

Nutzungsbedingungen

DigiZeitschriften e.V. gewährt ein nicht exklusives, nicht übertragbares, persönliches und beschränktes Recht auf Nutzung dieses Dokuments. Dieses Dokument ist ausschließlich für den persönlichen, nicht kommerziellen Gebrauch bestimmt. Das Copyright bleibt bei den Herausgebern oder sonstigen Rechteinhabern. Als Nutzer sind Sie nicht dazu berechtigt, eine Lizenz zu übertragen, zu transferieren oder an Dritte weiter zu geben.

Die Nutzung stellt keine Übertragung des Eigentumsrechts an diesem Dokument dar und gilt vorbehaltlich der folgenden Einschränkungen: Sie müssen auf sämtlichen Kopien dieses Dokuments alle Urheberrechtshinweise und sonstigen Hinweise auf gesetzlichen Schutz beibehalten; und Sie dürfen dieses Dokument nicht in irgend einer Weise abändern, noch dürfen Sie dieses Dokument für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, aufführen, vertreiben oder anderweitig nutzen; es sei denn, es liegt Ihnen eine schriftliche Genehmigung von DigiZeitschriften e.V. und vom Herausgeber oder sonstigen Rechteinhaber vor.

Mit dem Gebrauch von DigiZeitschriften e.V. und der Verwendung dieses Dokuments erkennen Sie die Nutzungsbedingungen an.

Terms of use

DigiZeitschriften e.V. grants the non-exclusive, non-transferable, personal and restricted right of using this document. This document is intended for the personal, non-commercial use. The copyright belongs to the publisher or to other copyright holders. You do not have the right to transfer a licence or to give it to a third party.

Use does not represent a transfer of the copyright of this document, and the following restrictions apply:

You must abide by all notices of copyright or other legal protection for all copies taken from this document; and You may not change this document in any way, nor may you duplicate, exhibit, display, distribute or use this document for public or commercial reasons unless you have the written permission of DigiZeitschriften e.V. and the publisher or other copyright holders.

By using DigiZeitschriften e.V. and this document you agree to the conditions of use.

Kontakt / Contact

DigiZeitschriften e.V.

Papendiek 14

37073 Goettingen

Email: digizeitschriften@sub.uni-goettingen.de

Retail Profit Margins in Japan and Germany

By

René G.J. den Hertog, Jeroen C.A. Potjes, and A. Roy Thurik

Contents: I. Introduction. – II. Japanese Retail Practice. – III. Modelling Retail Profit Margins. – IV. Results. – V. Concluding Remarks. – Appendix.

I. Introduction

The Japanese distribution system is often criticized. It is seen as complicated and it is claimed to make products unduly expensive by putting high profit margins on the products throughout the distribution channel. The EC and the US face a serious trade deficit vis-à-vis Japan since the beginning of the 1970s. A major source of the trade imbalance is the inability of European and American companies to market their products successfully to the Japanese customer. The establishment of an effective distribution network is seen as one of the main bottlenecks in marketing Western products into Japan. To establish a distribution network, a thorough understanding of Japanese business practices and full knowledge of the Japanese distribution system are indispensable [see Batzer and Laumer, 1989; Douglas and Craig, 1990; Montgomery, 1991; Simon, 1986; and the US International Trade Commission, 1990].

We can improve our understanding of the Japanese distribution system by comparing it with a known system. Many studies of Japanese retailing provide an implicit comparison with Western retailing by describing peculiarities of the Japanese retail structure like the abundance of small stores, the emphasis on service and quality, government regulations protecting small retail business and the tight relations between retailers, customers, wholesalers and manufacturers. Quantitative studies comparing Japanese retailing with retailing in other developed countries are scarce, but highly informative. Recent studies in this field are Flath [1990], Nariu and Flath [1991], Ito

Remark: The authors would like to thank the Institut für Handelsforschung of the University of Cologne for the provision of data, the Institute of Business Administration of Aoyama Gakuin University in Tokyo, Herman van Schaik of EIM Small Business Research and Consultancy for the elaboration of the data, and an anonymous referee for his useful comments and suggestions.

and Maruyama [1991], Nishimura [1993], and Potjes and Thurik [1992]. The abundance of retail stores and wholesalers in comparison to the US are explained in Flath [1990] and Nariu and Flath [1991], respectively. Ito and Maruyama [1991] and Nishimura [1993] compare determinants of retail efficiency between Japan, Germany and the United States, and conclude that Japanese retailing is as efficient as retailing in the other two countries. In Potjes and Thurik [1992], labour costs of both Japanese and French supermarkets have been examined. This study does not indicate any major differences between Japanese and Western retailing either.

