

**Research Note:**

# **A Pilot Test of Discrimination in the Japanese Distribution System**

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*Japanese trade practices continue to receive a great deal of discussion in both academic and trade circles. Foreign manufacturers of consumer goods believe that Japanese channel members do not provide foreign goods with the same level of support that domestic goods receive. Unfortunately, this has been difficult to validate since the level of analysis usually neglects merchandising support at the store level—where the success or failure of a product is often determined. A pilot study was conducted to develop a methodology that compared the relative levels of distribution and merchandising support for foreign and domestic brands. An intensive analysis of one product category in 131 Japanese retail stores was used to determine whether, after controlling for market share, foreign brands within the product category receive comparable treatment on a variety of merchandising indices. Results indicate that foreign products receive fair treatment.*

The failure of US products to make significant inroads in the Japanese market for consumer goods is a widely discussed topic with many potential implications for industry and trade policy. The subject has been covered by the trade press (*The Economist* 1988, 1989; Whemmouth 1989), academic

The authors would like to express their gratitude to the editor and anonymous reviewers for their helpful comments on an earlier version of this article.

journals (Okita 1984; Simon 1986), and even the mass media (Rapoport 1989; *Tokyo Business Today* 1989). Many of the articles point toward the Japanese system of distribution as one of the main barriers US and other foreign makers have found difficult to overcome. This has been ascribed to a variety of factors. The entire system is said to be too complex, with too many different levels of agents, wholesalers, and distributors through which the manufacturer's goods must move in order to reach the retailer and consumer. By comparison with other countries, the Japanese distribution system is also said to be more fragmented, comprising a higher percentage of "mom and pop" operations. Because of the many store owners, retailers possess great political clout, which is sometimes used to keep larger stores from being established as rapidly as market forces would support. To the extent that small stores limit the variety of brands and push domestic products, this may lead to discrimination. Finally, it is also claimed that operating in Japan is particularly difficult because of the Byzantine structure of incentives and rebates that manufacturers must understand and provide to obtain retailer cooperation.

Our focus is on whether foreign brands (including US products) appear to receive less distribution support from Japanese retailers than domestic products receive for a given level of consumer demand. (Because distribution support both causes and is caused by sales to consumers and expected consumer demand, the comparisons of foreign and domestic brands must recognize this two-way causality (Farley 1964; Parsons 1974; Farris, Olver, and de Kluyver 1989). We use the relationship of market share as a proxy for underlying, unobservable consumer demand; keeping in mind possible nonlinearities and feedback effects.

The analyses reported in this paper are based on cross-sectional data collected for a pilot test. Our purpose is to develop and refine a methodology for evaluating relative levels of distribution support with cross-sectional data. The data describe the market for shampoo brands in Japan. The shampoo category was selected because it contains a variety of foreign and domestic brands, exhibits rapid changes of brand loyalty (at least in the US), and is distributed in a variety of outlets (drug stores, grocery stores, variety stores, department stores, and specialty stores).

Our analyses show no favoritism toward domestic brands by the Japanese retail system. Instead, to our surprise, we found that foreign brands appear to enjoy more than their "fair share" of both breadth and depth of distribution support. The analyses also demonstrate that the level of support for foreign and domestic brands was consistent across store types.

The paper is organized as follows. The second section discusses some background issues on discriminatory practices and this study's objectives.

In section three we describe the data collection procedures, which in this case are somewhat unique, and which may be of interest to others collecting data on retail merchandising support. The fourth section presents our analyses of the relative support levels of foreign and domestic brands and our procedures for adjusting these to reflect consumer demand. The fifth and final section provides our conclusions and implications for further research.

## BACKGROUND ISSUES

Discriminatory trade practices in the Japanese distribution system can be examined in a variety of forms and at a number of levels in the channel. Quantitative evidence usually focuses on tariffs, the current account surplus, and quotas (Okita 1984; Japan Chamber of Commerce and Industry 1989) while qualitative evidence centers on the complexities of the rebate system, the long and fragmented channels, and the time-consuming certification process (*The Economist* 1989). Unfortunately, this data can be easily manipulated and reveals little insight into what is taking place at the consumer level—where the success or failure of a product is determined. More importantly, this type of data provides the manufacturer with little concrete evidence on which to act.

