



Title	A View of Regional Marketing on the Comparison of Income and Expenditure in Japan
Author(s)	KURODA, Shigeo
Citation	ECONOMIC JOURNAL OF HOKKAIDO UNIVERSITY, 22, 147-158
Issue Date	1993
Doc URL	<a href="http://hdl.handle.net/2115/30498">http://hdl.handle.net/2115/30498</a>
Type	bulletin (article)
File Information	22_P147-158.pdf



[Instructions for use](#)

# **A View of Regional Marketing on the Comparison of Income and Expenditure in Japan**

**Shigeo KURODA**

## **1. Introduction**

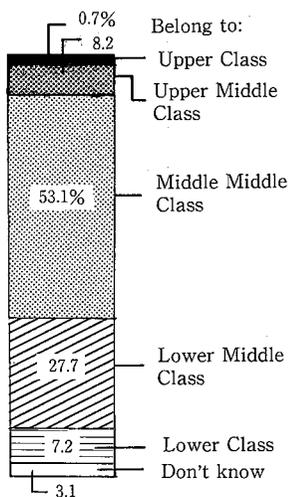
The main purpose of this paper is concerned with today's Japanese life, and with a new tendency in Japanese consumers' attitudes and behavior.

Until the present, Japan has pursued national economic 'growth' and 'equality' among its citizens for over forty years, since the end of World War II. As a result, Japanese citizens now have a higher per capita income than any other country in the world. The standard of living has been increasing, on a par with other industrialized nations, except in a few sectors such as housing, and Japanese consumers can afford to be selective in choosing products that meet strict standards of quality. Income has been rising at a steady rate in real terms since the 1980's, assisted by a lower level of inflation than in most nations. The consumer price index rose at an average annual rate of only 1.6 percent between 1983 and 1990, compared to 4.1 percent in the United States, 6.2 percent in the United Kingdom, 1.6 percent in West Germany, and 4.1 percent in France.

The Prime Minister's Office conducted a survey in 1990 on class perceptions in the Japanese household (see Figure 1). As many as 89 percent polled replied that they belong to the middle class. In spite of this, most Japanese do not have the impression that prices are low in their country; on the contrary, they complain that life has become harder. One reason for this is that beef, rice, and other foods are expensive compared with other goods. Also, educational expenses and housing costs such as rent and repayment of housing loans take up a large portion of the household budget. In 1989, the government of the world's leading creditor nation, however, released results of a poll showing that 70 percent of its citizens do not believe that they have an affluent lifestyle.

Clearly, someone is making out mightily from years of spectacular trade surpluses. But it isn't the vast majority of Japanese — who have a feeling of dissatisfaction due to their 'material-oriented' society and 'inequality'. For them, the good life as well-off Americans and Europeans know it remains frustratingly out of reach. In reality, the Living Standard Index in Table 1 shows a kind of affluence or affluent society. The values on this index are lower than those for the United States and European countries. Furthermore, Hochi (1989) indicates that more worrisome politically is what Japanese call KAKUSA, the widening gap between the privileged few who own urban land or stocks and the many millions who do not.

Figure 1. Class Perceptions of Japanese Households (May 1990)



N = 10,000 adults.

Source: Prime Minister's Office, Japan.

Table 1. Living Standard Index

	Japan		The U.S.		West Germany		The U.K.	
	1988	1995	1988	1995	1988	1995	1988	1995
①GNP (per capita)	23300	42100	19800	29500	19800	35800	12000	19300
②Household savings	15.4	13.9	4.2	4.8	13.7	12.0	2.4	7.5
③Leisure time	1858	2136	2284	2316	2696	2805	2403	2461
④Floor area per dwelling	80	92	159	160	93.8	95	88	90
⑤Big Mac's price	¥370	¥400	\$2.39	\$3.27	M4.30	M4.74	£1.26	£1.67
⑥Exchange rate	¥132/\$	¥99/\$	\$1	\$1	M1.87/&	M1.60/\$	\$1.70/£	\$1.75/£
Living Standard Index (LSI)	42	58	77	80	64	79	49	53

Note: 1. Figures of 1995 is based on 1988 = 100.

2.  $LSI = ③ + ④ + [① * (1 - ②) / ⑤]$ 

3. Exchange rate: \$1 = ¥128.2

Source: Nomura Sogo Kenkyusho, Nomura Keizai Report No.5, 1989. 4.