The aim of the present study is to compare the determinants of retail profit margins between Japan and Germany. It is the first presenting an empirical analysis of the consequences of the characteristics of the Japanese social and economic structure for retail profit margins and comparing the outcomes with those for a Western retail system. Batzer and Laumer [1989] and Simon [1986] also use the German retail system as a benchmark when comparing Japanese and Western retailing, although German retailing has its own peculiarities. Germany has for instance restrictive legal provisions regarding the opening hours of retail stores, many administered retail profit margins, and for some products profit margins are determined by producers. Nevertheless, the Japanese retail practice is seen as more distinct from the generally accepted Western retail standards than the German practice. To provide empirical evidence for this, the present study examines the net effects of Japanese and German characteristics on retail profit margins.

The structure of the study is as follows. The Japanese retail practice is described in Section II and occasional attention is paid to a comparison with that of Germany. Section III presents the mark-up model that is used to examine the determinants of retail profit margins in the two countries. The empirical results, based on data for 35 Japanese shop types and 38 German shop types for the period from 1973 until 1988, are presented in Section IV. We find the distinct features of Japanese retailing to have a significant impact on price-setting behaviour. Cost compensation as well as a basic entrepreneurial reward play a more important role in Japanese than in German retailing. Service level, advertising intensity and growth of consumer spending play a more distinct role in explaining German than Japanese profit margins. Our empirical evidence indicates that Japanese retailers can survive more easily than German retailers. Furthermore, the results confirm the assumption that price competition is less intense in

Japan than in Germany. Some concluding remarks are made in Section V.

II. Japanese Retail Practice

Batzer and Laumer [1989], Montgomery [1991] and Simon [1986] suggest a lower level of price competition in Japan than in Germany and other Western economies. In this section, we discuss four features of Japanese retailing reducing price competition: (i) government policies protect small business against large enterprises; (ii) retailers have a close relationship with their clients; (iii) stores are long-term investments providing a pension; (iv) retailers are backed by manufacturers and wholesalers.

1. Government Regulations

In general, government regulations temper the level of competition. In Japan, government policies are directed towards the protection of small and medium-sized businesses because the Liberal Democratic Party (LDP) ruling for many years relies to a large extent on the votes of the numerous small and medium-sized entrepreneurs and their relatives [Kosai, 1987; Patrick and Rohlen, 1987]. The considerable political pressure of small retailers on the LDP has led to the Large-Scale Retail Store Law (LSRS Law). This law favours small stores in two ways. First, small stores are allowed to have more flexible opening hours than large stores. Second, the law only allows the establishment of a large-scale retail store with the prior consent of the small retailers in the area. The procedure to obtain the consent of the local retailers usually delays the establishment of the large-scale stores by several years. We refer to Kirby [1983], Kuribayashi [1991], Patrick and Rohlen [1987] and the US International Trade Commission [1990] for detailed discussions of the LSRS Law. In Japan, the position of small retailers is further strengthened by regulations that are only imposed upon large enterprises. For instance, small retailers are not obliged to administrate their transactions and pay less taxes.

American and European politicians and the popular media often suggest that Japanese regulations have a more severe impact on retailing than Western regulations. However, the German government pursues a restrictive policy with respect to retail business hours and the establishment of hypermarkets and other large-scale stores in peripheral areas. Furthermore, it administers some retail prices. Therefore, one has to be careful when drawing conclusions on differences in price competition between Japan and Germany.

2. The Clientele

Japanese retailing is characterized by an abundance of small stores. To illustrate this, the average number of stores per 1,000 inhabitants is 13.5 in Japan and 6.2 in Germany. Flath [1990] gives a demand-side explanation for this phenomenon. He shows that retail stores not only distribute consumer goods but also function as a store-room for the people living in the neighbourhood. Retailers perform this function because Japanese houses are generally small. Little room is available for keeping stocks inside the house and only small amounts of products are bought daily. This feature unknown in Germany makes it important for the Japanese retailers to be located in the neighbourhood, because daily shopping is only possible if the stores are in the immediate vicinity of customers. Therefore, regular clients are prepared to pay for the continuation of their neighbourhood stores.

The daily shopping, the smallness of the stores, and the fact that customers and retailers live in the same area result in a close relationship between retailers and customers. Retailers are mainly occupied with strengthening this relationship with their clients. They realize this by offering high quality products and delivering special services. Retailers ensure that they can instantly deliver a large range of products requested by the customers. This strong emphasis on service and the close retailer–customers relationship lessen the price sensitivity of customers and therefore price competition.

In Northern European countries and the US, the relationship between retailers and their local customers, which used to be strong, has weakened considerably. Retail stores in the Southern European countries still rely on the patronage of their local clients. The general image is that in Northern Europe and the US, customers are more price conscious and are less interested in service when compared to Japan [Simon, 1986; Montgomery, 1991].