Although there are many marketer-influenced factors that *might* lead to variance in distribution support (e.g., supplier relationships, merchandising fees, and advertising), until it can be demonstrated that foreign goods receive less than equal treatment by distribution channels in Japan, there will be less motivation to investigate these causal factors. When all is said and done, what exactly is it that Japanese distribution channels are not providing for foreign products that domestic products are getting? Is it breadth of availability, favorable shelf locations, other merchandising and marketing support activities, or all of these? Japanese say some foreign goods have succeeded, but the fact that some goods have succeeded in gaining limited distribution is not compelling evidence that foreign goods are on equal footing compared to domestic goods.

This pilot study is aimed at developing a methodology for accumulating relevant evidence on the existence of discrimination in distribution channels by analyzing one specific category in the Japanese market. Comparing merchandising support for foreign and domestic goods at the same levels of market share will reveal whether foreign goods receive the retail push that their market share warrants. See Figure 1 for an example of this push-pull balancing concept. If all other factors except consumer preference *were* equal we would expect to find all brands along the curve. This

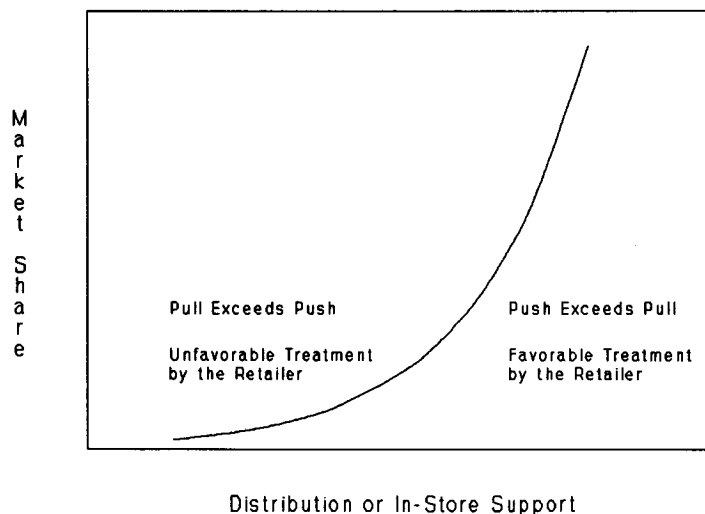
model reflects the fact that (all else being equal) retailers are more likely to stock and merchandise items that sell well, and vice versa.

If foreign manufacturers offer the trade the same levels of promotional support, but foreign shampoos are being discriminated against at the store level, then we expect to find their values on specific merchandising variables to be significantly lower than domestic brands with the same market share values. This would result in most foreign brands being located on the left side of the line in Figure 1. On the other hand, if foreign brands offer similar levels of promotional support and are being treated “fairly” by the retailer, the ratios of merchandising support and market share should be roughly equal, with as many foreign brands (and domestic) on either side of the push-pull balance line.

Clearly, analyses based on this simple model do not address other causal factors that *might* affect the trade support of a brand. For example, one might argue that higher promotion allowances would cause a brand to receive higher than average shelf space relative to its market share. Another well known example is the ability of Frito-Lay’s large salesforce to keep a product with a low level of market share at a higher level of distribution. Given the wide variety of possible causes, however, we should first determine the existence and dimensionality of trade support differences before developing a specific hypothesis for the causes.

FIGURE 1

### Push-Pull Balance Line



## DATA

We used a rather novel approach to gather information on in-store merchandising support. Photographs were taken of 131 retail stores, representing six store types, in the Tokyo area.<sup>1</sup> These photographs present clear evidence of what is actually going on at the consumer level. Additionally, this technique allows us to code at a later date and, more importantly, the data can be verified and corrected. Data may be gathered on a number of merchandising variables such as space, inventory, price, promotions, and displays.

