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IS THE JAPANESE DISTRIBUTION SYSTEM REALLY INEFFICIENT?

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ABSTRACT

This paper investigates the efficiency of the Japanese distribution system, measured by the distribution margin. Most of the discussions on the Japanese distribution system have so far relied on institutional descriptions and anecdotal evidence, failing to substantiate the case. The present paper will show that the Japanese and U.S. distribution sectors are about the same in terms of value added and distribution margins. Therefore, it is not true that the distribution sector adds up unnecessary distribution costs or earns monopolistic operating profits. This paper will not address a question whether the distibution system is acting as a non-tariff barrier. Thus, even if the distribution sector in Japan is judged to be "efficient," it leaves open a possibility that the distribution system works as a barrier to potential new entrants from both home and foreign manufacturers.

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1. Introduction

The Japanese distribution system has been criticized domestically and internationally. It is well-known that many Japanese consumer products, such as cameras and VCRs, are sold cheaper in New York than in Tokyo. Korean cars, successful in the United States, are virtually nonexistent in Japan. Famous brand-name goods, such as Louis Vuitton, Hermes, Chivas Regal and Courvoisier, imported from Europe, are sold in Japan with extraordinary premia. The "price differential between home and abroad" [Naigai Kakaku Sa] has become an important political problem in Japan.

Suspected causes for the price differential are the so-called Japanese characteristics in the distribution system. Many small (family-run) retail stores, which cannot exploit scale-economies, have survived thanks to the restriction on the construction and operation (store hours) of large retail (e.g. discount) stores in the neighborhood of small stores. Some of the many layers of wholesale industry seem unnecessary. The (vertically semi-integrated) keiretsu stores carry only one (domestic) brand, discriminating against other domestic brands as well as imports. Sole representative agents for imports in many imported goods enjoy its monopolistic rents, reducing the volume (and dollar value) of imports, given that they deal with differentiated products.

The situation described above is often stereotyped as the inefficient distribution system which incurs unnecessary distri-

bution costs and discriminates against imports. Two major questions and issues can be distinguished. First, it is important to investigate whether the unique characteristics result in the "inefficiency" of the distribution system in Japan. The distribution system is said to be efficient if the distribution system does not add unnecessary costs in the pipeline from a manufacturer to a consumer.

Second, the distribution system might act as a non-tariff barrier, which limits competition from abroad. This could happen even if the distribution system is "efficient" in terms of the pipeline costs. Suppose that the manufacturer charges a higher domestic price than export price, and/or that importers charge higher domestic wholesale prices than their import costs, then retail prices would be higher. Put differently, if the prices charged upon entry to the pipeline are already high, then the retail prices would be high even under the same distribution margin through the pipeline.

This paper investigates the first question, namely the efficiency of the Japanese distribution system. Most of the discussions on the Japanese distribution system have so far relied on institutional descriptions and anecdotal evidence, failing to substantiate the case, one way or the other, with quantitative measures. The present paper will show that the Japanese and U.S. distribution sectors are about the same in terms of value added and distribution margins. Therefore, it is

not true that the distribution sector adds up unnecessary distribution costs or earns monopolistic operating profits.

This paper will not address the second question, namely, whether the distibution system is acting as a non-tariff barrier. Thus, even if the distribution sector in Japan is judged to be "efficient," it leaves open a possibility that the distribution system works as a barrier to potential new entrants from both home and foreign manufacturers. The price differential between home and abroad can be a result of oligopolistic pricing behavior of manufacturers. Japanese manufacturers may set domestic wholesale prices higher than export price. Foreign manufacturers may charge higher export prices on goods bound for Japan than those for other markets. The price differential may be reinforced by the exclusive Keiretsu distribution system. If this scenario is the case, the efficiency of the distribution system implies that the monopoly rents are not shared by the distribution sector. This paper does not verify how likely this scenario is.

The rest of the paper consists of four sections. The next section will summarize the conventional wisdom of the Japanese distribution system. Section 3 will propose several measures to judge the efficiency of the distribution system. Some preliminary investigations on the U.S.-Japan comparison will be conducted. Section 4 is the core of this paper. It will investigate distribution margins of the (comparable) three-digit wholesale and two-digit retail sectors for the United States and Japan.

Interpretations of the finding will be offered in the last section.

2. Conventional Wisdom

Perceived characteristics of the Japanese distibution system can be summarized as follows.

(a) [**Many, Small-size establishments**] Wholesale and retail stores are of small size in the number of employees and in sales. They cannot adopt technological advances which take advantage of scale-economies. This characteristic also discriminates imports as well as any new products because financially weak establishments cannot experiment with new products at their own risk.

(b) [**Many layers**] The distribution system has "many layers and complex," in that there are relatively many distributors involved in the distribution system from the makers' warehouses to the consumer. Sometimes there are three different wholesalers involved from the manufacturer to the retailer. This makes the distribution system inefficient, that is distribution costs in the consumer price is higher than optimal.

(c) [**Distribution Keiretsu**] Manufacturers develop their exclusive distribution systems. For example, Panasonic stores, Sony stores, Toshiba stores, etc carry a set of consumer electronic products, but exclusively their own brands. This vertical semi-integration makes it difficult for new entrants, including imports, to penetrate the market. The new entrant would need to establish its own distributors. The operation would involve a

large risk that a few foreign firms would like to take.

(d) [Unique trading practices -- returns policy, sales persons on loan, price maintenance and rebate system] There are a number of the so-called unique trading practices which makes the distribution system in Japan "complicated" and "inefficient."

Returns from retail stores to wholesaler are often allowed even if retail stores bought the merchandise. In this sense a returns policy of unsold merchandise is said to be "liberal" (from retail to wholesale stores) [Henpin Sei]. Many department stores and other large retail stores are staffed with "persons on loan" from manufacturers to retail stores. Although they are on manufacturer's payroll, they act as sales persons who demonstrate and promote their products in the department store. Retail prices are often "maintained" by implicit agreement between the manufacturers and the retailers via wholesalers. Rebates between retailers and wholesalers are just a means of non-linear pricing. However, it is alleged that the terms of rebates are often not spelled out beforehand, but left to the discretion of wholesalers and manufacturers.

(e) [Dai-ten Ho] The policy using Dai-ten Ho (an acronym of the law and its implementation, concerning the restriction on construction of and on operating hours of large-scale retail stores) makes it difficult for large-size retail stores (discount stores, department stores and supermarkets) to take advantage of scale economies. Since these stores carry more imports than

smaller-size retail stores (see (b) above), Dai-ten Ho works against benefits of foreign makers as well as the Japanese consumers.

(f) [**Sole Representative Importer**] Many products are imported to Japan by sole representative importers. If the Japanese consumers have lower price elasticity for brand-name goods, then the sole representative importers of brand-name goods would find it profitable to charge a higher price for the goods in Japan than to the rest of the world. This would be not sustainable if parallel imports are permitted and costless.

(g) [**Personal Relationship and Long-term Contracts**] It is said that in order to make business deals, establishing a "personal relationship" is needed, and that a long-term relationship, marked by a reliable delivery record (even if this implies expensive overtime on the part of makers and wholesale businesses) and by after-sale service.

2.A [Many, Small-size establishments]

The characteristic of many, small-size establishments in Japan can be seen in three different statistics in Table 2-1.

