of feasible values for these parameters.

Questionnaire data indicated that the weighted-average rate of duty savings on dutiable components qualifying for FTZ treatment averaged 1 percent ad valorem for the auto industry. Industry data collected by the Commerce Department provided estimates of 1986 employment levels in the total U.S. auto parts and assembly industries. An estimated 654,000 workers were employed in auto parts production, of which 412,000 workers were estimated to be engaged in domestic production of auto parts for original equipment. 2/ On the basis of 1985 data, wage earnings in auto parts manufacturing averaged $28,900 annually.

1/ The employment gains represented by the shaded area can also be visualized as the area between $S_Z(t_X=t_Z)$ and $S_X^*(t_X=t_Z)$ between Q_7 and Q_8.

2/ U.S. Department of Commerce, International Trade Administration, U.S. Industrial Outlook 1987, p. 36-1 and 36-9. Industry analysts at the U.S. Department of Commerce estimate that only 60 percent of total auto parts production is for original equipment; the remainder is for aftermarket (replacement) use. All calculations therefore pertain to output and employment levels corresponding to production for new vehicles only.

Employment in assembly plants totaled 271,000 workers, of which 93,000 are currently employed in FTZs. Wages in assembly plants averaged $35,000 annually, according to data supplied by the Office of Business Analysis for 1985. Auto assembly activity generated $28.1 billion in value added, of which $8.7 billion was paid out in wages. Purchased materials, including parts, totaled $94 billion. Of this total, value added attributable to production of parts for new vehicles was estimated to be $60 billion.

Table 8-1 presents the results of calculations using equations derived using the model and the industry data presented above, under alternate values for the industry supply elasticities. In the very short run (corresponding to the case when both supply elasticities are zero) there are no employment effects. However, as additional time is allowed for the industries to adjust, corresponding to higher supply elasticities, net employment effects arise.

Whether there has been a net employment increase or decrease depends on assumptions regarding the relative magnitude of the supply elasticities for components and assembly, and on the model's implicit assumption that foreign and domestic components are close substitutes. If output in the assembly industry is more price responsive than in the parts production industry, expansion of the FTZ program is likely to result in employment gains. If output in the auto parts industry is more price responsive, then the net employment effects associated with expansion of the FTZ program are negative.

Estimation of the supply elasticities is notoriously difficult using econometric techniques. However, judgements can be reached using knowledge of the industry. Central considerations are an industry's capital intensity, the extent of its excess capacity, and whether an output increase or decrease is the expected response to the policy-induced price change.

The more capital intensive that an industry is, the less responsive production levels can be in the short or medium term to price changes. A comparison of the labor intensity of the auto parts and auto assembly industries reveals that both industries are highly capital intensive. Using data compiled by the Office of Business Analysis, labor's share of value added across six major auto parts industries averaged 35 percent, and the corresponding figure for auto assembly was 31 percent. Making allowances for measurement error, these data suggest that the supply elasticities would be very similar in magnitude, all other considerations aside.

Unless there is excess capacity, large increases in output would entail large capital outlays for new plant and equipment and require time for installation. However, an industry can presumably reduce output more rapidly in response to a price decline. Considering that duty relief under the FTZ provisions has reduced the price of parts and raised the return on assembly, it is probable that the elasticity of auto parts supply given a decline in its price would exceed the elasticity of auto assembly supply given the increase in the price of auto assembly.

The preceeding discussion suggests that the most reasonable estimates of the short-run employment effects are those derived assuming that the supply elasticity for parts is greater than the elasticity for assembly output. The relevant estimates of employment effects appear in the lower left portion of table 8-1. All of these estimates indicate that under the expanded FTZ program employment has fallen.

All of these estimates are based on a model that assumes that domestic components are close substitutes for imported components. Thus, when FTZ activity expands because of incentives to obtain duty relief, imported components displace domestic components and cause employment losses.

However, if domestic and imported components are complements, a reduction in the price of imported components would increase the demand for domestic components, thereby causing increased U.S. employment in the components industry. In this case the expanded FTZ program would generate unequivocal employment gains for the U.S. economy.

In reality, imported components would substitute for some domestic components and complement others. Consequently, the estimates provided in table 8-1 will overstate the job losses (or understate job gains) that result from the expanded FTZ program. Extreme estimates range from no impact (if both elasticities are zero) up to 21,900 jobs lost if it is assumed that no increase in assembly employment resulted from the program. Selecting a mid-range assumption that seems reasonable based on available evidence (e_X=2; e_Y=1) yields a conclusion that the net employment decline could be as high as 10,300 jobs. This net employment effect results from a loss of 14,600 jobs in auto parts employment, and a gain of 4,400 jobs in auto assembly. A loss of 14,600 jobs in the auto parts industry would represent a 3.5-percent decline (using a base of 412,000 that corresponds to parts for new vehicles only), or 2.2 percent of total auto parts employment. The estimated increase of 4,400 assembly jobs would represent a 1.6-percent increase from a base of 271,000 jobs.

Table 8-1
Estimated employment effects from an expanded FTZ program under alternate price elasticity of supply assumptions for components and assembly output: In thousands of jobs lost or (gained)

Price elasticity of components supply	Price elasticity of assembly supply							
	0.00	0.05	0.75	1.00	1.25	1.50	1.75	2.00
0.00	0.0	(2.9)	(3.7)	(4.4)	(4.9)	(5.2)	(5.6)	(5.8)
0.50	3.7	0.8	(0.1)	(0.7)	(1.2)	(1.6)	(1.9)	(2.2)
0.75	5.5	2.6	1.8	1.1	0.6	0.2	(0.1)	(0.4)
1.00	7.3	4.4	3.6	2.9	2.5	2.1	1.7	1.5
1.25	9.1	6.2	5.4	4.8	4.3	3.9	3.6	3.3
1.50	10.9	8.1	7.2	6.6	6.1	5.7	5.4	5.1
1.75	12.7	9.9	9.1	8.4	7.9	7.5	7.2	6.9
2.00	14.6	11.7	10.9	10.3	9.8	9.4	9.0	8.8
2.50	18.3	15.4	14.5	13.9	13.4	13.0	12.7	12.4
3.00	21.9	19.0	18.2	17.6	17.1	16.7	16.3	16.1

Source: Staff calculations based on data submitted in response to questionnaires of the U.S. International Trade Commission and on official statistics of the U.S. Department of Commerce.

The estimated employment effects described above represent employment gains or losses to each respective industry, and are not to be construed as increases or decreases in employment in the economy overall. Instead, employment declines represent workers exiting to other industries, and employment gains result from workers leaving jobs in other industries for positions in the components or assembly industry.

APPENDIX A

REQUESTS FROM COMMITTEE ON WAYS AND MEANS, UNITED STATES HOUSE OF REPRESENTATIVES

COMMITTEE ON WAYS AND MEANS

U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, DC 20515

June 22, 1987

The Honorable Susan Liebeler
Chairman
U.S. International Trade Commission
701 E Street, N.W.
Washington, D.C. 20436

Dear Madam Chairman:

In 1984, the U.S. International Trade Commission submitted a report on the administration and operation of foreign trade zones (FTZs). On behalf of the Committee, I am writing to request that you provide a supplemental report, under section 332(g) of the Tariff Act of 1930, updating the earlier study and expanding it with respect to foreign trade subzones or special-purpose zones. This will enable the Committee to analyze these subzones and to assess their implications for the U.S. economy and U.S. international trade. Among topics this report should address are:

-- an account of trends since the previous study in usage of subzones (growth of use; types of industries; foreign versus domestic content; percentage of final product exported from the United States versus imported for domestic consumption);

-- an account of the Foreign Trade Zones Board activities, focusing particularly on developments since the previous study in Board standards for assessing and approving applications for subzone status, in reviews of ongoing subzone operations, and in Board staffing and resources;

-- an account of safeguards in the system, including the effectiveness of customs procedures in detecting such abuses as evasion of quotas, and circumvention of countervailing and antidumping duty orders and country of origin provisions;

-- an analysis, to the extent possible, of the economic effects of subzones (on employment; tariff revenue; state economic development; U.S. investment levels; and international trade. On the latter point, is the net effect to increase imports, e.g., of parts, due to inverted tariffs? to increase exports? or is it trade neutral?);

-- a description of U.S. industry concerns (including both user industries and affected industries, such as suppliers) about subzones, and an assessment of recommendations for change.

The Committee on Ways and Means recognizes that this study will require collection of some information by questionnaire but asks that the Commission nevertheless provide its report no later than January 29, 1988. The Committee intends to use the study as background material for its own hearings on this subject. In order to facilitate an accelerated delivery schedule, the Commission is requested to rely on written submissions from the public rather than to hold separate hearings.

The General Accounting Office (GAO) will be conducting a similar study at the Committee's request. Please consult with the GAO to avoid duplication of effort to the extent possible.

By copy of this letter, the Committee requests that the Foreign Trade Zones Board and the U.S. Customs Service give their full cooperation and support to the Commission's study.

Sincerely yours,

Dan Rostenkowski
Chairman

SMG/jsp

cc: The Hon. William von Raab, Commissioner of Customs
John J. DaPonte, Jr., Executive Secretary,
Foreign Trade Zones Board

COMMITTEE ON WAYS AND MEANS

U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, D.C. 20515 27 AM 11:57

May 20, 1983

COMMISSIONER ECKES
USITC

#940

Honorable Alfred E. Eckes
Chairman
International Trade Commission
701 E Street, N.W.
Washington, D.C. 20436

Dear Mr. Chairman:

As you may know, the creation and operation of foreign trade zones and their implications for U.S. trade policy has been a concern of the Congress since the enactment of the Foreign Trade Zones Act in 1934. Recently, increasing public concern over the proper role of foreign trade zones (FTZ) in the U.S. economy has been expressed to the Committee on Ways and Means by such diverse interests as the importing community, municipal governments and domestic manufacturing industries. The Committee would appreciate the Commission's assistance in analyzing these operations and assessing their implications for the American economy.

Use of FTZ's has grown dramatically in the past decade. In fact, the Department of Commerce reports that the number of ports of entry with zone projects has grown from 10 to 75 during the past decade, and the value of goods entering zones and subzones has increased from just over \$100 million to over \$3 billion, about 50% of which involves manufacturing activity. Further, about 33% of the goods currently entering zones is of domestic origin and 30% of the goods shipped from zones are exported. Many proposals for manufacturing in zones for the domestic market have been opposed by competing domestic industries.

These statistics demonstrate not only the rapid growth in trade zones, but also their impact on international trade and investment. In view of these data, the Committee is concerned about whether the Congressional intent of the 1934 Act is being carried out: namely, to promote economic development, stimulate exports, increase employment, and improve the competitive posture of U.S. located firms in world markets.

-- a description of U.S. industry concerns (including both user industries and affected industries, such as suppliers) about subzones, and an assessment of recommendations for change.

The Committee on Ways and Means recognizes that this study will require collection of some information by questionnaire but asks that the Commission nevertheless provide its report no later than January 29, 1988. The Committee intends to use the study as background material for its own hearings on this subject. In order to facilitate an accelerated delivery schedule, the Commission is requested to rely on written submissions from the public rather than to hold separate hearings.

The General Accounting Office (GAO) will be conducting a similar study at the Committee's request. Please consult with the GAO to avoid duplication of effort to the extent possible.

By copy of this letter, the Committee requests that the Foreign Trade Zones Board and the U.S. Customs Service give their full cooperation and support to the Commission's study.

Sincerely yours,

Dan Rostenkowski
Chairman

SMG/jsp

cc: The Hon. William von Raab, Commissioner of Customs
John J. DaPonte, Jr., Executive Secretary,
Foreign Trade Zones Board

United States Senate

COMMITTEE ON FINANCE
WASHINGTON, DC 20510-6200

September 29, 1987

OCT 5 1987

The Honorable
Susan Liebeler
Chairman
U.S. International Trade Commission
701 E Street, N.W.
Washington, D.C. 20436

Dear Madame Chairman:

It has come to my attention that the International Trade Commission, in response to a request of the House Ways and Means Committee, is conducting a study under section 332 of the Tariff Act of 1930 of foreign trade subzones, to be completed by January 29, 1988. I understand that the scope of this study includes examination of the use of trade subzone status by oil refiners, although refineries are not a special focus of the study.

The purpose of this letter is to request that the Commission give particular attention in the course of this study to oil refineries. Among the issues that should be examined are whether subzone status tends to encourage employment and other economic benefits that would not otherwise exist; whether subzone status for refineries leads to increased sourcing of oil from abroad; and the effect of subzones on the tariff structure for crude oil and petroleum product imports.

I have directed my staff to consult with your staff on this study.

Sincerely,

Lloyd Bentsen

APPENDIX B

NOTICE OF INVESTIGATION

International Trade Commission, on July 30, 1987, Ordered that—

(1) Pursuant to subsection (b) of section 337 of the Tariff Act of 1930, an investigation be instituted to determine whether there is a violation of subsection (a) of section 337 in the unlawful importation into the United States of certain electronic chime modules, or in their sale, by reason of alleged direct infringement of (1) claims 1–2, 6–10, 12, 14–16, or 18–25 of U.S. Letters Patent 4,286,257; or (2) claims 10, 11 or 15 of U.S. Letters Patent 4,183,278, the effect or tendency of which is to substantially injure an industry, efficiently and economically operated, in the United States;

(2) For the purpose of the investigation so instituted, the following are hereby named as parties upon which this notice of investigation shall be served:

(a) The complainant is Lectron Products, Inc., 1400 South Livernois, Rochester Hills, Michigan 48308.

(b) The respondents are the following companies, alleged to be in violation of section 337, and are the parties upon which the complaint is to be served:

Modu-Tronics, Inc., 710 Progress Avenue, Scarborough, Ontario N1H 2Y3, Canada

Invotec Instruments, Inc., 390 Tapscott Road, Scarborough, Ontario M1B 2Y6, Canada

Invotec Instruments, Inc., Invotronics Division, 19700 Haggerty Road, Livonia, Michigan 48154.

(c) Juan Cockburn, Esq., Office of Unfair Import Investigations, U.S. International Trade Commission, 701 E Street NW., Room 128, Washington, DC 20436, shall be the Commission investigative attorney, party to this investigation; and

(3) For the investigation so instituted, Janet D. Saxon, Chief Administrative Law Judge, U.S. International Trade Commission, shall designate the presiding administrative law judge.

Responses to the complaint and the notice of investigation must be submitted by the named respondents in accordance with section 210.21 of the Commission's Rules of Practice and Procedure (19 CFR 210.21). Pursuant to § 201.16(d) and 210.21(a) of the rules (19 CFR 201.16(d) and 210.21(a)), such responses will be considered by the Commission if received not later than 20 days after the date of service of the complaint. Extensions of time for submitting a response will not be granted unless good cause therefor is shown.

Failure of a respondent to file a timely response to each allegation in the complaint and in this notice may be deemed to constitute a waiver of the right to appear and contest the allegations of the complaint and this notice, and to authorize the administrative law judge and the Commission, without further notice to the respondent, to find the facts to be as alleged in the complaint and this notice and to enter both an initial determination and a final determination containing such findings.

The complaint is available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 701 E Street NW., Room 156, Washington, DC 20436, telephone 202–523–0471. Hearing-impaired individuals are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on 202–724–0002.

By order of the Commission.

Kenneth R. Mason,

Secretary.

Issued: July 30, 1987.

[FR Doc. 87–17781 Filed 8–4–87; 8:45 am]

BILLING CODE 7020–02–M

[Investigation No. 332–248]

Implications of Foreign-Trade Zones (FTZ's) for U.S. Industries and for Competitive Conditions Between U.S. and Foreign Firms (Supplement and Expansion)

AGENCY: International Trade Commission.

ACTION: Institution of investigation.

SUMMARY: Following receipt on July 6, 1987, of a request from the Committee on Ways and Means of the U.S. House of Representative. The Commission instituted investigation No. 332–248 under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g), for the purpose of gathering and presenting information on the implication of foreign-trade zones (including subzones) (FTZ's) for U.S. industries and for competitive conditions between U.S. and foreign firms. The Commission's investigation will examine all developments concerning issues covered in the Commission's previous investigation, No. 332–165 (The Implications of Foreign-Trade Zones for U.S. Industries and for Competitive Conditions between U.S. and Foreign Firms, USITC Pub. 1496, February 1984), that have occurred since it was completed and will expand it to cover certain additional information requested by the Committee, primarily concerning subzones.

EFFECTIVE DATE: July 28, 1987.

FOR FURTHER INFORMATION CONTACT: Mr. Carl F. Seastrum, General Manufactures Division, U.S. International Trade Commission, Washington, DC 20436 (telephone 202–724–1733).

SUPPLEMENTARY INFORMATION: In addition to providing a supplement to the previous report, the Commission was specifically asked to expand the study to place focus on subzones so that the Committee can analyze them and assess their implications for the U.S. economy and U.S. International trade. In this connection, the report will have an account of trends since the previous study in the usage of subzones; an account of the Foreign-Trade Zones Board activities, focusing on subzones; an account of safeguards in the system, including the effectiveness of customs procedures in detecting such abuses as evasion of quotas, an circumvention of countervailing and antidumping orders and country of origin provisions; an analysis, to the extent possible, of the economic effects of subzone status on employment, tariff revenue, state economic development, U.S. investment levels, and on international trade; and a description of U.S. industry concerns (including both user industries and affected industries, such as suppliers) about subzones (the previous study invited comments on FTZ's in general and thus such comments are solicited within the scope of the request for a supplement), and an assessemnt of these recommendations for change.

The Committee requested that the Commission forward its support no later than January 29, 1988.

Written Submissions: To accelerate delivery of this report to the Committee for use in its hearings, the Committee asked the Commission to rely on written submissions from the public rather than to hold separate hearings. Thus interested persons are invited to submit written statements concerning the investigation. Such submissions should be received by the close of business on November 16, 1987. Commercial or financial information which a submitter desires the Commission to treat as confidential must be submitted on separate sheets of paper each clearly marked "Confidential Business Information" at the top. All submissions requesting confidential treatment must conform with the requirements of § 201.6 of the Commission's *Rules of Practices and Procedure* (19 CFR 201.6). All written submissions, except for confidential business information, will be made available for inspection by interested persons. All submission should be addressed to the Secretary,

United States International Trade Commission, 701 E Street NW., Washington, DC 20436.

Hearing impaires individuals are advised that information on this matter can be obtained by contacting our TDD terminal on (202) 724-0002.

By order of the Commission.

Kenneth R. Mason,

Secretary.

Issued: July 30, 1987.

[FR Doc. 87-17787 Filed 8-4-87; 8:45 am]

BILLING CODE 7020-02-M

[Investigation No. 337-TA-242]

Commission Decision on Whether To Review Initial Determination, Specification of Issues for Review, and Schedule for Filing of Written Submissions on Review and on Remedy, the Public Interest, and Bonding; Certain Dynamic Random Access Memories, Components Thereof and Products Containing Same

AGENCY: International Trade Commission.

ACTION: Notice is hereby given that the Commission has determined to review the administrative law judge's initial determination (ID) that there is a violation of section 337 of the Tariff Act of 1930 in the above-captioned investigation with respect to certain issues, has requested written submissions with respect to specific questions, has determined to review and vacate certain findings and conclusions in the ID, and has determined not to review the ID with respect to certain other issues.

Authority: The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930 (19 U.S.C. 1337) and in §§ 210.53-.56 of the Commission's rules of practice and procedure (19 CFR 210.53-210.56).

FOR FURTHER INFORMATION CONTACT: Judith M. Czako, Esq., Office of the General Counsel, U.S. International Trade Commission, telephone 202-523-0359.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation on March 19, 1986, in response to a complaint filed by Texas Instruments, Inc. (TI) of Dallas, Texas on February 7, 1986, to determine whether there is a violation of section 337 (19 U.S.C. 1337) and 19 U.S.C. 1337a in the importation and sale of certain dynamic random access memories (DRAMs). The complaint alleged that such importation and sale by the nineteen named respondents constitutes unfair methods of competition and unfair acts by reason of infringement of certain claims of ten U.S. patents owned by TI. The complaint further alleged that the effect or tendency of these unfair methods of competition and unfair acts is to destroy or substantially injure an industry, efficiently and economically operated, in the United States. During the course of the proceedings, thirteen of the original nineteen respondents were terminated from the investigation on the basis of license and settlement agreements.

On May 21, 1987, the presiding administrative law judge (ALJ) issued her initial determination (ID), finding that there is a violation of section 337 and 19 U.S.C. 1337a in the importation and sale of certain DRAMs by two of the remaining respondents, and that there is no violation of section 337 and 19 U.S.C. 1337a in the importation and sale of certain DRAMs by the other four remaining respondents. Complainant, the remaining respondents, and the Commission investigative attorneys filed petitions for review of various portions of the ID, and responses thereto. Subsequently, the Commission determined to terminate respondents Hitachi, Ltd. and Hitachi America, Ltd. from the investigation on the basis of a settlement and license agreement.

Having examined the record in this investigation, including the ID, the petitions for review, and the responses thereto, the Commission has concluded that there are issues that warrant review. Specifically, the Commission will review the following issues. As noted below, the Commission is limiting written submissions to specific questions raised by the issues to be reviewed.

1. Whether U.S. Letters Patent 3,716,764 (the '764 patent) is valid, and infringed by the accused imports. Review is limited to the validity and infringement issues arising out of the interpretation of the term "central region" in the patent claims, and the question of infringement under the doctrine of equivalents.

2. Whether U.S. Letters Patent 3,940,747 is infringed by the accused imports. Review is limited to the question of infringement under the doctrine of equivalents.

3. Whether U.S. Letters Patent 4,081,701 is infringed by the accused imports.

4. Whether U.S. Letters Patent 4,543,500 (the '500 patent) and U.S. Letters Patent 4,533,843 (the '843 patent) are valid, and infringed by the accused imports.

5. Whether respondent NEC Corporation is licensed under the '500 and '843 patents.

6. Whether complainant's activities, and those of its licensees, with respect to the patents in issue constitute an industry or industries, efficiently and economically operated, in the United States.

7. Whether the infringing imports have the effect or tendency to substantially injure a domestic industry or industries.

The Commission has further determined to review and vacate the ID with respect to the ALJ's determinations concerning the issue of double-patenting respecting U.S. Letters Patent 4,043,027, and infringement of claims 5, 8, and 15 of U.S. Letters Patent 4,240,092. In addition, the Commission has determined to review the ID with respect to the ALJ's findings and conclusions concerning respondents Hitachi, Ltd. and Hitachi America, Ltd., and vacate such findings and conclusions in light of the settlement and license agreement between Hitachi, Ltd. and complainant Texas Instruments, Inc.

The Commission has determined not to review the remainder of the ID, which thereby becomes the determination of the Commission.

If the Commission finds that a violation of section 337 has occurred, it may issue (1) an order which could result in the exclusion of the subject articles from entry into the United States and/or (2) cease and desist orders which could result in one or more respondents being required to cease and desist from engaging in unfair acts in the importation and sale of such articles. Accordingly, the Commission is interested in receiving written submissions which address the form of remedy, if any, which should be ordered.

If the Commission concludes that a violation of section 337 has occurred and contemplates some form of remedy, it must consider the effect of that remedy upon the public interest. The factors which the Commission will consider include the effect that an exclusion order and/or cease and desist order(s) would have upon (1) the public health and welfare, (2) competitive conditions in the U.S. economy, (3) the U.S. production of articles which are like or directly competitive with those which are the subject of the investigation, and (4) U.S. consumers. The Commission is therefore interested in written submissions which address the aforementioned public interest factors in the context of this investigation.

If the Commission finds that a violation of section 337 has occurred

APPENDIX C

INDUSTRY CONCERNS OVER FTZ GRANTS

Industry concerns over FTZ grants

Date of application	Sponsoring zone (FTZ #), firm (location)	Product causing concern	Name of group(s) or firm(s) expressing concern about or opposition to application	Major concern(s) expressed	Approval date or disposition of applications
July 30, 1982	Cincinnati, OH (46), (Huffy Corporation, Celina, OH)	Assembling bicycles from foreign and domestic bicycle component parts.	Cycle Parts & Accessories Association and certain manufacturers of bicycle component parts and bicycles.	Certain bicycle producers contended that benefits from duty reductions in instances of inverted tariffs would give Huffy, the largest U.S. producer/assembler of bicycles, a significant competitive advantage and force them to apply for subzone status for their plants. Component parts producers objected principally to the duty reductions in an "import-sensititive" industry. They noted that rates of duty were not reduced fully in GATT negotiations and that the import penetration is about two-thirds. In addition, a significant part of imports entered duty free under temporary legislation. The parts producers also questioned whether Congress intended duty reductions in inverted tariff situations and whether granting subzones on the basis of a regulation exceeds the Board's authority. They also questioned whether adjacency tions are consistent with the Zone Act.	Withdrew: Feb. 8, 1985. Due to opposition.
Feb. 3, 1983	Boston (27), Lawrence Textile Shrinking Co., (Lawrence, MA)	A variety of services for foreign and domestic textile mills and textile product users, primarily for wool and wool blend materials.	U.S. Department of Commerce's Office of Textiles and Apparel.	Concern over possible circumvention of international textile and apparel agreements protecting U.S. industry.	Approved: Jan. 5, 1984. After preliminary discussions with Customs and Commerce's Office of Textiles and Apparel, the applicant agreed that "its activities under zone procedures would be limited to the following inspection and processing operations: examination,

Industry concerns over FTZ grants--Continued

Date of application	Sponsoring zone (FTZ #), firm (location)	Product causing concern	Name of group(s) or firm(s) expressing concern about or opposition to application	Major concern(s) expressed	Approval date or disposition of application
					repair, sponging, "London" shrinking, folding, measuring, tentering, drying, back coating, color evaluation, packaging and labeling. The processes would involve no changes in Customs classification."
May 5, 1983	Portsmouth, NH (81), Manchester Manufacturing, Inc. (Colebrook, NH)	Imported apparel: storage, repair, and ornamentation.	U.S. Department of Commerce's Office of Textiles and Apparel.	Concern over possible circumvention of international textile and apparel agreements protecting U.S. industry.	Approved: Feb. 1, 1984. See Lawrence Textiles.
May 12, 1983	Battle Creek, MI (43), Clark Equipment Co. (Springfield and Oshtemo, MI) and Louisville, KY (29), Clark Equipment Co. (Georgetown, KY)	Forklift truck manufacturing.	American Iron & Steel Institute.	Concern that inverted tariff duty reductions may encourage imports of steel injuring the steel industry.	Approved: Mar. 12, 1984. No restrictions.
May 12, 1983	Boston, MA (27), General Dynamics (GD) Corp., (Quincy, MA)	Ship construction, conversion, and repair.	American Iron & Steel Institute and Local #5 of the Shipbuilders Union.	The AISI objected to duty reductions because of inverted tariffs which would affect the "import-sensitive" steel industry. Local #5 of the Shipbuilders Union believed that shipyard employees had the skills to produce items that GD subcontracted to foreign sources and that granting subzone status would encourage further use of foreign sources.	Approved: Dec, 2, 1983. In response to opposition, Examiners Committee report recommended approval subject to the following conditions: "(1) any steel plate, angles, shapes, channels, rolled sheet stock, bars, pipes and tubes, classified under Schedule 6, Part 2, Subp. B, TSUS, and not incorporated into merchandise otherwise classified, and which is used in the manufacture of vessels, shall be subject to Customs duties in accordance with applicable law, if the same

Industry concerns over FTZ grants--Continued

Date of application	Sponorsing zone (FTZ #), firm (location)	Product causing concern	Name of group(s) or firm(s) expressing concern about or opposition to application	Major concern(s) expressed	Approval date or disposition of application
					item is then being produced by a domestic steel mill; and (2) in addition to the annual report, GD-Quincy shall advise the Board's Executive Secretary as to significant new contracts, other than for the TAKX project, with appropriate information concerning foreign purchases otherwise dutiable, so that the Board may consider whether any foreign dutiable items are being imported for manufacturing in the subzone primarily because of subzone status and whether the Board should consider requiring Customs duties to be paid on such items."
July 28, 1983	Wilmington, DE (99), J. Schoeneman Co. (Wilmington, DE)	Apparel and textiles.	U.S. Department of Commerce's Office of Textiles and Apparel.	Concern over possible circumvention of international textile and apparel agreements protecting U.S. industry.	Approved: June 4, 1984. Cutting and sewing would be for piece goods for export only. Tariff deferral only on merchandise destined for domestic market as entry must be made before any cutting or sewing occurs.
July 28, 1983	Louisville, KY (29), Southeastersn Sweetners Distribution Company Inc. (Louisville, KY)	Liquefy and blend imported dry sugar with domestic corn syrup.	U.S. Cane Sugar Refiner's Assoc., Corn Refiner's Assoc., and U.S. Beet Sugar Assoc.	Concern over possible circumvention of sugar quota.	Withdrew: June 24, 1985. Due to opposition.
Dec 15, 1983	Memphis, TN (77), Sharp Mfg Company of America (Memphis, TN)	Assembling color televisions from color picture tubes and certain other foreign	The following have expressed concern about or opposition to previous subzone appli-	The inverted tariff would allow duty reduction on parts, particularly on color picture tubes, causing	Approved: July 2, 1984. With the restriction that full duty must be paid on imported color