3. The Japanese Retailer

The abundance of stores in Japan has resulted in a large number of small stores. The average store is operated by 3.9 persons in Japan and 6.0 persons in Germany, and the 1985 store size in sales is 299 thousand ECU for Japan and 552 thousand ECU for Germany [Management Statistics Bureau and Coordination Agency, 1990, and Statistisches Bundesamt, 1989]. Batzer and Laumer [1989] and Patrick and Rohlen [1987] give a supply-side explanation for the large number of

small stores. They argue that by screening out certain groups and by retiring workers early,¹ large firms create large pools of people often starting a retail store. The opportunity costs are low for these people. Their own entrepreneurial activity will give more job satisfaction and will create a higher income than other available jobs. Moreover, retailing in Japan is a sector in which (i) capital requirements are low, (ii) no special skills are required, and (iii) government policies provide support. Many retailers do not need capital to acquire or rent a selling area because stores are operated in their dwellings [see Nishimura and Tachibana, 1993]. The government supports in-house business operations by means of tax breaks. In Europe, there is also a large number of inactive people, but their propensity to start a retail store is low because special skills are required, capital requirements are often considerable and the drive to reenter the labour market is alleged to be lower for Europeans than for Japanese.

From the abundance of small retail stores it does not follow that competition is higher in Japan. In fact, because of a difference in the importance of stores for retailers' well-being, competition will be lower in Japan than in Germany. The Japanese retailers are interested in the operation of the store as a means of living. Many Japanese invest all their savings in a retail store which they view as a long-term investment providing a pension. They cannot easily change their occupation and will therefore not engage in investments that might jeopardize the economic prospects of their small family enterprises. When being unemployed, the Japanese have to rely on their family. The German retailer, however, generally owns a larger store and is interested in operations providing higher profits. The general image now is that, whereas the Japanese retailer is interested in a stable turnover, the German retailer aims at enlarging his profits and sales and therefore has to compete more aggressively.

4. The Relation between Retailers, Wholesalers and Manufacturers

The Japanese retailer is capable of promptly supplying the products needed by his clients because he is backed by manufacturers and

¹ In both Japan and Germany, employees receive a state pension at the age of 65 but retire at a younger age. Large Japanese enterprises retire their employees at the age of about 55 and provide them with a lump-sum pension. Since this pension is not always sufficient, the retirees have to find additional occupation. In Germany, the state and company pensions are in most cases sufficient and do not stimulate additional occupation.

wholesalers. The wholesale sector is tailored to daily delivery and dealing in small quantities because retail stores are relatively small due to the scarcity of space. To enable the small retail stores to perform the storeroom function, i.e. to keep every product on stock, wholesalers have to deliver goods frequently. For instance, a large manufacturing company such as Kao, dealing in detergents, even delivers an order consisting of only a handful of pieces within 24 hours.

The wholesalers and manufacturers take into account the risk-averse nature of the retailers. Often, retailers only have to pay for the goods they actually sell, and are allowed to return unsold goods [Czinkota and Woronoff, 1986; Flath and Nariu, 1989; and Kuriyayashi, 1991]. The room for extensive competition between retailers is suppressed through this system of close ties between retailers on the one hand and their suppliers on the other.

III. Modelling Retail Profit Margins

We present a model for retail profit margins in Subsection 1. Referring to our discussion of Japanese and German retailing in the previous section, we hypothesize five differences in coefficients between the two countries in Subsection 2.

1. The Model

We examine the consequences of the difference in market conditions between Japan and Germany for retail gross profit margins in the framework of a relationship first presented in Nootboom [1985].² This relationship is inspired by the rule-of-thumb pricing approaches in which entrepreneurs set prices based on full costs.³ We estimate this relationship for Japan and Germany separately. For each country, the shop-type and time-series data are pooled because several studies have shown that this single relationship can explain both differences in margins between different shop types as well as the development in

² There are several applications of this relationship in the retail area. Den Hertog and Thurik [1992] examine the meaning of expectations in German retail price setting, Nootboom, Kleijweg and Thurik [1988] identify demand effects in Dutch retail pricing, Nootboom, Thurik and Vollebregt [1988] compare retail margins in different European countries, and Potjes and Thurik [1993] examine the impact of different types of services and the inefficiency of small stores on Japanese retail profit margins.

³ See Scherer and Ross [1990, p. 261] and Nootboom, Kleijweg and Thurik [1988] for references and a discussion of its relevance in the retail area.

time per type of shop. Unless mentioned otherwise, for all variables the shop type value is an average value from a sample of firms belonging to this shop type. This explains our discussion of *average* profit margins, *average* operating costs, etc.