First, the number of workers (both employees and self-employed) per establishments are compared. The Japanese retail stores are on average operated by about 4 persons. In fact more than half of the retail stores have only one or two persons running the shop. The number of persons per establishment is about a half of that in the U.S. and two-thirds of that in Germa-

ny. Workers per wholesale establishment in Japan is about three-fourths of that in the United States; but it is comparable to that in Germany.

Second, the number of establishments per 1,000 residents is much higher in Japan than in the United States or Germany. This is true both in the wholesale and retail sectors. Retailers and wholesalers in Japan are about twice as dense as in the United States or Germany.

Third, the average Japanese retailer has a floor space about a third of the German counterpart. This could be a result of high land price in Japan.

These statistics confirm that the establishments are run by a smaller number of persons in Japan, and there are more establishments per capita than the United States and Germany.

Is this Japanese characteristic changing? Table 2-2 shows the time series of the workers per establishment for wholesale and retail sectors. The average number of workers per establishments has in fact declined recently, after peaking in 1972. The wholesale structure shows no evidence that the size of wholesale establishments are increasing at all.

**** Insert Tables 2-1 and 2-2 about here *****

Table 2-1: Many, Small-size Establishments, International comparison

		Japan	US	Germany
(1) Worker per Est.	**Wholesale**			
	1982	9.3	12.6	10.1
	1985	9.4	na	9.6
	Retail			
	1982	3.7	8.1	5.9
	1985	3.9	na	5.8
(2) Number of Est. per 1000 residents				
	Wholesale			
	1982	3.3	1.5	2.0
	1985	3.1	na	1.9
	Retail			
	1982	14.5	8.3	6.7
	1985	13.5	na	6.6
(3) Sales Floor space*,	**Retail**			
	1982	55.4	na	167.9
	1985	58.0	na	na

(* in sq. meters)

Source: Maruyama, et al. (1989)

Table 2-2: Many, Small-size Establishments, time series, Japan

	1958	1960	1962	1964	1966	1968	1970	1972	1974
Wholesale									
Est. (1000)	193	226	223	229	287	240	256	259	292
Workers (1000)	1551	1928	2129	2524	3042	2697	2861	3008	3290
Workers per Est.	8.0	8.5	9.5	11.0	10.6	11.2	11.1	11.6	11.2
Retail									
Est. (number)	1245	1288	1272	1305	1375	1432	1471	1496	1548
Workers (number)	3273	3489	3550	3811	4193	4646	4926	5141	5303
Workers per Est.	2.6	2.7	2.8	2.9	3.0	3.2	3.3	3.4	3.4

	1976	1979	1982	1985	1988
Wholesale					
Est. (number)	340,249	368,608	428,858	413,016	436,502
Workers (number)	3,512,973	3,672,638	4,090,919	3,998,437	4,331,601
Workers per Est.	10.3	10.0	9.5	9.7	9.9
Retail					
Est. (number)	1,614,067	1,673,667	1,721,465	1,628,644	1,619,599
Workers (number)	5,579,800	5,960,432	6,369,426	6,328,614	6,850,478
Workers per Est.	3.5	3.6	3.7	3.9	4.2

Source: MITI, "Census of Commerce"

On the retail side, however, workers per retail establishment is steadily increasing. Especially, after 1982, the number of establishment is declining, while the number of workers continues to grow. This results in an acceleration in this statistic. However, even with the increased pace over the period 1982-88, it would take 20 years to catch up with Germany and 40 years to catch up with the United States in terms of the workers per establishment.

2.B [**Many layers within the Wholesale industry**]

After the Japanese goods leave a manufacturer's warehouse, they typically go through more than one wholesaler. The Japanese wholesalers tend to be more specialized in one type of goods, and sometimes exclusively one brand. Yet, there are many wholesalers involved between the manufacturer and customers. Although practice differs from commodity to commodity, and sometimes brand to brand, Figure 1 depicts a stylized notion of "many layers."

A primary wholesaler could be a manufacturer's subsidiary. In that case, it deals with their own brands exclusively. (Examples: Consumer Electronics; Cosmetics; Detergent; and Cameras.) In other cases, a primary wholesaler deals with other brands. A secondary wholesaler is typically a regional distributor, and a tertiary wholesaler is a local distributor. In an extreme, large-scale retailers typically obtain goods from makers via a wholesaler in Japan, but without a wholesaler in the United States.

Figure 1: Typical merchandise flow

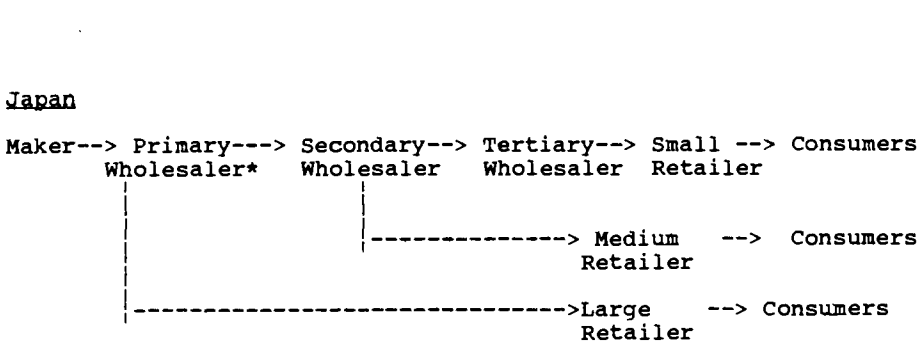

Table 2-3: Wholesale/Retail (W/R) Ratio

		Japan	US	Germany
W/R in Sales	1982	3.53	1.09	1.67 (1978)
	1985	3.44	0.97 (1986)	1.80 (1984)
W/R for inventories	1982	1.60	0.82	1.17 (1981)
	1985	1.55	0.85 (1986)	1.17 (1984)
W/R in number of Est.	1982	0.225	0.176	0.290 (1978)
	1985	0.229	na	0.292 (1984)

Notes: Wholesale trade data are based on merchant wholesalers.

As a measure of many layers in the wholesale industry, it is popular to use the wholesale/retail (W/R) sales ratio. We will explain the W/R ratio, and then propose an additional measure. The W/R sales ratio in Japan is significantly higher than the United States or Germany (Table 2-3 (row 1)).

*** Insert Figure 1 and Table 2-3 about here ***

The high W/R ratio is interpreted as an reflection of many layers in the wholesale industry, because sales of the same commodity are double or triple counted as wholesale sales in the multi-layered wholesale industry structure.

However, a high W/R ratio may be a result of another characteristic. Instead of wholesale being multi-layered, the retail establishments may be especially small size. If the retail sales per establishment (discussed in the next section) is small due to its small-scale operations (implied by workers per establishment data in Table 2-1), then a high W/R ratio would be obtained. Therefore, the W/R ratio alone is not conclusive evidence of the multi-layered nature.*

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* Note that W/R sales ratio can be decomposed into

$$\frac{\text{(Sales per est., wholesale)}}{\text{(Sales per est., retail)}} \times \text{(number of est. per 1000 residents)}$$

Therefore, if sales per establishment in retail in one country is extremely low, the W/R ratio would be higher, even though other components are comparable with other countries.

