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**Consumption Demand Trends and the Structure of
Supply:
Focus on Retail Industry Supply Behavior**

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Consumption Demand Trends and the Structure of Supply: Focus on Retail Industry Supply Behavior

Summary

1. From a macro perspective, overall consumption demand in Japan stagnated in the 1990s. One distinct supply-side characteristic was the aggressive opening of new stores by the retail industry following the deregulation of the Large-Scale Retail Store Law [enacted March 1, 1974, abolished May 31, 2000 and followed by the implementation of the Large-Scale Retail Store Location Law enacted on June 1, 2000]. The result was a sharp increase in retail industry competition for a greater share of a limited pie.

This report looks at the current conditions and issues concerning the structure of supply in Japan's retail industry. By connecting these to the long-term structural changes in consumption demand looked at from a macro perspective, the report seeks to improve understanding of retail industry supply behavior in the 1990s and search for hints to future retail industry capital spending.

2. An examination of the long-term demand trend for personal consumption (SNA statistics) by comparing it to the supply side ("*Current Survey of Commerce*" statistics) shows the percentage share of retail industry sales accounted for by personal consumption (excluding homeowners' imputed rents) has tended to decline (73.9% in Fiscal 1973 55.3% in Fiscal 1998.). Demand in industries other than the retail industry has continued past trends, and during the second half of the first decade of the 21 century will reach the level of retail industry sales in the 1990s (average ¥143 trillion annually). Retail industry sales correspond to the movement of the goods consumption included in personal consumption (particularly food and clothing), both of which have been stagnant since the beginning of the 1990s. But demand in industries other than retail industry corresponds to changes in the service consumption that is included in personal consumption, and despite its relative sluggishness compared to the average annual growth in the 1980s (6.8%) has expanded gradually at an average annual rate of about 3%, even throughout the 1990s. The category of service consumption with the highest percentage share of all personal consumption during the period from Fiscal 1970 through Fiscal 1998 was "health", followed by "other (travel, restaurants, etc.)", "education", "transport and communication" and "recreation and culture".

On the other hand, consumption other than household consumption, which corresponds to the bulk of intermediate consumption by corporations, began to decrease following the collapse of Japan's bubble economy. Compared to their peak in 1991, social expenses in particular had been cut by 25% by 1998, and this trend towards decreasing expenditure is continuing. Retail industry supply trends during the 1990s must be understood in the context of this stagnant goods consumption and declining non-household consumption (including social expenses) demand.

3. When we compare the outlooks for medium-term business demand that were assumed in the 1990s after the bubble period based on questionnaire surveys concerning business behavior to actual demand, the actual results on a total industry basis have been consistently below the forecast levels since 1993. This divergence between demand outlook and actual demand can be seen in both manufacturing and non-manufacturing industries. We can verify a high correlation between the degree of divergence and a sense of excess capacity. Despite the fact the retail industry among non-manufacturing industries assumed an industry demand outlook in the 1990s that was lower than the projected economic growth rate, the degree of divergence was nearly the same as that for 12 manufacturing industries that made the same assumption. Moreover the correlation with a sense of excess capacity is high. Personal services industries are identical to two manufacturing industries on the point that the industry demand outlooks they assumed in the 1990s were higher than projected economic growth rates. The degree of divergence is completely different, however, and forms a pattern similar to that of the retail industry. The total degree of divergence for the retail industry plus services for individuals was 18.5% as of 1998, substantially higher than the percentage for all industries (4.6%), and a situation where demand in line with expected growth has not been realized has continued to the present.

4. We assumed that supply side investment behavior is carried out based on the future demand outlook. We then compared real capital spending from the bubble period through the 1990s to the capital spending, calculated using the capital coefficient trend before the bubble period and the expected growth rate based on questionnaires concerning business behavior. We also compared this real capital spending to the capital spending that corresponds to realized growth in each five-year period for every year from 1985 through 1993, to check whether they were consistent.

During the period from 1985 to 1991 (1985~1989), real capital spending in the retail industry (personal services industries) changed nearly identically to the capital spending that corresponds to expected growth rates. Since 1992 (1990), however, capital spending has been less than the investment that corresponds to expected growth. When compared to the capital spending that corresponds to realized growth, however, the divergence between the two after 1988 grew larger until the cumulative amount of the divergence for the period until 1993 was ¥13.4 trillion (¥7.8 trillion). This can be calculated as amounting to 36% (30%) of actual cumulative capital spending of ¥37.4 trillion (¥25.8 trillion). The industry growth rate inferred from real capital spending since 1992 (1990) has constantly been lower than the expected growth rate that is based on questionnaires concerning business behavior. For the retail industry (personal services industries) the growth rate has declined from 2.9% in 1992 (4.9% in 1990) to 1.1% in 1998 (0.0%).

5. The rate of increase in the retail industry capital coefficient, which is an indicator of capital efficiency from a macro perspective, has been faster than the average rate of increase for manufacturing industries and has been increasing even more rapidly since the beginning of the 1990s. In order to examine the efficiency of stores opened following deregulation in the 1990s, we selected supermarkets as one example of a business with a remarkable number of new store openings. For 48 companies for which individual stores can be randomly chosen from securities information resources, we selected 1,925 stores that were open as of March 1999 from among 2,242 stores newly opened since the 1980s to create panel data (time-series tracking data). We divided this into two groups, for general super markets and specialty (food products) supermarkets according to business, and compared the changes in sales or store efficiency after the store opened based on the difference between when the stores opened or whether the land was owned when the store was built.

What can be verified at a minimum from this result is that despite some differences by business or whether the land was owned when a store was built, for the most part stores were alike on the three points that the stores opened in the 1990s have not shown the post-store opening revenue seen in stores opened in the 1980s, the period of time between when a store opened and the point in time at which store efficiency (real sales per retail floor space) began to decline grew shorter, and the stores that were opened in the first half of the 1990s had particularly low tangible fixed asset turnover ratios.