The average percentage gross margin, M , is defined as the difference between sales and purchasing value of sales, PV , expressed as a percentage of sales. For each type of shop i and year t , Nootboom's [ibid.] relationship explains the average percentage gross margin as a profit mark-up, PMU , on average operating costs, K , as a percentage of average sales, Q :

$$\begin{aligned} M_{it} &= 100 \frac{Q_{it} - PV_{it}}{Q_{it}} = \alpha_0 + \alpha_1 100 \frac{K_{it}}{Q_{it}} + PMU_{it} + e_{it} \\ &= \alpha_0 + \alpha_1 \kappa_{it} + PMU_{it} + e_{it} \end{aligned} \quad (1)$$

with disturbance e . Average percentage operating costs, κ , exclude a reward for the retailer's and his family's labour. This reward is part of the profit mark-up. If the percentage gross margin is exactly a percentage profit mark-up on percentage operating costs, the coefficients α_0 and α_1 should be zero and one, respectively. However, Nootboom, Kleijweg and Thurik [1988] report estimates of α_0 significantly different from zero, while Den Hertog and Thurik [1992] find α_1 to be significantly smaller than one.

We assume that the profit mark-up can be modelled as

$$PMU_{it} = \alpha_2 \underbrace{W_t/Q_{it}}_{\text{basic reward effect}} + \alpha_3 \underbrace{ST_{it}}_{\text{shop-type effect}} + \alpha_4 \underbrace{SL_{it}}_{\text{shop-type effect}} + \alpha_5 \underbrace{A_{it}}_{\text{shop-type effect}} + \alpha_6 \underbrace{\Delta C_t}_{\text{business-cycle effect}}, \quad (2)$$

where W/Q denotes the national wage level as a percentage of average sales, ST is the average selling value of merchandise in inventory as a percentage of sales, SL is the average ratio of the number of persons engaged to the size of the selling area, and A measures average advertising costs as a percentage of sales. The percentage growth of consumer spending, ΔC , is the growth of total consumer expenditure because we have no data per shop type. Henceforth, ST , SL and A are referred to as stock level, service level and advertising intensity, respectively.

The national wage level as a percentage of average sales per shop is used to account for the basic reward effect. This effect says that shopkeepers require some basic reward independent of sales, costs and other shop-type characteristics. This reward is assumed to be the same across different types of shop. It will be explained in the next subsec-

tion that coefficient α_2 estimates this reward (as a proportion of the national wage level).⁴

Stock level ST , service level SL and advertising intensity A are used to account for the shop-type effect. This effect originates from the fact that a more varied range of products, a higher service level and a better positioning on the market are positively valued by the customer and require a higher percentage profit mark-up to achieve a given return on investment for the retailer. This means that α_3 , α_4 and α_5 are assumed to be positive.

Percentage growth of consumer spending, ΔC , is used to account for the business-cycle effect. This effect relates to the idea that the size of the profit mark-up depends on the economic situation. Price competition will be more intense in a contracting market, because retailers attempt to sustain sales volume. The coefficient α_6 is assumed to be positive.

To provide insight in the retail pricing characteristics in Japan and Germany, we estimate the relationship

$$M_{cit} = \alpha_{c0} + \alpha_{c1}\kappa_{cit} + \alpha_{c2}(W_{ct}/Q_{cit}) + \alpha_{c3}ST_{cit} + \alpha_{c4}SL_{cit} + \alpha_{c5}A_{cit} + \alpha_{c6}\Delta C_{ct} + e_{cit} \quad (3)$$

for $c=j$ (Japan) and $c=g$ (Germany). In the next subsection, we formalize our discussion of Japanese and German retailing in Section II into hypotheses on differences between the coefficients α_{jk} and α_{gk} ($k=0, 1, \dots, 6$).

2. Hypotheses

Since some hypotheses can be understood more easily by considering the implications for retail net profits, equation (3) is rewritten as

$$R_{cit}^T = (M_{cit} - \kappa_{cit})Q_{cit} = \alpha_{c0}Q_{cit} + \alpha_{c2}W_{ct} + (\alpha_{c3}ST_{cit} + \alpha_{c4}SL_{cit} + \alpha_{c5}A_{cit})Q_{cit} + \alpha_{c6}\Delta C_{ct}Q_{cit} + w_{cit}. \quad (4)$$

For simplicity α_{c1} is assumed to be unity. Equation (4) says that a retailer's total reward, R^T , consists of the following components: a size component ($\alpha_{c0}Q_{cit}$), a basic reward ($\alpha_{c2}W_{ct}$), a reward for service

⁴ Note that the basic reward effect can also be interpreted as a scale effect: an increase in average sales yields a downward pressure on margins in our specification (resulting from a positive coefficient α_2 and a decrease of W/Q). This effect plays a major role in the ousting of smallness which is observed in retailing [see Nooteboom, 1986].

$((\alpha_{c3} ST_{cit} + \dots + \alpha_{c5} A_{cit}) Q_{cit})$ and a component depending on demand conditions $(\alpha_{c6} \Delta C_{ct} Q_{cit})$.

Equation (4) indicates that α_{c0} determines the direct relation between sales size and net profits. The more positive α_{c0} is, the more important economies of scale are and the more difficult it is for small firms to survive. Since small firms appear to survive more easily in Japan than in Germany, our *first hypothesis* is $\alpha_{j0} < \alpha_{g0}$.