Following are the results of an opinion poll on status income distribution conducted by the Japanese Economic Planning Agency (1988a):

- 1) The number of people who think they belong to the middle class is decreas-

ing, 4 out of 5 in 1987 and 3 out of 4 in 1988. Of these, 56.1 percent think the differences between the rich and poor have increased, as compared with the opinions of 10 years ago. (13.3% think the difference is less.)

- 2) They feel dissatisfaction especially in terms of income distribution (60.0%), the possession of durable goods such as a car and furniture (57.3%), and possession of financial property such as savings and stocks (54.6%).
- 3) According to the respondents, the causes of inequality are the 'rising price of land', the 'influx of people in Tokyo', 'aging of the population,' and the 'rise of stock prices'.
- 4) Things necessary for the correction of inequality are stability of prices, tax reform, and sufficient social security.

It would be useful to examine this sense of inequality and its influence upon the marketing system in Japan.

## **2. Inequality of Income as an Influential Factor to Consumption**

Generally speaking, investigation of the unequal approach to income distribution has been conducted in various ways, using for example a consumption function in economics and a marketing segmentation in marketing. These are based on an examination of income distribution by age, occupation, sex, the number of family members, savings, life cycle, the possession of a car, and the local environment of respondents. Most results of the analysis, however, are rather rough; the rich tend to own luxuries and the poor own merely daily necessities. Ozawa (1989) emphasises the importance of the inequality of asset distribution due to expenditure/prices rather than to income and city size. Sakai (1989), on the other hand, notices changes of family budget structure. Inequality of family expenditure became significant in the late 1970s.

According to Sakai, the following are its causes:

- 1) Changes of family structure due to the increase of couples without children and of nuclear families. Family expenditures for these classifications vary greatly.
- 2) A big difference in expenditures for education, for reading and recreation, and for clothing, especially among small scale families.
- 3) Equality of income distribution does not necessarily relate to family expenditures.

On the other hand, the idea of marketing today is consumer-oriented.

According to Urban (1987), for understanding a regional marketing system, it is important to classify consumers by age, income, sex, occupation, life cycle, and residential area. Residential areas in this case include the nation, local districts, cities, prefectures, towns, villages, and specific districts, and are in relation to all sorts of business such as manufacturing, wholesale, retail, transport, and so on.

Wada (1988) has grouped sales of 176 department stores into those in Tokyo, Hokkaido, Tohoku, Shikoku, and Kyushu, and states that consumption patterns emerge among these regions.

### 3. Regional Comparisons

#### 3-1. Measures of Inequality in Income Distribution

It is said that Japan has one of the most equal distributions of income in the world (see Table 2). These figures are shown by Gini coefficients. This coefficient is also a popular measure of inequality.<sup>1</sup>

According to Green (1992), in the Gini coefficient,  $G$  can be written as,

$$G = 1.0 - \sum_{i=1}^n f_i (p_i + p_{i-1})$$

where  $n$  is the total number of intervals (i.e., total number of income groups),  $p_i$  is the proportion of earners in interval  $i$  (i.e.,  $i$ th income group), and  $f_i$  is the proportion of earners in interval  $i$ . At any rate, if the value of  $G$  for country A is lower than that of country B, then income for country A is distributed equally to that of country B, and vice versa.

The value of  $G$  of Japan in Table 2 is lower than that of the other two countries. Therefore, Japan has a relatively equal income distribution.

Table 2. Difference of Inequality of Income Distribution  
(Gini Coefficient)

year	1975	1980	1986
Japan	0.2765	0.2599	0.2774
The U.S.	0.3348	0.3476	0.3660
The U.K.	0.3437	0.3363	0.3776

Source: 'The White Paper of National Life', The Economic Planning Agency, Japan.

Quote: Japan; 'Annual Report on the Family Income and Expenditure Survey',  
The Management and Coordination Agency.

The U.S.; 'Current Population Reports', U.S. Bureau of the Census.

The U.K.; 'Family Expenditure Survey', The Department of Employment.

---

1 Other measures, for example, the Variance of the Natural Logarithm of Annual Earnings, Theil's "Entropy" Index of Inequality, Atkinson's Measures of Inequality can be found in Green (1992).