Based on the above analysis, the environment in which the retail industry finds itself has become more severe as evidenced in the long-term trend in consumption demand viewed from a macro perspective. During the 1990s, demand in line with the industry's expected growth rate was never achieved. Add the timing of deregulation, and the 1990s can be seen as a period when it was difficult for the retail industry to rapidly adjust its supply behavior in ways consistent with realized demand. Nevertheless, as actual demand remains stagnant, the performance winners and losses are gradually becoming clearer, not only among companies with differences in company size or business conditions but even among companies faced with the same business conditions.

In addition, up until now retail industry capital spending had the effect of causing a trend-like rise in the capital coefficient while lowering capital efficiency. Looking just at supermarkets that aggressively built new stores, we can also note that the efficiency of stores newly opened in the wake of deregulation has not always been good. In this environment we expect that during Fiscal 2000 and Fiscal 2001 the magnitude of swings in investment will grow larger because of the stores built in the rush before enactment of the Large-Scale Retail Store Location Law and the cutbacks in reaction to them. The likelihood is quite high that the move to the new law will bring with it short-sighted retail industry investment activity.

In the future it will be important to apply IT (information technology) as a tool to improve the accuracy of consumption demand forecasts and the store sales multiplier effect. There will also be an urgent need, however, to use the opportunity created by the enactment of the Large-Scale Retail Store Location Law and its emphasis on regional and environmental protection to earnestly address the management issue of how to ensure the efficiency of new stores, when greater consideration of a balance with urban planning or revitalization of central business districts is demanded.

I. Long-term Trend in Consumption as Viewed from Demand and Supply

1. Relationship between Personal and Non-Household Consumption and Retail Store Sales

In this chapter we take a general overview of the long-term demand trends for consumption by comparing them to the supply side.

Figure 1-1 shows a long-term time series from Fiscal 1970 through Fiscal 1999 (SNA statistics only until Fiscal 1998, however), using personal consumption (final consumption expenditures by households excluding homeowners' imputed rents) looked at according to nominal basis SNA statistics¹ for the demand side, and retail industry sales volume taken from the "Current Survey of Commerce" published by Japan's Ministry of Economy, Trade and Industry for the supply side.

Since the beginning of the 1990s the growth in personal consumption in Japan has stagnated, showing no progress since reaching a peak of ¥250 trillion in Fiscal 1996 (¥248 trillion in Fiscal 1998). In contrast, after remaining nearly flat since the start of the 1990s, retail industry sales volume declined for three consecutive years after reading a peak of ¥148 trillion in Fiscal 1996 (¥135 trillion in Fiscal 1999). As seen in the graph, the divergence between these two amounts has gradually widened, and the percentage share of personal consumption accounted for by retail industry sales has declined from 73.9% in Fiscal 1973 to 55.3% in Fiscal 1998.

Stated another way, during this period of time non-retail industry demand, that is personal consumption excluding retail industry sales, has tended to increase. Non-retail industry demand regressed around the time trend from Fiscal 1970 until Fiscal 1998. When this data is simply extrapolated, non-retail industry demand will reach the level of retail industry sales in the 1990s (average ¥143 trillion annually) sometime during the second half of the first decade of the 21st century. In Section 2 we will infer the details non-retail industry demand from SNA statistics, but before doing so we will first take a look at the consumption demand trend by comparing it with retail industry sales volume.

The "retail industry" in the industry classification is on the sale of "things". Looked at from the demand side, however, retail industry sales volume includes business consumption (sales of gifts, etc.) that is treated as intermediate demand or sales of items such as automobiles for business use that are treated as capital spending. It is therefore necessary to look at the data by dividing the consumption demand associated with retail industry sales volume into final demand for "things" and intermediate demand.

To look at the connection with final demand for "things", in Figure 1-2 we compared retail industry sales volume to goods consumption (the total of durable goods, semi-durable goods and non-durable goods). The data for goods consumption are from the SNA statistics for personal consumption, which is thought to correspond roughly to retail industry sales. The two items moved nearly in parallel, and in the 1990s we can see that goods consumption tracked the movement in retail industry sales volume and did not grow. Even when we extracted and examined food and clothing consumption (the total for "foods, beverages and tobacco" and "clothing and footwear" in the category "final household consumption expenditures by purpose" in the SNA statistics) from goods consumption, the same tendency appeared. We believe that as Japan entered the 1990s, the stagnation in final demand for goods has been influencing the retail industry supply side.

¹ Although the 93SNA Statistics were published on October 27, 2000, the SNA statistics we used in this report are based on the 68SNA Statistics because we had not obtained the long-term time series data before the 1990s at the time of writing.