Table 2-4: Proportion of Wholesale Sales by class of customers

(%) Customer class	Japan (1982)	US (1982)	Germany (FRG) (1986)
Other wholesalers	41.9	24.8	16.2
Retailers and repair shops	24.0	28.0	30.0
Export	7.4	9.8	14.9
Household and individual	0.6	1.6	2.8
Industrial users, manufacturing and Mining	26.1	15.0	26.8
Others		20.8	9.2

Source: Maruyama et al. (1989).

Data Source:

Japan, Census of Commerce, 1982. (adjusted by deducting the amount of transaction between companies' headquarters and branches. These data cover manufacturers' and other industrial companies' sales branches and offices, and exclude agents and commission merchants.)

US, 1982 Census of Wholesale Trade (WC82-I-4) (only merchant wholesalers).

Germany, Handel, Gastgewerbe, Reiseverkehr Fachserie 6 (Reihe, 1.3 Warensortiment sowie Bezugs und Absatzwege im Grosshandel 1986). (Export include to GDR (East Germany))

We can measure the proportion of sales to other wholesalers in total sales, as shown in Table 2-4. This table clearly shows that more sales between wholesalers take place in Japan, a piece of evidence for multi-layered wholesale industry. Indeed, there are many layers in the wholesale industry.

2.C Theoretical Justifications

There are two opposite views on how to understand the existence of many, small-size retail and multi-level wholesale stores in Japan. The first view is that these characteristics are efficient results of Japanese consumer's preference and spatial limitations. (See Flath (1988, 1989a) and Maruyama (1988).) The second view is that they are largely a result of regulations. (See McCraw and O'Brien (1986).)

********** Insert Table 2-4 about here *********

The first view is developed as follows. Many, small-size retail establishments (neighborhood stores) are considered to be a rational result of consumer's diet and buying habit. Suppose that the Japanese consumer prefers to shop everyday in small-lots in neighborhood stores. Fresh (raw) fish must be purchased everyday (not once a week). Moreover, a refrigerator is too small to store weekly inventories at a time and automobiles are inefficient to use in urban areas due to traffic congestion. Then, this explains the existencce of many, small-size retail stores. In a sense, the large number of shops are a substitute for households' trip and stock costs. Although establishments

are small sized which seem inefficient, they are usually family-run establishments physically adjacent to the home, with low overhead costs and rents.

Many, small-size retail shops require extra layers (primary wholesale, secondary wholesale, etc) of the distribution system, if organizational (monitoring) costs approximately fix an optimal number of retailers (or other wholesalers) per one wholesaler. This would explain the multi-level wholesalers in Japan.

The second view is that these Japanese characteristics are indications of some distortions in the market. Even if roads are congested, public transportation is fully developed in Japan, consumers are quite mobile. There is no reason to suppose that retailers have to be close by. Even if many, small-size retail stores are given, the ratio of wholesalers could be less in Japan, as retailers are located close together geographically. In short, we would expect in more densely populated Japan a lower ratio of stores to population. According to this view, the wholesale/retail ratio should be less in Japan than other countries.* The stylized facts described above should be a result of some regulations, such as Daiten Ho.

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* David Flath, a discussant, drew our attention to the following fact. When the numbers of stores per thousand households are compared for different prefectures in Japan, both Tokyo (most densely populated) and Hokkaido (most sparsely populated) record the lowest. The number of retail stores excluding eating and drinking places for Japan's average is 45.5, while Tokyo 35.1 and Hokkaido 34.1. The comparable number for the U.S. is 23.8.

2.D Keiretsu and "Unique" Trading Practices

The conventional wisdom on Keiretsu can be understood as follows. Keiretsu stores in wholesale and at the retail level are controlled by the respective manufacturers. In the keiretsu stores, manufacturers control decisions, such as which brands to carry, how much discount from the "standard retail price" (or retail price wished by the maker, in the literal translation) can be allowed, and how to deal with unsold inventories. In that sense, the essential part of Keiretsu in the distribution sector is a package of "vertical restraints" in the sense of Flath (1989b).

Often wholesalers and retailers exclusively deal with one manufacturer. In order to maintain resale prices, the manufacturer has to accept unsold goods as returns. Otherwise the retail stores face too much risk in their earnings in the presense of uncertain demand. In a sense, the so-called liberal returns policy [Henpin Sē] and the price maintenance system can be understood as a result of a profit maximization of an oligopolist with differentiated products that has a keiretsu power to impose vertical restraints and whose retailers face an uncertain demand curve. (This point is forcefully shown in Flath (1989a) and Flath and Nariu (1989).) According to this view, there is nothing "unfair" or "inefficient" about "liberal" returns policy in Japan. If there is any problem, it is an institution (or a lack of strict enforcement of fair trade law), which allows

oligopolistic vertical restraints by manufacturers with differentiated products.

There is a controversy as to whether keiretsu stores are a real cause of Naigai Kakaku Sa. Some argue that many keiretsu stores deal with more than one brand. (Nihon Keizai Shinbun (1989, p. 84)) However, no estimate of the number of such stores is provided.

Another "unique" business practice in Japan is worth mentioning. Namely, many department stores are staffed by "persons on loan" from manufacturers or wholesalers. Table 2-5 shows the top 15 department stores in the ranking of the ratio of the number of (sales) persons on loan (i.e., loaned to the department stores) to the number of its own permanent staff.

The table shows that in twelve department stores (sales) persons on loan outnumber own (sales) persons. The Japanese department stores use their basement floors as food and grocery sections. They are usually operated and staffed as branches of small retail stores, and sales persons are usually on loan from respective retail stores. Therefore the department store with a larger food section, such as Keihin Tokyu, tends to have a higher ratio. A new branch of a department store chain also tends to have a higher ratio.

********** Insert Table 2-5 about here **********

Table 2-5 Sales Persons on Loan

Top 15 Department Stores in the ratio of "persons on loan" to "own permanent staff" in 1988 fiscal year

	ratio(%)	number(persons)
1. Keihin	235.1	1,380
2. Iyotetsu Sogo	178.5	1,294
3. Chiba Mitsukoshi	159.8	1,200
4. Kurosaki Sogo	151.5	1,198
5. Tokyu	148.3	7,644
6. Chubu Kintetsu	133.5	940
7. Chiba Sogo	121.0	1,483
8. Marui Imai	116.7	2,500
9. Hiroshima Sogo	109.0	1,380
10.Tenmaya	107.0	1,814
11.Fujisaki	102.2	830
12.Seibu	101.3	20,302
13.Odakyu	78.7	2,042
14.Hakata Daimaru	70.6	720
15.Yamagataya	64.1	900

Source: Nihon Keizai Ryūtsū Shinbun, '"Nihon no Kourigyo Chosa" kara,', no. 2, 1989.

The Japanese department stores also have corners for brand name merchandise, such as cosmetics, jewelry, bags, and apparel. These sections also have a higher ratio of persons on loan. Manufacturers also send people to retail stores when they think demonstration of new merchandise would help sales.* Another reason for manufacturers to send sales persons is to directly gather information on customer's reaction to the products and to utilize this information in product development.

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* Flath (1989a) applies Telser's (1960) argument of resale price maintenance to the vertical restraint behavior (Keiretsu) among the Japanese firms. However, Telser's argument, which emphasizes the merit of "demonstration," can be applied to the characteristic "persons on loan" in Japan, too.