In (3), the coefficient α_{c1} of the costs variable κ sheds light on the way retailers pass on their percentage costs to their customers. The *second hypothesis* is that $\alpha_{j1} = 1$ and $\alpha_{g1} < 1$. Japanese retailers interested in generating family income will avoid risk by fully compensating their costs. In fact, their protected environment enables them to do this. The high degree of competition in the German retail sector, however, makes it more difficult to pass on costs fully.

In (4), the coefficient α_{c2} reflects a reward that is independent of shop-type characteristics. This so-called basic reward is expressed as a proportion of the average national wage level. We feel that the Japanese retailer aims at gaining a steady family income that does not depend on sales, costs and market opportunities, whereas his German counterpart is more inclined to follow market opportunities. Our *third hypothesis* is therefore that the basic reward relative to average wages in the respective countries is higher for the Japanese retailer than for the German retailer: $\alpha_{g2} < \alpha_{j2}$.

Equation (3) implies that the more customers value service, the less pressure there is on profit margins in shop types with a high stock level, a high service level and a high advertising intensity. Related to this, (4) indicates that customers valuing service allow retailers to have a higher reward component that depends on his service or marketing success. As mentioned above, the German retailer has to accept a lower basic reward. To end up with a reasonable reward, the German retailer has to make aggressive use of differentiating service characteristics. Both Japanese and German customers value service, but the relationship between price and service is probably less direct in Japan than in Germany. The Japanese retailer cultivates his close relation with his clients by not asking a bonus for the large amount of service supplied. In fact, he does not have to ask for a bonus because his customers already allow a reasonable basic reward. The German customers do pay a bonus for service or require a discount if the service level is low.⁵

⁵ In Germany, the Aldi retail stores successfully combine a minimum of service with high price discounts.

Therefore, our *fourth hypothesis* is that the effect of service differentiation across shop types has a higher impact on profit margins in Germany than in Japan: $\alpha_{g3} > \alpha_{j3}$, $\alpha_{g4} > \alpha_{j4}$ and $\alpha_{g5} > \alpha_{j5}$.

Equations (3) and (4) imply higher margins and profits during periods of growth of consumer spending, $\Delta C > 0$, and lower profits during periods of decline, $\Delta C < 0$. The special market conditions allow the Japanese retailer to avoid these business cycles in profits and income. The German retailer, however, operates in an environment with much competition and is not able to avoid these fluctuations in income. Our *fifth hypothesis* therefore reads that business cycles affect German profit margins more than Japanese profit margins: $\alpha_{g6} > \alpha_{j6}$.

IV. Results

In this section, we present empirical results used to test the hypotheses presented above. For our analysis, we use data on medium-sized stores for 35 Japanese and 38 German shop types for the period from 1973 until 1988.⁶ See the Appendix for a description of the data. Since our data cover almost the entire spectrum of shop types, the data enable a fair comparison of retail pricing in Japan and Germany. We have weighted the data points with the market shares of the respective shop types in retailing to further enhance the comparability of our data as representing the entire retail sector of Japan and Germany. Note that this weighting of data points also corrects for heteroscedasticity. To correct for autocorrelation, we have used the well-known $1 - \rho_c L$ transformation of the variables. L denotes the lag operator and ρ_c is the first-order autocorrelation coefficient of the residuals for country c .⁷

Before we present the results, we want to stress that from the service variables ST , SL and A , the yearly averages across all shop types have been subtracted. The reason for this is that the cross-sectional and time-series components of these variables have different implications. The cross-sectional components are the shop-type deviations from the yearly averages. The cross-sectional components are assumed to account for the shop-type effect in our modelling. The time-series components which are the yearly averages do not account for the shop-type effect. An increase of these yearly averages means

⁶ For both countries, the data do not include large retail stores such as department stores and hypermarkets.

⁷ For both Japan and Germany, the autocorrelation coefficient is assumed to be identical for all shop types.

that all firms provide more service. To provide more service, all firms need more employees and larger stocks. This would mean that the yearly averages of the service variables are more closely related to a size or scale effect than to a service or shop-type effect. To make sure that the coefficients of the variables included to account for size effects are not biased, we have eliminated the time-series component of the service variables by subtracting the yearly averages.

The estimation results of the mark-up relationships are presented in Table 1. The results provide evidence in favour of most of our hypotheses. The negative difference between the constant terms α_{j0} and α_{g0} implies that the relation between sales size and net profits is stronger in Germany than in Japan. Japanese small firms can survive more easily than German small firms.

The results cannot reject the second hypothesis, $\alpha_{j1} = 1$ and $\alpha_{g1} < 1$. While the Japanese retailer passes on 100 per cent of his percentage costs, only 83 per cent of the percentage costs are compensated in the German retailer's profit margins. The German retailer cannot fully compensate his percentage costs because the high degree of competition in German retailing squeezes profit margins.