Figure 1-1. Long-Term Change in Consumption as Viewed from Demand and Supply

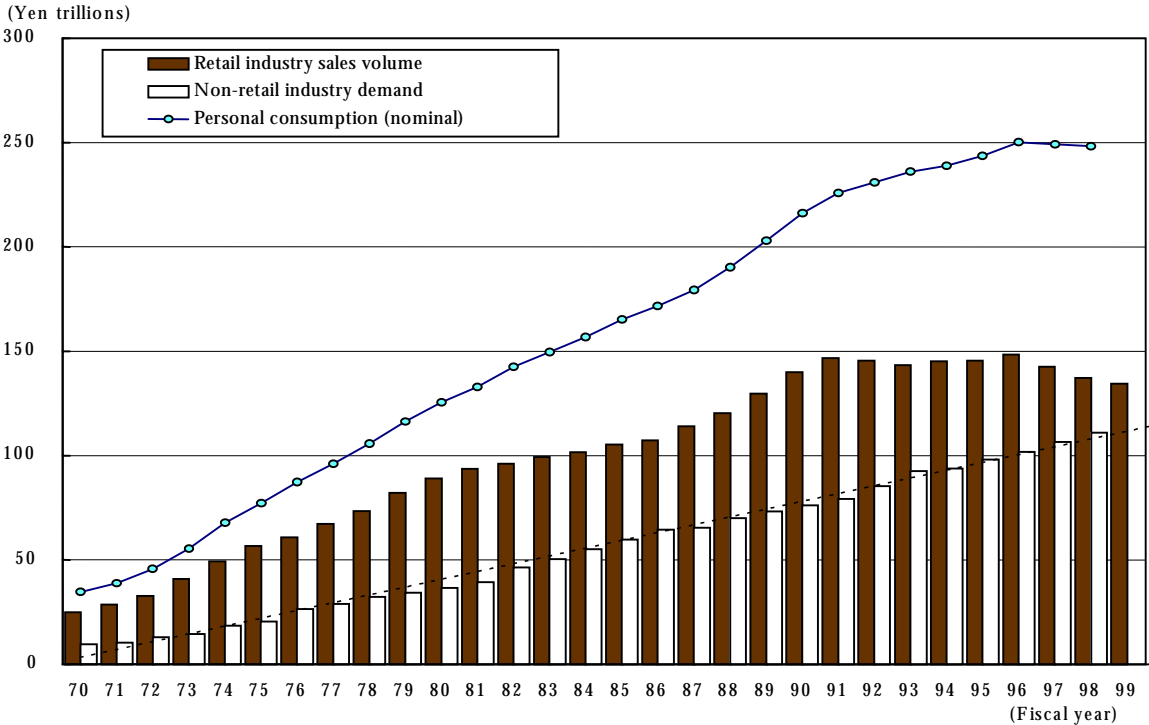
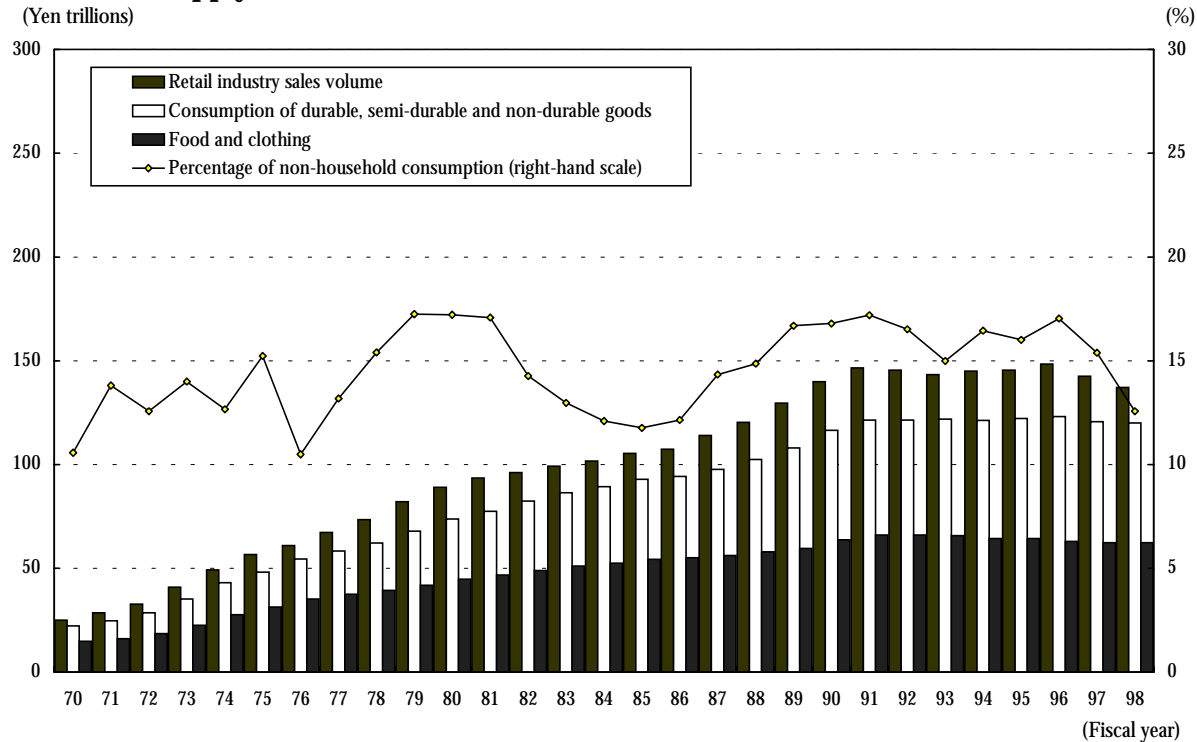


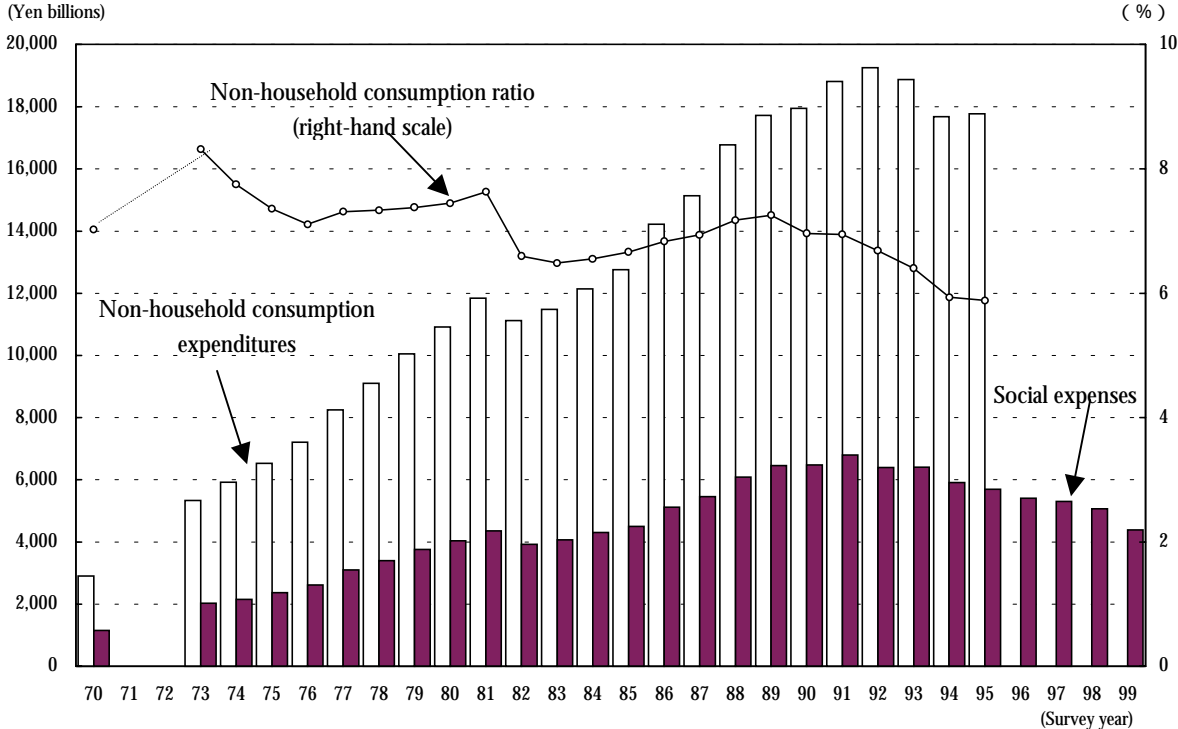
Figure 1-2. Long-Term Change in Goods Consumption as Viewed from Demand and Supply