### 3-2. Comparison of Differences Across Districts

An opinion poll about status and income distribution previously administered indicates that about 50 percent of the respondents think that people in Tokyo are better off than those in local districts. This means that Japanese consumers are gradually having KAKUSA throughout their regions.

In reality, we can observe many differences of items in the household's living expenditures among the annual income groups. And then, a new tendency among Japanese consumer attitudes and behavior is concerned with differences between income distribution across districts in Japan.

#### 3-2-1. Disparity between Income, Propensity to Consume, and Savings

Classification of districts is shown in Figure 2. According to Table 3, there is a certain difference between income in greater Tokyo (so-called Kanto) and that in other districts. Namely, income in Kanto is higher than that of other districts. However, income in each district has not changed greatly through the years 1969, 1974, 1979, and 1984.

Table 4 shows that both higher and lower propensities to consume by annual income classes are found in the western part of Japan.

Figure 2. 10 Districts in Japan



Table 3. Disparity of Income across Districts

(Worker's Households)

Year	1969		1974		1979		1984	
	income (yen)	ratio to all JPN						
(1)Hokkaido	77790	93.6 (%)	164874	92.1 (%)	271182	92.4 (%)	341010	90.7 (%)
(2)Tohoku	74852	90.2	168071	93.8	277008	94.3	350583	93.3
(3)Kanto	88493	106.7	187884	104.9	306660	104.4	402315	107.0
(4)Hokuriku	80461	97.0	185266	103.4	305442	104.0	399554	106.3
(5)Tokai	82446	99.4	180599	100.8	297965	101.5	384430	102.3
(6)Kinki	85192	102.7	180855	101.0	295306	100.6	373683	99.4
(7)Chugoku	79207	95.5	183359	102.4	293937	100.1	368680	98.1
(8)Shikoku	76522	92.2	166950	93.2	280427	95.5	346210	92.1
(9)Kyushu	74595	89.9	161604	90.2	268702	91.5	326664	86.9
(10)Okinawa	—	—	140472	78.4	238935	81.4	280385	74.6
(11)ALL JPN	82968	100.0	179089	100.0	293615	100.0	375863	100.0
C.V <sup>1)</sup> (*10 <sup>2</sup> )	5.572		8.022		6.950		9.788	

Note: <sup>1)</sup>Coefficient of Variation

Table 4. Disparity of Propensity to Consume across Districts

(Worker's Households)

Year	1969		1974		1979		1984	
	Prop. to consume	C.V <sup>1)</sup> by incom.gr	Prop. to consume	C.V <sup>1)</sup> by incom.gr	Prop. to consume	C.V <sup>1)</sup> by incom.gr	Prop. to consume	C.V <sup>1)</sup> by incom.gr
(1) Hokkaido	91.8	0.59593	90.2	*0.65799	88.1	*0.70493	86.6	0.62967
(2) Tohoku	92.5	0.46268	90.9	0.62543	88.7	0.69431	86.5	0.61805
(3) Kanto	93.5	0.62883	89.6	0.61710	88.4	0.67262	86.7	0.58557
(4) Hokuriku	91.4	0.60638	86.0	0.59273	82.7	0.65930	82.9	0.59690
(5) Tokai	91.5	*0.69632	87.4	0.62317	84.1	0.66510	85.1	0.63545
(6) Kinki	94.3 <sup>--</sup>	0.66138	91.1 <sup>++</sup>	0.58775	86.9	0.67200	87.2	0.59051
(7) Chugoku	92.1	0.45707	*89.3	0.59774	85.5	0.65266	83.3	0.59670
(8) Shikoku	90.3 <sup>--</sup>	0.50201	88.3	0.60696	85.8	0.67132	88.3 <sup>++</sup>	*0.64011
(9) Kyushu	92.9	0.48786	89.2	0.58684	89.2 <sup>++</sup>	0.70032	87.0	0.61137
(10) Okinawa	—	—	84.0 <sup>--</sup>	0.54637	82.6 <sup>--</sup>	0.65451	84.2	0.57420
(11) All JPN	93.0	0.54202	89.5	0.60464	87.1	0.66759	86.2	0.59311
Tokyo (*10 <sup>2</sup> )	94.9	0.55603	89.0	0.68903	89.2	0.69347	86.8	0.59952

Note: <sup>1)</sup> Coefficient of variation

++ The largest one of the values of propensity to consume within the year among districts.

-- The smallest one of the values of it within the year among districts.