Consistent with our third hypothesis, the Japanese basic reward is higher than the German basic reward; 62 and 32 per cent of the national wage levels, respectively. The Japanese retailer does not have to follow market opportunities to gain a reasonable income. He has a special relationship with his clients that makes it more difficult to gain a higher income by using marketing instruments; he can ask for a smaller bonus than his German counterpart. On the other hand, Japanese customers appreciate the convenience of having small stores nearby. Therefore, they are prepared to bear the price of a reasonable guaranteed retailers' income to maintain the wealth and diversity of small stores. Note that this implies two important conditions in favour of Japanese small stores: a reasonable guaranteed income and no use of marketing instruments to compete with other retailers.

In line with our fourth hypothesis, the shop-type effect is better reflected in the gross margin of German retailers than in that of Japanese retailers. The coefficients of service level, SL , and advertising intensity, A , are higher for Germany than for Japan. The coefficients of stock level, ST , are about the same for Japan and Germany.

Japanese demand conditions do not affect profit margins, whereas they do in Germany. However, our fifth hypothesis is not confirmed because we do not find a significantly higher effect of ΔC on German profit margins than on Japanese profit margins.

Table 1 – Estimation Results of Mark-up Relationship^a

$$M_{cit} = \alpha_{c0} + \alpha_{c1}\alpha_{cit} + \alpha_{c2}(W_{ct}/Q_{cit}) + \alpha_{c3}ST_{cit} + \alpha_{c4}SL_{cit} + \alpha_{c5}A_{cit} + \alpha_{c6}\Delta C_{ct} + e_{cit}$$

for $c=j$ (Japan), $c=g$ (Germany)

Japan						
α_{j0}	α_{j1}	α_{j2}	α_{j3}	α_{j4}	α_{j5}	α_{j6}
3.695 (0.435)	1.001 (0.018)	0.623 (0.075)	0.060 (0.015)	0.282 (0.031)	0.327 (0.139)	0.027 (0.023)
Germany						
α_{g0}	α_{g1}	α_{g2}	α_{g3}	α_{g4}	α_{g5}	α_{g6}
7.188 (0.711)	0.827 (0.028)	0.315 (0.118)	0.066 (0.008)	1.031 (0.101)	1.375 (0.210)	0.072 (0.035)
Difference between Japan and Germany ^b						
$\alpha_{j0} - \alpha_{g0}$	$\alpha_{j1} - \alpha_{g1}$	$\alpha_{j2} - \alpha_{g2}$	$\alpha_{j3} - \alpha_{g3}$	$\alpha_{j4} - \alpha_{g4}$	$\alpha_{j5} - \alpha_{g5}$	$\alpha_{j6} - \alpha_{g6}$
-3.493 (0.834)	0.174 (0.033)	0.308 (0.140)	-0.006 (0.017)	-0.749 (0.106)	-1.048 (0.252)	-0.045 (0.042)

^a The coefficients have been estimated by least squares corrected for autocorrelation and heteroscedasticity. Standard errors are given in parentheses. M denotes average percentage profit margin, α denotes average percentage operating costs, W/Q is the ratio of the national wage level to average sales, ST represents stock level, SL denotes service, A denotes advertising intensity and ΔC represents percentage changes of consumer spending. The Japanese relationship has been estimated by pooling data for 35 shop types and 16 years (1973–88), whereas data for 38 shop types and the same 16 years have been pooled for Germany. See Table 2 and the Appendix for a description of the panel data sets. – ^b The differences are $\alpha_{jk} - \alpha_{gk}$ with standard errors $\sqrt{\sigma_{jk}^2 + \sigma_{gk}^2}$ with σ_{ck}^2 the variance of coefficient α_{ck} . Because of differences in shop types between Japan and Germany, we could not use Seemingly Unrelated Regression to estimate the covariances of the parameters α_{jk} and α_{gk} . If the covariances are positive, our estimates of the standard errors of the differences are upper bounds.

V. Concluding Remarks

The empirical results show that Japanese retailers can survive more easily than German retailers. Compared with his German counterpart, the Japanese retailer faces a weaker relationship between net profits and size, can pass on more of his (percentage) operating costs, is less severely punished for operating inefficiently, has a higher basic reward and relies less on service instruments to gain a reasonable income. All this explains why there are much more small stores in Japan than in Germany.