We chose shampoos as our test category for the reasons cited earlier: variety of brands, rapid changes in loyalty, and widely varying store distribution. Over 100 shampoo brands were present in the stores. The total number of foreign brand observations, across all stores, was 1,028; domestic brand observations numbered 1,854.

All the brands in each store were used in the calculation of the in-store merchandising variables described in the next section. Market share data was obtained from a manufacturer who collects share data at the retail sales level. This narrowed down the sample to 17 domestic and 9 foreign brands. These 26 brands, which represented the most widely available and popular shampoos, represented over one-half of the total number of brand observations. Their collective market share for 1989 was 79.5 percent.<sup>2</sup>

## ANALYSIS

The analysis concentrated on the relative values of breadth and depth of distribution support between the nine foreign and seventeen domestic

<sup>1</sup> Store types and number include: Super Stores (19); Supermarkets >500 square meters in area (6); Supermarkets <500 square meters in area, Convenience Stores (30); Specialty Stores (48); Department Stores (22). Although we were unable to gather data on the distribution of store types we felt that our sample was reasonably representative of the population. For example, "mom and pop" stores are a significant proportion of the total retail stores in Japan. Our study was dominated by specialty shops which consisted primarily of mom and pop stores (VanVranken 1990).

Domestic Brands (Share)				Foreign Brands	
Essential	12.1	Mild Pure	3.6	Rejoy	5.3
Sifone	3.3	Merit	11.9	Lux	3.8
Liese	.9	Aqua Me	3.5	Timotei	6.8
Hair Rist	4.6	Hair Col.	1.9	Flex	.5
Mrng Fresh	2.1	Rinpoon	.5	Elseve	.8
Protea	1.5	Tiara	.4	Excell.	.3
M+	.4	Sa-La	1.7	Gentle C.	.3
Soft-in-1	5.1	Free & Free	.2	Finesse	.9
Super Mild	6.8	Nateurine	.3		

brands, controlling for each brand's market share value. Each brand's value on a specific merchandising variable was computed as a share for that variable within each store (using *all* the SKUs in the store) and these values were then summed across the stores in which the brand was stocked. These values were then plotted against each brand's market share.

### Variable Descriptions

Breadth of distribution was measured using unweighted and weighted store occupancy. Unweighted store distribution is simply the proportion of sampled stores in which a given brand is found. Weighted store distribution is calculated by weighting each store by its share of all store inventory.<sup>3</sup>

Six merchandising variables were used to compare the relative in-store support, or depth of distribution, of foreign and domestic products. First, space constraints in Japanese stores are very high. Products are often stocked on the floors, in baskets, outside the door, and in any other place possible. Thus, unlike their US counterparts, products in off-shelf locations are not necessarily receiving special promotion but rather being placed in shelf extensions. The first variable—total inventory—was calculated as the sum of all store inventory and was used as an indirect measure of store space allocated to the item.

Second, since foreign products frequently have an upscale image for consumer goods we believed that price may influence the retail merchandising strategies. Retail price was used to compute the second variable: dollars of shelf inventory.

Until recently, price promotions were not really used much in the Japanese marketplace. Quality was the most important product factor for the consumer and price reductions often had a negative impact on quality perceptions (Alden 1987). In addition, manufacturers actively discouraged retail price promotions. These companies felt that price reductions hurt their product image. However, with the introduction of large super stores and convenience shops and the increased use of computerized inventory management the channel power has begun to shift to the retailer. Together with increased consumer price sensitivity many retailers now use price as a merchandising tool (*The Economist* 1988). Two price-promotion variables were included in the study. First, each brand's total *value* of price reductions was computed. Second, each brand's total *number* of price

<sup>3</sup> Though product category sales volume (PCV) would have been a better weighting method, store level sales data was not available.

reductions was calculated. Similar to US stores, Japanese stores use special tags or product attachments to push merchandise. The fifth variable represents the brands' total number of display tags and product attachments.