\* The largest one of the values of Coefficient of Variation by Yearly income groups among districts.

Consumers in the Hokkaido and Tohoku areas also have fairly higher propensities to consume as compared with other districts. As can be seen in Table 5, all household savings increased over time in each of the districts, as did income.

Table 5. Disparity of Savings across Districts

(All Households)

Year	1969		1974		1979		1984	
	income (yen)	ratio to all JPN						
(1) Hokkaido	966	70.4 (%)	1686	66.8 (%)	3998	80.7 (%)	5097	75.8 (%)
(2) Tohoku	911	66.4	1943	77.0	3802	76.7	4786	71.2
(3) kanto	1500	109.3	2769	109.7	5307	107.1	7362	109.6
(4) Hokuriku	1303	95.0	2452	97.1	4783	96.5	6918	102.9
(5) Tokai	1454	106.0	2818	111.6	5404	109.1	7670	114.1
(6) Kinki	1726	125.8	2981	118.1	5583	112.7	7611	113.3
(7) Chugoku	1227	89.4	2429	96.2	5054	102.0	6857	102.0
(8) Shikoku	1158	84.4	2346	92.9	4947	99.9	6726	100.1
(9) Kyushu	964	70.3	1717	68.0	3695	74.6	4874	72.5
(10) Okinawa	—	—	990	39.2	2345	47.3	2656	39.5
(11) All JPN	1372	100.0	2524	100.0	4954	100.0	6720	100.0
C.V <sup>1)</sup> (*10 <sup>2</sup> )	2.107		2.665		2.142		2.420	

Note: <sup>1)</sup>Coefficient of Variation

### 3-2-2. Inequality of Annual Income

The results of this investigation about inequality of income across districts is detailed in the following pages.

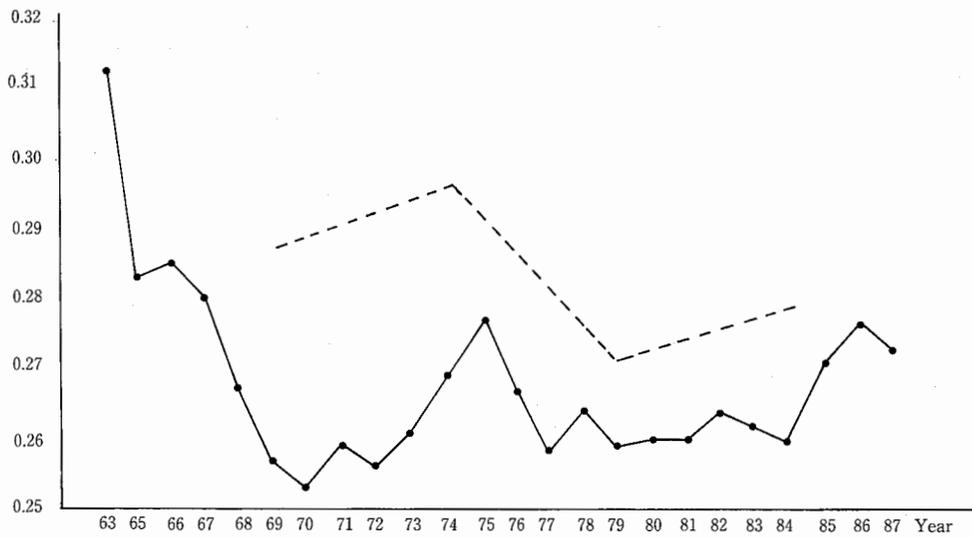
The Japanese Economic Planning Agency (1988b) analysed inequality by means of the Gini coefficient, referring to the 'Annual Report of Household Income and Expenditures' by the Management and Coordination Agency in Japan. As shown in Figure 3, movement of the Gini coefficient indicating differences among households becomes smaller during a period of economic growth, greater during recession and smaller again during a period of stability.

Inequality of income across 10 districts, could be interpreted by the Gini coefficient as follows:

Figure 4 indicates that there is a big difference across the districts (all households). This inequality is shown to be greater in the western part of Japan. It also becomes more pronounced year by year in all districts. Figure 5 shows movement of the Gini coefficient indicating differences among worker's households becoming greater as the coefficient of variation also increases during these 10 years. Hokkaido seems to be the most equally organized in terms of income distribution. It might be said, however, that it would be equal distribution under the lower income level.