become a long-term trend following the change of direction to cutbacks as personal consumption has stagnated.

This shows that when we look at the long-term demand trend for consumption by matching it against the supply side, the supply behavior of the retail industry in the 1990s must be understood as part of the demand trend in which goods consumption is stagnant and non-household spending (including social expenses) is declining.

Figure 1-3. Long-term Changes in Non-Household Consumption Expenditures (Including Social Expenses)



- Notes:
1. Non-household consumption expenditures are the total of spending for lodgings, daily allowances, social expenses and welfare expenses (the total of travel expenses, social expenses, welfare expenses and other non-household consumption expenditures for 1970 and 1973-1976). The social expenses for 1996 through 1998 are from National Tax Agency surveys.
 2. Non-household consumption ratio = Non-household consumption expenditures / (private final consumption expenditures + non-household consumption expenditures) * 100.

Sources: Ministry of Economy, Trade and Industry, "Input-Output Tables (Updated Tables)", Ministry of Public Management, Home Affairs, Posts and Telecommunications, "The 1970-75-80 Linked Input-Output Tables", and National Tax Agency "Survey of Corporate Business Conditions"

2. Demand in Industries other than the Retail Industry According to SNA Statistics

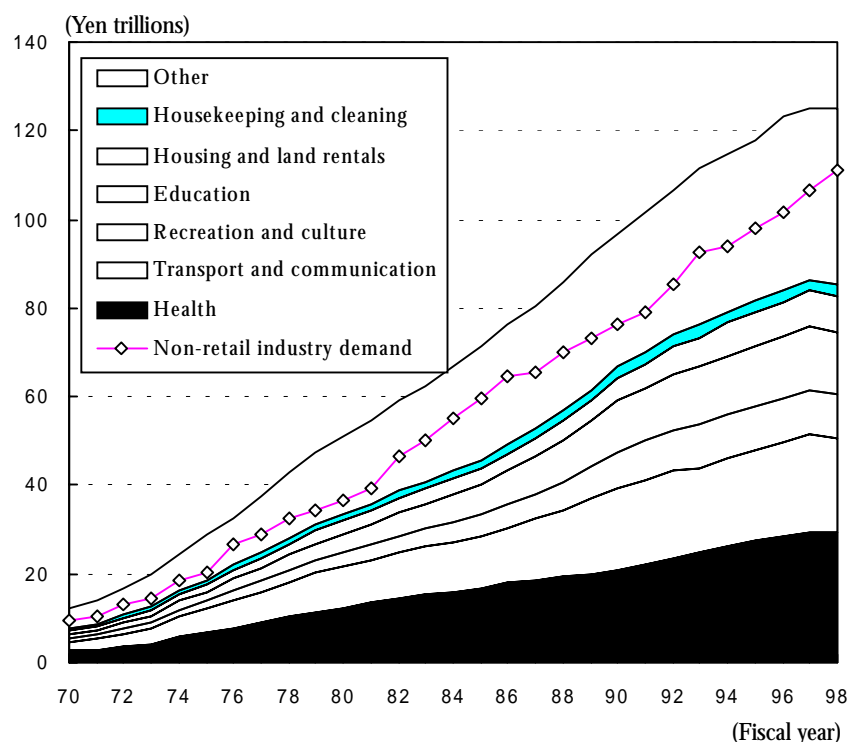
Now let us turn to the topic mentioned in the previous section and use SNA statistics to infer the specific details of non-retail industry demand, which has tended to increase over time.

Figure 1-4 shows the non-retail industry demand, which we examined at in Figure 1-1, compared to the services consumption data (service consumption excluding homeowners' imputed rents) included in SNA statistics for personal consumption and which are thought to generally correspond to this demand. Except for Fiscal 1997 and Fiscal 1998, the two items have moved nearly in parallel. We can see that although services consumption growth has slowed compared to its average rate of growth in the 1980s (6.8%), even in the 1990s it corresponded to the changes in non-retail industry demand, expanding at an average annual rate of about 3%. Let us interpret this fact to mean that the supply side for non-retail industries underlies the long-term trend in the shift in consumption to services seen up until now.

We estimated the details for services consumption based on the classifications for "family final consumption expenditures by item" from the SNA statistics. For weightings we used the percentages of consumption of services for each of the 10 major expense categories determined from the "Commodity classification – Yearly average monthly expenditures by type of goods and services per household for all households" taken from *"The Family Income and Expenditure Survey"* published by the Ministry of Public Management, Home Affairs, Posts and Telecommunications.