Finally, as a measure of depth of distribution support each brand's total number of SKUs was computed. For example, Flex 300ml and Flex 400ml would constitute 2 SKUs.

## RESULTS

### Breadth of Distribution

The top half of Figure 2 plots each brand's market share<sup>4</sup> against the unweighted store distribution. The lower half of the figure plots each brand's weighted store proportions against its market share. Both plots indicate that the foreign brands are well distributed in the market. More importantly, the graphs show that *the foreign products in this study receive greater breadth of distribution, at the same levels of market share, than their domestic counterparts*. The results also validate prior work that demonstrated an exponential relationship between distribution and market share (Farris, Olver, and de Kluyver 1989). Clearly, a higher ratio of market share per distribution point is associated with higher levels of distribution and causality operates in both directions.

### Depth of Distribution

Figure 3 plots each of the six merchandising variables against the brand's market share. The results again show *that at the same market share levels, foreign goods are receiving comparable or greater merchandising support than their domestic counterparts*. The region below the best-fit line represents a favorable area of merchandising support. Brands within this region are receiving higher levels of push than their market share warrants them. Here we can see that, except for displays, the relationship between market share and in-store merchandising support for foreign and domestic goods are almost identical. In fact, in most cases, foreign goods receive greater increases in merchandising support for a unit increase in market share.

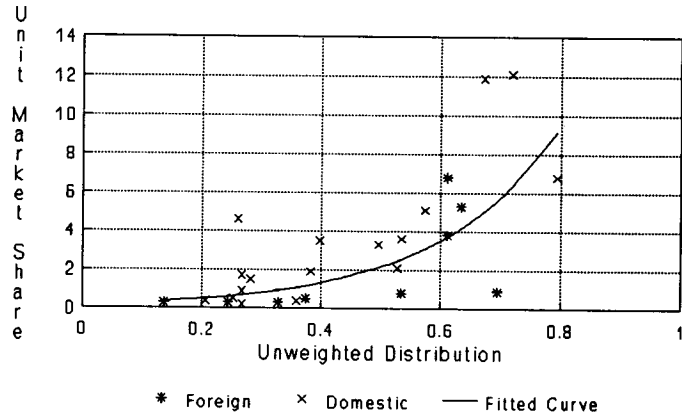
A comparison was made between foreign and domestic goods on the ratio of each specific merchandising value and the brand's market share. *T*-tests were significant at the .05 level in all merchandising categories

<sup>4</sup> Market share was reported both in units and dollars. Since the results were similar, market share in units was used in the paper.

FIGURE 2

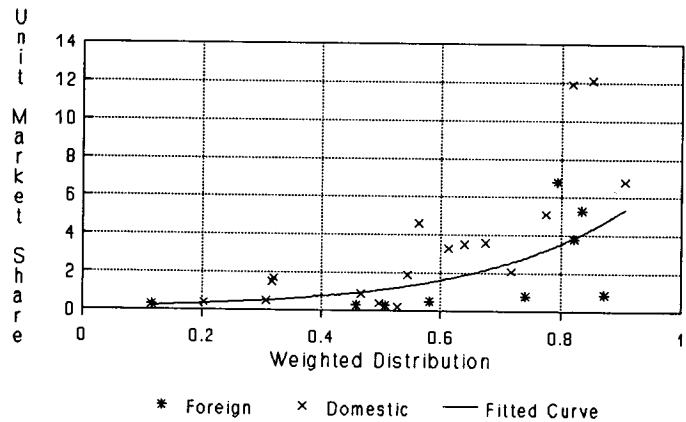
**Unweighted and Weighted Store Distribution of Foreign and Domestic Brands Controlled for Market Share**

Unweighted Store Distribution  
Versus Unit Market Share



Unweighted by the store's share of all store inventory.