On the other hand, as shown in Table 3, the income level in Okinawa and Kyushu are lower than that of Hokkaido. The Gini coefficient for Okinawa and Kyushu are, however, higher than that of Hokkaido. Therefore, the relation

Figure 3. The Movement of Inequality of Income Distribution  
(Gini coefficient)  
— 1963 to 1987 — (All Households)



Source — The Annual Report on the Family Income and Expenditure Survey (by The Statistics Bureau, Management and Coordination Agency, Japan).  
 - - - - - The National Survey of Family Income and Expenditure (which has been surveyed at every 5 years since 1964) (by The Statistics Bureau, Management and Coordination Agency, Japan).

Figure 4. Inequality of Income Distribution across Districts  
(All Households)

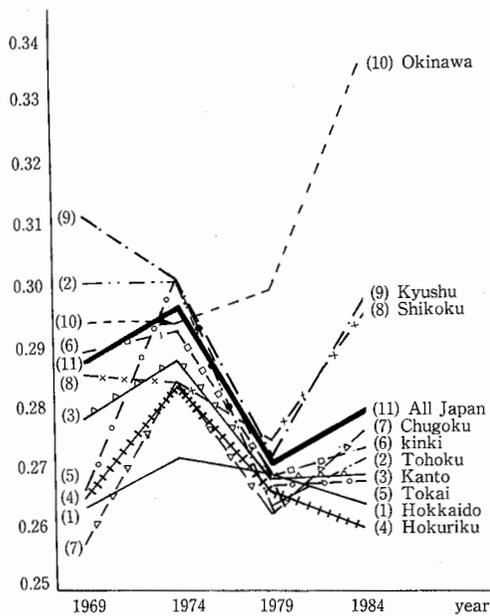
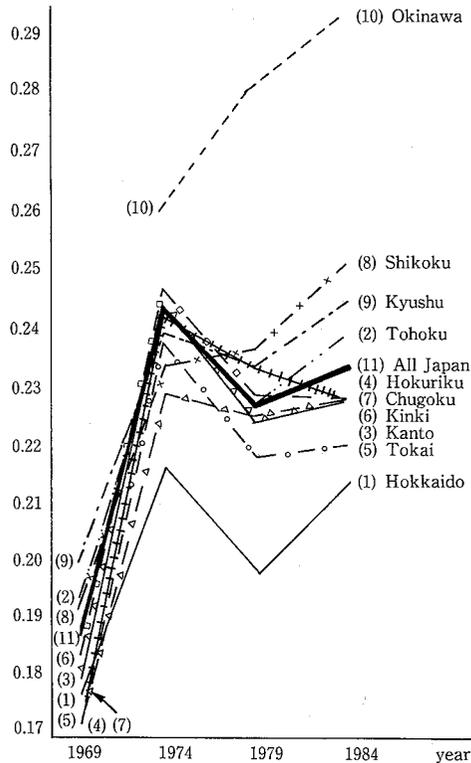


Figure 5. Inequality of Income Distribution across Districts (Workers' Households)



between lower income and equality of income distribution is not necessarily clear.

### 3-2-3. Differences in Living Expenditures by Annual Income Group

Figure 6 shows the Gini coefficient for differences in living expenditures among workers' households across the districts. Only Hokkaido shows a tendency towards equality of living expenditures promoted for 15 years from 1969 to 1984. The greater difference of living expenditures does not necessarily indicate a higher propensity to consume.

In Hokkaido, for example, the difference in living expenditures by annual income group (workers' households) is small while the propensity to consume is greater and varied among annual income groups.

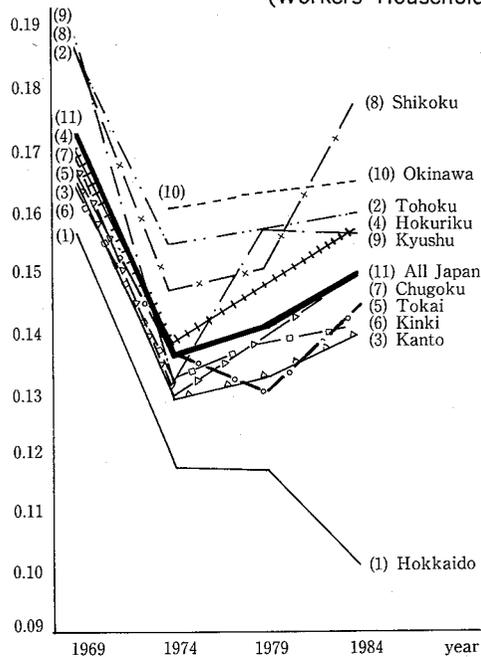
### 3-2-4. Difference in Household Savings by Annual Income Group

The difference in household savings within each district becomes smaller over time while its difference across the districts becomes greater.