For department stores, the significant numbers of persons on loan would cause the upward bias for their productivity (sales per person). In fact, when productivities in the retail sectors are examined by size of the establishments, those with more than 500 employees have extremely high productivities. (See Maruyama, et al. (1989).) A significant portion of high productivities are due to the "persons on loan."

2.E Large Scale Retail Store Law [Daiten Ho]

In 1956, in order to curb the growth of department stores, the Department Store Law, which required a permit for new construction, was enacted. Then large supermarkets, discount stores and other large chain stores, which were not covered by the Department Store Law, became popular. In order to cover these

new types of retail stores, the Large Scale Retail Store Law, [Daiten Ho] which requires a "reporting" of constructions, replace the Department Store Law, in 1974. It was revised in 1979 to its current form.

The Daiten Ho covers the two types of stores: The first type, stores with 1,500 square meters (or 3,000 square meters in large cities [Seirei Shitei Toshi]) or more; and the second type, stores with 500 - 1,500 sq. meters (or 500 - 3,000 sq. meters in large cities). A construction plan of a large retail store has to be submitted to a Governor (of prefecture); then the Sho Cho Kyo (committee of adjusting retail activities), which is organized under the Chamber of Commerce, "discusses" the plan. For the first type of stores, the report from the Dai Ten Shin (subcommitte of large retail stores) goes to the MITI minister. For the second type of stores, the report goes to the Governor. The "adjustment" items include the floor space, store days (days open in the week), store hours, and total days closed (in a year). On appearance, when a plan is submitted, it should be discussed with neighboring shopping malls and stores and be approved in due time.

However, the law is not the whole story. The Ministry of International Trade and Industry issues the ministry guidance on interpretation and implementation of the law. In fact, in the beginning of the 1980s, the implementation was significantly tightened so that it became not uncommon to take more than two

years after a submission of a plan to come to a final approval. In essense, the law and its implementation can virtually stop a construction of a large retail store, if the neighboring stores oppose.

Figure 2 shows the flow chart for the implementation of Daiten Ho, that is how the application to build a large scale retail store is handled. As shown in the Figure, a most time consuming part is in fact not a part of the law but merely "practices" and "gyosei shido" of the MITI. In particular, the "Pre-explanation" is not a code or "gyosei shido," but just a practice. However, some local governments do not accept an Articl 3 Application without an agreement from the Chamber of Commerce. The local business could simply boycott the "Pre-explanation" so that it could take forever before an Article 3 application could filed.

Figure 3 shows a case of the Summit Store Higashi Nakano. It took about seven years from the time plan was made to the time the store actually opened. It really took a long time before the Article 3 application was filed.

********** Insert Figures 2 and 3 about here **********

Let us turn to an issue how the Daiten Ho affects efficiency David Flath (1988) investigated how the number of other types of stores change as the number of department stores change in different prefectures. He finds that the number of drug stores is not affected by the number of department stores, while the number

of food liquor and apparel stores are quite elastic. This partly, but not entirely, explains how the Daiten Ho allows many, small-size stores to survive. It should also be pointed out that Daiten Ho protects the "insiders," i.e., existing department stores, from "outsiders," i.e., planned department stores.

Figure 2: Implementation of Daiten Ho

1. Store A plans to build a large scale retail store
2. Store A conducts a "Pre-Explanation [Jizen Setsumei]" to Local government, Chamber of commerce, and local business on the four conditions: days open during the week, floor space, closing time, and the number of store holidays

3. Local Chamber of commerce and local stores give an "agreement"

4. Store A files Article 3 Application (Application for a building permit) to the Governor.

5. The Governor sends the application to the MITI minister

6. The MITI minister asks the local Chamber of Commerce whether the Store A will affect the existing local business.

   a. If no, Store A may file Article 5 Application to the Governor and will be approved.

   b. If yes, then proceed to 7.

7. Store A, and Local Business must meet in the "Pre-Sho Cho Kyo" [Jizen Sho Cho Kyo]. This takes about eight months.

8. Store A files an Article 5 application to a Governor.

9. The Governor sends the application to the MITI minister.

10. The formal Sho Cho Kyo (an abbreviation for Shogyo Katsudo Chosei Kyogikai) examines the days open during the week, floor space, closing time, and the number of store holidays. The Sho Cho Kyo consists of local retail stores, local consumers, and scholars.

11. The Chamber of Commerce expresses its opinion.

12. The Large Scale Retail Store Commission [shingikai] examines the case.

13. The Local government expresses its opinion.

14. The MITI minister recommends on the conditions for building.

15. The MITI minister gives an approval.

(The process from 8 to 15 must occur within 5 months, according to Article 5.)

Figure 3: Case of "Summit Store Higashi Nakano"

Nov. 1980 The store expressed an interest in building a store to Tokyo local MITI office, Tokyo Chamber of Commerce, Tokyo government, Nakano-ku government, Shinjuku-ku government

Dec. 1980 The store went to associations of local stores in Nakano-ku and Shinjuku-ku.

Feb. 1981 The associations started to oppose the plan

April 1981 The Nakano-ku and Shinjuku-ku adopted a resolution to freeze the number of large scale retail stores, with pressure from the associations.

June and August 1981. Pre-explanation meetings were attempted, but did not materialize, because opposition put up a fight attacking a proposed owner.

July 1982. The Nakano-ku opposition group pressured a Diet member to put pressure on a parent company of the Summit Store.

Nov. 1982 - Sept. 1983. 15 informal meetings were held between the opposition groups and the Summit Store.

Oct. 1983 - Oct. 1984. 14 formal meetings were held between the opposition groups and the Summit Store.

Nov. 1984. The store plan is in general approved. The four conditions (see Figure 2, item 2) were discussed.

May 1986. An aggreement was signed. The Nakano-ku side is done.

July 1986. The Shinjuku-ku opposition group reaffirmed its opposition to the plan.

Sept. 1986. Article 3 Application is filed.

Dec. 1986. Pre-Sho Cho Kyo is finalized.
Oct. 1987. The Store was opened.

The Store held meetings with local government 151 times. The Store held 339 meetings with opposition groups in Nakano-ku and 62 meetings those in Shinjuku-ku.

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Source: Nikkei Business, June 5, 1989

3. Measures of Efficiency in the Distribution Sector

There have been many studies on the productivity and efficiency in the distribution sector. The most popular measure of the productivity and efficiency of the distribution system, has been "sales per employee," as in Ingene (1982) and Smith and Hitchens (1985). The latter compared the productivities of the U.S. and European distribution systems. When data are available, "value added per employee" was also used, as in Beckman (1957). As explained in the text, there are some conceptual difficulties in the use of these measures as a criteria for efficiency. Several authors, Bucklin (1978), Achaval (1984) have also expressed caution against the use of these measures. The Japanese distribution system in the light of international comparison was studied in Tajima and Miyashita (1985), Ryutsu Keizai Kenkyu sho (1988), and Maruyama, et al. (1989).

This section proposes to look at the gross margin, operating expenses, operating profit, and unit labor cost. We relied on data from Commerce Census of the United States and those of Japan. The Ministry of International Trade and Industry, White Paper (1988, p.73) and Nishimura and Tsubouchi (1989) calculated the gross margin from the Input-Output table.

A contribution of this paper, to be presented in the next section, is that it compares not only gross margins but also operating expenses, operating profits, and unit labor costs at the 3-digit wholesale and 2-digit retail sectors, using the

comparable Commerce Censuses in the United States and Japan.