Over the period from Fiscal 1970 through Fiscal 1998, services consumption expanded 10.2 times from ¥12.2 trillion to ¥124.9 trillion. During this period of time medical and health care represented the largest share of all personal consumption (Fiscal 1970 7.6% Fiscal 1998 11.8%). This was followed by "Other (travel, restaurants, etc.)" (12.8% 16.0%), "Education" (2.7% 5.6%), "Transport and communication" (6.0% 8.4%) and "Recreation and culture" (2.2% 4.2%). This spending can be seen to reflect the aging of Japan's population plus a change in consumer thinking regarding what is important in life to "leisure and spare time lifestyle" and the shift from "things" to "personal satisfaction" as the object of a better life. Under the long-term trend of the shift towards consumption of services, the environment centered on the sale of "things" in which the retail industry had operated can be said to have run into hard times in the 1990s.

Figure 1-4. Long-Term Change in Services Consumption Viewed from Demand and Supply



Reference: Spending volume for services consumption and the share as a percent of total consumption

Fiscal year	(Unit: Yen trillions)		Fiscal year	(Unit: %)	
	1970	1998		1970	1998
Services consumption	12.2	124.9	Services consumption	35.4	50.3
Health	2.6	29.4	Health	7.6	11.8
Transport and communication	2.1	21.0	Transport and communication	6.0	8.4
Education	0.9	14.0	Education	2.7	5.6
Recreation and culture	0.8	10.4	Recreation and culture	2.2	4.2
Housing and land rentals	0.8	8.0	Housing and land rentals	2.3	3.2
Housekeeping and cleaning	0.6	2.6	Housekeeping and cleaning	1.8	1.0
Other	4.4	39.6	Other	12.8	16.0

- Notes:
1. Services consumption (nominal) = services consumption – homeowners' imputed rents
 2. Non-retail industry demand = personal consumption (nominal) – retail industry sales volume
 3. To estimate the details for services consumption we used the classifications by type from the SNA data on household final consumption expenditures as a standard and divided expenditures proportionately by referring to the percentages for goods and services classifications by product in the household survey.
 "Health" is the total of consumers' personal payments plus medical insurance payments for medical expenses.
 "Recreation and culture" is the sum of monthly expenditures for all types of entertainment and culture, broadcasting and telecommunications charges, entrance fees, admission fees, game fees, etc.
 "Other" includes barber and hairstyling services, dining at eating and drinking places, lodging expenses, travel tour expenses, expenses for ceremonial occasions such as weddings and funerals, etc.

Sources: Ministry of Economy, Trade and Industry, "The Current Survey of Commerce", Ministry of Public Management, Home Affairs, Post and Telecommunications, "The Family Income and Expenditure Survey", and Cabinet Office, "The Annual Report on National Accounts"

II. Excess Capacity Problems in Non-Manufacturing Industries – The Retail and Personal Services Industries –

1. The Divergence from Demand Projections Based on Questionnaire Surveys Concerning Business Behavior and the Sense of Excess Capacity

It is reasonable to expect that firms make capital spending plans based upon demand forecasts for the goods and services to be supplied. Granting that is the case, if realized demand falls below the demand projections, the capital spending incurred based on the initial demand outlook will cause distortions from the perspectives of both profitability and recovery of the investment. This in turn can be thought to lead before long to a sense of excess capacity. The bubble economy in the latter half of the 1980s and the 1990s following the collapse of the bubble economy represent periods of time when creation of accurate demand outlooks was extremely difficult. An examination of the relationship between the divergence between demand and demand projections and the sense of excess capacity is therefore thought to be particularly meaningful.

As a surrogate variable for future demand outlook underlying capital spending plans, we used the industry demand outlooks for the next five years, the maximum span of time in the “*Business Activity Questionnaire Survey*” conducted by the Cabinet Office. For real GDP for each industry in the 1990s we contrasted expected results and actual results. We then verified whether the degree of divergence of these two items has a correlation to the sense of excess capacity seen in the Bank of Japan’s TANKAN Diffusion Index (D. I.) of decisions on manufacturing and operating capital spending (= “excess” – “shortage”). Specifically, based on the actual values of real GDP from 1985 through 1993 for each industry in the SNA statistics, we used the average annual growth rate outlook for the next five years for each industry (actual numbers) to calculate the forecast values for real GDP for the years 1990 through 1998. We then compared these to the actual values to determine the degree of divergence, and looked at the correlation of this degree of divergence and the manufacturing and operating production capacity judgment D. I. Finally, in order to combine the non-manufacturing industries in this report with those covered by the “*Business Activity Questionnaire Survey*”, we selected those large companies listed on the first and second sections of stock exchanges that are also covered by the production capacity judgment D.I., excluding the finance and insurance industries.

When looking at the correlation of the degree of divergence in demand and the sense of excess capacity by using the Bank of Japan’s TANKAN Diffusion Index (D. I.) of judgment on production capacity, the focus of the excess capacity problem will inevitably correspond to manufacturing industries with a relatively high D. I. level because of the tendency to determine the level of excess capacity by the level of the index. In fact, in contrast to an average capacity judgment D. I. of 25.5 for large-scale manufacturing industries in 1998 and 1999, the level for non-manufacturing industries of all sizes was 5.9, a level only 1/5 that of manufacturing. One would think from glancing at this figure that non-manufacturing industries have no excess capacity problem.

Nevertheless, the capital spending behavior of non-manufacturing industries in the 1990s differed from the situation during the 1970s and 1980s when it provided a prop for the economy even during recessions. No longer is it rare for the growth rate of real capital spending to fall below the level of the prior year. For the industries covered by this survey, the level of the capital judgment D. I. for the retail and personal services industries accounts for about 20% of the real capital spending of non-manufacturing industries (excluding the finance and insurance industries), a low figure compared to manufacturing industries. Considering that these industries are confronted directly by circumstances of stagnant consumption demand, however, the possibility

exists that a divergence between the industry demand outlook and actual demand has indeed occurred. By looking at the correlation of the degree of divergence between the industry demand outlook and actual demand with the manufacturing and operating production capacity judgment D. I., the sense of excess capacity in non-manufacturing industries becomes clear from the direction of the change, rather from the level of the D. I.