Industry concerns over FTZ grants--Continued

Date of application	Sponsoring zone (FTZ #), firm (location)	Product causing concern	Name of group(s) or firm(s) expressing concern about or opposition to application	Major concern(s) expressed	Approval date or disposition of application
		and domestic components.	ations by television manufacturers, including Sanyo (14A) in Forrest City, Ark., and Toshiba (78A) in Lebanon, Tenn.: RCA, North American Philips, GE, Electronics Industries Assoc. (EIA), and Committee to Preserve American Color Television (COMPACT).	injury to the domestic television industry with a net job loss in the United States. Industry is "import-sensitive" because color TV tubes were exempt from duty reductions during GATT negotiations and because of a number of TV cases involving unfair trade practices.	TV tubes, i.e., the same as the earlier applications.
Mar. 2, 1984	Rogers County, OK (53), Tubular Corp of America (Muskogee, OK)	Steel tubular products used for oil well casing and tubing, and gas drill pipe.	American Iron & Steel Institute (AISI), Tubular Products Group of Babcock & Wilcox, and Lone Star Steel.	AISI stated that the applicant's projections for production and employment increases as a result of FTZ status were vague and misleading, and that the granting of FTZ status might, in fact, harm the public interest and the domestic steel industry. Tubular Products Group opposed the application on the grounds that it would provide the applicant with an unfair cash flow advantage as a result of duty deferral.	Withdrew: Feb. 11, 1987. Due to opposition.
Mar. 6, 1984	Long Beach, CA (50), National Steel & Shipbuilding Co. (San Diego, CA)	Ship construction, conversion, and repair.	American Iron & Steel Institute.	See General Dynamics.	Approved: Aug. 10, 1984. See General Dynamics for a detailed description of the restrictions.
Apr. 30, 1984	San Jose, CA (18), New United Motor Mfg, Inc. (NUMMI), a joint venture between GM and Toyota (Fremont, CA)	Automobiles.	Chrysler.	Chrysler opposed the application because of the high ratio of foreign to domestic content, and because NUMMI, as a joint venture between the world's first and third largest automobile producers, would be a violation of antitrust law. Under	Approved: Oct. 10, 1984. The Examiner's Committee Report recommended approval based on the conclusion that NUMMI must also compete with offshore operations, including Toyota, and that the compact cars

Industry concerns over FTZ grants--Continued

Date of application	Sponsoring zone (FTZ #), firm (location)	Product causing concern	Name of group(s) or firm(s) expressing concern about or opposition to application	Major concern(s) expressed	Approval date or disposition of application
				these conditions, Chrysler argued that the granting of zone status to NUMMI would only result in the further displacement of domestic automobile sales and a net loss of jobs in the United States.	produced by NUMMI would also displace foreign-made compacts, which often have 100 percent foreign content. Because NUMMI projected at least 50 percent domestic content, displacement of imported cars would have a net positive impact on the U.S. economy. The report also stated that antitrust violations were not a matter for the Board to consider, and that the joint venture had already been reviewed and approved by the Federal Trade Commission.
May 7, 1984	Corpus Christi & Nueces County, TX (122), Gulf Marine Fabricators (Corpus Christi, TX)	Assembly and repair of oil rigs.	American Iron & Steel Institute.	AISI objected to duty reductions because of inverted tariffs which would affect the "import-sensitive" steel industry.	Approved: Sep. 5, 1985. See General Dynamics for a detailed description of the restrictions on steel-intensive imports. In addition, the FTZ Board added the following restrictions: (1) The subzone is approved for a five-year period, subject to Board renewal after review by Customs and the Board; and (2) Manufacturing operations at this zone site are limited to articles produced for export only.
May 7, 1984	Corpus Christi & Nueces County, TX (122), Berry Contracting Company (Corpus Christi, TX)	Pressure vessels, and oil and gas piping systems.	American Iron & Steel Institute.	See Gulf Marine Fabricators.	Approved: Sep. 5, 1985. Subject to the following restrictions: (1) Approved for a five-year period, subject to Board renewal after review by Customs and the Board;

Industry concerns over FTZ grants--Continued

Date of application	Sponsoring zone (FTZ #), firm (location)	Product causing concern	Name of group(s) or firm(s) expressing concern about or opposition to application	Major concern(s) expressed	Approval date or disposition of application
					and (2) Zone procedures are restricted to articles for export only.
May 17, 1984	Nashville, TN (78), Nissan Motor Mfg Corp (Smyrna, TN)	Automobiles.	American Iron & Steel Institute (AISI), Automotive Services Industry Assoc. (AISA), Champion Spark Plug Co.	ASIA and Champion Spark Plug expressed general concern about the use of imported parts and components in automobile manufacturing, while AISI argued that it would be a violation of the President's Comprehensive Steel Program to allow auto manufacturers to import steel sheets at a lower duty rate than established by law.	Approved: Aug. 30, 1984. No restrictions.
May 21, 1984	Peioria, IL (114), Caterpillar, Inc. (Peoria, IL)	Diesel engines for industrial, agricultural, and construction-type equipment, such as tractors, loaders, and pipelayers. At the time of application, Caterpillar was the nation's fifth largest exporter.	American Iron & Steel Institute (AISI), and United Steel Workers (USW).	Because the duty rate on finished tractors is 0 percent, AISI expressed concern that this lower rate of duty would encourage Caterpillar to increase its steel imports and thereby injure the domestic steel industry. Both AISI and USW recognized Caterpillar's large contribution to U.S. exports, but stated that the granting of subzone status might increase imports, while not necessarily increasing production or exports.	Approved: Dec. 21, 1984. According to the Federal Register notice, "Caterpillar must notify the FTZ Board prior to the commencement of any new manufacturing activity in the zone. Subzone operations are to be monitored by the FTZ staff to determine whether zone procedures create imports that would not otherwise occur."
June 1, 1984	Las Vegas, NV (89), Porsche Cars North America (Reno, NV) and Dorchester County, SC (21), Porsche Cars North America (Charleston, SC)	Preparation facilities for imported, high performance sports cars. Processes include installation of parts and accessories, dewaxing, mechanical modifications, etc.	Automotive Services Industry Assoc. (ASIA), and Champion Spark Plug.	ASIA and Champion Spark Plug expressed general concern about Porsche's domestic sourcing plans.	Approved: Mar. 14, 1985. No restrictions.

Industry concerns over FTZ grants--Continued

Date of application	Sponsoring zone (FTZ #), firm (location)	Product causing concern	Name of group(s) or firm(s) expressing concern about or opposition to application	Major concern(s) expressed	Approval date or disposition of application
June 18, 1984	Baltimore, MD (74), Bethlehem Steel Corp. (Sparrows Point, MD)	Ship construction, conversion, and repair.	American Iron & Steel Institute.	See General Dynamics.	Approved: Mar. 14, 1985. See General Dynamics for a detailed description of the restrictions.
Aug. 22, 1984	Erie County, NY (23), Ontario Knife (Franklinville, NY)	Zone procedures would allow Ontario Knife to import lower-priced foreign stainless and carbon steel for the production of professional knives and other cutlery.	Specialty Steel Industry of the United States (SSI).	SSI expressed concern over the importation of stainless steel protected by the President's Comprehensive Steel Program and U.S. tariff laws.	Pending.
Aug. 22, 1984	Erie County, NY (23), Robinson Knife (Springville, NY)	Zone procedures would be used primarily the same way as in the case of Ontario Knife (see above) for the production of manicure sets, scissors, and kitchen tools.	Specialty Steel Industry of the United States (SSI).	See Ontario Knife.	Pending.
Aug. 28, 1984	Erie County, NY (23), Buffalo Specialty Products, Inc. (BSP) (Hamburg, NY)	The production of specialty steel products for heavy industry and construction use. Zone procedures would be used for the processing of foreign steel raw materials into products for export-only.	Al Tech Specialty Steel Corp, and Specialty Steel Industry of the United States (SSI).	Al Tech expressed concern that the granting of subzone status to BSP would give that firm an unfair competitve advantage. Both Al Tech and SSI said that they would not oppose the application if BSP accepted the restrictions on steel (See General Dynamics).	Withdrew: Aug. 23, 1987. Due to opposition.
Oct. 2, 1984	Honolulu, HI (9), Dole Pineapple Co. (Honolulu, HI)	Imported tin plate used in the process of canning pineapple, pineapple juice, and and juice concentrate.	Domestic canning industry, American Iron & Steel Institute.	The opposition feared that if Dole received subzone status, other food canning companies in the continental United States would seek zone status as well.	Approved: Jul. 26, 1985. Because of General Headnote 6(b)(i) of the Tariff Schedule of the United States Annotated, the duty on tin plate containers in which imported pineapple entered the United States was zero, while Dole was forced to pay the full 3.9 percent ad valorem rate of duty. In order to give Dole

Industry concerns over FTZ grants--Continued

Date of application	Sponsoring zone (FTZ #), firm (location)	Product causing concern	Name of group(s) or firm(s) expressing concern about or opposition to application	Major concern(s) expressed	Approval date or disposition of application
					equal treatment on the tin plate it uses to can its domestic pineapple, the Board approved the application, in light of the special circumstances involved in the Hawaiian pineapple industry.
Oct. 30, 1984	Beaumont, TX (115), Bethlehem Steel Corp (Jefferson County, TX)	Ship construction and offshore drilling platforms.	American Iron & Steel Institute.	See General Dynamics.	Approved: Mar. 20, 1985. See General Dynamics for a detailed description of the restrictions.
Oct. 30, 1984	Wilmington, NC (66), Honda Power Equipment Co (Alamance County, NC)	Power lawnmowers and lawnmower parts.	American Iron & Steel Institute (AISI), Outdoor Power Equipment Institute (OPEI) and domestic industry.	Because import penetration for lawnmowers is low, AISI expressed concern that the Honda lawnmowers would simply displace domestic production and have a net employment effect of zero or less. OPEI opposed the application on the grounds that the benefit of duty deferral and inverted tariff savings would provide Honda with an unfair cash flow advantage. Also, without more specific plans to export, the granting of subzone status would likely have an adverse impact on the trade deficit. Domestic industry opposed the application primarily for the same reasons.	Pending. The Automotive & Consumer Goods Division of the International Trade Administration (Department of Commerce) conducted a study on the Honda application in which it was pointed out that, although the lawnmower market constricted during the 1982-83 recession, it has recovered, and domestic manufacturers still dominate the market. This market, it is stated, is not import-sensitive, and it is possible that the Honda lawnmowers produced in North Carolina would displace imports from Honda of Japan.
Nov. 16, 1984	Milwaukee, WI (41), Bay Shipbuilding Corp (Sturgeon Bay, WI)	Ship construction, conversion, and repair.	American Iron & Steel Institute.	See General Dynamics.	Approved: May 6, 1985. See General Dynamics for a detailed description of the restrictions.

Industry concerns over FTZ grants--Continued

Date of application	Sponsoring zone (FTZ #), firm (location)	Product causing concern	Name of group(s) or firm(s) expressing concern about or opposition to application	Major concern(s) expressed	Approval date or disposition of application
Dec. 7, 1984	Louisville, KY (29), General Electric Corp (Jefferson County, KY)	Household appliances, including refrigerators, dishwashers, and clothes washers.	American Iron & Steel Institute (AISI).	AISI expressed concern that General Electric would use zone procedures to import steel because of duty savings created by the inverted tariff.	Approved: Dec. 19, 1985. The Board approved the application "subject to the condition that any basic steel shape classifiable under Schedule 6, Part 2, Subpart B of the Tariff Schedule of the United States and not incorporated into merchandise otherwise classified, shall be subject to Customs duty in accordance with applicable law if the same item, with comparable performance qualities and availability, is then being produced by a steel mill in the United States.
Mar. 29, 1985	Milwaukee, WI (41), Ambrosia Chocolate Co. (Milwaukee, WI)	Industrial chocolate products for the bakery, confectionary, and dairy industries.	Department of Agriculture, U.S. Beet Sugar Assoc., U.S. Sugar Refineries Assoc., and Mary Lee Corp.	All parties opposed the application on the grounds that zone procedures would allow Ambrosia Chocolate to circumvent quotas established by the U.S. Sugar Support Program.	Approved: Mar. 23, 1987. With the restriction that "Ambrosia must elect domestic or privileged foreign status, as appropriate, with respect to foreign sugar that is used to manufacture products that are not covered by U.S. sugar program import quotas as designated in Presidential Proclamation 5294, as revised in Presidential Proclamation 5340 (TSUS Nos. 958.16, 958.17, and 958.18)." Because of the special circumstances of the Ambrosia Chocolate application, the Board declared that this decision would not serve as a precedent for other cases involving sugar

Industry concerns over FTZ grants--Continued

Date of application	Sponsoring zone (FTZ #), firm (location)	Product causing concern	Name of group(s) or firm(s) expressing concern about or opposition to application	Major concern(s) expressed	Approval date or disposition of application
					and sugar-containing products.
May 15, 1985	Flint, MI (140), General Motors (Flint, MI)	Automobiles.	American Iron & Steel Institute (AISI), and Automotive Services Industries Assoc. (ASIA).	ASIA expressed general opposition to the granting of zone status to a firm with no specific plans to to export, while AISI expressed concern about GM's sourcing plans with regard to steel under zone procedures.	Approved: Apr. 3, 1987. No restrictions.
June 6, 1985	Detroit, MI (70), Mazda Motor Manufacturing Corp. (Flat Rock, MI)	Automobiles.	American Iron & Steel Institute (AISI), Automotive Services Industries Assoc. (ASIA).	AISI objected to duty reductions because of inverted tariffs which would affect the "import-sensitive" steel industry, but added that it would not oppose the application if Mazda would accept the standard restrictions on steel imports (See General Dynamics). ASIA opposed the application because of the high ratio of foreign to domestic content, and because Mazda had no apparent projections for exporting finished vehicles.	Approved: Apr 1, 1986. No restrictions.
June 6, 1985	Erie County, NY (23), Greater Buffalo Press (GBP) (Chataugua County, NY)	Printing ink made from imported dry color pigments.	Dry Color Manufacturers Assoc., National Association of Printing Ink Mfrs., Synthetic Organic Chemical Mfrs. Assoc., and various ink, pigment, and printing companies.	The opposition stated that the net economic impact of the proposal would be harmful to domestic industry and would give GBP an unfair competitive advantage because of the inverted tariff benefit.	Approved: May 13, 1986. The Board approved the application for a five-year period, subject to the following conditions: "(1) Authority for the subzone may be extended after a review by the Board; (2) GBP must elect privileged foreign or domestic status, as appropriate, with respect to pigment prior to its use in the

Industry concerns over FTZ grants--Continued

Date of application	Sponsoring zone (FTZ #), firm (location)	Product causing concern	Name of group(s) or firm(s) expressing concern about or opposition to application	Major concern(s) expressed	Approval date or disposition of application
					production of ink to be sold in commercial quantities in the domestic market for use other than by GBP or a GBP subsidiary; (3) GBP must elect privileged foreign or domestic status, as appropriate, with respect to pigment prior to its use in the production of ink, once shipments of ink containing foreign pigment to GBP or a GBP subsidiary exceed 21 million pounds on an annual basis; (4) GBP will make available to the Customs Service on request its records, or the records of any of its subsidiaries that relate to the production, shipment, and sale of ink and will post a bond deemed adequate by the Customs Service to protect the revenue; and (5) Because of the special circumstances of this case, this action will not be considered a precedent for other FTZ Board actions involving printing ink or pigments."
July 29, 1985	Detroit, MI (70), Chyrsler Engine Plant (Trenton, MI)	4-cylinder engines. Imported parts include such and fuel-injector parts.	Automotive Services Industries Assoc (ASIA).	ASIA expressed general concern for the duty reduction on imported parts.	Approved: July 29, 1987. No restrictions.
Aug. 2, 1985	Salt Lake City, UT (30), Hercules Graphite Materials (Magna, UT)	The production of carbon fiber (graphite) materials for aerospace uses. A special grade of polyacrylonitrile	Department of Defense (DOD), and Union Carbide.	The Department of Defense currently has in effect a policy of "domesticity" for PAN, in which it is intended that at	Pending. Hercules requested that its application not be denied until the DOD determines its long-term

Industry concerns over FTZ grants--Continued

Date of application	Sponsoring zone (FTZ #), firm (location)	Product causing concern	Name of group(s) or firm(s) expressing concern about or opposition to application	Major concern(s) expressed	Approval date or disposition of application
		(PAN) fiber is imported for the making of graphite at this plant.		least "a third of PAN-based carbon fiber used in defense production will be supplied by two or more domestic industrial sources by the end of the calender year 1988." DOD, therefore, has objected to the proposal because it would interfere with the development of the domestic PAN supply. Union Carbide (the only domestic producer of PAN at the time of application) stated that unless zone procedures were limited to "export only", Herecules would have an unfair competitive advantage.	objectives for the sourcing of PAN, since the use of zone procedures might provide a cheaper alternative to domestic production.
Sept. 11, 1985	Philadelphia, PA (35), Pennsylvania Shipbuilding (Chester, PA)	Ship construction, conversion, and repair.	American Iron & Steel	See General Dynamics.	Pending.
Sept. 25, 1985	John F Kennedy Airport (111), Jack Young Assoc (Queens, NY)	Sweaters.	The following have at one time or another expressed concern about the use of the zone procedures for textile manufacturing operations: American Apparel Manufacturers Assoc (AAMA), American Textile Manufacturers Institute (ATMI), and the Department of Commerce's Office of Textiles and Apparel.	The opposition has repeatedly expressed concern over the use of the FTZ Programs to circumvent international textile and apparel agreements designed to protect domestic industry.	Approved: Mar. 10, 1986. The applicant agreed in advance to limit its FTZ operations to "export only".
Oct. 18, 1985	Honolulu, HI (9), Maui Pineapple Co. (Kahului, HI)	Imported tin plate used in the process of of canning pineapple, pineapple juice, and juice concentrate.	Domestic canning industry, American Iron & Steel Institue (AISI).	See Dole Pineapple Co.	Approved: Apr. 25, 1986. See Dole Pineapple Co.

Industry concerns over FTZ grants--Continued

Date of application	Sponsoring zone (FTZ #), firm (location)	Product causing concern	Name of group(s) or firm(s) expressing concern about or opposition to application	Major concern(s) expressed	Approval date or disposition of application
Oct. 23, 1985	Providence, RI (105), Pawtucket Fasteners (Pawtucket, RI)	The processing of imported stainless steel wire and bar into stainless steel fasteners, screws and bolts.	American Iron & Steel Institute, Specialty Steel Industry of the United States House of Representatives, (SSI) and the Iron and Steel Division of the International Trade Administration (Department of Commerce).	All parties expressed concern over the potential harm to domestic industry caused by foreign stainless steel imports.	Pending. A proposal was submitted that would limit the applicant's foreign stainless steel purchases to Voluntary Restraint Agreement (VRA) countries. Both SSI and Pawtucket Fasteners rejected this compromise.
Oct. 25, 1985	Harris Country, TX (84), GATX Terminals Corp (Harris Co TX)	Terminal and blending facility. Zone status would be used for the blending of domestic stocks with foreign components such as reformate, pyrolysis, gas, alkylates, c/9 aromatics, and catalytic naphtha in order to make motor fuel for the domestic market. Zone procedures would allow GATX to pay duty on the foreign components at the rate available to importers of finished motor fuel.	American Independent Refiners Assoc., National Petroleum Refiners Assoc., Oil, Chemical and Atomic Workers Union, and numerous domestic oil companies.	All those submitting letters of concern have objected to the special treatment of blending facilities on a case-by-case basis, especially since Congress rejected a bill proposing uniform tariff reductions on imported feedstocks used in blending. Without uniform treatment, those who have zone status would enjoy an unfair cash flow advantage through duty deferral, duty savings, duty exemption on re-exports and fuel consumed at the facility, and avoidance of drawback procedures.	Pending.
Dec. 4, 1985	Gulfport, MS (92), Moss Point Marine, Inc. (Escatawpa, MS)	Ship construction, conversion, and repair.	American Iron & Steel Institute.	See General Dynamics.	Pending. See General Dynamics for a detailed description of the restrictions.
Dec. 9, 1985	Little Rock, AR (14), Polar Stainless Products, Inc. (Searcy, AR)	Stainless steel sinks for home and commercial uses.	American Iron & Steel Institute, Specialty Steel Industry of the United States (SSI), LTV Steel, and Elkay Manufacturing Co.	All parties expressed concern over the potential harm to domestic industry caused by foreign stainless steel imports.	Pending. Polar agreed to accept the proposal that it limit its foreign stainless steel purchases to Voluntary Restraint Agreement (VRA) countries, but

Industry concerns over FTZ grants--Continued

Date of application	Sponsoring zone (FTZ #), firm (location)	Product causing concern	Name of group(s) or firm(s) expressing concern about or opposition to application	Major concern(s) expressed	Approval date or disposition of application
					SSI rejected this compromise (See also Pawtucket Fasteners).
Dec. 29, 1985	Chicago, IL (22), Power Packaging, Inc. (Chicago, IL)	Food processing and sugar blending.	U.S. Cane Sugar Refiners Assoc., U.S. Beet Sugar Assoc., Corn Refiners Assoc., Corn Growers Assoc., Florida Sugar Marketing & Terminal Assoc., and Florida Citrus Mutual.	All were concerned that zone procedures would allow Power Packaging to circumvent the sugar quota program designed to protect domestic industry. Florida Citrus Mutual objected to processing citrus products in the subzone.	Approved: Mar. 23, 1987. See Ambrosia Chocolate for a detailed description of the restrictions.
Feb. 21. 1986	Gramercy, LA (124), TransAmerican Natural Gas (TNG) Refinery (Destrehan, LA)	Oil Refinery. Zone procedures would allow TNG to defer duty on refined products made from foreign crude until they enter the customs territory of the United States.	American Independent Refiners Assoc., and numerous domestic oil companies.	All have objected to the special cash flow privileges that would be awarded to those seeking zone status, namely: (1) Duty deferral; (2) Elimination of drawback procedures; (3) Exemption from duty on waste, re-exports, and fuel consumed during the refining process; and (4) Duty reduction on certain products produced from foreign crude, such as liquefied petroleum gas (LPG), which is duty-free. Opponents claim that the benefits outlined above would give FTZ refineries a significant competitive edge over non-FTZ refineries, which could result in the shut-down of some domestic refineries and a national dependecy on foreign crude in the long-run.	Pending.
Apr. 1, 1986	Proposed Foreign Trade Zone: Lawrence Co., IL (No FTZ #), Hella North America (Clay Co., IL)	Auto components, including head and tail lamps, and electro-mechanical and electronic control units.	American Iron & Steel Institute (AISI).	AISI initially objected to any duty reduction on imported steel trimming for the head and tail lights, but later withdrew opposition when Hella	Pending.

Industry concerns over FTZ grants--Continued

Date of application	Sponsoring zone (FTZ #), firm (location)	Product causing concern	Name of group(s) or firm(s) expressing concern about or opposition to application	Major concern(s) expressed	Approval date or disposition of application
				revealed that the steel trimming was purchased from domestic sources.	
June 4, 1986	Louisville, KY (29), Toyota Motor Mfg. USA (Scott Co, KY)	Automobiles.	American Iron & Steel Institute, Motor Equipment Mfg Assoc., Automotive Parts and Accessories Assoc., and Automotive Service Industry Assoc.	Opponents expressed concern that the use of zone procedures would only encourage Toyota to continue sourcing the majority of its parts from Japan. Because of the existing problem of overcapacity in the auto parts industry, it was alleged that the proposed Toyota subzone would cost this industry more jobs than it would help to create.	Pending.
June 17, 1986	Lake Charles, LA (87), Conoco Refinery (Calcasieu Parish, LA)	Oil refinery. See TransAmerican Natural Gas.	American Independent Refiners Assoc. (AIRA), and numerous domestic oil compaines.	See TransAmerican Natural Gas for a detailed description of the objections raised by the opposition.	Pending.
June 20, 1986	Mobile, AL (82), ADDSCO Industries, Inc. (Mobile, AL)	Ship construction, conversion, and repair.	American Iron & Steel Institute.	See General Dynamics.	Pending.
June 27, 1986 (Extension of time period for use of zone procedures)	Panama City, FL (65), Berg Steel Pipe (Panama City, FL)	Processing of foreign steel plate into large-diameter pipe.	Domestic steel industry.	Inverted tariff would allow steel to enter with tariff reduction, and use of zone procedures might circumvent Government programs to control entry of foreign steel.	Approved: July 31, 1987. Berg Steel Pipe made a commitment to purchase only domestic steel and foreign steel licensed under the President's Steel Program until that program expires. The FTZ Board approved the company's use of zone procedures until Sept. 30, 1990.
July 14, 1986	Wilmington, NC (66), American Hoist and Derrick Cane (Amhoist) (Wilmington, NC)	Cranes, and related parts and equipment.	American Iron & Steel Institute, Welded Steel & Tube Institute, and the Committee of Domestic Steel Wire Rope and Specialty Cable Manufacturers.	The substantial inverted tariff savings would provide Amhoist with an incentive to import steel plate, wire rope, and other steel-intensive products. In addition, the granting of	Pending.

Industry concerns over FTZ grants--Continued

Date of application	Sponsoring zone (FTZ #), firm (location)	Product causing concern	Name of group(s) or firm(s) expressing concern about or opposition to application	Major concern(s) expressed	Approval date or disposition of application
				zone status to Amhoist would run contrary to the intent of the Presidential Steel Program, in effect until Sept. 30, 1989.	
July 20, 1986	Long Beach, CA (50), Todd Pacific Shipyards (Los Angeles, CA)	Ship construction and repair.	American Iron & Steel Institute.	See General Dynamics.	Pending. According to the FTZ Board, the applicant is reluctant to adhere to the standard restrictions on shipyards (See General Dynamics).
Aug. 18, 1986	Corpus Christi, TX (122), Champlin Oil Refinery (Nueces Co, TX)	Oil Refinery. See TransAmerican Natural Gas.	American Independent Refiners Assoc., Ashland Oil, Phillips 66, and Mobil Oil Co.	The contentions raised by this group are similar to those cited under TransAmerican Natural Gas (See above).	Pending.
Sept. 2, 1986	Peoria, IL (114), Diamond Star Motor Corp, a Chrysler/Mitsubishi joint venture (Normal, IL)	Automobiles. Components such as brake and suspension systems, transmissions, and engines will be purchased from Japan, while most of the steel and remaining parts will be sourced domestically.	American Iron & Steel Institute, and Automotives Parts and Accessories Assoc.	Both parties object to the application because of the high ratio of foreign to domestic content, which could lead to the displacement or even the loss of jobs in the auto parts industry.	Pending.
Oct. 7, 1986	Proposed Foreign Trade Zone: Findlay, OH (No FTZ #), Copper Tire Rubber Co (Findlay, OH)	Production of tires for auto assembly plants and the aftermaket. Some materials would be sourced aboard, including steel tire cord and certain polyester fibers.	American Iron & Steel Institute (AISI), Congressional Textile Caucus, Celanese Fiber Operations, Burlington Industries, and several textile and manmade fiber organizations.	Those representing the interests of the textile industry contend that the proposed Cooper Tire subzone would violate the Multi Fiber Agreement (MFA) designed to protect U.S. suppliers of polyester fabric. Celanese, which supplies Copper Tire with 14% of its poly fabric output, concurs with this objection. AISI objects to the establishment of a precedent for using zone procedures to import steel tire cord.	Pending.