Given all facts about the "uniqueness" of the Japanese distribution system, an important question from economic point of view is whether it adds up to an inefficient system as is often claimed. Several measures are proposed to be constructed to evaluate the efficiency of the distribution sector.

3.A Sales per worker, and sales per establishment

"Sales per worker" or "Sales per establishment" has been a popular measure for "performance" and "efficiency." For example, the measure was used in Takeuchi and Bucklin (1977) and cited by Rangan (1989), and is reproduced in Table 3-1. Rangan concluded from this figure "[T]he performance of the Japanese counterpart was significantly worse." First of all, this data is old, and second, there is a question as to whether this measure really reflect "performance" and "efficiency."

Table 3-2 shows more recent data of the same measure. In this table, Japan does not look inefficient, except for the measure of "retail sales per establishment." The wholesale sector look quite comparable or better than other countries.

**** Insert Tables 3-1 and 3-2 ****

There are two caveats. First, the productivity in the Japanese wholesale sector could be overestimated, because large scale trading houses [Sogo Shosha] are included in the wholesale sector. Trading houses engage in export, import, and international trade between third countries, as well as domestic retail

business. Second, the productivities in the retail sectors may be biased upward, because of the "persons on loan" in large scale department stores. (See the argument on persons on loan in the preceding section.) Another contamination is the inclusion of eating and drinking places in retail business.

Table 3-1: Productivity measured by sales, 1952-68

Retail		Japan	US	
Sales per establishment	1952	5.8	96.6	1948
	1958	10.6	123.7	1958
	1968	28.0	175.9	1967
Sales per workers	1952	2.6	19.0	1948
	1958	3.7	22.8	1958
	1968	8.0	28.2	1967
Number of establishments per 1000 residents	1952	14.1	11.3	1948
	1958	15.7	10.3	1958
	1968	17.8	8.9	1967

Note: Thousands of dollars, 360 yen to the dollar, deflated using the Japanese retail price index, 1968 base year (Japan).
Source: Rangan (1989), citing Takeuchi and Bucklin (1977).

Table 3-2: Productivity measured by sales, 1979-85

		Japan	US	Germany	
(1) Sales per Worker, **Wholesale**					
	1982	390.5	272.4	173.5	(G. 1979)
	1985	448.7	na	299.8	
Retail					
	1982	62.3	68.5	51.4	(G. 1979)
	1985	72.4	na	80.3	
(2) Sales per Est., **Wholesale**					
	1982	3614.7	3430.6	1750.8	(G. 1979)
	1985	4219.4	na	2870.8	
Retail					
	1982	230.3	554.2	302.9	(G. 1979)
	1985	281.3	na	465.8	

(in $1,000, measured in PPP exchange rate of OECD that is, $1 = DM 2.54 in 1979; $1 = yen 237 in 1982; $1 = yen 222 = DM 2.48 in 1985.

Source: Maruyama et al. (1989).

3.B Value Added

However, the amount of sales is not a good measure of productivity. First, it does not consider any costs of input. Compare a retail store which deals with expensive products (say, diamonds) with high purchase (input) prices (from wholesale level) and a retail store which deals with less expensive products (say, toys) with low purchase (input) prices. Even if the number of workers, their wage rate, and net profit are the same, the former category would have higher sales per worker. Moreover, double counting in multi-layered wholesale sector may cloud the figure.*

Hence, a more accurate measure of productivity is value-added. Thus, we examine the value added which is net of input costs. Table 3-3 shows the value added in the distribution sector relative to that in the manufacturing sector. In this measure, the Japanese value added per worker is as high as the

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* In order to understand why the sales per worker would be an incorrect statistic in a multilayered wholesale system, consider the following example. Suppose that $100 is charged for sales of a product from a single-layered wholesale sector to the retail sector, and that 10 people are working in the (single-layer) wholesale sector. Then $10 sales per worker would be recorded as the relevant statistic in this single-layered system. Next, suppose that the same product is sold three times in the multi-layered wholesale sector (recall Figure 1): $50 by 5 people in the first wholesale layer, $70 by 7 people in the second layer, and $100 by 10 people (in the third layer). Then the sales per capita in each layer is still $10 per person, and is so shown in the Japanese statistic. However, the "net" (or true) wholesale sale/worker, i.e., how many people are needed to pass the goods to the retail level, should be $100/(10+7+5), much less than $10 per person.

United States. In this measure, there is no evidence that the Japanese distribution sector is less efficient than in the United States or Germany.

*** Insert Table 3-3 ***

3.C Gross Profit margin.

If the efficiency of the distribution is measured by how much extra a consumer has to pay on top of manufacturer's costs, the gross profit margin is an appropriate measure:

(i) Gross Profit Margin Ratio = Gross Profit Margin/Sales

(ii) Gross Profit margin = Sales - Merchandise Costs

Merchandise Costs = Merchandise Purchase
+ Beginning-of-period Inventories
- End-of-period inventories

Or,

(iii) Gross Profit margin = Net Profits + Operating Expenses

Operating Expenses = Payroll + Rents + Advertisement
+ Transportation + depreciation, etc

Table 3-4 summarizes this measure. Contrary to a popular belief, theJapanese gross profit margin is quite comparable to, and to be precise lower than, the United States and Germany. This shows that operating expenses and net profits are not particularly high in Japan. Apparent small-size operations in Japan do not suffer from inefficiency.

*** Insert Table 3-4 ****

Table 3-3: Value Added

The ratio of value added per Worker in different sectors

	Japan 1985	US 1985	Germany 1985
Distribution sector / Industry Total	0.76	0.70	0.68
Manufacturing sector / Industry Total	1.19	1.12	0.95
Distribution sector / Manufacturing sector	0.64	0.63	0.71

Source: Maruyama et al. (1989).

Table 3-4: Gross Profit Margin Ratio

	Japan	US	Germany
Gross Profit margin,			
Wholesale			
1978	11.9		
1981		na	12.7
1986	11.2	19.4	12.6 (1985)
Retail			
1978	27.0		
1981		na	34.5
1986	27.1	31.0	34.2 (1985)

Source: Maruyama et al. (1989).

There are some caveats to this conclusion. First, although the Japanese small-size retail shops do not keep transportation costs (high physical distribution costs) and purchase costs down (no volume discounts applicable from wholesalers), they do operate on low rent and low payroll. In fact, many of small-size retailers are operated by shop owners themselves in the front of their principal residence. Many of shop owners are elderly couples who do not require high net profit or payroll.

Second, several U.S. economists have pointed out to us that an apparent high gross margin among U.S. wholesalers and retailers is a reflection of high incidences of shop-lifting, employee-theft, and outright burglary in the United States.* Unfortunately, we do not have the figures for damages in the distribution sector from such crimes.

Third, it may be possible that the average wholesale and average retail figures may be misleading, due to some structural outliers. Possibly, but not examined carefully here, dominant large-scale wholesalers or retailers pull the average up; or some non-distribution industry subgroup, such as "eating and drinking places," may be distorting the average figures. Calculation of gross margin and other statistics for industry subgroups and for establishment-size subgroups is on the agenda of future research.

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* One of the eye-opening scenes on Japanese sidewalks is rows and rows of vending machines for cigarettes, softdrinks, beer, magazines, telephone cards, etc.