Table 2 – *List of Japanese and German Shop Types*

Japan	Germany
supermarkets	groceries
convenience stores	health food stores
grocery stores	
alcoholic liquor stores	
meat stores	
poultry stores	
fresh fish stores	fish stores
vegetable and fruit stores	
confectionery and bakery stores	
rice and barley stores	
tea stores	tobacco stores
	general merchandise stores
dry goods stores	drapery stores
clothing stores	clothing stores
mens clothing stores	men and children clothing stores
female and child's clothing stores	women and children clothing stores
	baby and children clothing stores
	men's suit stores
	lingerie stores
haberdashery stores	linen/underwear and knitted goods stores
	leather and haberdashery stores
haberdashery and accessory stores	bedding stores
bedding stores	tapestry stores
	shoe stores
shoe stores	
Japanese style footwear stores	
bags and small cases stores	mixed assortments textile stores
drug stores	drug stores
toiletory stores	toiletory stores
furniture stores	furniture stores
	large household goods stores
hardware and kitchenware stores	household and kitchenware stores
	bathroom equipment stores
	floor-covering and wallpaper stores
	iron tools stores
chinaware and glassware stores	glass, china and ceramics stores
	lightening and electra stores
electrical household appliances stores	radio and television stores
book stores	book stores
paper and stationary stores	
sporting goods stores	sporting goods stores
watch, eye-glasses and optical goods stores	watches and jeweller's stores
bicycle stores	bicycle stores
camera and photographic supply stores	photographer's stores
toys and amusement goods stores	toys stores
musical instrument stores	musical instrument stores
	pet stores
	florists

Appendix

Data

Data are available for the period from 1973 until 1988 for 35 Japanese shop types and 38 German shop types. In Table 2, the shop types for Japan and Germany are described. Except for the national wage level, W , and the growth of consumer spending, ΔC , we have shop-type values for all our variables. As mentioned, the shop-type values are average values from samples of individual firms. The average national wage levels and the consumer spending growth rates are taken from the *OECD Bulletin of Labour Statistics*.

The German data giving percentage gross margin, M , the percentage operating costs, excluding the income of retailer and family, κ , total sales value, Q , stock level, ST , service level, SL , and advertising intensity, A , are taken from Sundhoff et al. [1980], and from Sundhoff and Klein-Blenkers [1980 through 1987]. The market shares of the shop types for 1988 are taken from the Statistisches Bundesamt [1989].

The Japanese data giving percentage gross margin, M , the percentage operating costs, excluding the income of retailer and family, κ , total sales value, Q , and advertising intensity, A , are taken from the Small and Medium Enterprise Agency [1975 through 1990]. The data giving stock level, ST , service level, SL , and the market shares of the short types are taken from the Census of Commerce [1972, 1974, 1976, 1979, 1982, 1985 and 1988]. The Census of Commerce gives only data for the census years; the interjacent data points are interpolated linearly.

References

- Batzer, Erich, Helmut Laumer**, *Marketing Strategies and Distribution Channels of Foreign Companies in Japan*. Boulder, CO, 1989.
- Census of Commerce**, compiled by Research and Statistics Department, Minister's Secretariat, Ministry of International Trade and Industry. Tokyo 1972, 1974, 1976, 1979, 1982, 1985, 1988.
- Czinkota, Michael R., Jon Woronoff**, *Japan's Market: The Distribution System*. New York 1986.
- Den Hertog, René G.J., A. Roy Thurik**, "Expectations and Retail Profit Margins". *International Review of Retail, Distribution and Consumer Research*, Vol. 2, 1992, pp. 263–282.

- Douglas, Susan P., C. Samuel Craig**, "Achieving Success in Japanese Consumer Markets". *Japan and the World Economy*, Vol. 2, 1990, pp. 1–21.
- Flath, David**, "Vertical Restraints in Japan". *Japan and the World Economy*, Vol. 1, 1989, pp. 187–203.
- , "Why Are There So Many Retail Stores in Japan?" *Japan and the World Economy*, Vol. 2, 1990, pp. 365–386.
- , **Tatsuhiko Nariu**, "Returns Policy in the Japanese Marketing System". *Journal of the Japanese and International Economies*, Vol. 3, 1989, pp. 49–63.
- Ito, Takatoshi, Masayoshi Maruyama**, "Is the Japanese Distribution System Really Inefficient?" In: Paul Krugman (Ed.), *Trade with Japan: Has the Door Opened Wider?* Chicago 1991, pp. 149–173.
- Kirby, David A.**, "Government Policies Towards the Small Retail Business in Japan". *International Small Business Journal*, Vol. 2, No 4, 1983, pp. 44–58.
- Kosai, Yutaka**, "The Politics of Economic Management". In: Kozo Yamamura, Yasukichi Yasuba (Eds.), *The Political Economy of Japan; Vol. 1: The Domestic Transformation*. Stanford, CA, 1987, pp. 555–592.
- Kuribayashi, Seki**, "Present Situation and Future Prospect of Japan's Distribution System". *Japan and the World Economy*, Vol. 3, 1991, pp. 39–60.
- Management Statistics Bureau and Coordination Agency (Eds.)**, *Japan Statistical Yearbook*. Tokyo 1990.
- Montgomery, David B.**, "Understanding the Japanese as Customers, Competitors, and Collaborators". *Japan and the World Economy*, Vol. 3, 1991, pp. 61–91.
- Nariu, Tatsuhiko, David Flath**, *The Complexity of Wholesale Distribution Channels in Japan*. Paper presented at the AMA Global Marketing Conference on the Japanese Distribution System, November 22–24, 1991.
- Nishimura, Kiyohiko G.**, "The Distribution System of Japan and the United States: A Comparative Study from the Viewpoint of Final-Goods Buyers". *Japan and the World Economy*, Vol. 5, 1993, pp. 265–288.
- , **Towa Tachibana**, *Entry Regulations, Tax Distortion, and the Bipolarized Market: The Case of Japanese Retail Sector*. The Centre for Japan–U.S. Business and Economic Studies. New York 1993.
- Nooteboom, Bart**, "A Mark-up Model of Retail Margins". *Applied Economics*, Vol. 17, 1985, pp. 647–667.
- , "Costs, Margins, and Competition: Causes of Structural Change in Retailing". *International Journal of Research in Marketing*, Vol. 3, 1986, pp. 233–242.
- , **Aad Kleijweg, A. Roy Thurik**, "Normal Costs and Demand Effects in Price Setting. A Study of Retailing". *European Economic Review*, Vol. 32, 1988, pp. 999–1011.
- , **A. Roy Thurik, Sjaak Vollebregt**, "Do Retail Margins Differ between European Countries? A Comparative Study". In: Erdener Kaynak (Ed.), *Transnational Retailing*. Berlin 1988, pp. 155–165.
- Patrick, Hugh T., Thomas P. Rohlen**, "Small-Scale Family Enterprises". In: Kozo Yamamura, Yasukichi Yasuba (Eds.), *The Political Economy of Japan; Vol. 1: The Domestic Transformation*. Stanford, CA, 1987, pp. 331–384.