When we look on at the degree to which real GDP diverged from projections during the 1990s a total industry basis, real GDP has been below the outlook since 1993, the year marking the bottom of the prior recession. This divergence persisted even during the economic recovery phase from 1994 through 1996 (¥34 trillion~¥50 trillion: a divergence ratio of 7.4%~10.9%), and was ¥29 trillion (a divergence ratio of 6.1%) as of 1999. When we try looking at the total for the retail industry and personal services industry, the real GDP has been below the outlook levels since 1991 when Japan entered its prior recession, with the divergence reaching ¥11 trillion (a divergence ratio of 18.5%) as of 1998. From this we can see that a situation in which the demand from the expected growth has not been achieved has continued to the present.

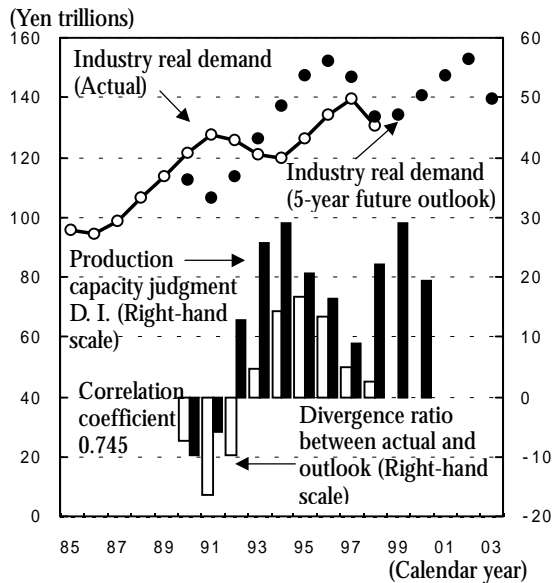
Next we separated manufacturing and non-manufacturing industries and plotted the real GDP values (1985~1998), five-year future outlooks (1990~2003) and the divergence ratios (1990~1998) between these for both industry categories to create Figure 2-1-1 (manufacturing industries) and Figure 2-1-2 (non-manufacturing industries).

What becomes clear from the divergence from the demand projections is (1) for the manufacturing and non-manufacturing industries the real GDP growth rate outlooks for the 1990s (the average annual growth rate using the 1990 actual value and the 1999 projected value) were 1.9% and 2.0%, a result of about 2% for either industry, but the real GDP growth rate achieved during this period was an annual average of 1.3%, well below these outlooks; (2) although the industry real demand outlook for manufacturing industries (the average annual growth rate using the 1990 actual value and the 1999 projected value) was 1.1% and assumed to be even lower than the projected economic growth rate (1.9%), in fact industry real demand growth rate (the average annual growth rate using the 1998 actual value and 1990 actual value) was an even lower at 0.9%; (3) industry real demand outlook for non-manufacturing industries (the annual average growth rate using the 1990 actual value and the 1999 projected value) was 2.4% and assumed to be higher than the projected economic growth rate (2.0%), but in fact the industry real demand growth rate (the annual average growth rate using the 1990 actual value and the 1998 actual value) was only 1.8%.

Figure 2-1. Industry Demand Outlook and Actual Results for the 1990s (1990-1999) and the Correlation between the Degree of Divergence between Outlook and Actual Demand and the Production Capacity Judgment D. I.

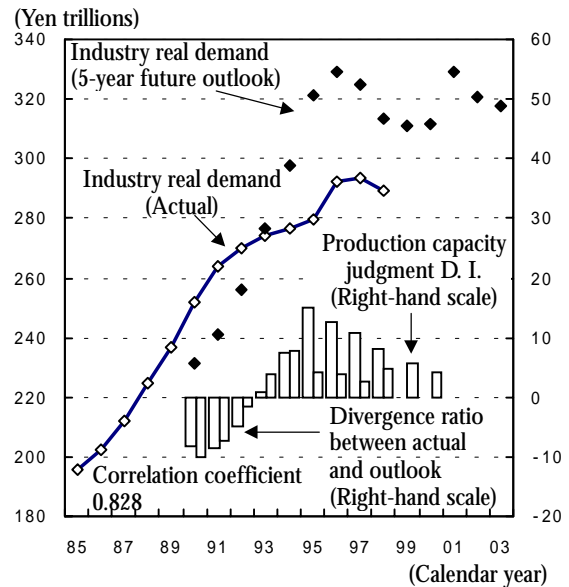
Real GDP projection > industry real demand projection (1.9% > 1.1%)

Figure 2-1-1. Manufacturing



Real GDP projection < industry real demand projection (2.0% < 2.4%)