Fourth, considering retail and wholesale margins separately may be misleading in light of the fact that the wholesale/retail ratios are quite different betwen Japan and other countries. The margin of the distribution system as a whole should be constructed to represent the notion of how much a consumer has to pay on top of manufacturer's cost.

The last concern is taken up in the next table. Table 3-5 describes the margin aggregate for wholesalers and retailers. The aggregate margin/retail sales is defined and decomposed as follows:

$$(MW + MR)/R = (MW/W)*(W/R) + (MR/R)$$

where MW = gross margin of wholesale
MR = gross margin of retail
R = retail sales
W = wholesale sales

The figures are calculated and shown in Table 3-5.

This table also shows that the Japanese margin is quite comparable to Germany, and slightly higher than the United States. In sum, judging from the gross margin figures, we do not detect any inefficiencies in the Japanese distribution system.

3.D. Distribution Margin: Input-output approach

In the preceding subsection, the gross margin was calculated from Census of Commerce in Japan and Census of Wholesale Trade and Census of Retail Trade in the United States. There is another way to calculate the gross margin in the entire distribution sector (the distribution margin, for short).

The MITI (1988) calculated the distribution margin from the input-output table, and Nishimura and Tsubouchi (1989) improved upon the MITI's method. MITI's white paper, 1988 reported that the U.S. distribution margin is about twice as much as the Japanese counterpart.

Nishimura and Tsubouchi (1989) corrected the MITI figures by reclassifying the repair service, and government controlled distribution service (in tobacco, rice, etc). Their finding is that the distribution margin for Japan is quite comparable to the U.S. counterpart. The numbers are reported in Table 3-6. (For details of the adjustment, please refer to Nishimura and Tsubouchi (1989).)

********** Insert Tables 3-5 and 3-6 about here **********

Table 3-5: Distribution Margin: Census Approach

	Japan	US	Germany
(1) Aggregate Margin/Distribution Sales ..			
1978	15.6..		
1981		na	20.3
1986	15.5	25.3	20.0 (1985)
(2) Aggregate Margin/Retail Sales			
1978	63.4		
1981		na	58.0
1985	57.6	49.7	58.9 (1985)

Notes: Wholesale data are based on merchant wholesalers. Aggregate Margin is defined in text.

Source: Maruyama et al. (1989)

Table 3-6: Distribution Margin: I-O Approach

	Japan		US
	1980	1985	1977
MITI (1988)		29.78	39.44
Official Base	33.4	34.4	35.7
(breakdown)			
Wholesale	9.9	8.2	na
Retail	23.5	26.2	na
Nishimura (1989)	36.8	38.6	35.7

Source: Nishimura-Tsubouchi (1989)

4. Efficiency at 2-digit and 3-digit industry levels

4.A. Gross margin, Operating Expenses and Profits.

In this section we extend the analysis in the preceding section in two dimensions. First, an analysis of gross margin will be conducted at the three-digit wholesale and two-digit retail industry levels. Since the Standard Industrial Code of Japan (JSIC) is slightly different from that of the United States (SIC), we have devised a matching table of the two SICs for the distribution sector. Second, gross margins will be decomposed into operating expenses and operating profits.

To the best of our knowledge, this paper is the first to compare operating expenses and operating profit for the U.S. and Japanese two- to three-digit matching distribution subsectors.

The study of three-digit industry is necessary in order to account for the following issues in the aggregate data. First, the Japanese wholesale industry include gigantic, general trading houses [Sogo Shosha], to which no institution in the United States is comparable. These Japanese trading houses engage in export, import, trading between third-countries, as well as the domestic distribution system. The same company deals with importing F-16 fighters as well as exporting cup noodles. They are known to exploit scale economies, so that the low (operating) profit margin rate suffices for its success. They are quite different entities from those in the domestic distribution system. The effect of general trading houses can be eliminated by

supressing two-digit industry, JSIC no.49.

When the retail "aggregate" statistic is constructed, the United States tend to include "Eating and Drinking places (SIC no.58)" while Japan exclude "Eating and Drinking places, general (JSIC no 59) or other (JSIC no 60)." Since restaurants and fast-food outlets have quite different functions and cost characteristics from other retail shops, we would be interested in comparable retail aggregates without eating and drinking places.

First, let us describe how we match the two- and three-digit industries. The wholesale industry is divided into three two-digit industries in Japan and two two-digit industries (non-durables and durables) in the United States. Subdividing into the three-digit wholesale levels, the Japanese SIC tend to include more than each U.S. SIC. One exception is that textile and apparel are divided into two in Japan, while it is aggregated into one in the United States.

Second, in the two-digit retail level, the Japanese and US SICs are quite comparable. After minor reclassification on the US SIC, such as classifying gasoline stations into miscellaneous instead of motor vehicle (dealers), the two SICs are quite comparable.

In sum, Table 4-1 summarizes our matching of the two SICs. The modified SIC (mSIC) is close to JSIC, except that it aggregates 501 and 511. Details of names of the industy code are given in the Data Appendix 2.

********** Insert Table 4-1 about here **********

Table 4-1: Matching Table Summary
Wholesale -- General Merchants

JSIC		Japan	U.S.
501	Textile Except Apparel, Accessories, Notions	501	
502	Chemicals and Related Products	502	516
503	Minerals and Metals, Petroleum, Petro products	503	505,517
504	Machinery, Equipment, Motor Vehicle, Electr.	504	508,501 506
505	Building, construction Materials, Lumber,	505	503
511	Apparel, Accessories, Notions	511	513*
512	Farm, Livestock, Fishery, raw materials	512	515
513	Food, Beverages, Beer, Wine	513	514,518
514	Drugs and toiletries, sundries	514	512
515	Furniture, home furnishing	515	502
519	Miscellaneous	519	504*,507 509,511,519

Note: 1. Other types of wholesalers, such as sales representatives, commission agents, are excluded.
2. General Merchandise [Shosha] in Japan (no. 49) is excluded
3. See Data Appendix for details
4. * 513, and 504 in US will be omitted in the table due to the missing observation.

Retail

JSIC		Japan	U.S.
53	General Merchandise Stores (incl Dept stores)	53	53
54	Dry goods, Apparel, Accessories,	54	56
55	Food and Beverage stores, liquor, seasoning	55	54, 5921
56	Motor vehicles (dealers), bicycles,	56	55except554
57	Furniture, Fixture and hardware	57	52, 57
58	Miscellaneous	58	554,5912

Note: 1. "General Eating and Drinking place (JSIC 59)," "Other eating and drinking places (JSIC 60)," and "Eating and drinking places (SIC 58)" are excluded.
2. For details, see Data Appendix 2.
3. US code 52 and 58 will be omitted due to missing data.

Table 4-2 shows the results of such estimates. The following summarizes the major findings.

1. In the wholesale sector, the gross margin ratio in the U.S. (17.3%, in 1982) is higher than that in Japan (14.0%, in 1986), while in the retail sector, the gross margin in the U.S. (25.9%) is lower than that in Japan (27.0%, in 1986). In both sectors, the operating expenses ratio is higher in the U.S., while the operating profit ratio is higher in Japan.

If the general trading houses (JSIC 49) are included in the Japanese wholesale sector, the operating expenses of the wholesale industry declines by about 1.7-2.4% points and operating profit by 0.6 - 0.9 % points. Eating and drinking places are excluded in both countries.