Weighted Store Distribution  
Versus Unit Market Share



Store distribution weighted by each store's share of all store inventory.



except number of SKUs. Table 1 breaks this ratio down by market share group. In most cases the mean value was higher for the foreign brands. Thus, foreign brands receive more in-store support per unit market share. This analysis was repeated with the two highest market share brands removed. The results again showed that foreign brands were supported comparably or advantageously.

### **Store Type**

Although the data used in the study was aggregated across the stores, an anonymous reviewer conjectured that the levels of support for foreign and domestic brands may vary by store type. This reviewer specifically noted that department stores often position themselves as upscale shopping establishments. Therefore, one may expect to find that foreign products are supported advantageously. In fact, the data revealed that foreign share of shampoo brands within a store ranged from a low of .26 in small supermarkets to a high of .48 in department stores. To investigate whether the in-store support also varied within department stores the analysis was repeated first with department stores removed and second with only department stores. Figure 4 illustrates that although the absolute support, measured by inventory, is slightly different for foreign and domestic brands across store types, the relative levels are similar. The marked deviation from the prior graphs that is exhibited by the department store analysis may be attributed to the limited sample size. This pattern was similar across most of the other merchandising variables. The means of the ratio of level of support to market share, along with the *t*-test results, are shown in Table 1. Interestingly, all *t*-tests were insignificant.

### **CONCLUSION**

A recent survey of business periodicals uncovered approximately 300 citations using only the keywords "Japanese" and "distribution."<sup>5</sup> Current rounds of Japanese trade discussions indicate that issues in this area will continue to receive a great deal of coverage and analysis in the near future. The current study uses a rather unique approach to investigate the issue of discriminatory trade practices at the retail level. Photographs were taken of Japanese retail shops to capture the in-store merchandising support given to foreign and domestic brands. The objective was to determine whether

<sup>5</sup> The survey was made using University Microfilms Incorporated ABI database, which lists abstracts and indexes from over 800 business periodicals. The time period was from May 1985–April 1990.

**FIGURE 3**  
**Merchandising Support for Foreign and Domestic Shampoo Brands**

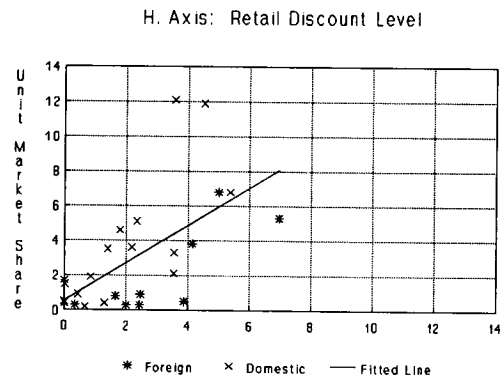
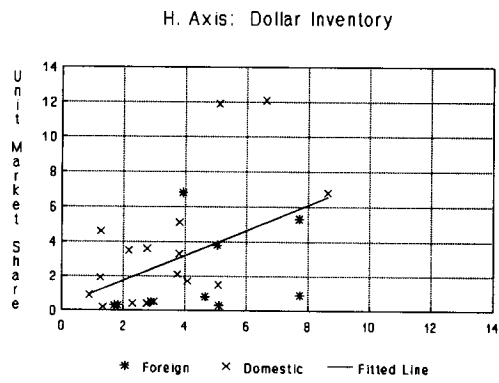
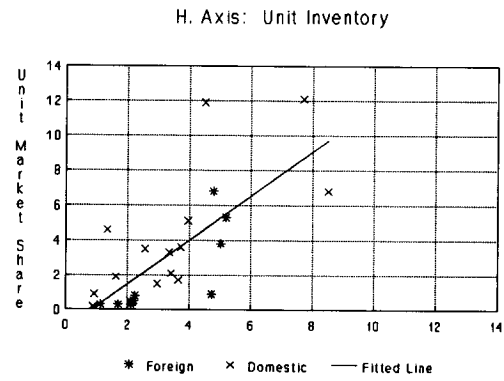
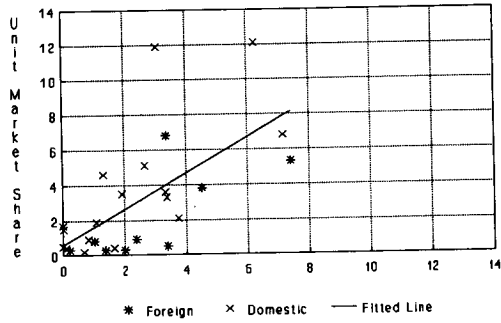