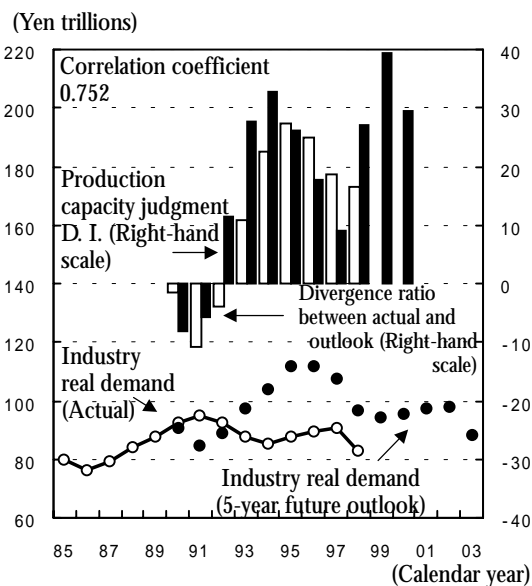
Figure 2-1-2. Non-Manufacturing



(1) Manufacturing

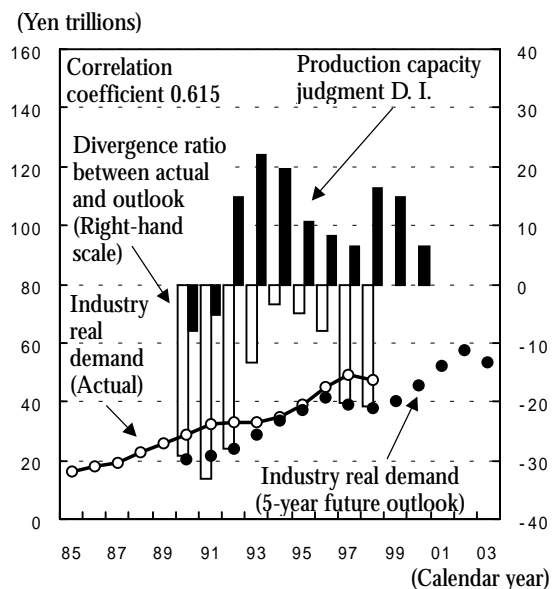
Real GDP projection > industry real demand projection (1.9% > 0.2%)

Figure 2-1-3. Manufacturing, 12 Industries



Real GDP projection < industry real demand projection (1.9% < 3.7%)

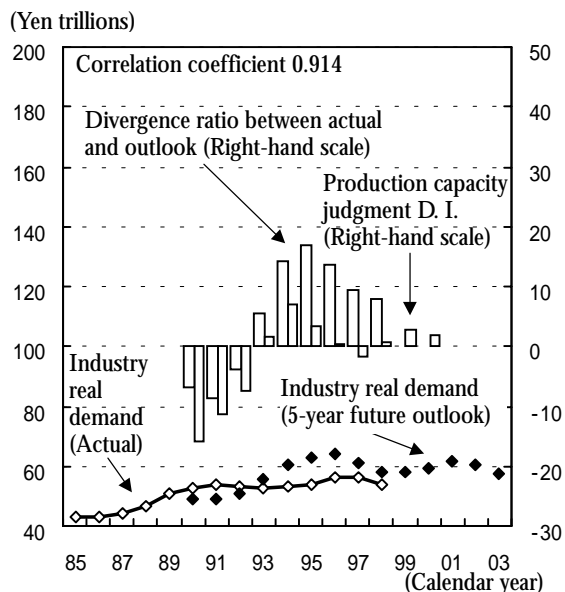
Figure 2-1-4. Manufacturing, 2 Industries



(2) Non-manufacturing

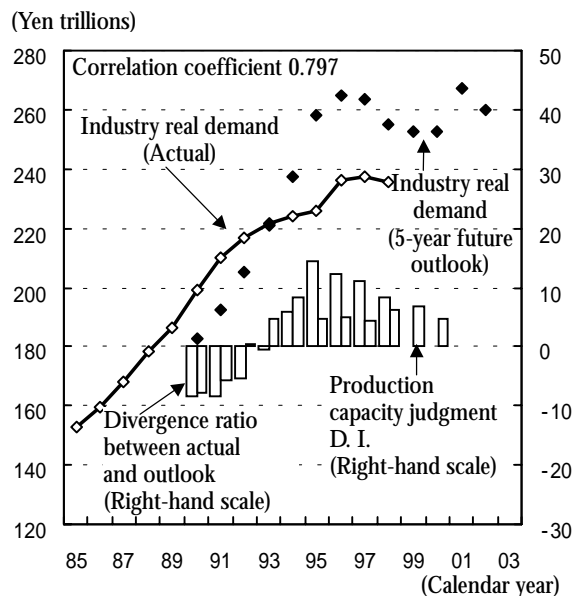
Real GDP projection > Industry real demand projection (1.9% > 1.2%)

Figure 2-1-5. Non-Manufacturing, 2 Industries



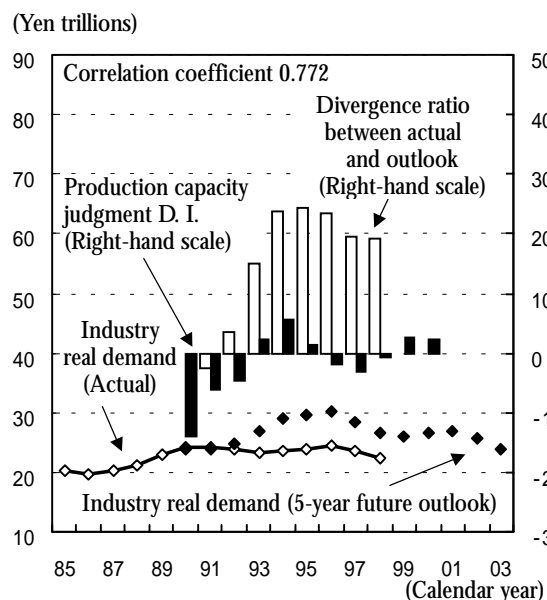
Real GDP projection < Industry real demand projection (2.0% < 2.7%)

Figure 2-1-6. Non-Manufacturing, 5 Industries



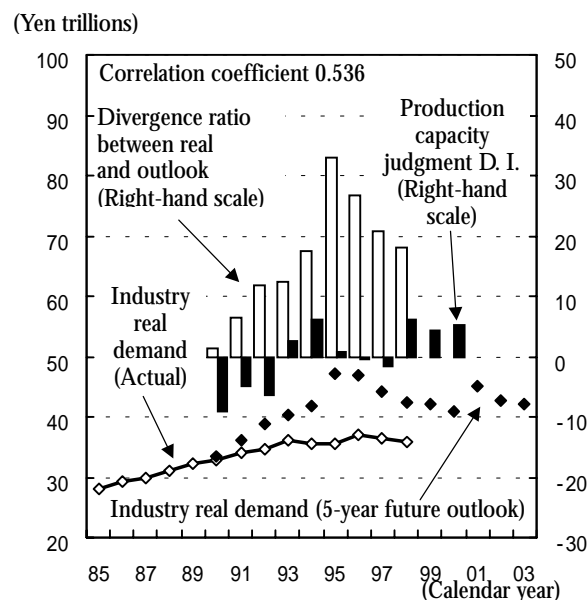
Real GDP projection > Industry real demand projection (1.8% > 0.9%)