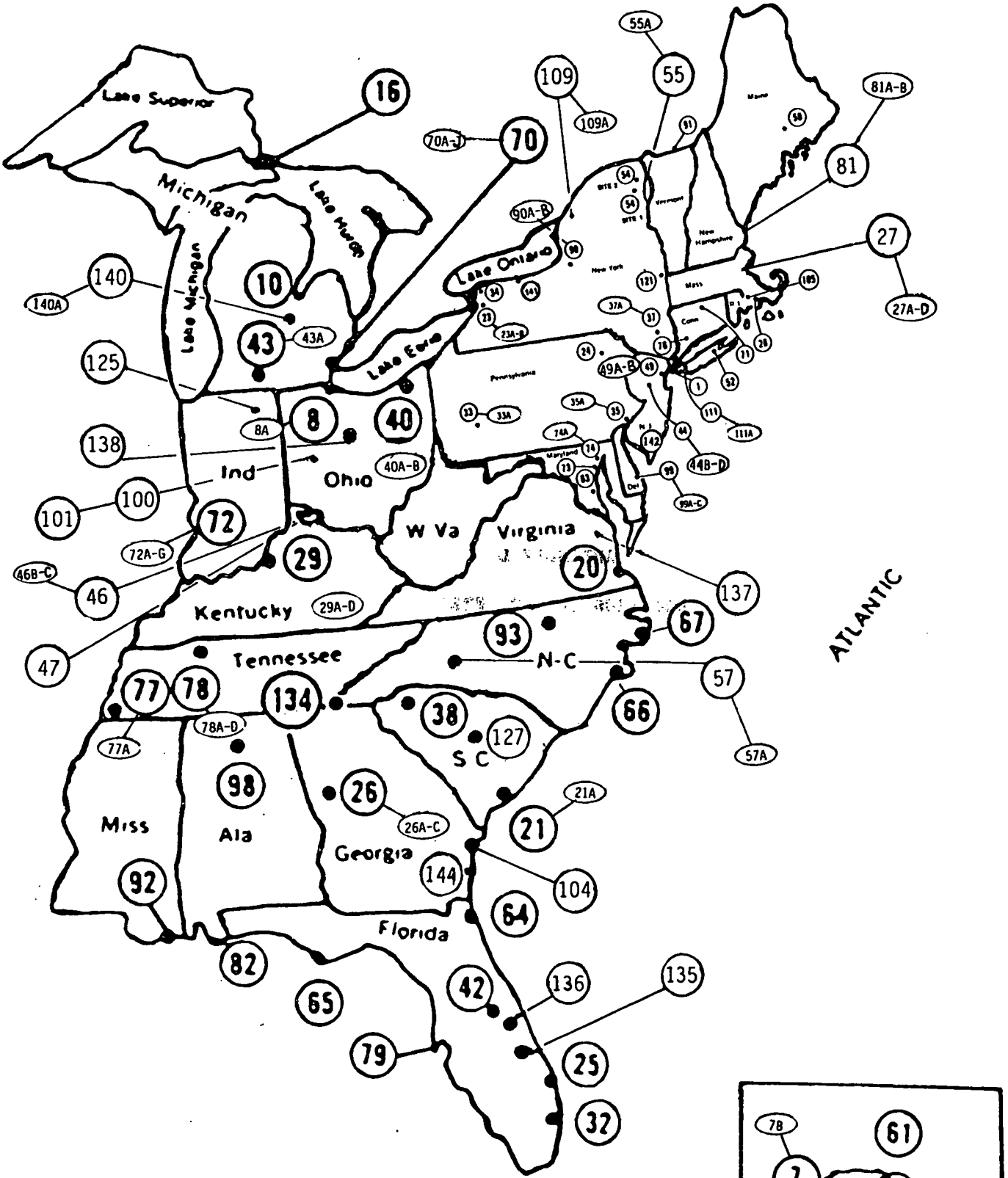
Industry concerns over FTZ grants--Continued

Date of application	Sponsoring zone (FTZ #), firm (location)	Product causing concern	Name of group(s) or firm(s) expressing concern about or opposition to application	Major concern(s) expressed	Approval date or disposition of application
Oct. 17, 1986	Proposed Foreign Trade Zone: Burns Habor, IN (No FTZ #), Caterpillar Engine Plant (Lafayette, IN)	Diesel engines for marine and industrial uses.	American Iron & Steel Institue (AISI).	AISI has expressed general concern over Caterpiller's plans to import steel-intensive parts.	Pending.
Feb. 27, 1987	Suffolk, VA (20), Stihl, Inc. (Virginia Beach, VA)	Mid-sized chain saws and other outdoor power tools.	Outdoor Power Equipment Institute (OPEI), Lunt Manufacturing Co, Imperial Die Casting Corp, Homelite Inc.	OPEI has expressed concern over the absence of specific employment and export projections in the application. All parties are apprehensive about the increasingly competitive environment in both the chain saw and/or the die casting market, and object to any proposal that would encourage importing through duty reduction.	Pending.
July 14, 1987	Harris Co, TX (84), Oiltanking of Texas (Harris Co, TX)	Terminal and blending facility. See GATX Terminal Corp for a detailed description of intended zone use.	American Independent Refiners Assoc., and numerous domestic oil compaines.	See GATX Terminal Corp for a detailed description of the objections raised by the opposition.	Pending.

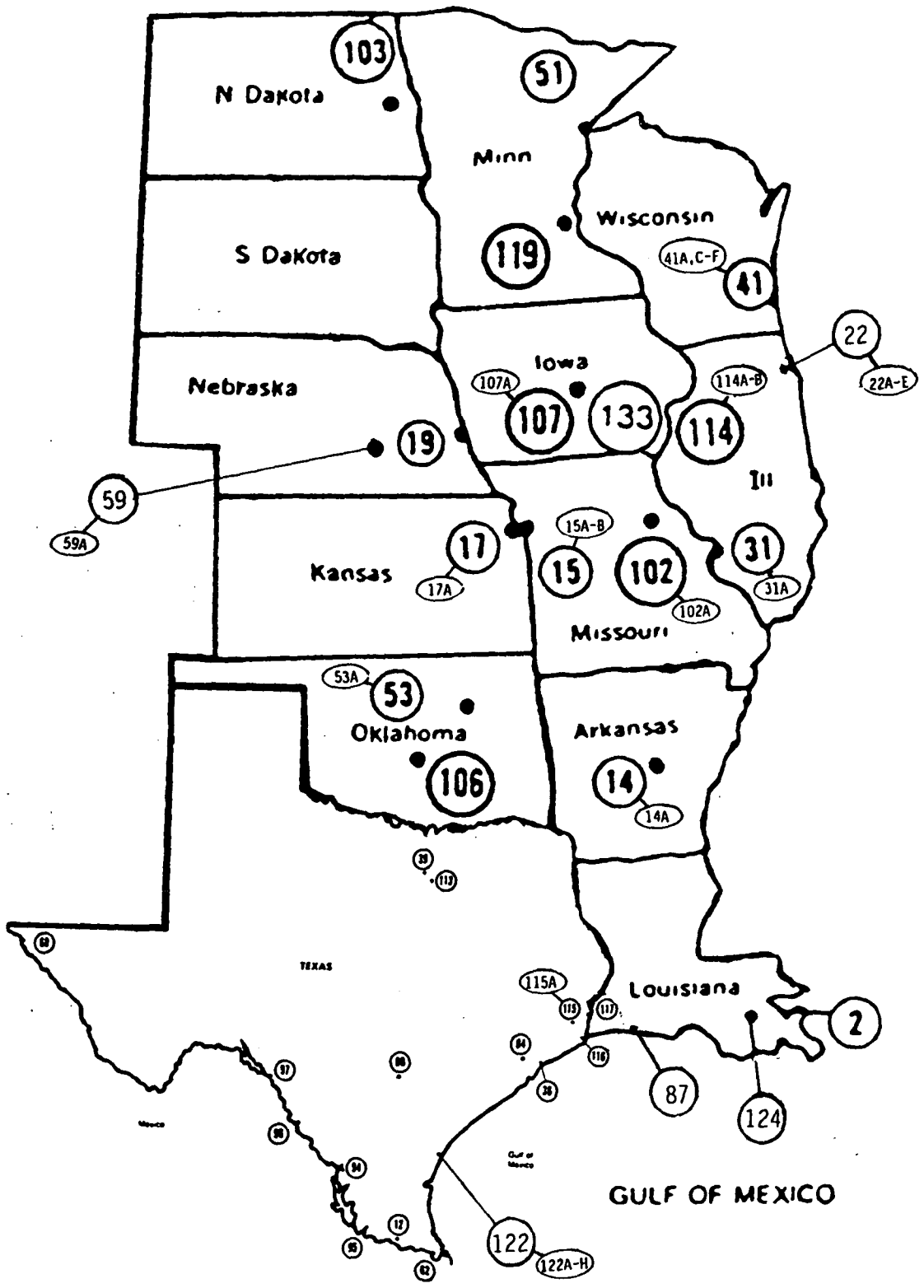
APPENDIX D

LOCATION OF U.S. FTZ'S

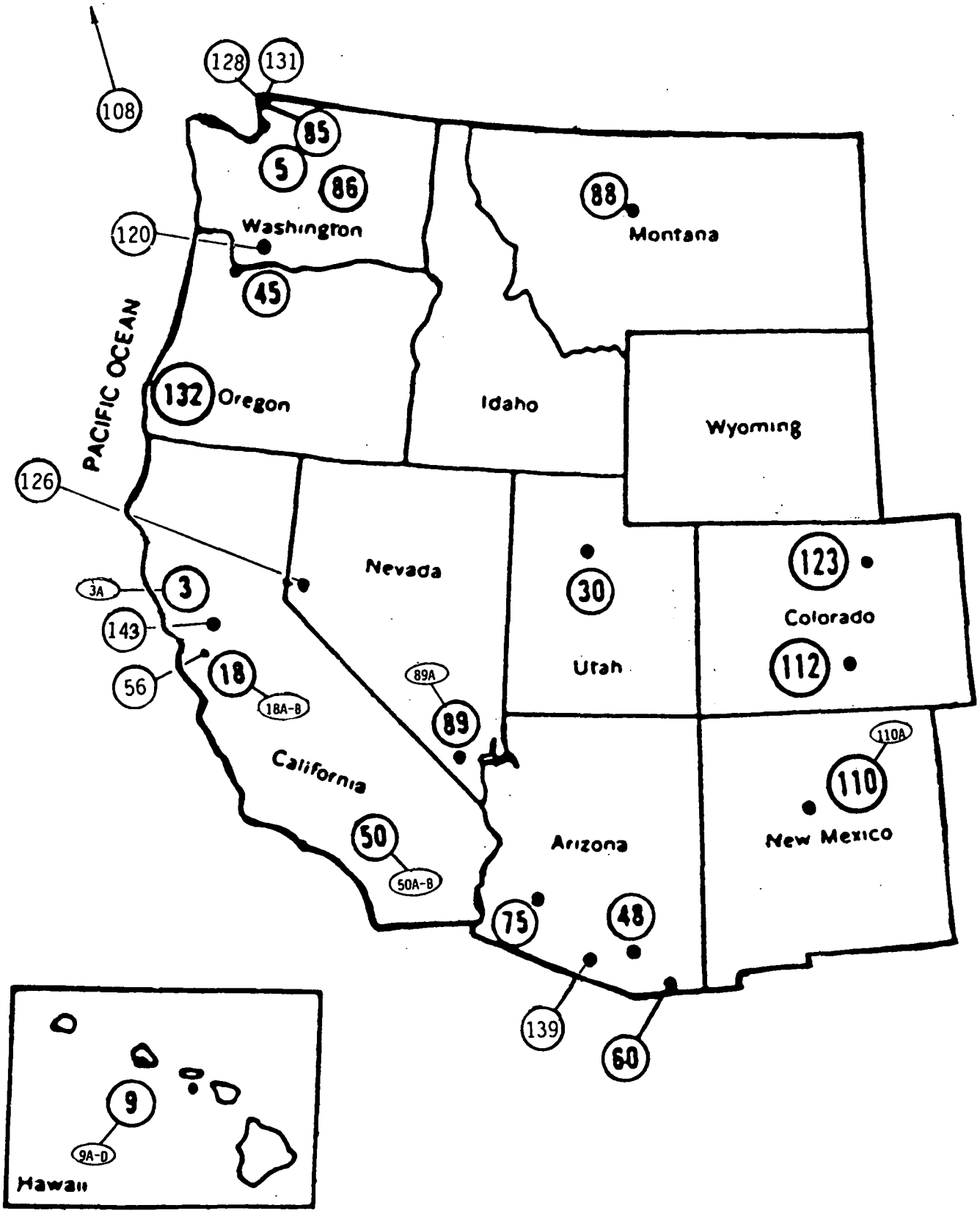
GEOGRAPHICAL LOCATIONS OF UNITED STATES FOREIGN-TRADE ZONES AND FOREIGN-TRADE SUBZONES



EASTERN UNITED STATES



CENTRAL UNITED STATES



WESTERN UNITED STATES

U.S. FOREIGN-TRADE ZONES

Zone No. 1, New York City
Operator: S & F Warehouse, Inc.
Brooklyn Navy Yard, Bldg. 77, Brooklyn, NY 11205
Grantee: City of New York

Zone No. 2, New Orleans
Grantee/Operator: Board of Commissioners of the Port of New Orleans, P.O. Box 60046, New Orleans, LA 70160

Zone No. 3, San Francisco
Operator: Foreign Trade Services, Inc.
Pier 23, San Francisco, CA 94111
Grantee: San Francisco Port Commission

Zone No. 5, Seattle
Grantee/Operator: Port of Seattle Commission
P.O. Box 1209, Seattle, WA 98111

Zone No. 7, Mayaguez (Puerto Rico)
Grantee/Operator: Puerto Rico Industrial Dev. Co.
G.P.O. Box 2350, San Juan, PR 00936

Zone No. 8, Toledo
Grantee: Toledo-Lucas Country Port Authority
One Maritime Plaza, Toledo, OH 43604-1866

Zone No. 9, Honolulu
Grantee/Operator: State of Hawaii
Pier 2, Honolulu, HI 96813

Zone No. 12, McAllen (Texas)
Grantee/Operator: McAllen Trade Zone, Inc.
6401 S. 33rd Street, McAllen, TX 78501

Zone No. 14, Little Rock
Operator: Little Rock Port Authority
7500 Lindsey Rd., Little Rock, AR 72206
Grantee: Arkansas Dept. of Industrial Development

Zone No. 15, Kansas City (Missouri)
Grantee/Operator: Greater Kansas City FTZ, Inc.
120 W. 12th St., Suite 650, Kansas City, MO 64105

Zone No. 16, Sault Ste. Marie (Michigan)
Grantee/Operator: Economic Development Corp. of Sault Ste. Marie, 1301 W. Easterday, Sault Ste. Marie, MI 49783

Zone No. 17, Kansas City, (Kansas)
Grantee/Operator: Greater Kansas City FTZ,Inc.
120 W. 12th St., Suite 650, Kansas, MO 64105

Zone No. 18, San Jose (California)
Grantee: City of San Jose
801 North First St., Rm. 408, City Hall
San Jose, CA 95110

Zone No. 19, Omaha
Grantee/Operator: Dock Board of the City of Omaha
Omaha-Douglas Civil Center, 1819 Farnam St., Rm. 701
Omaha, NE 68183

Zone No. 20, Suffolk (Virginia)
Grantee: Virginia Port Authority
600 World Trade Center, Norfolk, VA 23510

Zone No. 21, Dorchester County (South Carolina)
Operator: Carolina Trade Zone
2725 W. 5th North St., Summerville, SC 29483
Grantee: South Carolina State Ports Authority

Zone No. 22, Chicago
Grantee: Illinois International Port District
12700 Butler Drive, Lake Calumet Harbor, Chicago, IL 60633

Zone No. 23, Buffalo
Grantee: County of Erie
Erie County Industrial Development Agency, Suite 300
Liberty Bldg., 424 Main St., Buffalo, NY 14202

Zone No. 24, Pittston (Pennsylvania)
Grantee/Operator: Eastern Distribution Center, Inc.
1151 Oak Street, Pittston, PA 18640-3795

Zone No. 25, Port Everglades (Florida)
Grantee/Operator: Port Everglades Port Authority
P.O. Box 13136, Port Everglades, FL 33316

Zone No. 26, Shenandoah (Georgia)
Grantee: Georgia Foreign Trade Zone, Inc.
230 Peachtree St., N.W., P.O. Box 1776, Atlanta, GA 30301

Zone No. 27, Boston
Grantee: Massachusetts Port Authority
10 Park Plaza, Boston, MA 02116

Zone No. 28, New Bedford (Massachusetts)
Grantee/Operator: City of New Bedford
Mayor's Office of Community Development, 133 William St.,
Rm. 215, New Bedford, MA 02740

Zone No. 29, Louisville
Grantee/Operator: Louisville & Jefferson County
Riverport Authority, 6219 Cane Run Road, Louisville,
KY 40258

Zone No. 30, Salt Lake City
Grantee: Redevelopment Agency of Salt Lake City
285 West North Pemple, Suite 200, Salt Lake City. UT 84103

Zone No. 31, Granite City (Illinois)
Grantee/Operator: Tri-City Regional Port District
2801 Rock Road, Granite City, IL 62040

Zone No. 32, Miami
Grantee: Greater Miami Foreign Trade Zone, Inc.
1601 Biscayne Blvd., Miami, FL 33132

Zone No. 33, Pittsburgh
Grantee: Regional industrial Dev. Corp. of
Southwestern Pennsylvania, Suite 1220, Frick Building,
Pittsburgh, PA 15219

Zone No. 34, Niagara County (New York)
Grantee/Operator: County of Niagara
County Office Bldg., 59 Park Ave., Lockport, NY 14094

Zone No. 35, Philadelphia
Grantee: The Philadelphia Port Corporation
1020 Public Ledger Bldg., 6th & Chestnut Streets,
Philadelphia, PA 19106

Zone No. 36, Galveston
Operator: Port of Galveston
Galveston Wharves, P.O. Box 328, Galveston, TX 77550
Grantee: City of Galveston

Zone No. 37, Orange County (New York)
Operator: Foreign Trade Dev. Co. of Orange Cty., Inc.
P.O. Box 6147, Stewart Airport, Newburgh, NY 12550
Grantee: County of Orange

Zone No. 38, Spartanburg County (South Carolina)
Operator: Carolina Trade Zone
2725 W. 5th North St., Summerville, SC 29483
Grantee: South Carolina State Ports Authority

Zone No. 39, Dallas/Fort Worth
Grantee: Dallas/Fort Worth Regional Airport Board
P. O. Drawer DFW, Dallas/Fort Worth Airport, TX 75261

Zone No. 40, Cleveland
Grantee: Cleveland Port Authority
101 Erieside Avenue, Cleveland, OH 44114

Zone No. 41, Milwaukee
Grantee: Foreign Trade Zone of Wisconsin, Ltd.
2150 E. College Avenue, Cudahy, WI 53110

Zone No. 42, Orlando
Grantee/Operator: Greater Orlando Aviation Authority
4101 East 9th Street, Orlando, FL 32812

Zone No. 43, Battle Creek (Michigan)
Grantee/Operator: BC/CAL/KAL Inland Port Authority of
S. Central Michigan Development Corp., P.O. Box 1438,
Battle Creek, MI 49016

Zone No. 44, Morris County (New Jersey)
Grantee: N.J. Dept. of Commerce & Economic Dev.
Office of Int'l Trade, 744 Broad St., Newark, NJ 07102

Zone No. 45, Portland (Oregon)
Grantee/Operator: Port of Portland
P.O. Box 3529, Portland, OR 97208

Zone No. 46, Cincinnati
Grantee/Operator: Greater Cincinnati FTZ, Inc.
120 W. 5th Street, Cincinnati, OH 45202

Zone No. 47, Campbell County (Kentucky)
Grantee/Operator: Greater Cincinnati FTZ, Inc.
120 W. 5th Street, Cincinnati, OH 45202

Zone No. 48, Tucson (Arizona)
Grantee/Operator: Papago-Tucson FTZ Corp.
San Xavier Development Authority, P.O. Box 11246,
Mission Station, AR 85734

Zone No. 49, Newark/Elizabeth (New Jersey)
Grantee/Operator: Port Authority of NY and NJ
One World Trade Center, Rm. 64, West, New York, NY 10048

Zone No. 50, Long Beach (California)
Grantee: Board of Harbor Commissioners of the Port of
Long Beach, P.O. Box 570, Long Beach, CA 90801-0570

Zone No. 51, Duluth (Minnesota)
Grantee/Operator: Seaway Port Authority of Duluth
1200 Port Terminal Drive, P.O. Box 8677, Duluth, MN 55808

Zone No. 52, Suffolk, County (New York)
Grantee/Operator: County of Suffolk
1 Trade Zone Drive, Ronkonkoma, NY 11779

Zone No. 53, Rogers County (Oklahoma)
Grantee/Operator: City of Tulsa-Rogers Cty, Port Auth.
Tulsa Port of Catoosa, 5330 Cimarron Road
Catoosa, OK 74105

Zone No. 54, Clinton County (New York)
Grantee/Operator: Clinton County Area Dev. Corp.
P.O. Box 19, Plattsburgh, NY 12901

Zone No. 55, Burlington (Vermont)
Grantee/Operator: Greater Burlington Industrial Corp.
P.O. Box 786, Burlington, VT 05726

Zone No. 56, Oakland (California)
Operator: Oakland International Trade Center, Inc.
633 Hegenberger Rd. Oakland, CA 94621
Grantee: City of Oakland

Zone No. 57, Mecklenburg County (North Carolina)
Operator: Piedmont Distribution Center
P.O. Box 7123, Charlotte, NC 28217
Grantee: North Carolina Department or Commerce

Zone No. 58, Bangor (Maine)
Grantee/Operator: City of Bangor
Economic Dept., City Hall, Bangor, ME 04401

Zone No. 59, Lincoln (Nebraska)
Grantee/Operator: Lincoln Chamber of Commerce
1221 North Street, Suite 606, Lincoln, NE 68508

Zone No. 60, Nogales (Arizona)
Operator: Rivas Realty
3450 Tucson-Nogales Highway, Nogales, AR 85621
Grantee: Border Industrial Development, Inc.

Zone No. 61, San Juan (Puerto Rico)
Grantee/Operator: Puerto Rico Commercial Dev. Co.
Commonwealth of Puerto Rico, G.P.O. Box 4943,
San Juan, PR 00936

Zone No. 62, Brownsville (Texas)
Grantee/Operator: Brownville, Navigation District Port of
Brownville, P.O. Box 3070, Brownville, TX 78520

Zone No. 63, Prince George's County (Maryland)
Grantee: Prince George's County Government
The Collington Center, 16201 Trade Zone Ave, Ste 104
Upper Marlboro, MD 20772

Zone No. 64, Jacksonville (Florida)
Grantee: Jacksonville Port Authority
P.O. Box 3005, Jacksonville, FL 32206

Zone No. 65, Panama City (Florida)
Grantee/Operator: Panama City Port Authority
P.O. Box 15095, Panama City, FL 32406

Zone No. 66, Wilmington (North Carolina)
Operator: N.C. State Port Authority
2202 Burnett Blvd., Wilmington, NC 28402
Grantee: North Carolina Dept. of Commerce

Zone No. 67, Morehead City (North Carolina)
Operator: N.C. State Port Authority
2202 Burnett Blvd., Wilmington, NC 28402
Grantee: North Carolina Dept. of Commerce

Zone No. 68, El Paso (Texas)
Operator: El Paso International Airport
El Paso, TX 79925
Grantee: City of El Paso

Zone No. 70 Detroit
Grantee/Operator: Greater Detroit Foreign-Trade Zone, Inc.
100 Renaissance Ctr., Suite 2020, Detroit, MI 48243

Zone No. 71, Windsor Locks (Connecticut)
Grantee: Industrial Development Commission of Windsor Locks
Town Office Building, 50 Church Street, P.O. Box L,
Windsor Locks, CT 06096

Zone No. 72, Indianapolis
Operator: Indianapolis Economic Development Corporation
48 Monument Circle, Indianapolis, IN 46204
Grantee: Indianapolis Airport Authority

Zone No. 73, Baltimore/Washington Int'l Airport
Operator: All Cargo Expediting Services, Inc.
P.O. Box 28673, BWI Airport, MD 21240
Grantee: Maryland Dept. of Transportation

Zone No. 74, Baltimore
Grantee: City of Baltimore
c/o Baltimore Economic Development Corp.,
36 South Charles St., Baltimore, MD 21201

Zone No. 75, Phoenix
Grantee: City of Phoenix
Community & Economic Dev. Adm., Suite D,
920 E. Madison St., Phoenix, AZ 85034

Zone No. 76, Bridgeport (Connecticut)
Grantee/Operator: City of Bridgeport
City Hall, 45 Lyon Terrace, Bridgeport, CT 06604

Zone No. 77, Memphis
Operator: Mid-South Terminals Company, Ltd.
P.O. Box 13286, Memphis, TN 38113
Grantee: The City of Memphis

Zone No. 78, Nashville
Grantee: Metropolitan Nashville-Davidson County Port Authority
172 Second Ave. North, Ste. 212,
Nashville, TN 37201

Zone No. 79, Tampa
Grantee: City of Tampa
Office of Urban Dev., City Hall, 315 E. Kennedy Blvd.,
Tampa, FL 33602

Zone No. 80, San Antonio
Grantee: City of San Antonio
P.O. Box 9066, San Antonio, TX 78285

Zone No. 81, Portsmouth (New Hampshire)
Grantee/Operator: New Hampshire State Port Authority
555 Market Street, P.O. Box 506, Portsmouth, NH 03801

Zone No. 82, Mobile
Operator: Mobile Airport Authority
Bldg. 11, Brookley Complex, Mobile, AL 36615
Grantee: City of Mobile

Zone No. 83, Huntsville (Alabama)
Grantee/Operator: Huntsville-Madison County Airport
Authority, P.O. Box 6006, Huntsville, AL 35806
J.E. Mitchell, Jr. (205) 772-9395

Zone No. 84, Harris County (Texas)
Grantee: Port of Houston Authority
P.O. Box 2562, Houston, TX 77252

Zone No. 85, Everett (Washington)
Grantee: Puget Sound Foreign-Trade Zone Association
c/o Economic Development Partnership for Washington
18000 Pacific Highway South, Suite 400, Seattle, WA 98188

Zone No. 86, Tacoma (Washington)
Grantee: Puget Sound Foreign-Trade Zone Association
c/o Economic Development Partnership for Washington
18000 Pacific Highway South, Suite 400, Seattle, WA 98188

Zone No. 87, Lake Charles (Louisiana)
Grantee/Operator: Lake Charles Harbor & Terminal District
P.O. Box AAA, Lake Charles, LA 70602

Zone No. 88, Great Falls (Montana)
Grantee/Operator: Economic Growth Council of Great Falls
P.O. Box 1273, Great Falls, MT 59403

Zone No. 89, Clark County (Nevada)
Grantee/Operator: Nevada Development Authority
3900 Paradise Road, Suite 155, Las Vegas, NV 89109

Zone No. 90, Onondaga (New York)
Grantee: County of Ononodaga
c/o Greater Syracuse Chamber of Commerce
100 E. Onondaga Street, Syracuse, NY 13202

Zone No. 91, Newport (Vermont)
Grantee/Operator: Northeastern Vermont Dev. Assoc.
44 Main Street, St. Johnsbury, VT 05819

Zone No. 92, Harrison County (Mississippi)
Grantee: Greater Gulfport/Biloxi Foreign-Trade Zone, Inc.
3825 Ridgewood Rd., Jackson, MS 39211-6453

Zone No. 93, Raleigh/Durham (North Carolina)
Grantee: Triangle J. Council of Governments
100 Park Drive, P.O. Box 12276, Research Triangle Park, NC 27709

Zone No. 94, Laredo (Texas)
Operator: Laredo International Airport
Operator of Foreign-Trade Zone No. 94
518 Flightline, Building #132
Laredo, TX 78041
Grantee: City of Laredo

Zone No. 95, Starr County (Texas)
Grantee/Operator: Starr County Industrial Foundation
P.O. Drawer H
Rio Grande City, TX 78582

Zone No. 96, Eagle Pass (Texas)
Grantee/Operator: City of Eagle Pass
P.O. Box C, City Manager's Office, Eagle Pass, TX 78852

Zone No. 97, Del Rio (Texas)
Grantee/Operator: City of Del Rio
City Manager's Office, P.O. Drawer DD, Del Rio, TX 78840

Zone No. 98, Birmingham (Alabama)
Grantee/Operator: City of Birmingham
Mayor's Office, City of Birmingham, Birmingham City Hall
Birmingham, AL 35203

Zone No. 99, Wilmington (Delaware)
Grantee/Operator: State of Delaware
Delaware Development Office, Dover, DE 19901

Zone No. 100, Dayton (Ohio)
Grantee/Operator: Greater Dayton Foreign-Trade Zone, Inc.
1880 Kettering Tower, Dayton, OH 45423-1880

Zone No. 101, Clinton County (Ohio)
Grantee/Operator: Airborne FTZ, Inc.
145 Hunter Drive, Wilmington, OH 45177

Zone No. 102, St. Louis
Grantee/Operator: St. Louis County Port Authority
130 South Bemiston, Clayton, MO 63105

Zone No. 103, Grand Forks (North Dakota)
Grantee/Operator: Grand Forks Dev. Foundation
P.O. Box 1177, 204 North 3rd, Grand Forks, ND 58201

Zone No. 104, Savannah (Georgia)
Grantee/Operator: Savannah Airport Commission
P.O. Box 2723, Savannah, GA 31402-2723

Zone No. 105, Providence and North Kingstown (Rhode Island)
Grantee: Rhode Island Port Authority and Economic Dev. Corp.
7 Jackson Walkway, Providence, RI 02903

Zone No. 106, Oklahoma City (Oklahama)
Grantee: The City of Oklahoma City
c/o Community Dev. Dept., 200 N. Walker, 4th Floor, Oklahoma City, OK 73102

Zone No. 107, Des Moines (Iowa)
Operator: Centennial Warehouse Corporation
10400 Hickman Rd., Des Moines, IA 50322
Grantee: The Iowa Foreign-Trade Zone Corporation

Zone No. 108, Valdez (Alaska)
Grantee: The City of Valdez, Alaska
Port of Valdez, 200 S.W. Market St., Suite 985, Portland, OR 97201-5713

Zone No. 109, Watertown (New York)
Grantee: The County of Jefferson
c/o Jefferson Industrial Dev. Agency
175 Arsenal St., Watertown, NY 13601

Zone No. 110, Albuquerque (New Mexico)
Operator: Foreign-Trade Zone of New Mexico
FTZ Operators, Inc., 1617 Broadway NE, P.O. Box 26928, Albuquerque, NM 87125
Grantee: The City of Albuquerque

Zone No. 111, JFK, Int'l Airport (New York)
Operator: Port Authority of New York and New Jersey
Kennedy Int'l Airport, Business Adm. Div., Bldg. 141
Jamaica, NY 11430
Grantee: The City of New York

Zone No. 112, Colorado Springs (Colorado)
Operator: Front Range Foreign-Trade Zone, Inc.
4675 Aerospace Boulevard, Colorado Springs, CO 80925
Grantee: Colorado Springs Foreign-Trade Zone, Inc.