As a result, we note the following important points with regard to these differences:

- 1) During the period of economic recession between 1979 and 1983, differences

Figure 6. Inequality of Expenditures across Districts  
(Workers' Households)



between household income and living expenditures increased in Japan.

- 2) Differences exist between household income and living expenditures across the districts. Especially those in Tokyo show a big difference from those in other districts due to the recession. The results for Hokkaido, however, indicate smaller differences.
- 3) Differences in household income and living expenditures for Shikoku, Kyushu, and Okinawa are considerably large, although household income in these districts is smaller than the national average.
- 4) In Hokkaido, household income is lower than the national average. Differences in household income and living expenditures among annual income groups (workers' households) are also small.

Therefore, the relatively low income distribution in Hokkaido, in effect, lowers the national average in Japan. As a result, Japan's income distribution is less than that of other advanced countries.

#### 4. For Further Investigation

Differences in possession of durable goods among annual income groups may be analysed.

The Japanese Economic Planning Agency (1988b) compares the rate in a wide use of durable goods throughout households which earn ¥2.50 million or less per year with that of households which earn ¥6.51 million or more per year. The comparison

shows that there is no great difference in the wide use of furniture and cameras between the two groups. As far as visual and sound products such as color TV, video tape recorders (VTR), the stereo phonograph, radio-cum-cassette tape recorder, 8-mm movie camera and projector, compact disc (CD) player, and vehicles such as the automobile, bicycle, motorcycle, and scooter are concerned, a big difference between annual income groups is found.

The 'National Survey of Family Income and Expenditure, Volume 10 — Summary Report' (by The Statistics Bureau, Management and Coordination Agency, Japan) investigates differences in quantities of major durable goods possessed among annual income groups: group 1 (income: ¥3.20 million per year)—group 5 (income: ¥7.27 million per year), for example. According to the investigation, there is no great difference between the two income groups on the possession of furniture, household utensils, or recreational goods for which higher percentages of households possessing them are recorded. However, a big difference is found among annual income groups for the goods which are new-products, luxurious golf clubs, pianos, central heating, personal computers, and 8-mm/16-mm movie cameras, etc., for which lower percentages of households possessing them are recorded.

The following are points of regional marketing to be further investigated:

- 1) The 'National Survey of Family Income and Expenditure in 1984' is relatively out of date. The year 1989 should be added.
- 2) The difference between possessing durable and non-durable goods among the districts in 1984 should be examined.
- 3) The definition of differences (KAKUSA) needs to be dealt with by researchers.
- 4) The 'market' of a certain product and the 'region' also could be redefined from the viewpoints of various researchers.

*Professor of Marketing, Faculty of Economics, Hokkaido University*

## References

- Green, G., J. Coder, and P. Ryscavage** (1992), "International Comparisons of Earnings Inequality for Men in the 1980s", *Review of Income and Wealth*, Series 38, Number 1, March.
- Hochi, S. and Others** (1989), *Not Only Gap . . .*, San Shu Sha, Japan.
- Japanese Economic Planning Agency** (1988a), *The Survey of Japanese Consumer Sentiment on National Life*, Japan.
- Japanese Economic Planning Agency (1988b), *The White Paper of National Life: 1988*, Japan.
- Ozawa, M.** (1989), *A New Age of Consumption by Income Class*, Nihon Keizai Shinbun, Japan.

- Sakai, M.** (1989), "The Growing Difference of Expenditures", *Nikkei Ryutsu Shinbun*, January 21, Japan.
- Urban, G. L., J. R. Hauser and N. Dholakia** (1987), *Essentials of New Product Management*, Prentice-Hall Inc.
- Wada, M. and Others** (1988), "Large-Scale Retailers based on the Statement of Accounts in 1987", *RIRI Ryutsu Sangyo*, No.165, Vol.20-7, July, Japan.