2. Among the 3-digit wholesale sectors, operating expenses ratios of all but one sector in the United States are higher than the comparable sectors in Japan. In contrast, the operating profit ratios in Japan are higher than those in the United States, except in three subsectors, JSIC 502, 504 and 514.

Among the 2-digit retail sectors, similar characteristics hold true. Operating expenses ratios of the U.S. are higher than those of Japan in four out of six sectors, while the operating profit ratios for the U.S. are lower than those of Japan in all but one sector.

********* Insert Table 4-2 about here **********

Table 4-2: Sales, Expenses, and Profits

Wholesale: Expense/Sales ratio and Profit/Sales ratio

JSIC		JAPAN, 1979		US, 1982		JAPAN, 1986	
		E/S	P/S	E/S	P/S	E/S	P/S
49	E/S	1.6				1.2	
	P/S		1.3				1.8
501	E/S	7.5				9.1	
	P/S		4.7				4.2
502	E/S	8.9		22.3		9.4	
	P/S		3.9		7.4		3.2
503	E/S	6.3		7.0		6.2	
	P/S		3.6		1.6		2.8
504	E/S	11.8		21.5		13.1	
	P/S		6.0		4.8		3.9
505	E/S	11.4		20.0		11.9	
	P/S		7.3		3.5		6.3
511	E/S	14.8				18.1	
	P/S		6.1				5.4
512	E/S	5.7		4.8		5.5	
	P/S		4.7		0.2		3.1
513	E/S	8.1		13.5		9.8	
	P/S		4.3		1.9		3.9
514	E/S	12.7		14.8		14.6	
	P/S		4.0		5.4		2.2
515	E/S	16.1		25.4		14.9	
	P/S		6.5		3.9		4.6
519	E/S	11.8		17.5		11.4	
	P/S		5.0		2.3		3.9
Wsl	E/S	7.7				7.8	
w/49	P/S		4.2				3.3
Wsl	E/S	9.4		14.6		10.2	
w/o49	P/S		5.1		2.7		3.8

Retail

mSIC		JAPAN, 1979		US, 1982		JAPAN, 1986	
		E/S	P/S	E/S	P/S	E/S	P/S
53	E/S	19.0		32.2		21.6	
	P/S		5.0		2.5		1.6
54	E/S	24.6		36.7		29.5	
	P/S		8.4		3.4		6.7
55	E/S	17.6		22.0		20.4	
	P/S		7.6		2.3		4.9
56	E/S	18.2		16.1		19.3	
	P/S		7.4		3.5		5.4
57	E/S	21.9		34.5		24.1	
	P/S		8.2		2.8		5.3
58	E/S	20.3		15.9		21.9	
	P/S		7.1		4.3		5.3
Rtl	E/S	19.7		22.9		21.9	
	P/S		7.3		3.0		5.1

Table 4-2: Sales, Expenses, and Profits

(continued)

Notation, S: Sales
E: Operating Expenses
P: Operating Profits

Source:

Japan, Ministry of International Trade and Industry, Small and Medium Enterprise Agency, "Report on 5th Basic Survey of Commercial Structure and Activity,"

U.S., (1) Department of Commerce, Bureau of Census, "1982 Census of Wholesale Trade, Industry Series, Measures of Value Produced, Capital Expenditures, Depreciable Assets, and Operating Expenses"

(2) Department of Commerce, Bureau of Census, "1982 Census of Retail Trade, Industry Series, Measures of Value Produced, Capital Expenditures, Depreciable Assets, and Operating Expenses"

In sum, the following conclusion emerges. The Japanese distribution sectors operate with less operating costs and earn higher operating profit. Casual arguments in the popular press, on the theme of the inefficient Japanese distribution system, is hardly consistent with the evidence presented in this paper.

4-B. Labor Costs

In order to investigate the detail of the cost composition, the labor cost component is analyzed. The labor cost ratio is defined as total labor cost divided by the value added. (If the value added was normalized by the respective prices, the ratio would be equivalent to unit labor cost.)

Table 4-3 compares the labor cost ratio. Among the 3-digit wholesale sectors, the U.S. has a higher labor cost ratio in all but one (JSIC 514) sector. Among the 2-digit retail sectors, except for one (JSIC 58) sector, the U.S. has a higher labor cost ratio. Therefore, it is evident that the labor share in value added is higher in the United States than in Japan.

In sum, the share of labor costs in the distribution sector in Japan is no higher than in the United States. Hence, the findings in this section shows that with respect to many criteria, such as the distribution margin, operating expenses, and the labor cost ratio, the Japanese subsectors in the distribution industry are, in general, as efficient as the U.S. counterpart.

********** Insert Table 4-3 about here **********

Table 4-3: Labor Cost Ratio
Wholesale

Notation,
Labor Cost = Total Payroll/Value Added

JSIC	JAPAN, 1979	US, 1982	JAPAN, 1986
49	35.8		22.0
501	43.3		50.0
502	53.3	55.6	59.2
503	40.4	63.4	47.4
504	47.6	67.6	61.2
505	43.9	72.8	48.6
511	54.9		60.1
512	36.1	89.0	44.5
513	49.2	74.9	53.9
514	62.6	57.5	77.4
515	54.6	74.0	60.9
519	53.3	76.5	57.7
Wsl w/49	46.5		52.6
Wsl w/o 49	47.2	70.3	55.5

Retail

mSIC	JAPAN, 1979	US, 1982	JAPAN, 1986
53	61.6	86.5	82.9
54	59.3	82.8	68.2
55	57.3	82.9	70.0
56	57.0	71.2	65.4
57	59.2	84.0	70.5
58	61.7	63.6	69.0
Rtl	59.2	78.7	69.4

Source: See Table 4-2.

5. Concluding Remarks

Let us summarize our findings, our interpretations and implications as well as some caveats. In this paper, we have explained major characteristics of the Japanese distribution system, and presented some quantitative measures on "efficiency" of the distribution system. Although the Japanese distribution system appears to be very different from the U.S. counterpart, its performance, measured by value added, gross margin, operating expenses, and labor costs, is quite comparable with its U.S. counterpart. Hence, we do not have any evidence to conclude that the Japanese characteristics are symptoms of inefficiency.

When our findings are combined with other pieces of evidence, such asthat the retail prices are in general higher in Japan, and that the behavior of Japanese exporters can be viewed as "pricing to the market" (see Marston (1989)), the following scenario seems plausible. The Keiretsu or whatever structures that make possible vertical restraints and resale price maintenance may segregate the Japanese market from the rest of the world. Then the pricing to the market behavior becomes possible and the Japanese manufacturers seem to excercize this power. In that sense, the distribution system is guilty of causing the price differential between Japan and abroad.

However, whatever rents accrued from vertical restraints and the pricing to the market behavior are not shared by the distribution sector, or the distribution sector itself does not incur

extra (operating) expenses which apparently resulted from the Japanese characteristics. The Japanese distribution system is as efficient as the U.S. counterpart, once the system receives as an input to the "pipeline" the goods from manufacturers.