- Potjes, Jeroen C.A., A. Roy Thurik**, "Japanese Supermarket Chains and Labour Costs: Part 2, A Comparison with French Variety Stores, Supermarkets and Hypermarkets". *Journal of Marketing Channels*, Vol. 1, 1992, pp. 97–113.
- , –, "Profit Margins in Japanese Retailing". *Japan and the World Economy*, Vol. 5, 1993, pp. 337–362.
- Scherer, Fredrick M., David Ross**, *Industrial Market Structure and Economic Performance*. Third Edition. Boston 1990.
- Simon, Hermann**, "Market Entry in Japan: Barriers, Problems and Strategies". *International Journal of Research in Marketing*, Vol. 3, 1986, pp. 105–115.
- Small and Medium Enterprise Agency**, *Costs of the Small and Medium Sized Enterprises*. Tokyo 1975 through 1990.
- Statistisches Bundesamt**, *Statistisches Jahrbuch 1989 für die Bundesrepublik Deutschland*. Stuttgart 1989.
- Sundhoff, Edmund, Fritz Klein-Blenkers**, *Mitteilungen des Instituts für Handelsforschung an der Universität zu Köln*, Vol. 33–39. Köln 1980 through 1987.
- , –, **Hans Buddeberg, Robert Nieschlag**, *Schriften zur Handelsforschung Nr. 63: Umsatz, Kosten, Spannen und Gewinn des Einzelhandels in der Bundesrepublik Deutschland in dem Jahrzehnt 1969 bis 1978*. Göttingen 1980.
- US International Trade Commission**, *Phase I: Japan's Distribution System and Options for Improving U.S. Access*. USITC publication 2291. Washington, D.C., 1990.

* * *

Abstract: Retail Profit Margins in Japan and Germany. – This study compares the determinants of retail profit margins in Japan and Germany. Although several studies consider the peculiarities of the Japanese society and its economic structure, the comparison in this study is the first systematic, empirical analysis of the consequences of these characteristics for Japanese retail profit margins. For this purpose, two extensive data sets are used and a mark-up relationship is tailored to examine differences in Japanese and German retail profit margins. The empirical outcomes indicate that small firms can survive more easily in Japan than in Germany. This explains the abundance of small stores in Japan. JEL No. D2, D4

*

Zusammenfassung: Gewinnspannen im Einzelhandel Japans und Deutschlands. – Die Autoren vergleichen die Bestimmungsgründe für die Gewinnspannen im Einzelhandel Japans und Deutschlands. Obwohl es einige Arbeiten über die Besonderheiten der japanischen Gesellschaft und ihrer Wirtschaftsstruktur gibt, analysiert diese Studie als erste systematische empirische Arbeit die Auswirkungen dieser Besonderheiten auf die Gewinnspannen im japanischen Einzelhandel. Zu diesem Zweck wurden zwei umfangreiche Datensätze benutzt und wird ein Ansatz für den Gewinnaufschlag so zugeschnitten, daß die Unterschiede zwischen den japanischen und deutschen Gewinnspannen im Einzelhandel untersucht werden können. Die empirischen Ergebnisse zeigen, daß kleine Firmen in Japan leichter als in Deutschland überleben können. Dies erklärt die große Zahl von kleinen Läden in Japan.