Zone No. 113, Ellis County (Texas)
Operator: Trade Zone Operations, Inc.
100 Center Drive, Midlothian, TX 76065
Grantee: Midlothian Chamber of Commerce

Zone No. 114, Peoria (Illinois)
Grantee: Economic Development Council, Inc.
230 S.W. Adams, Peoria, IL 61602

Zone No. 115, Beaumont (Texas)
Grantee: Foreign-Trade Zone of Southeast Texas, Inc. M-Bank Port Arthur
8200 Hwy. 69, Suite 403, Port Arthur,
TX 77640

Zone No. 116, Port Authur (Texas)
Grantee: Foreign-Trade Zone of Southeast Texas, Inc. M-Bank Port Arthur
8200 Hwy. 69, Suite 403, Port Arthur,
TX 77640

Zone No. 117, Orange (Texas)
Grantee: Foreign-Trade Zone of Southeast Texas, Inc. M-Bank Port Arthur
8200 Hwy. 69, Suite 403, Port Arthur,
TX 77640

Zone No. 118, Ogdensburg (New York)
Grantee: Ogdensburg Bridge and Port Authority
Ogdensburg, N.Y. 13669

Zone No. 119, Minneapolis-St. Paul Minnesota
Grantee: Greater Metropolitan FTZ Commission, c/o MCDA
331 Second Ave. S., Suite 600, Midland Square Bldg.,
Minneapolis, MN 55401

Zone No. 120, Cowlitz County (Washington)
Grantee: Cowlitz Economic Development Council
1338 Commerce, Suite 211, Longview, WA 98632

Zone No. 121, Albany (New York)
Grantee: Capital District Regional Planning Commission
214 Canal Square, 2nd Floor, Schenectady, NY 12305

Zone No. 122, Corpus Christi (Texas)
Grantee: Port of Corpus Christi Authority
P.O. Box 1541
Corpus Christi, TX 78403

Zone No. 123, Denver (Colorado)
Operator: Aspen Distribution
5401 Oswego St., P.O. Box 39108, Denver, CO 80239
Grantee: City and County of Denver

Zone No. 124, Gramercy (Louisiana)
Grantee: South Louisiana Port Commission
P.O. Drawer K, La Place, LA 70068-1109

Zone No. 125, South Bend (Indiana)
Operator: Material Trans Action
2741 N. Foundation Dr., South Bend, IN 46634-1877
Grantee: St. Joseph County Airport Authority

Zone No. 126, Sparks (Nevada)
Grantee: Nevada Development Authority
Nevada Foreign-Trade Zone, P.O. Box 11710, Reno, NV 89510

Zone No. 127, West Columbia (South Carolina)
Operator: Columbia Metropolitan Airport
3000 Aviation Way, W. Columbia, SC 29169-2190
Grantee: South Carolina State Ports Authority

Zone No. 128, Whatcom County (Washington)
Grantee: Lummi Indian Business Council
2616 Kwina, Bellingham, WA 98266

Zone No. 129, Bellingham (Washington)
Grantee: Port of Bellingham
P.O. Box 1737, Bellingham, WA 98227

Zone No. 130, Blaine (Washington)
Grantee: Port of Bellingham
P.O. Box 1737, Bellingham, WA 98227

Zone No. 131, Sumas (Washington)
Grantee: Port of Bellingham
P.O. Box 1737, Bellingham, WA 98227

Zone No. 132, Coos County (Oregon)
Grantee: International Port of Coos Bay Commission
Oregon Int'l Port of Coos Bay, Port Bldg., Front & Market St., Coos Bay, OR 97420

Zone No. 133, Quad-City (Iowa/Illinois)
Grantee: Quad-City Foreign-Trade Zone, Inc.
First National Bank of the Quad-Cities, Suite 406
Quad-City, IL 61201

Zone No. 134, Chattanooga (Tennessee)
Grantee: Partners for Economic Progress, Inc.
1001 Market Street, Chattanooga, TN 37402

Zone No. 135, Palm Beach County (Florida)
Grantee: Port of Palm Beach District
P.O. Box 761, Palm Beach, FL 33480

Zone No. 136, Brevard County, (Florida)
Grantee: Canaveral Port Authority
P.O. Box 267, Port Canaveral Station, Cape Canaveral, FL 32920

Zone No. 137, Washington, Dulles Int'l Airport, Virginia
Grantee: Washington Dulles Foreign-Trade Zone
P.O. Box 17349, Washington Dullas Int'l Airport, Washington, DC 20041

Zone No. 138, Franklin County (Ohio)
Grantee: Rickenbacker Port Authority
375 South High Street, 17th Floor, Columbus, OH 43215

Zone No. 139, Sierra Vista (Arizona)
Grantee: Sierra Vista Economic Development Foundation, Inc.
P.O. Box 2380, Sierra Vista, AZ 85636

Zone No. 140, Flint (Michigan)
Grantee: City of Flint
Bishop International Airport, G-3425 West Bristol Road,
Flint, MI 48507

Zone No. 141, Monroe County (New York)
Grantee: County of Monroe, New York
Monroe County Foreign-Trade Zone, 55 St. Paul Street,
Rochester, NY 14604

Zone No. 142, Salem (New Jersey)

Zone No. 143, Sacramento (California)

Zone No. 144, Brunswick (Georgia)

APPENDIX E

PARTIES TO WHOM QUESTIONNAIRES WERE SENT AND FROM WHOM COMMENTS WERE DIRECTLY SOLICITED

Firms and/or establishments to which questionnaires were sent (number in parenthesis indicates number of individual questionnaires sent to that location)

Ambrosia Chocolate Co
1133 North 5th Street
Milwaukee, WI 53203
(1)

American Motors Corp
27777 Franklin Road
Southfield, MI 48034
(2)

Bay Shipbuilding Corp
605 North 3rd Street
Sturgeon Bay, WI 54245
(1)

Berg Steel Pipe Corp
PO Box 2029
Panama City, FL 32401
(1)

Berry Contracting, Inc.
PO Box 4858
Corpus Christi, TX 78469
(1)

Bethlehem Steel Corp
PO Box 3031
Beaumont, TX 97704
(1)

Bethlehem Steel Corp
Sparrows Point Yard
Sparrows Point, MD 21219
(1)

Caterpillar Incorporated
100 Northeast Adams Street
Peoria, IL 61629
(1)

CC Distributing, Inc
PO Box 9153
Corpus Christi, TX 78469
(1)

Chrysler Corp
38111 Van Dyke Avenue
Sterling Hts, MI 48077
(7)

Clark Equipment
300 West Vine Street
Lexington, KY 40507-1640
(1)

Clark Equipment
4950 West Dickman Road
Battle Creek, MI 49015
(1)

Coastal Refining & Marketing
PO Box 521
Corpus Christi, TX 78403
(1)

Compressors of Texas, Inc
4730 Westway Drive
Corpus Christi, TX 78408
(1)

Dole Processed Foods Co
650 Iwilei Road
Honolulu, HI 96817
(1)

Eli Lilly & Co
307 East McCarty Street
Indianapolis, IN 46285
(3)

Finley-McDermott & Co.
for Jack Young & Asso.
333 E. 46th Street
New York, NY 10017
(1)

Ford/Transportation & Traffic
Parklane Tower East
1 Parklane Blvd - Suite 200
Dearborn, MI 48126
(12)

General Dynamics
Quincy Shipbuilding Division
10 Forbes Road, East
Braintree, MA 02184
(1)

General Electric
Bldg 1 Rm 152
Appliance Park
Louisville, KY 40225
(1)

General Motors
14-262C GM Building
Detroit, MI 48202
(15)

Goetze Gasket Co
1641 Forrest Ave
La Grange, GA 30240
(1)

Greater Buffalo Press
302 Grote Street
Buffalo, NY 14207
(1)

Gulf Marine Fabricators
PO Box C
Ingleside, TX 78362
(1)

Hawaiian Flour Mills
PO Box 855
Honolulu, HI 96808
(1)

HIRI/Enerco
PO Box 3379
733 Bishop Street
Honolulu, HI 96842
(1)

Hitox Corporation of America
PO Box 2544
Corpus Christi, TX 78403
(1)

Honda
655 15th Street, NW
Washington, DC 20005
(1)

IBM
Dept. F, Diagonal Highway
Building 910
Boulder, CO 80302
(2)

Kawasaki Motors Mfg Corp, USA
6600 27th Street, NW
Lincoln, NE 68524
(1)

Lawrence Textiles
PO Box 1016
516 Broadway
Lawrence, MA 01841
(1)

Lilli Ann
2701 16th Street
San Francisco, CA 94103
(1)

Manchester Manufacturers
PO Box 119
Colebrook, NH 03576
(1)

Maui Pineapple
PO Box 187
Kahului
Island of Maui, HI 96732

Mazda Motors, USA Corp
1 Mazda Drive
Flat Rock, MI 48134
(1)

Nashua Corporation
International Division
44 Franklin Street
Nashua, NH 03061
(1)

National Steel & Shipbldg
PO Box 85278
San Diego, CA 92138
(1)

New United Motors Mfg, Inc (NUMMI)
455500 Fremont Blvd
Fremont, CA 94538
(1)

New York Air Brake Co
Starbuck Avenue
Watertown, NY 13601
(1)

Nissan Motor Mfg Corp, USA
812 Nissan Drive
Smyrna, TN 37167
(1)

Olympus Corporation
2185 Fortune Drive
San Jose, CA 95131
(1)

Pedigree USA, Inc
PO Box 432 High Gate Rd
St Albans, VT 05478
(1)

Porsche Cars of North America
PO Box 30911
Reno, NV 89520
(2)

Power Packaging, Inc
525 Dunham Road
St. Charles, IL 60174
(3)

Sanyo Mfg Corporation
3333 Sanyo Road
Forest City, AR 72335
(1)

J. Schoeneman Co
9 Vandever Avenue
Wilmington, DE 19802
(1)

Sharp Manufacturing Co
Sharp Plaza Blvd
Memphis, TN 38193-0001
(1)

Smith-Corona
839 Route 13 South9
Cortland, NY 13045
(1)

Southwestern Refining Co, Inc
PO Box 9217
Corpus Christi, TX 78469
(1)

Sterlingwale
10 Park Plaza
Boston, MA 02116
(1)

Summa Medical Corporation
4272 Ballon Park Rd, NE
Albuquerque, NM 87109
(1)

Tennessee Valley Authority
1570-C Chestnut Street Tower
Chattanooga, TN 37402
(2)

Toshiba of America, Inc
1420 Toshiba Drive
Lebanon, TN 37087
(1)

Toyota Auto Body, Inc
6375 Paramount Blvd
PO Box 2140
Long Beach, CA 90801
(1)

Trifinery
PO Box 9606
Corpus Christi, TX 78469
(1)

UNR Industries
332 South Michigan St
Chicago, IL 60604

Volkswagen of America
1 Volkswagen Plaza
New Stanton, PA 15672
(1)

Winnebago Industries
PO Box 152
Forest City, IA 50436

Xerox Corporation
800 Phillips Rd, Bldg 0205-99P
Webster, NY 14580
(1)

Parties known to have expressed concern about foreign-trade zones who were solicited for comments

AFL-CIO
815 16th Street, NW
Economic Research Dept
Washington, DC 20006

American Apparel Mfr Assoc
2500 Wilson Blvd, Suite 301
Arlington, VA 22201

American Iron & Steel Institute
1133 15th Street, NW, Suite 300
Washington, DC 20005

American Textile Mfrs Institute
1101 Connecticut Ave, NW
Washington, DC 20036

American Textiles Machinery Assoc
7297 N Lee Highway
Falls Church, VA 22042

Automotive Parts & Accessories Assoc
5100 Forbes Blvd
Lanham, MD 20706

Automotive Services Industry Assoc
1725 K Street, NW, Suite 710
Washington, DC 20006

Collier, Shannon, Rill & Scott
Re: Bicycle Mfrs Assoc of America
1055 T Jefferson St NW, Suite 308
Washington, DC 20007

Collier, Shannon, Rill & Scott
Re: COMPACT
1055 T. Jefferson St NW / Suite 308
Washington, DC 20007

Collier, Shannon, Rill & Scott
Re: Outdoor Power Equip Institute
1055 T Jefferson St NW / Suite 308
Washington, DC 20007

Collier, Shannon, Rill & Scott
Re: Specialty Steel Industry
1055 T Jefferson St NW / Suite 308
Washington, DC 20007

Corn Refiners Assoc, Inc
1001 Connecticut Ave NW
Washington, DC 20036

Cycle Parts & Accessories Assoc
181 Salem Road
East Hills, NY 11577

Dry Colors Manufacturers Assoc
PO Box 20839
Alexandia, VA 22320-1839

Electronics Industries Association
2001 I Street NW
Washington, DC 20006

Half Penny, Hahn, & Roche
20 North Wacher Road
Chicago, IL 60606

Homelite, Div of Textron, Inc
14401 Carowinds Blvd
PO Box 7047
Charlotte, NC 28217
(704) 588-3200

Int'l Union of Electronic, Electrical,
Salaried, Machine & Furn Workers
1126 16th Street NW
Washington, DC 20036

Lonny Frake
PO Box 97
Maysville, KY 41056

Motor & Equipment Manufacturers Assoc
PO Box 1638
300 Sylan Avenue
Englewood Cliffs, NJ 07632-0638

Nat'l Machine & Tool Builders Assoc
7901 Westpark Drive
McLean VA 22102

New Hampshire State Port Authority
555 Market Street
PO Box 506
Portsmouth, NH 03801

North American Philips
Consumer Electronics Corp
Interstate 40, Straw Plains Pike
knoxville, TN 37914

Northern Textile Assoc
230 Congress Street
Boston, MA 02110

Roadmaster Coroporation
Radio Tower Rd & East St
PO Box 344
Olney, IL 62450

Stewart-Warner Corp
1010 Vermont Avenue, NW
Suite 1120
Washington, DC 20005

Taft, Stettinius & Hollister
Re: Wald Mfg Company
1620 I Street NW / Suite 800
Washington, DC 20006

United Auto Workers
1757 N Street NW
Washington, DC 20036

United Steel Workers
815 16th Street NW
Washington, DC 20006

U.S. Beet Sugar Assoc
1156 15th Street NW
Suite 1019
Washington, DC 20005

U.S. Cane Sugar Refiners Assoc
1001 Connecticut Ave NW
Washington, DC 20036

Wald Mfg
PO Box 10
Maysville, KY 41056
(606) 564-4078

Parties in the petroleum industry known have expressed interest in the past about foreign-trade zones who were solicited for comments

American Independent Refiners
114 Third St SE
Washington, DC 20003

Amoco Corporation
1615 M Street, NW
Suite 200
Washington, DC 20036

Amoco Oil Co
200 East Randolph Drive
PO Box 6110A
Chicago, IL 60680

Ashland Oil, Inc
1025 Connecticut Avenue, NW
Suite 507
Washington, DC 20036

Crown Central Petoleum Corp
One North Charles
Baltimore, MD 21201

GATX Terminals Corp
400 North Belt, East
Houston, TX 77060-3534

Lane & Mittendorf
1750 K Street NW
Washington, DC 20006

Marathon Petroleum Co
Louisiana Refining Division
PO Box AC
Garyville, LA 70051

Mobil
3225 Gallows Road
Fairfax, VA 22037-0001

National Petroleum Refiners Assoc
1899 L Street NW
(457-0480)

Oiltanking of Texas, Inc
PO Box 96290
Houston, TX 77213

Pennzoil Company
1155 15th Street NW
Suite 600
Washington, DC 20005-2770

Phillips 66
Attn: Richard Robinson
Bartlesville, OK 74004

Robert J. Kane Associates, Inc
9603 Scotch Haven Drive
Vienna, VA 22180

Sun Refining & Marketing Co
Ten Penn Center
1801 Market St
Philadelphia, PA 19103-1699

Tenneco Oil Co
Tenneco Bldg
PO Box 2511
Houston, TX 77001

State and local representatives solicited for comments on the relationship of foreign-trade zones to state economic development

Off of Int'l Trade
3601 C St Suite 722
Anchorage, AK 99503

Alabama Development Office
State Capital
Montgomery, AL 36130

Arkansas Industrial Development Comm
1 Capitol Mall
Little Rock, AR 72201

Arizona Dept of Commerce
1700 W Wash St Rm 505
Phoenix, AZ 85007

Dept of Commerce
1121 L St Suite 600
Sacramento, CA 95814

Int'l Trade Office
1313 Sherman, Rm 518
Denver, CO 80203

Dept of Economic Development
210 Washington St
Hartford, CT 06106

Natl Governor's Assn
444 N. Capitol St NW
Washington, DC 20009

U.S. Conference on Mayors
1620 I St NW
Washington, DC 20006

Delaware Development Office
99 King Highway
Dover, DE 19001

Bur. of Int'l Trade & Dev
401 Collins Bldg
Tallahassee, FL 32399-2000

Georgia Dept of Ind & Trade
PO Box 1776
Atlanta, GA 30301

Dept of Bus & Econ Dev-FTZ
521 Ala Moana, Pier 2
Honolulu, HI 96813

Dept of Commerce
State House Rm 108
Boise, ID 83720

Dept of Comm & Cons Affairs-Intl
100 W Randolph, Suite 3-400
Chicago, IL 60601

Indiana Dept of Commerce
1 N Capitol Ave
Indianapolis, IN 46204-2248

Iowa Econ Dev Intl Div
200 E Grand
Des Moines, IA 50309

Dept of Commerce, Trade Dev. Div.
400 SE Eighth St., Suite 500
Topeka, KA 66603-3957

Kentucky Commerce Cabinet
Capital Plz Tower 24th Flr
Frankfort, KY 40601

LA Dept of Commerce
PO Box 94185
Baton Rouge, LA 70804

Ofc of Intl Trade & Invest
100 Cambridge St 9th Flr
Boston, MA 02202

Maine World Trade Association
77 Sewall St
Augusta, ME 04430

Mich. Dept of Commerce
PO Box 30225 Law Bldg
Lansing, MI 48909

1000 World Trade Center
30 E. 7th St
St Paul, MN 55101

Intl Bus Devel
PO Box 118
Jefferson, CY MO 65102

Miss. Research & Devel Ctr
3825 Ridgewood Rd
Jackson, MS 39211-6453

Bus Asst Div State of Montana
1424 Ninth Ave
Helena, MT 59620-0531

Intl Div Dept of Econ Dev
Box 949666-301 Cent Mall S
Lincoln, NB 68509

Commission on Economic Dev.
600 E William St, Suite 203
Carson City, NV 89710

Dept of Comm Intl Div
430 N. Salisburg St
Raleigh, NC 27611

N.D. Econ Devel Commn Dev
Liberty Memorial Bldg.
Bismark, ND 58805

Ofc of Ind Devel
PO Box 856
Concord, NH 03301

NJ Division of Intl Trade
744 Broad St Rm 1709
Newark, NJ 07102

Econ Dev & Tourism - Intl Trade Div
J. Montoya B - 1100 St Franc
Santa FE, NM 87503

NY State Dept of Econ Dev
230 Park Ave
New York, NY 10169

Ofc of Indus Dev
30 E Brad St 23rd Flr
Columbus, OH 43266

OK Dept of Commerce
6601 Broadway Ext
Oklahoma Cty, OK 73116

Intl Trade Div for Ore. Econ. Dev
1500 SW First, Suite 620
Portland, OR 97201

PA Dept of Commerce/Intl Div
Forum Bldg Rm 490
Harrisburg, PA 17120

Dept of Econ Dev
7 Jackson Walkway
Providence, RI 02903

SC State Dev Board
PO Box 927
Columbia, SC 2902

Goveror's Ofc of Econ/Dev
Capital Lake Plaza
Pierre, SD 57501

Dept of Econ & Community Dev.
320 6th Av N., R. Jackson Bldg
Nashville, TN 37219

Utah Bus & Econ Dev
6150 State Office Bldg
Salt Lake, UT 84114

Dept of Econ Dev
1000 Washington Bldg
Richmond, VA 23219

Agency of Dev & Community Affairs
109 State St
Montpelier, VT 05602

Dept of Trade & Econ Dev
313 First Ave North
Seattle, WA 98109

Wisconsin Dept of Dev
123 W Wash Ave
Madison, WI 53707

Gov.'s Ofc of Community & Ind Dev
Main Capitol Bldg Rm M-146
Charleston, WV 25305

State Plng. Coordinator's Ofc
Herschler Bldg
Cheyenne, WY 82002

APPENDIX F

GENERAL-PURPOSE ZONE PROFILES

McAllen, TX (FTZ No. 12)

As in previous years, on the basis of merchandise shipments, McAllen was the number one general-purpose zone in 1986. The value of merchandise shipped from this zone increased from $525 million, or 38 percent of merchandise shipped from all general-purpose zones in 1983 to $612 million, or 20 percent of shipments in 1986. Major operations conducted within the zone between 1983 and 1986 were warehousing, inspection, repacking, storage, and exportation of such goods as television parts, electric motors, jewelry, leather goods, machine parts, and musical instruments. In 1986, the zone served 149 firms. Among the most important of these were Zenith Electronics, General Electric Co., and McAllen American (a subsidiary of Kimball Piano and Organ Co.). The McAllen zone is located in southwest Texas about 3 miles from the Mexican border via the Hidalgo port of entry on 40 net leasable acres out of an 80-acre block. The grantee for the zone is McAllen Trade Zone, Inc., a Texas nonprofit corporation, and the operator is McAllen Industrial Board, a joint venture of the city of McAllen and the McAllen Chamber of Commerce. The grant to establish the zone was received on October 23, 1970; it went into operation on June 5, 1973.

Tacoma, WA (FTZ No. 86)

This recently established general-purpose zone accounted for the second largest amount of shipments in 1986. Shipments from Tacoma totaled $532 million, or 17 percent of merchandise shipped from all general-purpose zones. This was up sharply from 1985 shipments of $34 million, or less than 1 percent of all general-purpose zone shipments in that year. The principal function of the zone has been to import motor vehicles from Japan that are processed and accessorized. The accessorization consists of installing domestic components such as air conditioning, radios, mirrors, floor mats, bumpers, et cetera, into Japanese motor vehicles. No manufacturing took place within the zone. In 1986, the zone served only one firm. Puget Sound Foreign Trade Association is the grantee of the zone. The grant to establish the zone was received on July 20, 1983, and the zone began to operate on August 9, 1985.

Ellis County, TX (FTZ No. 113)

This is the most recently approved general-purpose zone to report merchandise shipped. It accounted for the third largest amount of shipments in 1986, a total of $480 million, or 15 percent of merchandise shipped from all general-purpose zones, a $300 million increase for 1985. This was more than twice the value of shipments of $176 million for the zone in 1985. The primary function of the zone was to import motor vehicles that are then processed and accessorized. The accessorization consists of installing domestic components such as air conditioning, radios, mirrors, floor mats, bumpers, et cetera, into the Japanese motor vehicles. No manufacturing took place within the zone in 1986. The zone served one user during FY 1986, which used approximately 53 acres of activated space. The Midlothian Chamber of Commerce, which is the grantee of the zone, contracted with Trade Zone Operations, Inc., to operate the zone. The grant to establish the zone was received on December 21, 1984, and the zone became active on February 11, 1985.

Miami, FL (FTZ No. 32)

This zone accounted for the fourth largest amount of shipments from general-purpose zones in 1986. The 1986 shipments from the zone totaled $298 million, or almost 10 percent of total shipments from the general-purpose zones. This represents an increase of $56 million over shipments in 1983 for the zone. A few manipulative operations, repacking, inspection, and testing were conducted within the zone. A primary function of this zone has been to serve as a major marketing and distribution point from Europe and Asia into South America and the Caribbean; and vice versa. Merchandise shipped included electronic articles, jewelry, general merchandise, perfumes, and liquors. In 1986, the zone served 175 firms, 114 of which occupied the zone continuously. The Miami zone is located on a 73 acre tract of land approximately 5 miles west of Miami International Airport and 15 minutes via expressway from the Port of Miami and the downtown central business district of Miami. The grantee, the Greater Miami Chamber of Commerce, has contracted with the Miami Free Zone Corp., a private Florida corporation, to operate the zone. The grant to establish the zone was received on September 6, 1977; the zone began to operate on April 16, 1979.

New Orleans, LA (FTZ No. 2)

This zone which is the oldest foreign-trade zone facility on the gulf coast and the second oldest operating zone in the United States, ranked fifth among the general-purpose zones with total shipments of $108 million, up 6 percent from 1983 total shipments of $101 million. Many manipulation and manufacturing operations were carried out in the zone including--quality control through inspection; adjustment and repair of binoculars; the inspection and repair of cameras, projectors, light meters; the cleaning, grading, mixing, grinding and rebagging and/or destruction of casein; the removal of ornamentation of clothing; and the stacking of lumber. Merchandise shipped included telephones and televisions, cameras and binoculars, coffee, and office machines. In 1986, the zones served 163 businesses, 9 of which occupied zone facilities continuously. The zone continues to occupy 18.6 acres adjacent to the Napoleon Avenue wharf on the north bank of the Mississippi River. In August 1984, Foreign Trade Zones Board Order No. 245 authorized the expansion and relocation of the zone to the heart of the Almonaster Michoud Industrial District. In May 1986, an application was approved for the development of a large scale foreign-trade zone operation, the Newport Industrial Park site, in response to the interest and need expressed for such an operation. The grantee and operator of the New Orleans foreign-trade zone has been the Board of Commissioners of the Port of New Orleans. The grant to establish the zone was received on July 16, 1946 and the zone began to operate on May 1, 1947.

Long Beach, CA (FTZ No. 50)

This zone ranked sixth among active general-purpose zones in 1986, with total shipments of $105 million, or 3 percent of merchandise shipped. This was a 39-fold increase from the 1983 total shipments of $2.6 million. Manipulation carried out in the zone facility included the destruction of redundant part axles, testing and destruction of toys, examining, repacking, and reconditioning of liquor, the examination of electromedical apparatus and

parts, and the remarking of cartons of turbo chargers for export. Merchandise shipped included axles, machinery, motors, irons, and televisions. In 1986, the zone served 307 firms, 53 of which occupied zone facilities continuously. The Long Beach zone occupies an 11.8 acre tract of land, of which 6.8 acres have been fully developed for zone use. The Board of Harbor Commissioners of the City of Long Beach is the grantee that contracted with Cal Cartage Enterprises, Inc., to operate the zone. The grant to operate the zone was received on September 14, 1979, and the zone began to operate in December 1982.

Port Everglades, FL (FTZ No. 25)

The general-purpose zone in Port Everglades, FL, ranked seventh among such zones in 1986, having shipped 90 million dollars' worth of merchandise, or about 3 percent of the total. Zone shipments in 1986 increased 16 percent, from $77 million in 1983. Principal activities conducted within the zone in recent years have been "Pick and Pack" operations through which commodities such as perfumes, pharmaceuticals, copy machine parts, sporting equipment, department store merchandise, and telecommunications equipment are brought in volume from overseas and distributed in smaller quantities in the United States and Latin America. Sample cutting, labeling, relabeling, counting, and sorting plus picking and packing were major manipulative activities carried out in the zone. In 1986, the zone served 122 businesses, 106 of which occupied zone facilities continuously. The zone is located on an 82 acre tract of land in southeast Florida about 20 miles north of Miami near Florida's deepest seaport area on the Atlantic Ocean. In 1986, the zone began a major expansion program that included the construction of two warehouses. The Port Everglades Port Authority is the grantee and operator of the zone. The grant to establish the zone was received on December 27, 1976, and the zone began to operate in a temporary warehouse facility on July 19, 1977.

Indianapolis, IN (FTZ No. 72)

The general-purpose zone in Indianapolis, ranked eighth on the basis of shipments from such zones in 1986, accounting for about $80 million, or more than triple the zone's 1983 shipments of $23 million. Principal zone operations included the unpacking and testing for defects of partially finished stereo cassette decks, the storage of pharmaceutical supplies, orthopedic and prosthetic devices, and the storage of liquor and ball bearings. Merchandise shipped from the zone included electronic components, medical supplies, ball bearings, distilled spirits, and textiles. The zone served 13 businesses in 1986 including Alpine Electronics, Inc., Clarion Corp. of America, Eli Lilly and Co., and the Dana Corp. The Indianapolis Airport Authority is the Grantee of the Foreign Trade Zone. The Indianapolis Economic Development Corp. operates the zone through an agreement with the Greater Indianapolis Foreign Trade Zone, Inc., a non-profit corporation. The grant to establish the zone was received on September 28, 1981, and the zone began to operate on December 1, 1981.

Wilmington, DE (FTZ No. 99)

This Delaware general-purpose zone ranked ninth in terms of shipments from such zones in 1986, registering shipments of $69 million. Manipulations

and manufacturing operations carried out in the zone included the blending of foreign and domestic frozen orange juice and the storage of foreign frozen juice concentrate. The zone served 4 businesses 2 of which occupied zone facilities continuously. The zone has two sites, one at the Port of Wilmington and one in the town of Wyoming, Kent County, DE. The Delaware Development Office, through an agreement with the City of Wilmington and a lease with the property owner in Kent County, operates the foreign-trade zone at both sites. The grant to establish the zone was received on April 27, 1984, and the zone began to operate later that year.

Other general-purpose zones

The balance ($737 million, or 24 percent) of the value of shipments from general purpose zones in 1986 was accounted for by 52 active zones. In 1986, the value of shipments from these zones ranged individually from a low of $26,873 (from Omaha, NE) to a high of $68,643,368 (from New York City). Zone operations consisted principally of the traditional activities associated with foreign-trade zones including the storing, sorting, inspection, labeling, and distribution of myriad consumer goods and other products. As in previous years, manufacturing in the general-purpose zones was limited except for a few zones such as FTZ No. 65 in Panama City, FL, where large-diameter steel pipe is produced, and FTZ No. 8 in Toledo, OH, where intermediate food products are manufactured. In 1986, 2051 firms used the general-purpose zones; 49 percent of these businesses used the zones part time.