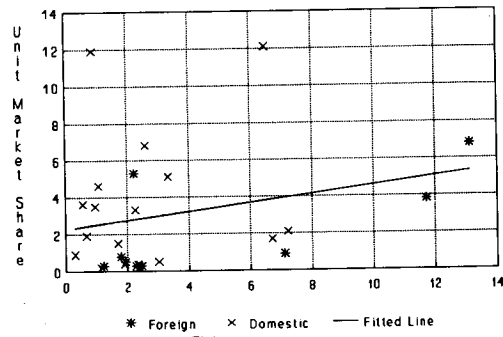
FIGURE 3

Continued

H. Axis: Number of SKUs w/Price Discount



H. Axis: Number of Special Attachments



H. Axis: Number of SKUs

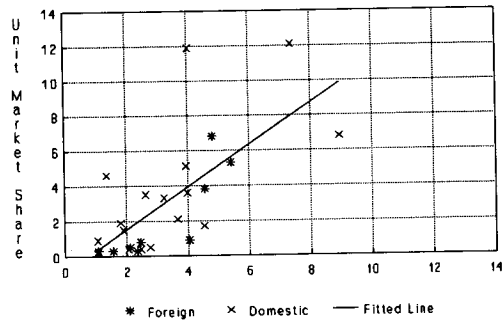


TABLE 1

**Mean Values for the Ratio of Merchandising Support  
Level/Market Share**

VARIABLE	Share Range	ALL STORES		NO DEPARTMENT		ONLY DEPARTMENT	
		Foreign	Domestic	Foreign	Domestic	Foreign	Domestic
Inventory	0 - 2	4.8	3.2	3.6	2.7	1.2	.5
	2 - 4	1.3	1.1	1.1	1.1	.2	.0
	4 - 6	1.0	.5	.9	.5	.1	.0
	6 - 8	.7	1.3	.6	1.1	.1	.2
	All Brands	3.5	1.9*	2.7	1.7	.8	.2
Dollar Inventory	0 - 2	8.2	4.1	5.5	3.4	.3	.7
	2 - 4	1.3	1.1	1.3	1.1	.2	.0
	4 - 6	1.4	.5	1.3	.5	.1	.0
	6 - 8	.6	1.3	.5	1.1	.0	.2
	All Brands	5.8	2.4*	4.0	2.0*	1.8	.3
Retail Discount	0 - 2	5.7	.7	4.5	.7	1.4	.0
	2 - 4	1.1	1.3	1.0	1.3	.0	.0
	4 - 6	.9	.8	.9	.8	.0	.0
	6 - 8	.7	.9	.6	.8	.1	.0
	All Brands	4.1	.8*	3.3	.8*	.9	.0
Number with Discount	0 - 2	3.8	1.5	3.5	1.5	.8	.0
	2 - 4	1.2	1.1	1.2	1.0	.0	.0
	4 - 6	1.4	.4	1.4	.4	.0	.0
	6 - 8	.5	1.1	.5	1.0	.1	.0
	All Brands	2.9	1.1*	2.4	1.1*	.5	.0
Displays	0 - 2	5.6	3.5	4.4	2.9	1.3	.7
	2 - 4	3.1	1.1	2.9	1.1	.2	.0
	4 - 6	.4	.4	.4	.4	.0	.0
	6 - 8	1.9	.4	1.8	.4	1.0	.0
	All Brands	4.4	2.0*	3.5	1.7*	.9	.3
Number of SKUs	0 - 2	4.7	3.5	3.6	2.9	1.2	.6
	2 - 4	1.2	1.1	1.1	1.1	.1	.0
	4 - 6	1.0	.5	1.0	.5	.0	.1
	6 - 8	.7	1.3	.6	1.1	.0	.2
	All Brands	3.5	2.1	2.8	1.8	.8	.3