Finally, let us comment on a U.S.-Japan conflict with regard to the Japanese distribution system. An opinion that considers institutions and business practices in the Japanese distribution system as a significant non-tariff barrier is gaining momentum in the United States and is frequently mentioned in the recent "structural impediments" talks between the United States and Japan. Business leaders and government officials in the United States suspect that the Japanese distribution system discriminates against imports from the United States and other countries. By removing the barriers, it is suggested that the Japanese would import more manufactured goods and the trade imbalances would diminish.

The structural impediments initiative (SII) has recently prompted two types of reactions in Japan. First, "revisionists" in Japan, mainly reacting to attacks from the United States, emphasize that the Japanese characteristics could be a result of "rational behavior and free choices" of the Japanese consumers. (See, for example, Itoh (1989) and MITI (1989).) Second, "reformers" consider that the Japanese charactereristics do represent some sort of market imperfection, by regulations and/or by rent-seeking behavior of oligopolists.

Both domestic reformers and U.S. negotiators would regard some of regulations, institutions, and practices as adverse to consumers' welfare, and as counterproductive to international efficiency. Reformers may welcome the U.S. demands, because they are politically helpful as a "foreign pressure" [gaiatsu] from the United States. However, reformers may be quite different from the U.S. negotiation team in assessing the effects of the structural impediments on trade balances or potential benefits to American firms. Reformers think that removing structural barriers might not reduce by a significant proportion the Japanese trade surplus, especially the bilateral trade imbalance between Japan and United States, but that it would surely improve the Japanese consumers' welfare.

Both true revisionists and true reformers would not object to dismantling Daiten Ho, or at least to implement, on the part of MITI, the law without favoring small stores. If what revisionist claim is correct, constructing a large retail store would not affect consumers' behavior which prefers frequent visit to neighborhood stores. Reformers think that the Daiten Ho causes some distortion in the retail market. Although the retail sales per establishments is increasing, the pace of catching up to the United States and Germany is too slow. Hence, the Daiten Ho should be significantly weakened, if not abolished.

This paper has hopefully clarified with ample quantitative evidence, one particular aspect, namely efficiency, of the dis-

tribution system in Japan. It is our hope that this stimulates further research in this field.

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DATA APPENDIX 1

List of Data Sources

(Classification: D Distributive Trade, M Manufacturers, R Retail Trade, T Total Industry, W Wholesale Trade)

SOURCE NUMBER	COUNTRY	SOURCES	CLS	VARIABLES									
				Establishment	Firms	Persons Engaged	Employees	Sales	Gross Margin	Inventory	Trade Notes & Acounts RCVL.	Sales Floor Space	Value Added
JP-1	JAPAN	SHOUGYO TOUKEI (SHOWA 57) (Census of Commerce, 1982)	W	O		O		O		O			
			R	O		O		O		O		O	
JP-2	JAPAN	SHOUGYO TOUKEI (SHOWA 60) (Census of Commerce, 1985)	W	O		O		O		O			
			R	O		O		O		O		O	
JP-3	JAPAN	Report on 4th Basic Survey of Commercial Structure and Activity	W					O	O				
			R					O	O				
JP-4	JAPAN	Report on 5th Basic Survey of Commercial Structure and Activity	W					O	O				
			R					O	O				
JP-5	JAPAN	HOUJIN KIGYOU TOUKEI NENPOU (Annual Financial Report for Corporations)	W					O		O	O		
			R					O		O	O		
US-1	U.S.A.	1982 Census of Wholesale Trade	W	O	O		O	O		O			
US-2	U.S.A.	1982 Census of Retail Trade	R	O	O		O	O					

List of Data Sources

(Classification: D Distributive Trade, M Manufacturers, R Retail Trade, T Total Industry, W Wholesale Trade)

SOURCE NUMBER	COUNTRY	SOURCES	CLS	VARIABLES									
				Establishment	Firms	Persons Engaged	Employees	Sales	Gross Margin	Inventory	Trade Notes & Accounts RCVL.	Sales Floor Space	Value Added
US-3	U.S.A.	Statistical Abstract of the U.S.A.,1987	R, D			○							
US-4	U.S.A.	Current Business Reports BM-87-13	W					○	○	○			
US-5	U.S.A.	Current Business Reports BR-86-13	R					○	○	○			
US-6	U.S.A.	Current Business Reports BR-13-87S	R							○			
US-7	U.S.A.	Quarterly Financial Report for Manufacturing,Mining,and Trade Corporation(4Q 1986)	W, R					○		○	○		
GE-1	F.R.G.	Handels-und Gaststätten-zählung 1979	W, R	○	○	○		○				○	
GE-2	F.R.G.	Handels-und Gaststätten-zählung 1985	W, R	○	○	○		○					
GE-3	F.R.G.	Statistisches Jahrbuch 1984	W					○	○	○			
GE-4	F.R.G.	Statistisches Jahrbuch 1985	R					○	○	○			
GE-5	F.R.G.	Statistisches Jahrbuch 1987	W, R							○			
GE-6	F.R.G.	Statistisches Jahrbuch 1988	W, R					○	○	○			

Data Appendix 2: Standard Industry Code: US. SIC vs. J. SIC

Japan	US
Wholesale	
two-digit published data (no matching as is)	
49 General Mechandise	
50 Textile, Machinery, etc	
51 Apparel, Food, Furniture	
	50 Durable goods
	51 Non-durable goods
The three-digit matching table	
49 General Merchandize [Shosha]	[not available]
(50 Textile, Machinery, etc)	
501 Textile except Apparel	
502 Chemicals related products	516 Chemicals and allied materials
503 Minerals and Metals	505 Metals and minerals, exept Petr
incl. Petro	517 Petroleum and petro. products
504 Machinery and Equipment	508 Machinery, equipment and supl
incl. Motor vehicle (5042,5043)	501 Motor vehicles and parts, supl
incl Electrical (5046, 5047)	506 Electrical goods
505 Building Materials	503 Lumber, and other construction Materials
(51 Apparel, Food, Furniture)	
511 Apparel, Accessories, Notions	513 Apparel, piece goods and notions
512 Farm, Livestock and Fishery	515 Farm-products raw materials
513 Food and Beverages	514 Groceries and related products
incl Beer, wine	518 Beer, wine and distilled alch
514 Drugs and Toiletries	512 Drugs, drug proprietries Druggists' sundries
515 Furniture, Fixture and house Furnishing	502 Furniture and home furnishings
519 Miscellaneous wholesale trade	509 Miscellaneous durable
	519 Miscellaneous nondurable
incl paper and paper prod(5191)	511 Paper and paper products
incl hardware(5192)	507 Hardware, plumbing and heating equipment, etc
incl sporting goods toys, (5195)	504 Sporting recreational, photo, toys

Japan		US	
	Retail		
53	General Merchandise	53	General Merchandise stores
54	Dry goods, Apparel and Accessory Stores	56	Apparel and accessory stores
55	Food and Beverage stores incl beverage (liquor) and seasoning stores	54 5921	Food stores Liquor stores
56	Motor Vehicles, Bicycles and Cars	55ex554	Automotive dealers
57	Furniture, Fixture and Household Utensil stores incl hardware (5721)	57 52	Furniture, home furnishings Building materials, hardware garden supply, mobile home
58	Miscellaneous incl Gasoline service sta. 5831 incl Drug stores 5811		 554 Gasoline service stations 5912 Drug stores and proprietary st
(The following groups are not included in the table.)			
59	General Eating and Drinking places	58	Eating and drinking places
60	Other Eating and Drinking places		