APPENDIX G

SUBZONE PROFILES

Ford Motor Co. (Kansas City, MO plant) (subzone 15A)

Ford began operations at its Kansas City, MO, plant in January 1957 and gained subzone status in September 1983. The Greater Kansas City Foreign-Trade Zone, Inc., is the zone grantee and Kansas City is the port of entry. The Ford plant is assembling Ford Tempo and Lincoln-Mercury Topaz passenger automobiles from domestic and imported auto parts and subassemblies. The principal imported parts entering as nonprivileged status merchandise, including * * *

. As can be seen in table G-1, shipments from the zone * * * *** in 1984, the first full year of operating in the zone, before * * * *** in 1986. The foreign share of purchased inputs received * * * *** percent of the total value in 1984 to *** percent of the value in 1986 and to *** percent in the 9-month period ending in June 1987.

Table G-1
Ford Motor Co. (Kansas City, MO) (subzone 15A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983 1/	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Exports (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Exports (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in September 1983.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Ford Motor Co. (Chicago, IL) (subzone 22B)

Ford has been operating in their Chicago location, the Torrence Ave. Assembly Plant, since 1914. Their foreign-trade zone activities, assembling

of passenger automobiles, began in August 1986. The Illinois International Port District is the grantee and operator of zone 22. The principal imported components that entered into the subzone using nonprivileged foreign status were * * * . Shipments from the zone during the 9-month period ending June 1987 amounted to *** as shown in table G-2. The foreign share of purchased inputs received was *** percent.

Table G-2
Ford Motor Co. (Chicago, IL) (subzone 22B): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1986 1/	October 1986-June 1987
Shipments:		
Domestic (number)	***	***
Export (number)	***	***
Total	***	***
Shipments:		
Domestic (1,000 dollars)	***	***
Export (1,000 dollars)	***	***
Total	***	***
Total employment	***	***
Production and related workers	***	***
Hours worked by production workers (1,000 hours)	***	***
Share of total value of purchased inputs received of--		
Domestic content (percent)	***	***
Foreign content (percent)	***	***

1/ Subzone operations began in August 1986. No data on employment were provided for earlier years.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Ford Motor Co. (Atlanta assembly plant) (subzone 26A-C)

Ford operates this subzone in conjunction with the automotive assembly operations of its Hapeville, GA, plant that has been in operation since 1947. The zone grantee is the Georgia Foreign-Trade Zone, Inc., and Ford has been operating in its subzone since November 1985. Ford imported * * * utilizing nonprivileged foreign status. Foreign content was approximately *** percent during October 1986-June 1987, as shown in table G-3.

Ford Motor Co. (Louisville assembly plant) (subzone 29B)

Ford's Louisville, KY, automobile assembly plant, which has been in operation since 1955, began foreign-trade zone operations in October of 1985. The zone grantee is the Louisville and Jefferson County Riverport Authority.

Table G-3
Ford Motor Co. (Atlanta, GA) (subzone 26A-C): Selected data on total FTZ operations, 1986 and October 1986-June 1987

Item	1986 1/	October 1986-June 1987
Shipments:		
Domestic (number)	***	***
Export (number)	***	***
Total	***	***
Shipments:		
Domestic (1,000 dollars)	***	***
Export (1,000 dollars)	***	***
Total	***	***
Total employment	***	***
Production and related workers	***	***
Hours worked by production workers		
1,000 hours	***	***
Share of total value of purchased inputs received of--		
Domestic content (percent)	***	***
Foreign content (percent)	***	***

1/ Subzone operations began in November 1985. No data on employment were provided for earlier years.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

On February 10, 1986, Ford temporarily suspended its subzone operations in order to respond to administrative problems raised by the U.S. Customs Service. These problems involve the assessment of customs duties and classification of merchandise entered into the subzone. The local Ford management is waiting for a corporate decision to reactivate the zone. Meanwhile, all applicable duties are being paid on merchandise prior to its entry into the zone. Part of the difficulties appear to be related to the fact that although automobile and truck operations are both being conducted at the Louisville plant, the subzone activities only affect the automobile assembly lines. When the subzone was in full operation, Ford was entering nonprivileged foreign status * * *

. The limited subzone activities, which generated shipments of *** in 1986, are shown in table G-4.

Ford Electronics and Refrigeration Corp. (FERCO) (Lansdale, PA, plant) (subzone 35A)

The Lansdale, PA, facility has been operated by Ford since 1961; it received subzone status in August 1983. The Philadelphia Port Corp., a quasi-public, nonprofit corporation that administers city-owned port facilities, is the grantee of the zone. Delaware Valley Foreign Trade Zone, Inc., operates and administers the zone. FERCO, a Ford Motor Co. subsidiary,

Table G-4
Ford Motor Co. (Louisville, KY) (subzone 29B): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986 1/	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Exports (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Exports (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzones operations began in October 1985 and were suspended in February 1986 because of administrative problems with the U.S. Customs Service.
2/ No data provided for these periods as the Commission asked only for employment data for nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

uses the subzone to facilitate the receipt, testing, and production of automotive electronic components, speed control devices, windshield wiper controls, and radios. The subzone also houses the importing and exporting operations associated with the movement of parts, subassemblies, and finished products between the United States and Ford's wholly owned operation in Sao Paulo, Brazil. Ford's operation in Brazil supplies electronic components and audio equipment to Ford assembly plants in the United States, Canada, Europe, and South America. Completed assemblies are also shipped from subzone 35A to Ford's other U.S. subzones for final assembly. Ford officials indicated that the subzone has enabled Ford to transfer a significant portion of their quality-control operations to the United States, which otherwise might be performed offshore. The major advantage of subzone status has been the reduction of duties on imported electronic products and components when they enter the customs territory of the United States through one of Ford's auto assembly facilities. Ford's subzone status also encouraged the company to look to export markets for their products. Total shipments increased from *** in 1984, the first full year of subzone operations, to *** in 1986. Foreign share of purchased inputs received was * * * 1983-87. The operations are summarized in table G-5.

Table G-5
Ford Electronics and Refrigeration Corp. (Lansdale, PA) (subzone 35A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983 1/	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars).....	***	***	***	***	***
Export (1,000 dollars).....	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

1/ Subzone operations began in August 1983.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Ford Motor Co. (Lorain, OH, assembly plant) (subzone 40A)

The Ford motor-vehicle assembly plant in Lorain, OH, has been in operation since 1958. The plant gained subzone status in May 1985 and currently produces automobiles and van trucks. The zone's grantee is the Cleveland Port Authority. Since 1985, Ford has entered nonprivileged foreign status * * *

in support of its domestic operations. The company contended that the duty savings at this subzone have increased the price competitiveness of their domestically assembled vehicles vis-a-vis comparable foreign vehicles and led to increased production. Shipments from the subzone did increase dramatically during 1986 to *** as shown in table G-6. * * * , the foreign share of purchased inputs received was * * * *** percent.

Ford Motor Co. (Edison, NJ, assembly plant) (subzone 49A)

Ford's Edison, NJ, assembly plant has been in operation since 1948. Subzone operations at the facility commenced in April 1984 and afford the company access to the facilities of the Newark/Elizabeth-Port Authority Marine Terminal, which is the cite of FTZ 49. The zone grantee is the Port Authority of New York and New Jersey. Ford entered a variety of nonprivileged foreign status automotive components into the zone including, * * *

. These were used in the assembly of four cylinder, sub-compact automobiles. The subzone has, according to company officials, had little affect on the firm's purchasing decisions for components, parts, and raw materials but a significant impact on

Table G-6
Ford Motor Co. (Lorain, OH) (subzone 40A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985 1/	1986	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Export (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in May 1985.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

the profitability of the plant. Shipments from the subzone increased from the partial-year level of *** in 1984 to the full-year level of nearly *** in 1986, as shown in table G-7. The foreign share of purchased inputs received was * * * but * * * for the 9 months of operations ending June 1987.

Ford Motor Co. (Romeo tractor plant) (subzone 70A)

Ford began operations at its Romeo, MI, plant in 1974 and received its subzone status in June 1982. The zone grantee is the Greater Detroit Foreign Trade Zone, Inc. Ford acquired the New Holland, PA. facility and is in the process of closing the Romeo facility and relocating personnel to Pennsylvania. Ford manufactured some tractor components in the zone and combined them with other domestic and foreign-made components to assemble tractors that are designated for agricultural and industrial use. The imported components, which are accorded nonprivileged foreign status, include * * * .

These components, which normally would be dutiable

Table G-7
Ford Motor Co. (Edison, NJ) (subzone 49A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985 1/	1986	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Export (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in April 1984.
2/ No data provided for this period as the Commission only asked for employment data for the nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

at rates ranging from 1.0 to 4.4 percent ad valorem were, subsequent to their incorporation into finished tractors, dutiable upon exit from the subzone at from 0.5 to 2.1 percent ad valorem. This constituted the major advantage from subzone status. These duty savings helped increase the price competitiveness of U.S.-produced tractors vis-a-vis foreign-made tractors, many of which were entered duty free. Ford exported * * * of the zone to Canada and other offshore markets, as shown in table G-8. The foreign share of purchased inputs received * * * 1983-86.

Ford Motor Co. (Wayne, MI, assembly plant) (subzone 70C)

Production operations at Ford's Wayne, MI, assembly plant commenced in 1952, and subzone operations were initiated on February 28, 1983. The zone grantee is the Greater Detroit Foreign Trade Zone, Inc. The Wayne assembly plant manufactured finished automobiles from components purchased from domestic and foreign suppliers and from other domestic and foreign-based Ford manufacturing facilities. The foreign components, which Ford brought into the zone as nonprivileged foreign status merchandise, included * * *

. On average, foreign merchandise was retained in the zone for * * *

Table G-8
Ford Motor Co. (Romeo, MI) (Subzone 70A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Export (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Not available.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

. Subzone shipments peaked at approximately *** in 1984, and since then have * * * *** percent to *** in 1986, as shown in table G-9. During this same period, exports as a percentage of the total value of shipments * * * *** *** percent.

Ford Motor Co. (Wixom, MI, assembly plant) (subzone 70D)

Ford assembly operations in Wixom began in 1957. Subzone operations in April 1984. Ford produces the Lincoln Mark 7, Town Car, and Continental Models at this location. During 1984-June 1987, the major components that were entered into the zone under nonprivileged foreign status by Ford were * * *

. During the first two full years of subzone operations, shipments * * * *** *** in 1986 from *** in 1985, as shown in table G-10. Foreign share of purchased inputs received was * * * *** percent of the total.

Ford Motor Co. (Dearborn, MI, assembly plant) (subzone 70E)

The Ford automotive assembly plant in Dearborn, MI, has been in operation since 1927. The Ford Mustang is being produced in this facility. The Dearborn plant began its subzone operations in May 1984. Since 1984, Ford has

Table G-9
Ford Motor Co. (Wayne, MI) (subzone 70C): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983 1/	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Export (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in February 1983.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table G-10
Ford Motor Co. (Wixom, MI) (subzone 70D): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1984 1/	1985	1986	October 1986-June 1987
Shipments:				
Domestic (number)	***	***	***	***
Export (number)	***	***	***	***
Total	***	***	***	***
Shipments:				
Domestic (1,000 dollars)	***	***	***	***
Export (1,000 dollars)	***	***	***	***
Total	***	***	***	***
Total employment	***	***	***	***
Production and related workers	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***
Share of total value of purchased inputs received of--				
Domestic content (percent)	***	***	***	***
Foreign content (percent)	***	***	***	***

1/ Subzone operations began in April 1984. No data on employment were provided for 1983.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

entered nonprivileged foreign status transmissions from * * *

. Shipments from the zone
* * * *** *** in 1985 to *** 1986,
the second full year of zone operations, as indicated in table G-11. Foreign
share of purchased inputs received * * * *** percent of the total
value during 1984-June 1987.

Table G-11
Ford Motor Co. (Dearborn, MI) (subzone 70E): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984 1/	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Export (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzones operations began in May 1984.
2/ No data provided for 1983 as the Commission asked only for employment data for the nonsubzone period.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Ford Motor Co. (St. Louis, MO, assembly plant) (subzone 102A)

Ford's St. Louis assembly plant, which is located in Hazelwood, MO, began its operations in 1948. The plant began its operations in subzone 102A in September 1984. The zone grantee and operator is the St. Louis County Port Authority. During fiscal years 1983 and 1984, the plant producted Mercury Grand Marquis automobiles. On January 25, 1985, production of these vehicles was shifted to Ford's St. Thomas, Ontario, Canada plant at which time subzone operations were halted while the St. Louis plant was extensively renovated. Ford has since begun producing its Aerostar mini van/truck line at the St. Louis plant. During the shutdown, Ford paid all zone fees and maintained the subzone's "active" status. The zone has not resumed operations, however,

because of administrative difficulties with the U.S. Customs Service. These difficulties stem from the Aerostar's dual usage as passenger vehicles (which are dutiable at 2.5 percent), or as cargo vehicles or trucks (which are dutiable at 25 percent ad valorem). Ford and Customs have been trying to establish a system to differentiate parts going into Aerostar passenger models (for which Ford would desire nonprivileged foreign status), from those going into cargo models (for which Ford would benefit from privileged foreign status). These problems appear to be close to resolution and the subzone is expected to resume operations in January 1988. Table G-12 provides information on the limited operations that were performed during 1984-85.

Table G-12
Ford Motor Co. (St. Louis, MO) (subzone 102A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984 1/	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Export (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzones operations began in September 1984.
2/ No data provided for 1983 as the Commission asked only for employment data for nonsubzone periods.
3/ Subzone status not utilized while plant underwent renovation and while Ford resolved administrative difficulities with the U.S. Customs Service.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Chrysler Motors Corp. (Jeep Assembly) (subzone 8A)

The grantee of Chrysler Motor Corp's subzone plant located in Toledo, OH, is the Toledo-Lucas County Port Authority. Chrysler's operations under subzone procedures began in July 1985, although the plant became operational in 1911. This was an American Motors facility prior to the takeover of AMC Corp. by Chrysler. Chrysler operations consisted of manufacturing automobiles and Jeeps from parts and subassemblies of foreign and domestic origin. Nonprivileged foreign items included * * *

. Passenger cars were the principal product manufactured, * * * *** percent of total shipments during 1985 to *** percent during partial-year 1987; the remainder consisted of Jeeps (tables G-13 and G-14). As shown in table G-15, exports as a share of total shipments * * * *** percent in partial-year 1987 from *** percent in 1985. Domestic share of purchased inputs received * * * , amounting to over *** percent.

Table G-13
Chrysler Corp. (subzone 8A): Selected data on automobiles FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985 1/	1986	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Exports (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Exports (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in July 1985.
2/ No data provided for these periods as the Commission only asked for employment data for nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Chrysler Corp. (St. Louis Assembly Plant) (subzone 31A)

The grantee of this subzone, located in Fenton, MO, is the Tri-City Regional Post District. Chrysler's operations under subzone procedures began in March 1983, although the plant became operational in August 1959. Chrysler produced automobiles from domestic and imported auto parts and subassemblies. The major imported items were engines and radios from Japan. As shown in table G-16, the domestic share of purchased inputs received fluctuated between *** percent and *** percent during the period 1984 and partial-year 1987. Exports as a share of total shipments were over *** percent in October 1986-87, * * * *** percent in 1984. The average number of production employees * * * *** percent over that reported in 1984.

Table G-14
Chrysler Corp. (subzone 8A): Selected data on truck/van (jeep) FTZ operations, 1983-86 and October 1986-June 1987

Item	1985 1/	1986	October 1986-June 1987
Shipments:			
Domestic (number)	***	***	***
Exports (number)	***	***	***
Total	***	***	***
Shipments:			
Domestic (1,000 dollars)	***	***	***
Exports (1,000 dollars)	***	***	***
Total	***	***	***
Production and related workers	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***
Share of total value of purchased inputs received of--			
Domestic content (percent)	***	***	***
Foreign content (percent)	***	***	***

1/ Subzone operations began in July 1985. Data not available on employment for 1983-84.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table G-15
Chrysler Corp. (subzone 8A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985 1/	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Exports (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in July 1985.
2/ No data provided for these periods as the Commission only asked for employment data for nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table G-16
Chrysler Corp. (subzone 31A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1984 1/	1985	1986	October 1986-June 1987
Shipments:				
Domestic (number)	***	***	***	***
Exports (number)	***	***	***	***
Total	***	***	***	***
Shipments:				
Domestic (1,000 dollars)	***	***	***	***
Exports (1,000 dollars)	***	***	***	***
Total	***	***	***	***
Total employment	***	***	***	***
Production and related workers	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***
Share of total value of purchased inputs received of--				
Domestic content (percent)	***	***	***	***
Foreign content (percent)	***	***	***	***

1/ Subzone operations began in March 1983. Data not available for 1983.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Chrysler Corp. (Kenosha Assembly) (subzone 41A)

American Motors Corp. (AMC) began subzone operations at its Kenosha, WI, plant in March 1982. However, the plant has been in operation since 1902. Chrysler gained this plant in its recent acquisition of AMC. The Grantee is the Foreign Trade Zone of Wisconsin, Ltd. Chrysler assembled automobiles from foreign and domestic auto parts. The major imported item was * * * from France (AMC was 48-percent owned by Renault of France). As shown in table G-17, the foreign share of purchased inputs received * * * *** in partial-year 1987, from *** percent in 1983. This occured because Chrysler switched models produced at the facility. Exports as a share of total shipments * * * during 1983-86 *** percent; during partial-year 1987, the share of exports was *** percent. The average number of production and related workers * * * *** percent in 1986 over that reported in 1983. The employment of production workers * * * *** percent in partial-year 1987, * * * ***

Chrysler Corp. (Jefferson Assembly) (subzone 70B)

The Greater Detroit Foreign-Trade Zone, Inc., affiliated with the City of Detroit Chamber of Commerce, is the grantee of Chrysler Corp.'s subzone plant located in Detroit, Mich. The plant became operational in 1923, and subzone activity commenced in April 1982. Chrysler assembled automobiles from

Table G-17
Chrysler Corp. (subzone 41A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Exports (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Exports (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

domestic and imported auto parts. Major imported products included * * * . As shown in table G-18, domestic share of purchased inputs received accounted for between *** and *** percent, by value, of finished products shipped from the subzone. Exports as a share of total shipments * * * *** percent in partial-year 1987, from *** percent in 1983. The average number of production and related workers employed followed the trend of exports, * * * *** percent in partial-year 1987 from that reported in 1983.

Chrysler Corp. (New Castle) (subzone 72G)

The Indianapolis Airport Authority is the grantee of Chrysler Corp.'s subzone plant located in Indianapolis, IN. The plant became operational in June 1925, and subzone procedures commenced in January 1987. Chrysler assembles automotive parts from rough castings and other automotive parts. * * * were supplied by * * * . As shown in table G-19, domestic share of purchased inputs received amounted to *** percent, and exports as a share of total shipments were over *** percent during partial-year 1987.

Table G-18
Chrysler Corp. (subzone 70B): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Exports (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Exports (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked byproduction workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table G-19
Chrysler Corp. (subzone 72G): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	October 1986-June 1987 1/
Shipments:	
Domestic (1,000 dollars)	***
Exports (1,000 dollars)	***
Total	***
Total employment	***
Production and related workers	***
Hours worked by production workers (1,000 hours)	***
Share of total value of purchased inputs received of--	
Domestic content (percent)	***
Foreign content (percent)	***

1/ Subzone operations began in January 1987. Data on employment not provided for earlier periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Chrysler Corp. (Newark Assembly) (subzone 99B)

Chrysler began operations at its Newark/Wilmington, DE, area plant in July 1951. Subzone procedures commenced in October 1984. The grantee is the State of Delaware. Chrysler produced automobiles at this facility, using * * *. As shown in table G-20, exports as a share of total shipments * * * *** percent in 1986, from *** percent in 1985; during partial-year 1987, exports as a share of total shipments were *** percent. The domestic share of purchased inputs received was * * * percent during 1985-June 1987. The average number of production and related workers * * * *** percent in partial-year 1987 * * * that reported in 1985.

Table G-20
Chrysler Corp. (subzone 99B): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1985 1/	1986	October 1986-June 1987
Shipments:			
Domestic (number)	***	***	***
Exports (number)	***	***	***
Total	***	***	***
Shipments:			
Domestic (1,000 dollars)	***	***	***
Exports (1,000 dollars)	***	***	***
Total	***	***	***
Total employment	***	***	***
Production and related workers	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***
Share of total value of purchased inputs received of--			
Domestic content (percent)	***	***	***
Foreign content (percent)	***	***	***

1/ Subzone operations began in October 1984. Data on employment not provided for 1983 and 1984.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

General Motors Corp. (GM) (subzone 15B)

This GM plant is located in Kansas City, MO, which is considered to be adjacent to the Kansas City port of entry. The grantee is the Greater Kansas City Foreign Trade Zone, Inc. Although the plant became operational in January 1929, subzone operations did not begin until September 1985. This establishment assembles automobiles from parts shipped into this foreign-trade subzone. Table G-21 shows that exports accounted for *** percent, by value, of subzone shipments in 1986, but such exports * * * percent during October

Table G-21
General Motors Corp. (subzone 15B): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986 1/	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Export (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in September 1985.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

1986-June 1987. Foreign share of purchased inputs received reached *** percent during October 1986-June 30, 1987, compared with *** percent during 1986. The principal components shipped to this FTZ and their countries of origin in 1986 were as follows: * * *

General Motors Corp. (GM) (subzone 26A-D)

This GM plant is located in Doraville, GA. The grantee is the Georgia Foreign-Trade Zone, Inc. However, this general-purpose zone has been inoperative since September 4, 1985, when it was closed on orders of the U.S. Customs Service. Nevertheless, GM began operating in a subzone in February 1984, and continues to operate thereunder. This plant has been in operation since November 1947. GM realized duty savings on * * *
. This establishment assembles automobiles from parts shipped into the subzone. As shown in table G-22, * * * automobiles shipped from this subzone were * * * . During the February 1984-June 1987 period, foreign share of purchased inputs received varied from a low of *** percent in 1984 to a high of *** percent in 1986.

Table G-22
General Motors Corp. (subzone 26A-D): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984 1/	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Export (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of-					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in February 1984.
2/ No data provided for 1983 as the Commission asked only for employment data for the nonsubzone period.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

General Motors Corp. (GM) (subzone 26A-L)

This GM plant is located in Atlanta, GA. The grantee is the Georgia Foreign Trade Zone, Inc. However, this general-purpose zone has been inoperative since September 4, 1985, when it was closed on orders of the U.S. Customs Service. Nevertheless, GM began operating in a subzone in April 1984, and continues to operate thereunder. This plant has been operating since the Spring of 1928. GM realized duty savings on * * * . * * * were purchased in * * * and * * * were imported from * * *. This plant manufactured and assembled GM subcompact vehicles. As table G-23 shows, during this period, exports from this subzone ranged from *** percent of total shipments, by value, in 1984, to *** percent in 1986. During April 1984-June 1987, foreign share of purchased inputs received varied from a low of *** percent in October 1986-June 30, 1987, to a high of *** percent in 1986.

Table G-23
General Motors Corp. (subzone 26A-L): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984 1/	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Export (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in April 1984.
2/ No data provided for 1983 as the Commission asked only for employment data for the nonsubzone period.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

C-P-C General Motors Corp. (GM) (subzone 37A)

This GM plant is located in North Tarrytown, NY. The grantee is the Foreign Trade Development Co. Subzone operations began on October 7, 1985. GM realized duty savings on * * * . This plant consists of an assembly operation for Pontiac 6000 and Buick Century automobiles. Table G-24 shows that during October 1986-June 1987, exports from this subzone accounted for *** percent of total shipments, by value, compared with *** percent in 1986. Foreign share of purchased inputs received * * * *** percent, by value, during the period.

General Motors Corp. (GM) (subzone 40B)

This GM plant is located in Lordstown, OH. The grantee is the Cleveland-Cuyahoga County Port Authority. GM began operating in a subzone in March 1986, whereas the plant has been operating since February 1966. Duty savings were realized for automobiles on * * * . This plant manufactures and assembles automobiles, trucks, and vans. No duty savings

Table G-24
C-P-C General Motors Corp. (subzone 37A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1985	1986 1/	October 1986-June 1987
Shipments:			
Domestic (number)	***	***	***
Export (number)	***	***	***
Total	***	***	***
Shipments:			
Domestic (1,000 dollars)	***	***	***
Export (1,000 dollars)	***	***	***
Total	***	***	***
Total employment	***	***	***
Production and related workers	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***
Share of total value of purchased inputs received of--			
Domestic content (percent)	***	***	***
Foreign content (percent)	***	***	***

1/ Subzone operations began in October 1987.
2/ No data provided for 1985 as the Commission only asked for employment data for the nonsubzone periods. Employment data for 1983 and 1984 are not available.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

were experienced on the trucks/vans. For all product lines, exports accounted for *** percent, by value, of total shipments in both periods (table G-25). * * * exports of trucks and vans were * * * percent of total shipments (table G-26). During October 1986-June 1987, foreign share of purchased inputs received amounted to *** percent compared with *** percent in 1986 (table G-27).

B.O.C. General Motors Corp. (GM) (subzone 41C)

This GM plant is located in Janesville, WI. The grantee is the Foreign Trade Zone of Wisconsin, Ltd. The subzone began operations in December 1985, whereas the plant began operations in September 1923. GM realized duty savings on the automobiles on * * * . This plant assembles small-sized Chevrolets and Cadillacs, trucks, and vans. No duty savings were experienced on the trucks/vans. For all product lines, exports accounted for *** percent, by value, of total shipments in 1986 and for *** percent during October 1986-June 1987 (table G-28). * * * exports were * * * for automobiles, exports * * * account for *** percent, by value, of truck and van shipments in 1986 and for *** percent during October 1986-June 1987 (tables G-29 and G-30). Foreign share of purchased inputs received during these periods was about *** percent compared with about *** percent for automobiles.

Table G-25
General Motors Corp. (subzone 40B): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986 1/	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Export (number)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in March 1986.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table G-26
General Motors Corp. (subzone 40B): Selected data on truck/van FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Export (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in March 1986.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table G-27
General Motors Corp. (subzone 40B): Selected data on automobiles FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Export (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in March 1986.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table G-28
B.O.C. General Motors Corp. (subzone 41C): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1984	1985	1986 1/	October 1986-June 1987
Shipments:				
Domestic (number)	***	***	***	***
Export (number)	***	***	***	***
Total	***	***	***	***
Total employment	***	***	***	***
Production and related workers	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***
Share of total value of purchased inputs received of--				
Domestic content (percent)	***	***	***	***
Foreign content (percent)	***	***	***	***

1/ Subzone operations began in December 1985.
2/ No data provided for these periods as the Commission only asked for employment data for the nonsubzone periods. Employment data for 1983 are not available.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table G-29
B.O.C. General Motors Corp. (subzone 41C): Selected data on automobiles FTZ operations, 1983-86 and October 1986-June 1987

Item	1984	1985	1986 1/	October 1986-June 1987
Shipments:				
Domestic (number)	***	***	***	***
Export (number)	***	***	***	***
Total	***	***	***	***
Shipments:				
Domestic (1,000 dollars)	***	***	***	***
Export (1,000 dollars)	***	***	***	***
Total	***	***	***	***
Production and related workers	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***
Share of total value of purchased inputs received of--				
Domestic content (percent)	***	***	***	***
Foreign content (percent)	***	***	***	***

1/ Subzone operations began in December 1985.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods. Employment data for 1983 are not available.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table G-30
B.O.C. General Motors Corp. (subzone 41C): Selected data on truck/van FTZ operations, 1983-86 and October 1986-June 1987

Item	1984	1985	1986 1/	October 1986-June 1987
Shipments:				
Domestic (number)	***	***	***	***
Export (number)	***	***	***	***
Total	***	***	***	***
Shipments:				
Domestic (1,000 dollars)	***	***	***	***
Export (1,000 dollars)	***	***	***	***
Total	***	***	***	***
Production and related workers	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***
Share of total value of purchased inputs received of--				
Domestic content (percent)	***	***	***	***
Foreign content (percent)	***	***	***	***

1/ Subzone operations began in December 1985.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods. Employment data for 1983 are not available.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

General Motors Corp. (GM) (subzone 49B)

This GM plant is located in Linden, NJ. The grantee is the Port Authority of New York and New Jersey. Subzone operations began in January 1987 for this plant that has been in operation since 1937. This plant assembles automobiles. GM realized duty savings on * * * imported from * * *. During partial-year 1987, * * * exports from this subzone (table G-31). The foreign share of purchased inputs received amounted to *** percent.

Table G-31
General Motors Corp. (subzone 49B): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986 1/	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Export (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in January 1987.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

C-P-C General Motors Corp. (GM) (subzone 53A)

This GM plant is located in Oklahoma City, OK. The grantee for this subzone is the Port of Catoosa. GM began subzone operations in March 1985. This plant began operations in April 1979. GM realized duty savings on * * * . This plant manufactures and assembles automobiles. During this period, exports * * * percent, by value, of total shipments (table G-32). Foreign share of purchased inputs

Table G-32
C-P-C General Motors Corp. (subzone 53A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985 1/	1986	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Export (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in March 1985.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

received represented *** percent in 1985 and 1986, but * * * percent during October 1986-June 1987.