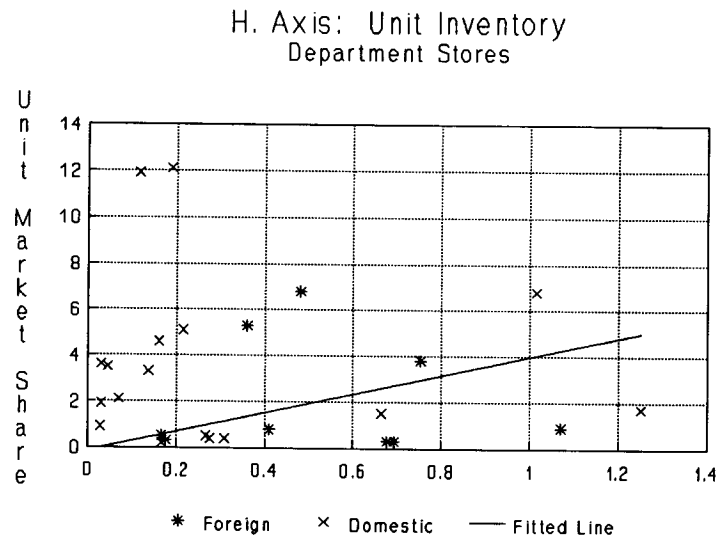
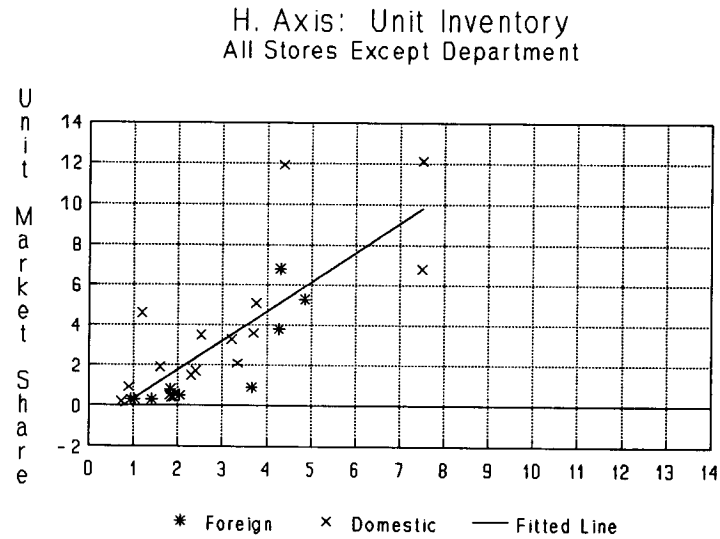
\* Significant at the .05 level.

Japanese retailers allocate their fixed levels of merchandising support fairly to foreign and domestic shampoo brands within the Tokyo metropolitan area.

The results of the study show that foreign shampoos are not only receiving comparable levels of distribution and in-store merchandising support, but, in many cases, receive favorable levels relative to the domestic

FIGURE 4

**Comparison of Merchandising Support for All Stores Except Department and Department Stores Alone**



brands. This pattern was found to be consistent across different store types. The data used in this study was collected in the Tokyo metropolitan area, which may not be representative of other markets. To successfully compete in a cosmopolitan area merchants may need to devote greater merchandise support to foreign products that may enjoy higher-than-average demand in a cosmopolitan area. This may explain what appears to be favorable treatment of foreign brands.

Certainly the evidence uncovered in the study does not support the idea that foreign goods are being discriminated against by Japanese retailers. Perhaps these manufacturers already understand the distribution system better than they understand the Japanese consumers; an argument that the Japanese have made for several years. The complex patterns that underlie the relationships between distribution and market share make it imperative that all channel members understand the interdependencies between market push and pull.

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