B.O.C. General Motors Corp. (GM) (subzone 70F)

This GM plant is located in Ypsilanti, MI. The grantee is the Greater Detroit Foreign-Trade Zone, Inc. GM began subzone operations in February 1985 for this plant that has been in operation since June 1959. GM realized duty savings on * * * . This plant assembles automobiles, including the Oldsmobile Delta 88 and the Pontiac Bonneville models. * * * of the subzone shipments are exported (table G-33,). Foreign share of purchased inputs received amounted to *** percent in 1986, but * * * percent during October 1986-June 1987.

General Motors Corp. (GM) (subzone 70G)

This GM plant is located in Pontiac, MI. The grantee is the Greater Detroit Foreign-Trade Zone, Inc. Operations began at this subzone in August

Table G-33
B.O.C. General Motors Corp. (subzone 70F): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1985 1/	1986	October 1986-June 1987
Shipments:			
Domestic (number)	***	***	***
Export (number)	***	***	***
Total	***	***	***
Shipments:			
Domestic (1,000 dollars)	***	***	***
Export (1,000 dollars)	***	***	***
Total	***	***	***
Total employment	***	***	***
Production and related workers	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***
Share of total value of purchased inputs received of--			
Domestic content (percent)	***	***	***
Foreign content (percent)	***	***	***

1/ Subzone operations began in February 1985. Employment data for 1983 and 1984 are not available.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

1986, whereas the plant has been operational since 1932. GM realized no duty savings on importations of * * * , but enjoyed deferred duty payments. Such duty will be paid after final car assembly at other GM foreign-trade subzones. This plant produces and assembles automobile engines and currently ships them * * * (table G-34). Foreign share of purchased inputs received was *** percent, in 1986 and *** percent during October 1986-June 1987.

Table G-34
General Motors Corp. (subzone 70G): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986 1/	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Export (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in August 1986.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

New United Motors Manufacturing, Inc. (subzone 18B)

New United Motors Manufacturing Inc., (NUMMI) of Fremont, Calif., is the Joint Venture between Toyota Motor Corp. of Japan and General Motors Corp. NUMMI began manufacturing operations at this location in December, 1984 and activated the subzone in October of that year. The grantee for the zone is the City of San Jose. The zone is within the San Francisco-Oakland customs port of entry.

According to NUMMI, the Fremont facility is an integrated automobile assembly operation. Within the facility, body panels are stamped, many subassemblies are manufactured, frames are made in robotized welding shops, painting and sealing is done, and vehicle assembly is performed.

The major benefit to NUMMI from operations within the zone was the duty savings from the inverted tariff structure. Duty savings have also enabled NUMMI to establish competitive transfer prices on vehicles exported to Canada.

When the grant was approved, the Board concluded that NUMMI would compete with offshore operations producing compact cars, and that because NUMMI cars were expected to have a maximum foreign content of 50 percent, their sales would have a net positive effect on the U.S. economy.

Total shipments from the zone between December 1984 and June of 1987 were *** (table G-35). Of this amount, *** percent were export shipments, * * * percent in 1986. Foreign share of purchased inputs received has remained steady at around *** percent.

Table G-35
New United Motors Manufacturing, Inc. (NUMMI) (subzone 18B): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1984	1985 1/	1986	October 1986-June 1987
Shipments:				
Domestic (number)	***	***	***	***
Export (number)	***	***	***	***
Total	***	***	***	***
Shipments:				
Domestic (1,000 dollars)	***	***	***	***
Export (1,000 dollars)	***	***	***	***
Total	***	***	***	***
Total employment	***	***	***	***
Production and related workers	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***
Share of total value of purchased inputs received of--				
Domestic content (percent)	***	***	***	***
Foreign content (percent)	***	***	***	***

1/ Subzone operations began in October 1984. Manufacturing began in December 1984.
2/ No data provided for 1984 as the Commission asked only for employment data for the nonsubzone period.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Porsche Cars North America, Inc. (PCNA) (subzone 21-A)

The PCNA plant is located in Charleston County, SC. The grantee of the Subzone is the South Carolina State Ports Authority. Subzone procedures began at the initial opening of the PCNA facility in September 1984. The PCNA facility was used primarily as a storage and distribution center for automobiles and auto parts and accessories. PCNA received these items from West Germany. PCNA temporarily deactivated the subzone in August 1986, because of its low level of business activity and to the fact that it was not being used for any modification or manufacturing processes. In response to

the Commission's questionnaire, PCNA stated that its principal benefit from the establishment of the subzone was savings on deferred import duties and excise tax payments.

Porsche Cars North America, Inc. (PCNA) (Subzone 89A)

The PCNA plant, located in Reno, NV, began subzone procedures at the same time the facility became operational in September 1984. The grantee is the Nevada Development Authority. The facility was used as a distribution center for Porsche cars, parts, and accessories. PCNA's principal benefit from the foreign trade zone program was savings from deferred duty and excise tax payments. PCNA deactivated the subzone in August 1986. The decision to deactivate the subzone was based primarily upon an evaluation by PCNA of its level of business, its rate of inventory turnover, and the fact that it was not using the subzone for any modification or manufacturing processes.

Volkswagen of America, (VW) (subzone 33A)

VW is a wholly owned subsidiary of Volkswagen AG, West Germany. Its plant is located in Westmoreland County, PA. The grantee is the Regional Industrial Development Corp. of Southwestern Pennsylvania. Volkswagen's operations under subzone procedures began in January 1979; the plant commenced operations in April 1978. In November 1987, VW announced that it was closing this plant and would move its production operations back to West Germany. The firm assembled automobiles and trucks from imported and domestic components (light-duty truck production in 1983 only). Major component parts received * * * for the VW production operation were * * *

. The principal benefit which VW realized from the zone program was duty savings because of inverted tariffs. As shown in table G-36, the value of total shipments * * * percent in 1986 over that reported in 1983. The foreign share of purchased inputs received * * * percent in October 1986-June 1987, from *** percent in 1983. Exports as a share of total shipments *** percent in 1983 to about *** percent in 1986. The average number of production employees * * * percent in 1986 * * * that reported in 1983. Table G-37 shows separate data on automobiles only.

Honda of America Manufacturing, Inc. (HAM) (subzone 46B)

Honda of America Manufacturing, of Marysville, OH, is approximately 97-percent owned by American Honda Motor Co. of Gardena, CA., (which is 100-percent owned by Honda Motor Co., Ltd. of Japan), and 3 percent by Honda Motor Co., Ltd. The Ohio plant started operations in September of 1979, and began operations under subzone status as a motorcycle facility in April of 1980. The grantee for the subzone is the Greater Cincinnati Foreign Trade Zone, Inc. The plant is located 25 miles from the Columbus customs port of entry.

Table G-36
Volkswagen of America (subzone 33A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars).....	***	***	***	***	***
Export (1,000 dollars).....	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)...	***	***	***	***	***
Foreign content (percent)....	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table G-37
Volkswagen of America (subzone 33A): Selected data on automobiles FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number).....	***	***	***	***	***
Export (number).....	***	***	***	***	***
Total.....	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars).....	***	***	***	***	***
Export (1,000 dollars).....	***	***	***	***	***
Total.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of-					
Domestic content (percent)...	***	***	***	***	***
Foreign content (percent)....	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Honda originally began manufacturing large bore motorcycles at the Marysville facility as a preliminary step to further investment in U.S. manufacturing plants. The plant engages in frame fabrication, welding, molding, painting, assembly, quality control, and shipping. Because of the motorcycle operations success, in 1980, Honda announced plans to construct a $250 million automobile plant adjacent to the original site. The first Honda Accords were produced at this plant in November of 1982. Honda describes this facility as the most integrated automobile manufacturing plant in America. Honda also recently received subzone status for its Ohio engine plant that produces both motorcycle and automobile engines.

The major benefit from zone operations for motorcycles was the inverted tariff structure on imported parts (primarily engines). This ceased in 1983 when Harley-Davidson brought import relief action against importers of motorcycles. The resulting increased tariffs caused the Board to deny Honda the use of nonprivileged foreign status merchandise. See appendix C for further details. 1/ For automobiles, the major items for which nonprivileged foreign status was claimed were * * *

Total shipments from the zone * * * by June of 1987, from *** million in 1985 (table G-38). Export shipments from the zone * * * from 1983 to 1986 * * * , but in October 1986-June 1987, these shipments * * *

* * * , the export trend for automobiles had been * * * while that for motorcycles had been * * *.

Total foreign share of purchased inputs received was * * * percent. Foreign share of purchased inputs received for automobiles was * * * percent, and that for motorcycles was * * * percent * * * . The number of workers at this facility has * * * in 1987 from *** in 1983. Tables G-39 and G-40 give separate data on automobiles and motorcycles.

Nissan Motors Manufacturing Corp., (NMMC) (subzone 78A)

Nissan Motors Manufacturing, Corp. U.S.A. is a wholly owned subsidiary of Nissan Motors Co., Ltd., Japan. Its U.S. plant, located in Smyrna, TN., commenced operations in January 1981. Although the facility became a subzone in April 1982, it did not produce its first saleable trucks until June 1983. The grantee is the Metropolitan-Nashville Davidson County Port Authority. Subzone operations consist of manufacturing lightweight trucks, subcompact automobiles, and auto body parts; however, production of automobiles did not begin until 1985. In response to the Commission's questionnaire, NMMC stated that the deferral of duty payments in the context of high interest rates in the early 1980's was the primary reason it sought to establish a foreign trade subzone. However, when NMMC began passenger car production, inverted duty savings became the major benefit that the foreign-trade zone program afforded the company. As shown in table G-41, the value of total shipments * * *

1/ However, Presidential Proclamation 5727 of Oct. 9, 1987, removed the increased tariffs and allows future use of zones for manufacturing motorcycles.

Table G-38
Honda of America Manufacturing, Inc. (subzone 46B): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983 1/	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)...	***	***	***	***	***
Export (1,000 dollars).....	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent)..	***	***	***	***	***

1/ Subzone operations began in April 1980 for motorcycles and November 1982 for automobiles.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table G-39
Honda of America Manufacturing, Inc. (subzone 46B): Selected data on automobiles FTZ operations, 1983-86 and October 1986-June 1987

Item	1983 1/	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number).....	***	***	***	***	***
Export (number).....	***	***	***	***	***
Total.....	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars).....	***	***	***	***	***
Export (1,000 dollars).....	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent)....	***	***	***	***	***

1/ Subzone operations began in November 1982.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table G-40
Honda of America Manufacturing, Inc. (subzone 46B): Selected data on motorcycles FTZ operations, 1983-86 and October 1986-June 1987

Item	1983 1/	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Export (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in April 1980.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table G-41
Nissan Motors Manufacturing Corp. (subzone 78A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983 1/	1984	1985 2/	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Although subzone operations began in April 1982, the first salable trucks were not produced until June 1983.
2/ Production of automobiles began.
3/ Not available.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

*** percent in 1986 * * * that reported in 1983. Foreign share of purchased inputs received * * * percent in 1986, from *** percent in 1983; during October 1986-June 1987, foreign share of purchased inputs received was *** percent. Average employment of production workers * * * in 1983 to *** in 1987. Tables G-42 and G-43 show separate data on automobiles and trucks.

Table G-42
Nissan Motors Manufacturing Corp. (subzone 78A): Selected data on automobiles FTZ operations, 1985-86 and October 1986-June 1987

Item	1985 1/	1986	October 1986-June 1987
Shipments:			
Domestic (number)	***	***	***
Export (number)	***	***	***
Total	***	***	***
Shipments:			
Domestic (1,000 dollars)	***	***	***
Export (1,000 dollars)	***	***	***
Total	***	***	***
Production and related workers	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***
Share of total value of purchased inputs received of--			
Domestic content (percent)	***	***	***
Foreign content (percent)	***	***	***

1/ Manufacturing of automobiles began in 1985.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Enerco, Inc., and the Hawaiian Independent Refinery, Inc. (HIRI) (subzone 9A)

The grantee of both Enerco and HIRI, which are wholly owned by the Hawaiian-based energy company, Pacific Resources, Inc., is the State of Hawaii. Subzone status was granted for HIRI in 1972 and for Enerco in 1975. HIRI receives crude petroleum at its subzone and refines it into * * *

. Enerco refines crude petroleum to produce * * *
. The major sources for the crude petroleum imports are * * *

1/ * * *

Table G-43
Nissan Motors Manufacturing Corp. (subzone 78A): Selected data on trucks/vans FTZ operations, 1983-86 and October 1986-June 1987

Item	1983 1/	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (number)	***	***	***	***	***
Export (number)	***	***	***	***	***
Total	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ The first salable trucks produced in June 1985.
2/ Not available.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

As shown in tables G-44 and G-45, total shipments from subzone 9A * * * in 1983 to *** in 1986. HIRI accounted for * * * percent of shipments from subzone 9A during 1983-86. Foreign share of purchased inputs received * * * percent to *** percent at the same time, while that of Enerco was * * * percent * * *. Table G-46 gives combined data on HIRI and Enerco so that comparisons can be made with the previous Commission study on FTZ's.

Coastal Refining and Marketing, Inc. (subzone 122A)

Coastal Refining and Marketing, Inc., is a wholly owned subsidiary of the Coastal Corp., Houston, TX., a company involved in crude petroleum/ natural gas exploration and development, and refining. Coastal began operations in the subzone in September 1986. During the period, Coastal produced * * * . The major sources of imported crude petroleum and naphtha used as feedstocks were * * * . 1/ Shipments from subzone 122A were *** in 1986, * * * during October 1986 to June 1987 (table G-47). For the comparable periods, foreign share of purchased inputs received * * * from *** percent to *** percent.

1/ * * *

Table G-44
HIRI (subzone 9A): Selected data on FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)..	***	***	***	***	***
Exports (1,000 dollars)...	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table G-45
Enerco (subzone 9A): Selected data on FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)..	***	***	***	***	***
Exports (1,000 dollars)...	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inpus received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table G-46
HIRI and Enerco (subzone 9A): Selected data on FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)..	***	***	***	***	***
Export.(1,000 dollars)....	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table G-47
Coastal Refining and Marketing, Inc. (subzone 122A): Selected data on FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986 1/	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)..	***	***	***	***	***
Exports (1,000 dollars)...	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

1/ Subzone operations began in September 1986.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Southwest Refining Co., Inc., (subzone 122B)

Southwest Refining Co., Inc., Corpus Christi, TX, is a wholly owned subsidiary of Kerr-McGee Refining Corp., Kerr-McGee Corp. Kerr-McGee is a diversified energy company involved in conventional as well as nuclear energy. Southwest Refining Co. received its subzone status in November 1986 and began admitting merchandise in December 1986; the refinery produces * * *

. The sources of crude petroleum imports into the subzone are * * * . As shown in table G-48, the value of shipments from subzone 122B was *** during October 1986 to June 1987. The foreign share of purchased inputs received was *** percent.

Table G-48
Southwest Refining Co., Inc. (subzone 122B): Selected data on FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987 1/
Shipments:					
Domestic (1,000 dollars)..	***	***	***	***	***
Exports (1,000 dollars)...	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

1/ Subzone operations began in December 1986.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Commonwealth Oil Refining Co., Inc. (CORCO) (subzone 7B)

The grantee of CORCO is the Puerto Rican Industrial Development Co. Subzone status was granted in 1985 authorizing CORCO for blending and terminalling operations. CORCO is currently operating under Chapter 11 of the U.S. Bankruptcy Code as debtor-in-possession. Essentially, CORCO blends * * *

. Total shipments from subzone 7B * * * from

*** in 1985 to *** during October 1986 to June 1987 (table G-49). Foreign share of purchased inputs received was *** percent * * *

Table G-49
Commonwealth Oil Refining Co., Inc. (CORCO) (subzone 7B): Selected data on FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)..	***	***	***	***	***
Exports (1,000 dollars)...	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Ambrosia Chocolate Co. (subzone 41F)

Ambrosia Chocolate Co. is a division of W.R. Grace, based in New York City. The Ambrosia chocolate manufacturing plant is located within the Port of Milwaukee, WI. The grantee of the subzone is the Foreign-Trade Zone of Wisconsin, Ltd. The Ambrosia plant has been operational since May 1894, but was not granted subzone status until May 1987. Ambrosia produces sweetened cocoa for sale to the food processing industry at the subzone plant. Ambrosia's grant restricts it to producing products that are subject to U.S. quotas. (The language of its grant restriction is identical to that of Power Packaging, Inc., below). Ambrosia's use of subzone status enables it to compete with increased imports of chocolate by being able to purchase sugar at world prices rather than domestic prices. Ambrosia's shipments of sweetened cocoa in 1987 were * * * . Foreign share of purchased materials received amounted to *** percent, with * * * supplying the sugar.

Power Packaging, Inc. (PPI) (subzones 22C, 22D, and 22E)

PPI has three sugar-product processing plants in the Chicago, IL area that are considered to be "adjacent" to the Chicago customs port of entry. The grantee is the Illinois International Port District (formerly the Chicago Regional Port District). PPI's plant at Carol Stream, IL (22C), has been

operational since April 1974 and was granted subzone status in August 1987; its plant at West Chicago (22D) has been operational since April 1976 and was granted subzone status in July 1987; and its plant at St. Charles (22E) has been operational since April 1977 and was granted subzone status in July 1987. These grants were obtained so late in fiscal year 1987 that PPI did not have any subzone activity to report in the Commission's questionnaire. PPI blends sugar with other products to produce sugar-containing products at these plants. According to its grant, PPI must elect domestic or privileged foreign status, as appropriate, when using foreign sugar to manufacture products that are not covered by U.S. sugar program import quotas as designated in Presidential Proclamation 5294, as revised in Presidential Proclamation 5340 (TSUS Nos. 958.16, 958.17, and 958.18). This restriction effectively subjects the foreign sugar used to the U.S. sugar import quotas. PPI stated that its subzone status enables it to preserve employment and generate revenues in the United States, rather than operate its business in Canada. PPI hopes to compete more favorably in the international marketplace because it will be able to bring the less expensive imported sugar from Canada into the United States for processing.

Lilli Ann (subzone 3A)

Lilli Ann of San Francisco, CA, a manufacturer of apparel, was granted subzone status in 1963. The grantee for this zone is the San Francisco Port Commission, and the customs port of entry in San Francisco.

Although the firm management was able to supply only limited amounts of useful data on their operations within the zone, it reported that it used the subzone as a bonded warehouse where no manufacturing was performed.

All merchandise within the zone was reported as nonprivileged foreign, and valued at *** per year from 1983 through 1986. Domestic shipments were valued at *** per year.

Lawrence Textile Shrinking Co. (subzone 27C)

The company, located in Lawrence, MA, has operated at the firm's current location since January 1967, operations in the subzone began in October 1984. The grantee for this zone is the City of Boston, and the customs port of entry for this subzone is Lawrence, MA.

The establishment warehouses and treats fabrics. No manufacturing is performed at this location.

The major benefits from operation within the subzone included duty deferral, increased employment, and domestic production of garments.

When granting the subzone, the Board stipulated that no manufacturing may take place within the zone that would change the tariff classification of the goods.

Pedigree Inc., U.S.A. (subzone 55A)

The parent company for Pedigree Inc. of St. Albans, VT, is Pedigree Inc. of Montreal, Canada. The subsidiary began operations at its current location in 1976 and began operations within the subzone in June of 1984. The grantee for this subzone is the Greater Burlington Industrial Corp. U.S. customs port of entry for this subzone is Burlington, VT.

The facility was originally intended to be used to "ornament" garments. Due to lack of space, however, it is currently being used as a bonded garment warehouse where no manipulation takes place.

According to Pedigree, there were no major benefits derived from the use of this subzone. The firm deactivated the zone within two months of activation because of the high costs of running the zone. The firm recorded * * * of shipments, * * * was derived from foreign purchased materials received. Customs costs, fees to the general-purpose zone, and the fees to the National Association of Foreign-Trade Zones were seen as too great for a small operation.

J. Schoeneman (subzone 99A)

J. Schoeneman of Wilmington, DE, is a division of Cluett, Peabody & Co. of New York, NY. Operations began at this site in 1922 and operations within the foreign-trade subzone began in March 1985. The grantee for this subzone is the State of Delaware, and the customs port of entry is Wilmington.

The firm brought fabric into the zone to be manipulated, not for any manufacturing processes. Operations carried out within the subzone included: examination, shading, sponging, measuring, and storage of imported piece goods.

The major benefit of operations in the subzone was the duty deferral on piece goods that were manipulated and stored within the zone. Drawback was also avoided when goods did not sell in the United States, and were reexported directly from the zone.

The grant stipulates that no manufacturing is to take place within the subzone.

Olympus Corp. (subzone 18A)

Olympus Corp., based in Lake Success, NY, is a subsidiary of Olympus Optical Co., Ltd. of Tokyo, Japan. The subsidiary began operations at this site in 1969, and began operations within the subzone, which is located in San Jose, CA, in January 1986. The grantee for this zone is the City of San Jose.

As in the textile and apparel subzones, no manufacturing took place in this subzone. Activity consisted mainly of the storage of medical instruments. Olympus had originally intended to use the facility to inspect and adjust endoscopes, and possibly to engage in some assembly operations. As yet, these activities have not taken place.

The major benefit derived from subzone operations came from duty deferral on privileged foreign merchandise imported from Japan.

* * * shipments from the zone were * * * , amounting to *** in 1986 and *** during partial-year 1987. Foreign share of purchased inputs received was *** percent. Total employment amounted to * * * workers during both periods.

Quincy Shipbuilding Division (subzone 27B)

Quincy Shipbuilding, based in Quincy, MA, is a division of General Dynamics Corp. of St. Louis, MO. Operations at Quincy's current location began in January 1964, and operations within the subzone began in December 1983. The grantee for this subzone is the city of Boston and the customs port of entry for this site is Boston.

The subzone had been used for the construction and repair of ships. Quincy is currently out of business. The major benefit derived from operations in the zone was through duty savings on components for ships. The foreign purchased components on these ships were entered into the United States duty-free through the inverted tariff structure.

Foreign share of purchased inputs received was *** percent. Shipments * * * percent in 1986 to *** (table G-50). Employment also * * * in that year to *** from * * * in 1984.

Bay Shipbuilding Corp. (subzone 41E)

Bay Shipbuilding Corp. of Sturgeon Bay, WI, is a wholly owned subsidiary of the Manitowoc Co., Inc., of Manitowoc, WI. Operations were begun at the Bay Shipbuilding site in March 1972, and zone activity commenced in September 1985. The grantee for the zone is the Foreign Trade Zone of Wisconsin, Ltd., and the zone is adjacent to the Green Bay customs port of entry.

Activity within the subzone consisted of shipbuilding, repair, and ship conversions. The establishment has changed its emphasis from the construction of fresh water Great Lakes vessels, to the building of salt water vessels due to the expectation of poor market potential for fresh water ships.

The intense international competition and the lack of domestic support industries for shipbuilding led Bay Shipbuilding to seek zone status to improve its competitiveness in the international market. Especially significant in the firm's decision to seek zone status was the lack of U.S.-produced marine engines of the type required on ocean-going cargo vessels.

The firm expects to realize duty savings from inverted tariffs on ships delivered to U.S. nationals and to avoid the use of drawback on ships delivered to foreign nationals.

In 1987, Bay Shipbuilding delivered *** dollars' worth of goods * * * from the subzone (table G-51). Of these goods, *** percent were domestic purchased inputs received. Employment in the zone * * * from *** in 1985 to *** in June of 1987.

Table G-50
Quincy Shipbuilding Division (subzone 27B): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983 1/	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in December 1983; however, Quincy did not deliver any shipments until 1985.
2/ Quincy is currently out of business, and the subzone is deactivated.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table G-51
Bay Shipbuilding Corp. (Subzone 41E): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985 1/	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Export (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in September 1985.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods.
3/ No shipments made in these periods.
4/ Not available.

Source: Compiled from data submitted in response to questionnaires of the International Trade Commission.

National Steel Shipbuilding Co. (subzone 50B)

National Steel Shipbuilding Co. of San Diego, CA, is a subsidiary of the Morrison-Knudson Corp. of Boise, ID. Operations commenced at the San Diego location in 1959, and zone operations began in September 1984. The grantee for this zone is the City of Long Beach, and the zone is located within the San Diego customs port of entry.

The shipyard engaged in the construction and repair of vessels and the construction of offshore oil facilities.

The major benefit from operation within the subzone came from savings on components purchased abroad, such as cranes, doors, engines, and lifeboats that are subject to substantial duty. Since ships receive duty-free treatment, savings through use of the inverted tariff structure can be substantial.

Employment at the facility was * * * percent, from 1984 through partial-year 1987, to *** employees (table G-52). Shipments from the subzone were * * * destinations. Foreign share of purchased inputs received was *** percent.

Table G-52
National Steel & Shipbuilding Co. (subzone 50B): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984 1/	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars).....	***	***	***	***	***
Export (1,000 dollars).....	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers..	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

1/ Subzone operations began in September 1984.
2/ No data provided for 1983 as the Commission asked only for employment data for the nonsubzone period.

Source: Compiled from data submitted in response to questionnaires of the International Trade Commission.

Bethlehem Steel Corp. (subzone 74A)

Bethlehem Steel Corp. Shipyard of Sparrows Point, MD, is a division of Bethlehem Steel Corp., Bethlehem, PA. The Sparrows Point location has been in operation since 1905, and has been operating as a foreign trade subzone since

April 1985. The grantee is the Baltimore Economic Development Corp. (BEDCO). The customs port of entry for the subzone is Baltimore.

The Sparrows Point Shipyard engages in marine construction and repairs. Zone status allowed the installation of foreign-purchased components free of duty. This permitted the yard to bid more competitively on international tenders.

The yard, which only shipped in 1986, delivered *** in goods to * * * destinations (table G-53). Foreign share of purchased inputs received was *** percent.

Table G-53
Bethlehem Steel Corp. (subzone 74A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986 1/	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)....	***	***	***	***	***
Export (1,000 dollars).....	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)..	***	***	***	***	***
Foreign content (percent)...	***	***	***	***	***

1/ Subzone operations began April 1985.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods.
3/ No shipments.

Source: Compiled from data submitted in response to questionnaires of the U.S. Intenational Trade Commission.

General Electric Co., (GE) (subzone 29C)

GE of Louisville, KY, a division of General Electric Co. of Bridgeport, CT, began operations at this site in September 1952. Operations as a subzone began in December 1985. The grantee for this subzone is the Louisville and Jefferson County Riverport Authority. The zone is adjacent to the Louisville customs port of entry.

At this site, GE engaged in the total assembly of clothes washers, dishwashers, and refrigerators from the base to the finish trim, including sheet metal work, plastic and wire assemblies, as well as painting.

Major benefits from operations in the subzone included cost reductions derived from inverted tariffs, employment stability, and the opportunity for GE to integrate manufacturing facilities in the United States and abroad. Additionally, inventory controls and security programs have been improved.

Approval was given on the condition that GE pay customs duty on certain steel shapes if the same item is being produced, and is available, through domestic steel mills. For further details, see appendix C.

Shipments from the subzone, which were * * * from 1986 through partial-year 1987, to *** (table G-54). Foreign share of purchased inputs received averaged *** percent.

Table G-54
General Electric Co. (subzone 29C): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986 1/	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)....	***	***	***	***	***
Export (1,000 dollars).....	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)..	***	***	***	***	***
Foreign content (percent)...	***	***	***	***	***

1/ Subzone operations began in December 1985.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Toyota Auto Body, Inc., of CA (subzone 50A)

Toyota Auto Body, Inc., began operations at its Long Beach, CA, plant in January 1974 and became a subzone in July 1983. The grantee is the Board of Harbor Commissioners of the city of Long Beach. The facility is used primarily for truck bed assembly operations. Duty savings from inverted tariffs were the principal benefit realized by Toyota. There were * * * exports forwarded from the subzone during the reporting period. Foreign share of purchased inputs received * * * during 1985-June 1987 * * * (table G-55). Japan was the only country supplying components for production operations. The average number of production

Table G-55
Toyota Auto Body, Inc., of California (subzone 50A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985 1/	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars).....	***	***	***	***	***
Export (1,000 dollars).....	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)...	***	***	***	***	***
Foreign content (percent)....	***	***	***	***	***

1/ Subzone operations began in 1985.
2/ No data provided for these periods as the Commission only asked for employment data for nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

workers employed * * * percent during October 1986-June 1987 over that reported in 1985.

Berg Steel Pipe Corp. (FTZ 65)

Berg Steel Pipe Corp. is a subsidiary of Berg Pipe, Inc. Both are based in Panama City, FL. The parent company is a joint venture between the West German Bergrohr and two U.S. firms, Western Steel International and Intercontinental Metals. Berg Steel Pipe has been operating at its current location since June 1980 and has been operating within the foreign-trade zone since March 1982. Berg was the only major firm to have manufacturing activity taking place within a general-purpose zone. The grantee of this zone is the Panama City Port Authority, and the customs port of entry is Panama City.

Berg fabricates large-diameter steel pipe from steel plate through a cold-roll process that consists of the forming, welding, finishing, and inspection of finished pipe. According to the company, Berg was the only U.S. manufacturing facility capable of producing larger than 4-foot diameter pipes to grade X-70 specifications.

The major benefit from operation within the subzone stemmed from the inverted tariff structure between steel plate and steel pipe. Pipe can be imported into the United States by foreign suppliers at a lower rate of duty than Berg can import the basic steel plates.

Board order #171 states that Berg's continued zone operation would be contingent on levels of domestic steel plate purchases, import displacement and other considerations. The Berg operation was examined by the Board in July of 1987 to determine whether continued zone operation was in the public interest. The board decided that operations should continue, and extended the grant until September 30, 1990. The Board continued to restrict Berg's operations so that if antidumping, countervailing duties, or trigger price mechanisms are in effect on foreign products brought into the subzone, the firm may be required to classify that product as privileged foreign merchandise, thereby losing the inverted tariff benefits.

From 1985 to June 1987, foreign share of purchased inputs received * * * percent to *** percent (table G-56). Export shipments accounted for *** percent of the total shipments * * * .

Table G-56
Berg Steel Pipe (FTZ 65): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars).....	***	***	***	***	***
Export (1,000 dollars).....	***	***	***	***	***
Total.....	***	***	***	***	***
Share of total value of shipments of--					
Domestic content (percent)....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers..	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Caterpillar, Inc. (subzone 114A)

Caterpillar, Inc., of Peoria, IL, began operations within the subzone at the Mossberg facility in May 1986. The grantee for the zone is the Economic Development Council for the Peoria Area, Inc. Peoria is the U.S. customs port of entry for this site.

The Caterpillar plant manufactures, assembles, and tests diesel engines for earthmovers, construction equipment, trucks, and for marine, agriculture, petroleum, and other applications.

Major benefits include duty deferral on imported privileged foreign status merchandise and recent Illinois legislation that allows businesses located in foreign-trade zones to qualify for tax breaks. Imported items to the subzone included * * * . * * *

In approving the application, the Board stipulated that Caterpillar must notify the Foreign Trade Zone Board prior to engaging in any new manufacturing operations within the zone. All operations are to be monitored by Board staff to determine whether existence of the zone, in fact, is increasing imports that would otherwise not occur. For further details on restrictions, see appendix C.

Total shipments from the zone * * * percent from 1986 through part-year 1987 (table G-57). This * * * was primarily due to * * * . Foreign share of purchased inputs received * * * percent. Employment * * * in 1983 to *** in part-year 1987.

Table G-57
Caterpillar, Inc. (subzone 114A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986 1/	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars).....	***	***	***	***	***
Exports (1,000 dollars).....	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

1/ Subzone operations began in May 1986.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods.
3/ Not available.

Source: Compiled from data submitted in response to questionnaires of the International Trade Commission.

Gulf Marine Fabricators, Inc. (subzone 122D)

Gulf Marine Fabricators of Ingleside, TX, is a subsidiary of Peter Kiewit, of Omaha, NE. Operations in Ingleside began in June 1985 and operations within the subzone followed in September 1986. The grantee for the subzone is the Port of Corpus Christi Authority. Corpus Christi is the customs port of entry for the subzone.

Manufacturing activity within the zone consisted of the fabrication of offshore drilling vessels.

Benefits from zone operations will come mainly from savings on dutiable foreign goods used in the production of offshore oil facilities (especially for export to Africa, Mideast, South America and Caribbean areas), and avoidance of the need to use drawback.

The firm operates under Board Order 297, referenced in Board Order 310, which enumerates steel mill products on which duty must be paid.

Although no shipments were made from the subzone between 1983 and partial-year 1987, employment within the zone * * * workers in 1987. This is because Gulf Marine is currently constructing the Bullwinkle Oil Rig and has not yet delivered any products from the subzone.

Tennessee Valley Authority (TVA), (subzones 78C and 78D)

The Tennessee Valley Authority of Chattanooga, TN, is an agency of the United States Government. Subzone 78C is located in Hartsville, TN, at the TVA's Nuclear Plant site there, and subzone 78D is located at Phipps Bend, TN, at TVA's nuclear plant site near Sturgionsville. The TVA began operations at the Hartsville site in December 1972 and first operated in the subzone in May 1985. Operations began at the Chattanooga site in September 1974, and as a subzone in April 1984. The grantee for both sites is the Metropolitan-Nashville Davidson County Port Authority. The Hartsville subzone is adjacent to the Nashville customs port of entry, and the Sturgionsville subzone is located about 85 miles Northeast of the Knoxville customs port of entry.

The subzones are currentiy used as storage facilities with no continual entry and withdrawal of materials from the zone.

The major benefits from the subzones are the duty deferral on turbo generator equipment from cancelled nuclear plants and the elimination of duty on unneeded and unmarketable equipment. Savings to rate payers for subzones 78C and 78D combined were estimated at *** .

The Board limited operation of the subzones to 5 years.

Dole Processed Foods Co. (subzone 9C)

Dole Processed Foods Co. of Honolulu, HI, is a division of Castle & Cooke, Inc., Los Angeles, CA. Dole began operations at its current site in June 1907, and began operations within the subzone in August 1985. The grantee for the zone is the State of Hawaii and Honolulu is the zone's customs port of entry.

Manufacturing within the subzone consisted of producing empty cans and can ends from coils and bundles of tinplate. After filling with domestic pineapple, the cans were shipped to domestic and foreign ports. A small percent of the empty cans were also sold commercially.

The principal benefit to the firm from operations in the subzone occurred from the Customs ruling that permitted merchandise that was to be used in the manufacture of containers for food products to enter the U.S. customs

territory duty-free (Customs Service Headquarters Ruling Letter CLA-2:CO:RCV:G; 073879 LCS: 2/29/84). The duty on foreign tinplate containers in which imported pineapple enters the United States is zero because of the provisions of general headnote 6(b)(i) of the Tariff Schedule of the United States Annotated. To give Dole (which used domestic pineapple) equal treatment, the subzone application was approved, thereby permitting Dole to avoid the 3.9 percent ad valorem rate of duty.

Foreign share of purchased inputs received was about *** percent in 1986 and partial-year 1987 (table G-58). Shipments from the subzone amounted to *** in 1986.

Table G-58
Dole Processed Foods Co. (subzone 9C): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985 1/	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars).....	***	***	***	***	***
Exports (1,000 dollars).....	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers..	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

1/ Subzone operations began in August 1985.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods.
3/ No shipments data reported for 1985.
4/ Not available.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Maui Pineapple Co., Ltd. (subzone 9D)

Maui Pineapple, a subsidiary of Maui Land & Pineapple Co. Inc., both of Kahului, HI, began operating at its current location in April 1932, and began operations within the subzone in May 1986. The grantee for the zone is the State of Hawaii, and the customs port of entry for the subzone is Kahului Harbor.

The facility engaged in the preparation, canning, warehousing, and shipment of canned pineapple and juice products. The facility also manufactured tin cans for the packing of domestic grown pineapples and juices. Pineapple products were transferred to Kahului Harbor for shipment to domestic markets.

Maui received the same duty-free treatment as Dole Processed Foods Co., discussed above, for the tinplate in which it enters domestic pineapple and juices. Foreign share of purchased inputs received * * * from *** to *** percent from 1986 through June of 1987 (table G-59).

Table G-59
Maui Pineapple Co. Ltd. (subzone 9D): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986 1/	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Exports (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone began in May 1986.
2/ Not available.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Sanyo Manufacturing Corp., (SMC) (subzone 14A)

SMC of Forrest, AR, is a subsidiary of Sanyo Electric Co., Ltd., of Osaka, Japan. The subsidiary first operated at its current location in January 1977, and commenced operations within the subzone in December 1982. The grantee for the subzone is the State of Arkansas and the site is adjacent to the Memphis customs port of entry.

The facility was engaged in the manufacturing of color TV's and microwave ovens with parts from Japan, the United States and Singapore. Polystyrene was also manufactured within the subzone. Sanyo was not able to provide separate data on these products.

Benefits from operations within the subzone included the avoidance of drawback procedures on exports, duty savings due to merchandise status selection, duty deferral, duty savings on scrap material, and tax and insurance benefits. Most of the duty-reduction savings applied to microwave ovens only because of restrictions on the TV portion of the grant (see app. C for details). Benefits also included better material flow and better security.

Export shipments from the subzone * * * from 1983 to * * * percent of total shipments in 1986 (table G-60). Foreign share of purchased inputs received * * * from *** percent in 1985 to *** percent during October 1986-June 1987. The facility experienced * * * in total employment between 1984 and partial-year 1987, from *** to *** employees.

Table G-60
Sanyo Manufacturing Corp. (subzone 14A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars).....	***	***	***	***	***
Exports (1,000 dollars).....	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers...	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. Intenational Trade Commission.

Sharp Manufacturing Co. of America, (subzone 77A)

Sharp Manufacturing Co. of America, based in Memphis, TN, is a division of Sharp Electronics Corp. of Japan. The Tennessee firm has operated at this location since October 1979, and has operated within the subzone since December 1984. The grantee for this subzone is the City of Memphis, and the subzone is within the Memphis customs port of entry.

Within the zone, Sharp manufactured complete assemblies of microwave ovens and color TV's using foreign and domestic parts. Steel parts were fabricated from sheet steel. Storage, testing, and shipping were also performed within the zone.

Major benefits from zone operations came from the inverted tariff structure on imported merchandise other than TV picture tubes; thus, microwave oven manufacturing experienced the greatest duty savings from the inverted tariff structure.

The Foreign-Trade Zone Board addressed objections to the controversial approval of the zone application by requiring that picture tubes be imported as privileged foreign merchandise, thereby denying inverted tariff benefits on these items and requiring full customs duty to be paid on that merchandise (see app. C for further details).

Sharp shipped merchandise worth *** during October 1986-June 1987 (table G-61). Of the total shipments, * * * percent were export shipments. Foreign share of purchased inputs received * * * was *** percent during partial-year 1987. Tables G-62 and G-63 give separate data on TV's and microwaves.

Table G-61
Sharp Manufacturing Co. of America, (subzone 77A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1985 1/	1986	October 1986-June 1987
Shipments:			
Domestic (1,000 dollars)	***	***	***
Exports (1,000 dollars)	***	***	***
Total	***	***	***
Total employment	***	***	***
Production and related workers	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***
Share of total value of purchased inputs received of--			
Domestic content (percent)	***	***	***
Foreign content (percent)	***	***	***

1/ Subzone operations began in December 1984.
2/ Not available.

Source: Compiled from data submitted in response to questionnaires of the International Trade Commission.

Hawaiian Flour Mills, Inc. (subzone 9B)

Hawaiian Flour Mills, Inc., of Honolulu, HI, is a subsidiary of the Kerr Pacific Corp. of Portland, OR. The mill began operation at its current location in August 1964, and began operating in the subzone in January 1986. The grantee for the zone is the State of Hawaii, and Honolulu is the customs port of entry for the subzone.

Manufacturing at the mill entailed the milling of grain and the production of bakery mixes from domestically produced flour and other imported and domestic bakery mix ingredients. The mill exported to Asia and the South Pacific islands. The major benefit from the subzone was derived from the avoidance of the use of drawback on exports.

Total shipments increased during 1986 through partial-year 1987 from *** to *** (table G-64). * * * shipments were * * * . Foreign share of purchased inputs received * * * percent.

Table G-62
Sharp Manufacturing Co. of America, (subzone 77A): Selected data on television FTZ operations, 1983-86 and October 1986-June 1987

Item	1985 1/	1986	October 1986-June 1987
Shipments:			
Domestic (number)	***	***	***
Exports (number)	***	***	***
Total	***	***	***
Shipments:			
Domestic (1,000 dollars)	***	***	***
Exports (1,000 dollars)	***	***	***
Total	***	***	***
Production and related workers	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***
Share of total value of purchased inputs received of--			
Domestic content (percent)	***	***	***
Foreign content (percent)	***	***	***

1/ Subzone operations began in December 1984.
2/ Not available.

Source: Compiled from data submitted in response to questionnaires of the U.S. Intenational Trade Commission.

Table G-63
Sharp Manufacturing Co. of America, (subzone 77A): Selected data on microwave FTZ operations, 1983-86 and October 1986-June 1987

Item	1985 1/	1986	October 1986-June 1987
Shipments:			
Domestic (number)	***	***	***
Exports (number)	***	***	***
Total	***	***	***
Shipments:			
Domestic (1,000 dollars)	***	***	***
Exports (1,000 dollars)	***	***	***
Total	***	***	***
Production and related workers	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***
Share of total value of purchased inputs received of--			
Domestic content (percent)	***	***	***
Foreign content (percent)	***	***	***

1/ Subzone operations began in December 1984.
2/ Not available.

Source: Compiled from data submitted in response to questionnaires of the U.S. Intenational Trade Commission.

Table G-64
Hawaiian Flour Mills, Inc. (subzone 9B): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986 1/	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)	***	***	***	***	***
Exports (1,000 dollars)	***	***	***	***	***
Total	***	***	***	***	***
Total employment	***	***	***	***	***
Production and related workers	***	***	***	***	***
Hours worked by production workers (1,000 hours)	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent)	***	***	***	***	***
Foreign content (percent)	***	***	***	***	***

1/ Subzone operations began in January 1986.
2/ No data provided for these periods as the Commmission only asked for employment data for the nonsubzone periods.
3/ Not available.

Source: Compiled from data submitted in response to questionnaires of the U.S. Intenational Trade Commission.

Xerox Corp. (subzone 23A)

The Grantee of Xerox Corp.'s plant in Webster, NY, is the county of Erie. The subzone operations that began in August 1984 (limited to the manufacturing of plain copier equipment), consisted of assembling imported and domestic component parts into complete office copying machines and laser printers. In response to the Commissions' questionnaire, Xerox stated that duty savings from inverted tariffs and tariff deferrals were the major benefits derived from the FTZ program. Total shipments of finished products, as shown in table G-65, * * * during 1985 and 1986. * * * exports as a share of total shipments * * * to *** percent during October 1986-June 1987, from *** percent in 1984. * * * were the leading countries supplying parts and components for production operations. Foreign share of purchased inputs received * * * from *** percent in 1984 to *** percent in 1986, and then * * * during October 1986-June 1987 to *** percent. Total employment * * * percent during October 1986-June 1987, compared with employment in 1984.

Greater Buffalo Press, Inc. (GBP) (subzone 23B)

GBP of Buffalo, NY, has been operating at its Sheridan, NY, subzone since August 1986. The grantee for the zone is the County of Erie, and the customs port of entry for the site is Buffalo, NY.

Table G-65
Xerox Corp. (subzone 23A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984 1/	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)..	***	***	***	***	***
Exports (1,000 dollars)...	***	***	***	***	***
Total	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

1/ Subzone operations began in August 1984.
2/ No data provided for 1983 as the Commission only asked for employment data for the nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. Intenational Trade Commission.

Within the subzone, printing inks were manufactured for GBP use from domestic and foreign raw materials. GBP used imported dry pigments and the balance of the manufacturing material was of domestic origin.

The major benefit from zone operations was the duty savings on imported chemicals through the inverted tariff structure. According to GBP, it will begin manufacturing pigment within the zone using savings obtained through current zone operations. This will lead to reductions in pigment imports as GBP becomes an internationally competitive manufacturer. Without the subzone grant, GBP alleged it would have located its facility in Canada.

To satisfy the National Association of Printing Ink Manufacturers' objections, GBP agreed not to use the inverted tariff privileges when selling ink to a nonaffiliated company. The grant also restricts use of these privileges after 21 million pounds of ink have been sold within the GBP organization. The grant is also to be reviewed after 5 years.

Total shipments rose from *** in 1986 to *** in partial-year 1987 (table G-66). Of these shipments, *** percent were exports, * * * those in the previous year. Foreign share of purchased inputs received showed * * * , from *** percent to *** percent during that period.

Table G-66
Greater Buffalo Press, Inc. (subzone 23B): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986 1/	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)...	***	***	***	***	***
Exports (1,000 dollars)....	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

1/ Subzone operations began in August 1986.
2/ No data provided for these periods as the Commission asked only for employment data for the nonsubzone periods.

Source: Compiled from data submitted in response to questionnaires of the U.S. Intenational Trade Commission.

Kawasaki Motors Manufacturing Corp. U.S.A. (subzone 59A)

Kawasaki, U.S.A., based in Lincoln, NE, is a subsidiary of Kawasaki Heavy Industries of Kobe, Japan. U.S. operations began at this location in January 1975, and operations within the subzone followed in October 1980. The grantee for the zone is Lincoln Foreign Trade Zone, Inc. The customs port of entry is Lincoln.

Within the facility Kawasaki produces motorcycles, jet skis, all-terrain vehicles (ATV's), and seat frames. 1/ Assemblies are fabricated and welded, fiberglass parts are bonded, vehicles are painted, and final assembly and inspection take place within the zone. Vehicles are also stored in finished-goods warehouses before release to distribution points.

Benefits from subzone operations stemmed from duty savings under the inverted tariff structure on jet skis and ATV's. However, because of the

1/ On Dec. 30, 1987, Kawasaki, along with four other firms selling ATV's in the United States, reached a court-approved settlement with the Consumer Product Safety Commission and the Justice Department, to stop selling three-wheeled ATV's in the United States. The Washington Post, Dec. 31, 1987, p. A1.

industry escape-clause on motorcycles, which increased the duty on these items, the use of nonprivileged foreign status on motorcycle part imports was restricted. For further details on the restrictions, see appendix C. 1/

Of the *** in total shipments from the zone during partial-year 1987, *** percent were exported abroad (table G-67). Foreign share of purchased inputs received * * * percent * * * . * * * have the highest foreign share of purchased inputs received of the Kawasaki products, at *** percent (table G-68). Jet skis are now being exported by Kawasaki, and * * * (table G-69). The firm believes that it has been responsible for developing the world market for jet skis. As seasonal demand increases for this product, especially during the summer months, Kawasaki hires up to *** extra part-time workers to meet this need. Table G-70 shows separate data on ATV's.

Table G-67
Kawasaki Motors Manufacturing Corp. USA (subzone 59A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)..	***	***	***	***	***
Exports (1,000 dollars)...	***	***	***	***	***
Total.....	***	***	***	***	***
Total employment.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. Intenational Trade Commission.

1/ However, President Proclamation 5727 of Oct. 9, 1987, removed the increased tariffs and allows future use of zones for manufacturing motorcycles.

Table G-68
Kawasaki Motors Manufacturing Corp. USA (subzone 59A): Selected data on motorcycle FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)..	***	***	***	***	***
Exports (1,000 dollars)...	***	***	***	***	***
Total.....	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)..	***	***	***	***	***
Exports (1,000 dollars)...	***	***	***	***	***
Total.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. Intenational Trade Commission.

Table G-69
Kawasaki Motors Manufacturing Corp. USA (subzone 59A): Selected data on jet ski FTZ operations, 1983-86 and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)..	***	***	***	***	***
Exports (1,000 dollars)...	***	***	***	***	***
Total.....	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)..	***	***	***	***	***
Exports (1,000 dollars)...	***	***	***	***	***
Total.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. Intenational Trade Commission.

Table G-70
Kawasaki Motors Manufacturing Corp. USA (subzone 59A): Selected data on all-terrain vehicle (ATV) FTZ operations, 1983-86, and October 1986-June 1987

Item	1983	1984	1985	1986	October 1986-June 1987
Shipments:					
Domestic (1,000 dollars)..	***	***	***	***	***
Exports (1,000 dollars)...	***	***	***	***	***
Total.....	***	***	***	***	***
Shipments:					
Domestic (1,000 dollars)..	***	***	***	***	***
Exports (1,000 dollars)...	***	***	***	***	***
Total.....	***	***	***	***	***
Production and related workers.....	***	***	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***	***	***
Share of total value of purchased inputs received of--					
Domestic content (percent).....	***	***	***	***	***
Foreign content (percent).....	***	***	***	***	***

Source: Compiled from data submitted in response to questionnaires of the U.S. Intenational Trade Commission.

Smith Corona Corp. (subzone 90A)

The Smith Corona Corp., a wholly owned subsidiary of Hanson Industries of the United Kingdom, began subzone operations at its Cortland, NY, plant in July 1985. Smith Corona has been in operation in the Cortland area for over 100 years. The grantee is Onondago County of New York. The firm's operations consisted of manufacturing and repairing typewriters, personal word processors, and typewriter accessories from parts of domestic and foreign origin. Smith Corona is the sole remaining manufacturer of typewriters in the United States. According to the response to the Commission's questionnaire, Smith Corona has benefited mostly from inverted tariffs afforded by the FTZ program. In addition, Smith Corona stated that the program allowed it to successfully employ a just-in-time inventory system, allowing reduced on-hand inventories and parts obsolescence. Smith-Corona stated that the subzone grant was a major factor in allowing it to remain in business. Typewriters were the principal product manufactured, accounting for * * * percent of the total value of shipments during October 1986-June 1987. As shown in table G-71, exports as a share of total shipments * * * from *** percent in 1985 to nearly *** percent in October 1986-June 1987. The domestic share of purchased inputs received * * * to *** percent in October 1986-June 1987, from *** percent in 1985. The average number of production employees * * * nearly *** percent during October 1986-June 1987 over those reported in 1985.

Table G-71
Smith Corona Corp. (subzone 90A): Selected data on total FTZ operations, 1983-86 and October 1986-June 1987

Item	1985 1/	1986	October 1986-June 1987
Shipments:			
Domestic (1,000 dollars).....	***	***	***
Exports (1,000 dollars).....	***	***	***
Total	***	***	***
Total employment.....	***	***	***
Production and related workers.....	***	***	***
Hours worked by production workers (1,000 hours).....	***	***	***
Share of total value of purchased inputs received of--			
Domestic content (percent)....	***	***	***
Foreign content (percent).....	***	***	***

1/ Subzone operations began in July 1985. Data not available on employment for 1983 and 1984.

Source: Compiled from data submitted in response to questionnaires of the U.S. Intenational Trade Commission.

APPENDIX H

FTZ EMPLOYMENT EFFECTS

FTZ Employment Effects

Economic Analysis

This section outlines the methodology used to determine the domestic employment effects of the FTZ provisions. A geometric presentation is first developed, using a partial-equilibrium model of protection with two-staged production. 1/ The model is then extended to consider the effects of quantitative import restrictions on fully assembled products. An algebraic presentation follows. The estimated employment effects are the changes in employment that have occurred because of the expanded use of the FTZ (subzone) program.

The effects of the FTZ program can best be analyzed by dividing the industrial production process into two stages: a components manufacturing stage and an assembly stage. Although both operations may be integrated within a single firm, both are distinct activities in terms of labor and material requirements and production techniques. The framework adopted here clarifies that competition in the industry is between domestic and foreign firms engaged in each process, respectively. For example, foreign components producers compete with domestic components manufacturers, while offshore assembly operations compete with domestic firms that assemble.

The FTZ/subzone program is controversial because the reduction of duties on imported materials that is (implicitly) provided alters the structure of tariff protection against the domestic components manufacturing industry and in favor of the domestic assembly stage. Many of the firms that have requested FTZ status, for example, are part of the auto industry that is subject to an "inverted" tariff structure. Under this tariff schedule, imports of auto components are subject to higher import duty rates than are the final vehicles into which they are assembled. It can be shown that this duty scheme confers negative effective protection upon the auto assembly industry. 2/ Granting a firm approval to operate in a FTZ/subzone allows it

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1/ The model assumes final products are produced from components and assembly services using fixed-coefficients (Leontief) technology, and that foreign elasticities of import supply for both inputs and final products are infinite. See W. Max Corden, The Theory of Protection, ch. 3, pp. 28-64 for a complete discussion.

2/ The effective rate of protection is the proportional change in an industry's value-added as a result of a tariff schedule compared with free trade. Algebraically, the effective rate of protection can be calculated as follows:

$$[H\text{-}1] \qquad r_Y = \frac{t_Z - a_{XY} t_X}{(1 - a_{XY})}$$

where r_Y is the effective rate for assembly activity, the numerator is the difference between the duty on the assembly product (vehicles) and the duty on imported inputs (parts) weighted by their share of total cost, and the denominator is the value-added per unit of assembly activity. Most vertically-segmented industries are protected by "escalating" nominal tariffs that confer positive rates of effective protection to successive downstream production activities.

to operate under a tariff structure more favorable to assembly processing, by replacing the existing "inverted" tariff schedule with a schedule that equalizes nominal tariffs. This removes the negative effective protection against assembly activity without totally removing tariff protection for domestic producers of components.

Geometric Presentation

Figure H-1 displays a partial equilibrium framework for analyzing the effects of tariff policy on an industry characterized by two-staged production. Although the following discussion proceeds using the auto industry for concreteness, it can just as readily be applied to other industries.

Quantities of auto parts, units of assembly services, and fully assembled vehicles are measured on the horizontal axis, units selected so that one unit of parts and one unit of value-adding assembly activity is required by domestic producers to produce one vehicle, as if the technology can be described by a fixed-coefficients production function. The three $S_X^*(\ )$ curves (* denote foreign variables) are the foreign supply curves for auto parts under alternate assumptions regarding duty rate t_X: $t_X=0$, $t_X=t_Z$ (as under FTZ provisions), or $t_X>t_Z$, as if FTZ treatment is not applicable. Import duty rates on auto parts are as follows: $(P_2-P_0)/P_0$ if $t_X>t_Z$ and $(P_1-P_0)/P_0$ if $t_X=t_Z$. Import supply curves for assembled vehicles are denoted by $S_Z^*(t_Z=0)$ and $S_Z^*(t_Z>0)$, and correspond to assumptions that import tariffs on vehicles are nil or equal t_Z, respectively. Import duty rates on vehicles are $(P_4-P_3)/P_3$, which is equivalent to $(P_1-P_0)/P_0$. All foreign import supplies are assumed to be perfectly elastic.

Construction of the supply curves for domestically assembled vehicles, denoted by $S_Z(t_X>t_Z)$ if imported parts are fully dutiable, or $S_Z(t_X=t_Z)$ if FTZ status applies, is more involved. Each represents the (vertical) summation of the **market** supply curve for auto parts and the supply curve associated with domestic final auto assembly. The market supply curve for auto parts is itself the (horizontal) sum of the upward-sloping domestic supply of parts S_X and the relevant import supply of parts. This market supply curve for parts is therefore kinked at the point where the upward-sloping domestic supply meets the relevant horizontal import supply curve. The supply curve for the (value-adding) assembly activity is shown as S_Y. Summing the market supply of auto parts TS_X $(=S_X+S_X^*)$ and the supply of domestic processing (S_Y) results in the domestic supply curve for assembled vehicles (S_Z). The slope of S_Z is equal to the sum of the slopes of S_X and S_Y. Therefore, the left-hand segment has slope equal to the sum of the slopes for S_X and S_Y, and the right-hand segment has a slope equal to the slope of S_Y (the slope of the market supply curve of parts equals zero in this range because the foreign supply of imported parts is infinitely elastic).

Given market demand for assembled vehicles D_Z, equilibrium values can be derived under the alternate assumptions that FTZ provisions are in effect or not (see fig. H-2 and H-3). Consider first the case when both parts and assembled products are fully dutiable. Equilibrium price and quantity are P_4 and Q_{11}. The level of domestic vehicle production is Q_3, and

Figure H-1
Partial equilibrium model of protection with two-stage production

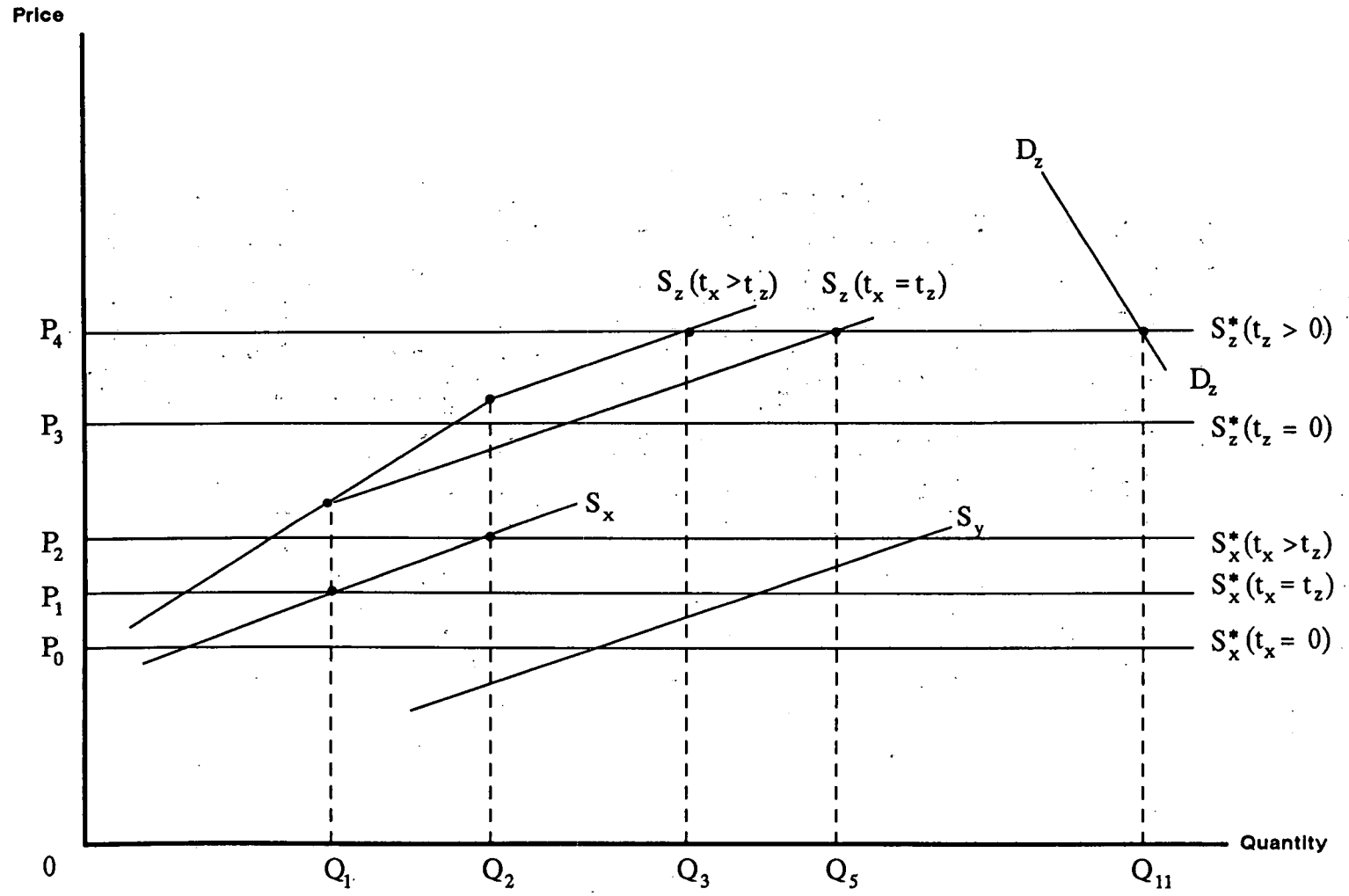


Figure H-2
Partial equilibrium model of protection with two-stage production; no FTZ program

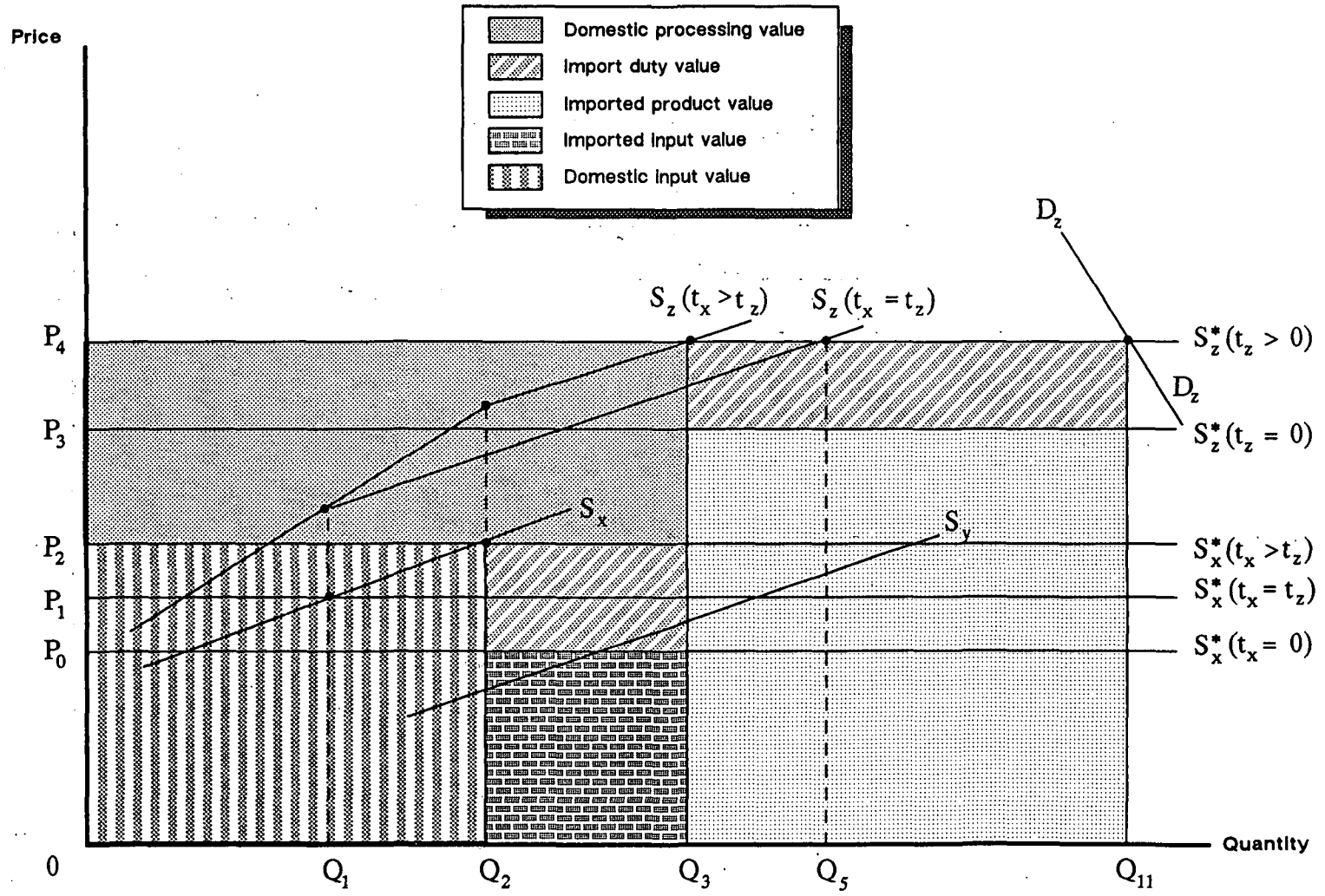
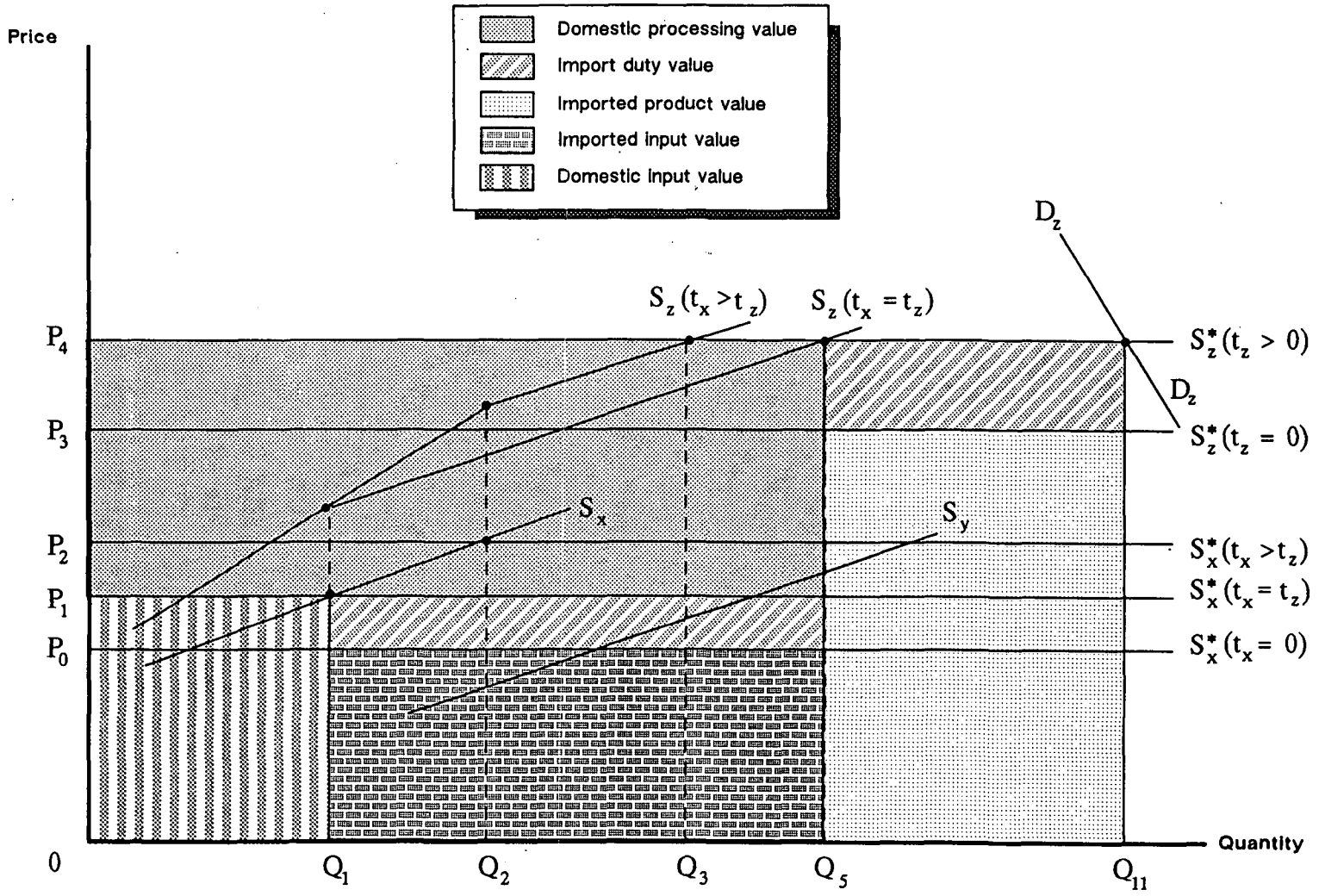


Figure H-3
Partial equilibrium model of protection with two-stage production; FTZ program in effect



imports of the assembled vehicles are $(Q_{11}-Q_3)$. Total market demand for auto parts is therefore Q_3, satisfied by domestic production of Q_2 and imports (Q_3-Q_2). Duties collected are $(Q_{11}-Q_3)(P_4-P_3)$ on assembled vehicles and $(Q_3-Q_2)(P_2-P_0)$ on parts.

Now assume that the rates of duty on auto parts and assembled vehicles are equalized because of FTZ provisions. Duty relief shifts import supply of auto parts down to $S_X^*(t_X=t_Z)$, and the consequent reduction of costs rotates the domestic supply of assembled vehicles rightward to $S_Z(t_X=t_Z)$. Equilibrium price and quantity for assembled vehicles remain P_4 and Q_{11}. (Price is unchanged because import supply is assumed to set a ceiling on market price.) Domestic production of assembled vehicles rises from Q_3 to Q_5 and imports decline to $(Q_{11}-Q_5)$. Total market demand for auto parts also rises from Q_3 to Q_5. However, shifting relative prices results in substitution towards foreign supplies and away from domestic parts. Domestic production of parts falls from Q_2 to Q_1, supplemented by imported parts that rise to (Q_5-Q_1). Duties paid on assembled vehicles decline to $(Q_{11}-Q_5)(P_4-P_3)$. Duties paid for imported auto parts change from $(Q_3-Q_2)(P_2-P_1)$ to $(Q_5-Q_1)(P_1-P_0)$. The direction of change in duty payments on imported parts is uncertain. For example, the decline in the rate of duty on parts may be compensated for by a rising quantity of imported parts, raising total duty payments on parts.

Employment Effects

Figure H-4 illustrates the net effects of the FTZ program on the auto parts and assembly industries. Revenues earned by the auto parts industry decline from P_2Q_2 to P_1Q_1. In the short run, the revenue losses above the supply curve S_X are profits lost by auto parts producers. The remaining revenue losses (the shaded area under S_X between Q_1 and Q_2) represent the opportunity value of resources exiting the industry, including employment losses.

For the assembly industry, revenues rise under the FTZ program. Profits rise, increasing by (P_2-P_1) for each unit up to Q_3 and by the triangular area above the supply curve for vehicles (refer to $S_Z(t_X=t_Z)$) between Q_3 and Q_5. The shaded area remaining (below $S_Z(t_X=t_Z)$ and above $S_X^*(t_X=t_Z)$) corresponds to increased value added, including employment. 1/

Geometric analysis when quantitative restrictions apply

Figures H-5 and H-6 take into consideration quantitative import restrictions on assembled vehicles that are in force before and after the introduction of an FTZ program. Under the QR assembled vehicle imports are limited to Q_0. 2/ Total market supply of vehicles becomes $TS_Z(t_X>t_Z)$, and results in equilbrium price and quantity P_6 and Q_9. As before, the

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1/ The employment gains represented by the shaded area can also be visualized as the area under S_Y between Q_3 and Q_5.

2/ The quota limit on assembled vehicles Q_0 is also equal to (Q_4-Q_3) and (Q_9-Q_7).

Figure H-4
Partial equilibrium model of protection with two-stage production: Net effects from FTZ program

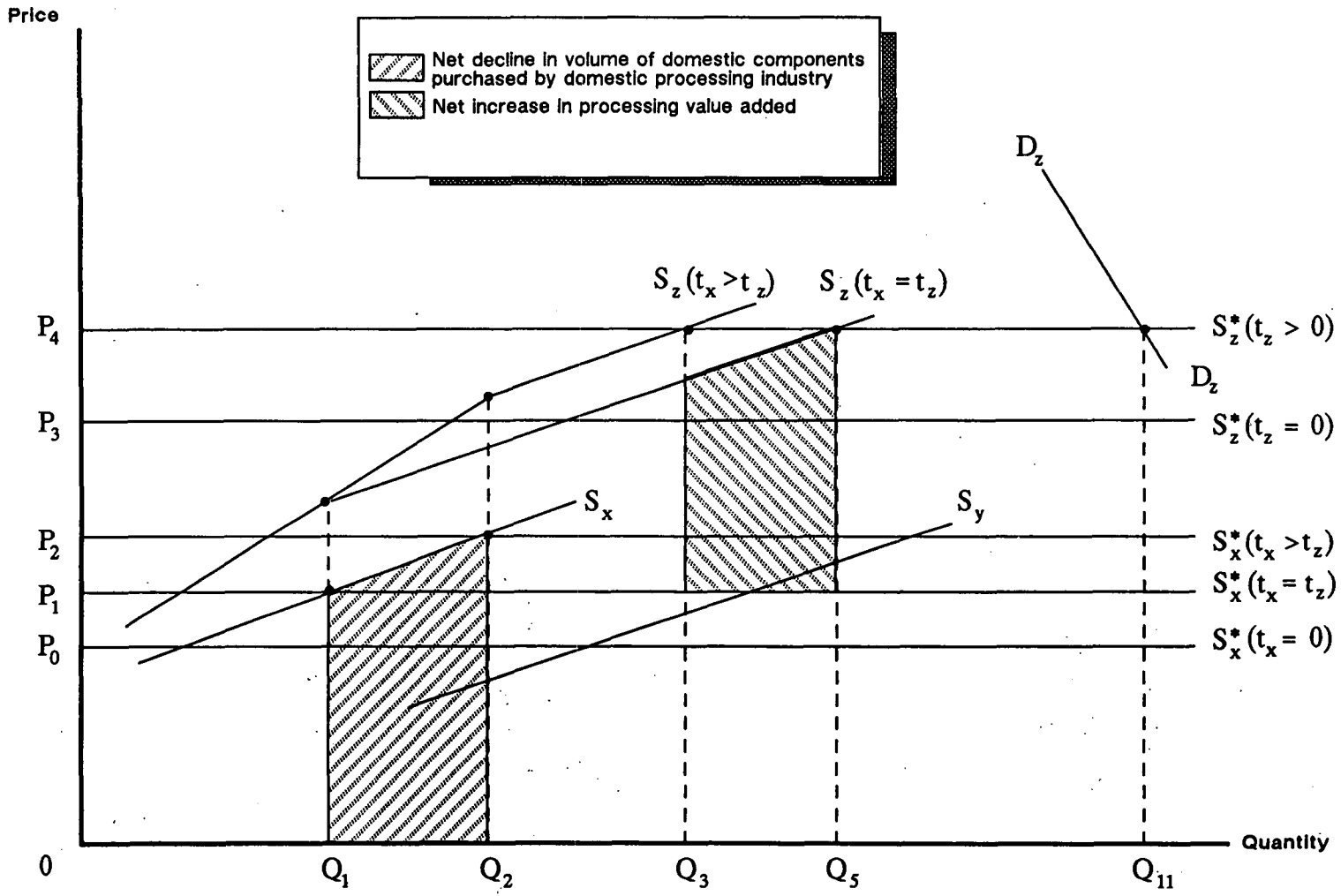
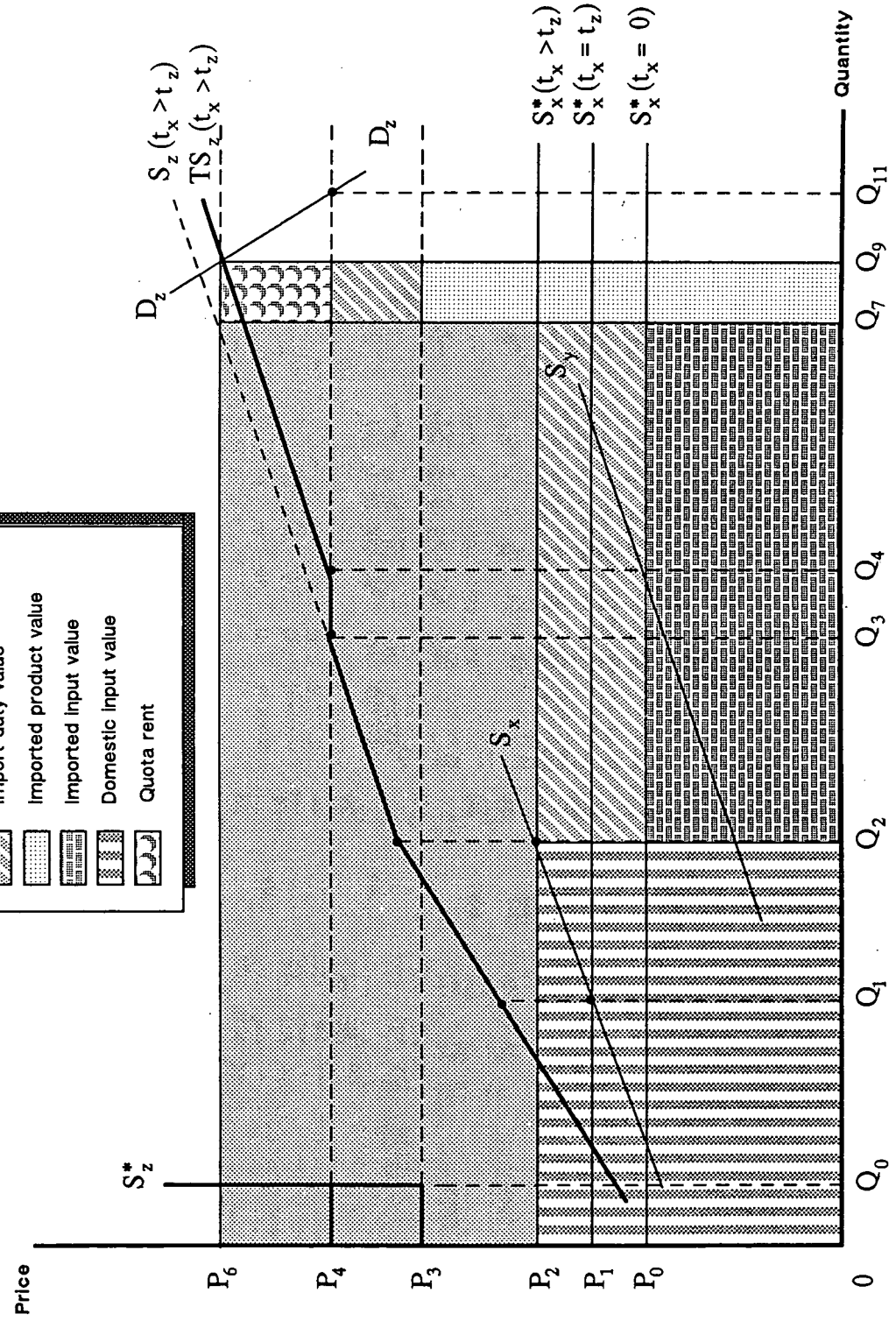
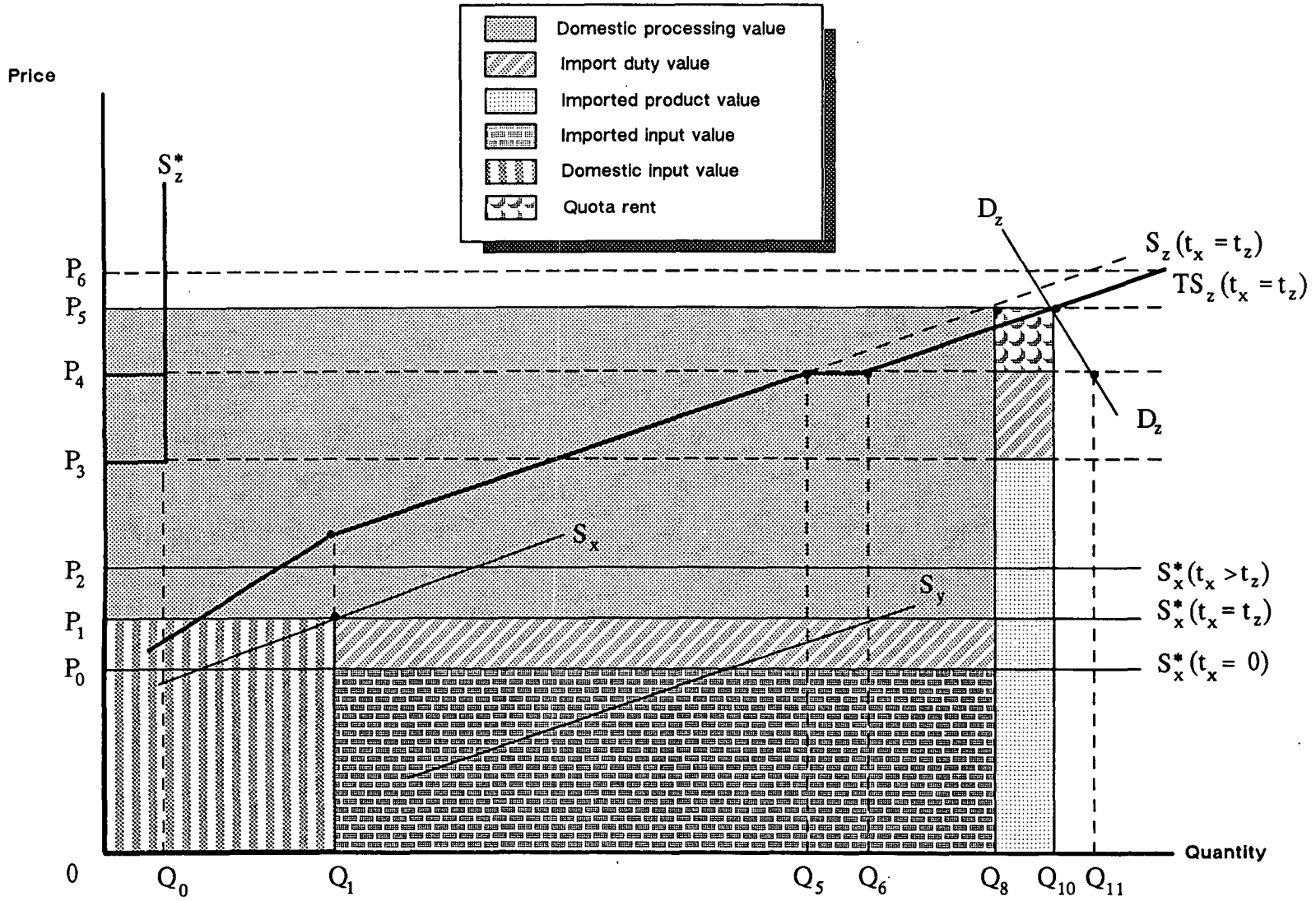


Figure H-5
Partial equilibrium model of protection with two-stage production: Voluntary restraint agreement on final product, no FTZ program



Note: $Q_0 = (Q_4 - Q_3) = (Q_8 - Q_7)$

Figure H-6
Partial equilibrium model of protection with two-stage production
Voluntary restraint agreement on final product, FTZ program in effect



expanded FTZ program results in a downward shift in the domestic (and market) supply curves for assembled vehicles [i.e., from $TS_Z(t_X>t_Z)$ to $TS_Z(t_X=t_Z)$]. This results in a decline in equilibrium price from P_6 to P_5 and an increase in equilibrium quantity from Q_9 to Q_{10}.

Tariff revenues collected on vehicle imports are unaffected, provided that the QR remains binding. Tariff receipts on imported parts can increase or decrease because the declining rate of duty is accompanied by an increase in the level of imported parts, from (Q_7-Q_2) to (Q_8-Q_1).

The effects of the FTZ program on the domestic automotive parts industry are identical to the preceeding analysis conducted without QR's.

However, the effects on the domestic auto assembly industry differ from the previous analysis. As before, the returns to assembly activity increase because of the reduced cost of domestic and imported parts. However, in this case some of the duty savings is passed on to consumers. The increase in the quantity of assembly supplied induced by the higher price of assembly results in more vehicles produced than consumers are willing to buy at the prevailing price. Only at a lower equilibrium price will the additional output be met by higher quantity demanded. The more price elastic the demand for vehicles, the less of the duty savings that will be passed along to consumers, and the higher the price of assembly.

Algebraic Presentation

Quantitative estimates of the employment effects of expanded use of FTZ provisions are obtained using an algebraic translation of the diagrammatic model presented above. The model consists of a production function, three domestic supply equations, two import supply equations, and a market demand equation. Two additional equations relate industrial output levels to employment.

The production of vehicles is described by the following Leontief production function:

[H-2] $$\ln Q_Z = \min (\ln Q_X, \ln Q_Y)$$

where 'ln' denotes a natural logarithm. Units are selected so that one completed vehicle requires one unit of parts and one unit of value-adding assembly activity.

Domestic output of parts, assembly activity, and finished vehicles are described by supply equations that assume constant elasticity of supply:

[H-3] $$\ln Q_X = x_o + e_X(\ln P_X)$$

[H-4] $$\ln Q_Y = y_o + e_Y(\ln P_Y)$$

[H-5] $$\ln Q_Z = z_o + e_Z(\ln P_Z)$$

where the e_X, e_Y and e_Z are the respective supply elasticities.

Import supply equations for parts and finished vehicles are analogously specified, with all foreign variables denoted by asterisks (*):

[H-6] $\ln Q_X^* = x_0^* + e_X^*(\ln P_X^*)$

[H-7] $\ln Q_Z^* = z_0^* + e_Z^*(\ln P_Z^*)$

In the present model, however, foreign supply elasticities e_X^* and e_Z^* are assumed to be infinite.

The market demand for vehicles is defined as follows:

[H-8] $\ln D_Z = n_0 - n_Z(\ln P_Z)$

The quantity of vehicles demanded varies inversely to price such that the price elasticity of demand n_Z is constant.

Finally, labor requirements in parts production and assembly activity are proportional to output:

[H-9] $L_X = a_{LX}(Q_X)$

[H-10] $L_Y = a_{LY}(Q_Y)$

Denoting total market supplies by TS_i, assuming cost minimization in production, invoking equilibrium conditions, and using identities provides the following:

[H-11] $TS_Z = D_Z; \quad D_Y = Q_Y = TS_X$

[H-12] $TS_Z = Q_Z + Q_Z^*; \quad TS_X = Q_X + Q_X^*$

The approximate employment effects attributable to a change in the duty rate on imported auto parts involves obtaining values for dL_X and dL_Y (where "d" prefixes denote changes). These are derived as:

[H-13] $dL_X = a_{LX}\, P_X Q_X\, e_X\, dP_X/P_X\, (1 + 0.5(dP_X/P_X))$

[H-14] $dL_Y = a_{LY}\, P_Y Q_Y\, e_Y\, dP_Y/P_Y\, (1 + 0.5(dP_Y/P_Y))$

These expressions indicate that changes in employment in the respective industries depend on the labor/output ratio, the current value of industry output, the price elasticity of industry supply, and the percentage change in the price of each industry's output in response to the change in the duty rate. The expressions for the percentage changes in prices in response to the duty rate change satisfies the following 1/:

[H-15] $dP_X/P_X = dT_X/P_X$

[H-16] $dP_Y/P_Y = -(dP_X/P_X)\,(P_X/P_Y)$

1/ For example, a 1-percent decline in the duty on auto parts would result in an equal decline in the price of auto parts (because of the perfectly elastic supply of imported auto parts). If the ratio of assembly value added to parts value added is one to three, there would be a 3-percent increase in the return to auto assembly.

To incorporate a voluntary import restraint on assembled vehicles into the model, only equation H-16 needs to be modified. The duty savings generated by the FTZ program are now passed along to consumers of vehicles as well as to the vehicle assembly industry. The precise effect on the price of assembly services now depends on the price elasticity of demand for vehicles, in addition to the price elasticity of assembly supply and the amount of the duty reduction 1/:

[H-17] $$dP_Y/P_Y = f(n_Z, e_Y, t_X)$$

where $$f(\ ) = [1/(1-P_X/P_Z)][1+(dt_X/P_X)(P_X/P_Z)]^{(n_Z-e_Y)/n_Z}$$

Equation H-14, which describes the effects of the expanded FTZ program on employment in the assembly industry, is adjusted accordingly. The market price of auto parts changes in accordance with equation H-15. Consequently, introducing the VRA does not affect the preceeding analysis on employment effects in auto parts industry.

1/ The analysis follows the methodology developed in USITC publication 1897, Annual Report On the Impact of the Caribbean Basin Economic Recovery Act on U.S. Industries and Consumers (September 1986), app. C.