Figure 2-1-7. Retail Industry



Real GDP projection < Industry real demand projection (2.0% < 2.8%)

Figure 2-1-8. Personal Services Industries



- Notes:
1. The 5-year future outlook for industry real demand for manufacturing and non-manufacturing industries was calculated based on the future 5-year annual average growth rate outlook (actual value) for each industry, from the time of each survey, taken from the “*Business Activity Questionnaire Surveys*” for each industry (firms listed on the first and second sections of a stock exchange; excludes the finance and insurance industries)
 2. Non-manufacturing is the total for construction, electric power, city gas and water, wholesale and retail, real estate, transportation, telecommunications, and services (including leasing). We have deducted homeowners’ imputed rents that are included in real estate industry data, however, and used the housing rental industry deflator to convert imputed rents to real rents.
 3. The 12 industries included in manufacturing are food and beverages, textiles, paper and pulp, petroleum and coal, cement, ceramics and glass, iron and steel, metal products, non-ferrous metals, general machinery, transportation equipment, precision machinery, and the total for other manufacturing industries (clothing, personal belongings, parts and wooden products, furniture, printing and publishing, hides, leather and leather goods, rubber products)
 4. The two industries for manufacturing are the total for chemicals (including pharmaceuticals) and electric machinery.
 5. The two industries for non-manufacturing are the total for retailing and transportation and telecommunications.
 6. The five non-manufacturing industries are the total for construction, real estate, electric power, city gas and water, wholesale and services (including leasing).
 7. The industry real demand five-year future outlook for the personal services industry and the production capacity judgment D. I. have been substituted for the services industry (including leasing).
 8. The production capacity judgment D. I. = Production capacity “excessive capacity” – “insufficient capacity” (ratio of number of firms responding, % points), large firm base. Average from the surveys in March, June and September 2000.
 9. Divergence ratio for actual and outlook = [Industry real demand (5-year future outlook) – Industry real demand (Actual)] / Industry real demand (Actual)
 10. The real GDP projection is the annual average growth rate using the 1990 actual value and the 1999 projection value.
- Sources: Bank of Japan, “Short-term Economic Survey of Enterprises in Japan”, and Cabinet Office, “Annual Report on National Accounts” and “Annual Report on the Business Activity Questionnaire Surveys”

As a result, in both manufacturing industries and non-manufacturing industries a divergence arose from 1993 onward because actual results fell below the outlook (for manufacturing industries the average amount of the divergence from 1993 through 1998 was ¥12 trillion and the divergence ratio was 9.3%; for non-manufacturing industries the amount of the divergence was ¥26 trillion and the divergence ratio was 9.2%). When we calculate the correlation between the degree of divergence and the sense of excess capacity for 1990 through 1998, we discover there is a high correlation (correlation coefficients: 0.745 for manufacturing, 0.828 for non-manufacturing). Compared to the projected economic growth rate, despite that fact that there were differences in the industry demand outlook between manufacturing industries where stable industry demand was expected and non-manufacturing industries where rather strong industry demand was expected, the correlation with a sense of excess capital was common to both. This tells us that the excess capacity problem in this economic downturn is by no means a problem just for manufacturing industries.

For non-manufacturing industries as well the demand projection pattern is not the same for each industry. We can divide non-manufacturing industries into those that anticipated stable industry demand compared to the projected economic growth rate, and those that expected strong industry demand. The two industries in the former group are retailing and transportation and telecommunications (industry real demand outlook of 1.2% compared to the expected

economic growth rate of 1.9%) (Figure 2-1-5), while the five industries in the latter group are construction, real estate, electric power, city gas and water, wholesaling, and services (including leasing) (industry real demand outlook of 2.7% compared to the expected economic growth rate of 2.0%) (Figure 2-1-6).

For the former two industries a divergence arose because actual demand fell below the outlook from 1993 onward (the average amount of divergence for 1993 through 1998 was ¥37 trillion, a divergence ratio of 11.3%). We could verify a strong correlation (correlation coefficient 0.914) between the degree of divergence and the sense of excess capacity for 1990 through 1998. Looking at the retail industry (industry real demand outlook of 0.9% compared to the expected economic growth rate of 1.8%) (Figure 2-1-7), from 1992 onward the actual results fell below the outlook (average divergence amount of ¥4 trillion from 1992 through 1998, a divergence ratio of 18.4%) and the correlation coefficient is 0.772.

On the other hand, a divergence did arise for the five industries in the latter group as well as actual demand fell below the outlook from 1994 onward (the average amount of divergence for 1994 through 1998 was ¥24 trillion, a divergence ratio of 10.4%). The correlation for this group is high (correlation coefficient 0.797). When we look at the personal services industries, however, (industry real demand outlook of 2.8% compared to the expected economic growth rate of 2.0%) (Figure 2-1-8) included in services industries (industry real demand outlook of 3.6% versus the expected economic growth rate of 2.0%), a situation where actual demand has been below outlook since 1990 (the average annual amount of the divergence from 1990 through 1998 was ¥6 trillion, a divergence ratio of 16.6%) but the correlation coefficient is low at 0.536. We must be careful, however, noting that we cannot necessarily use this result to make the snap judgment that the personal services industry has a weak correlation with the sense of excess capacity.

As reasons, we note first that the personal service industry has been substituted for the service industry due to the data limitations of demand projections and the production capacity judgment D. I., and it is possible the data cannot adequately reflect actual conditions in the personal services industries that are included in all service industries.

Second, as with the retail industry a divergence from the demand projections arose in the personal services industry. The importance of this becomes clear when we look at the industries by dividing them, as we did with the non-manufacturing industries, into the 12 industries (food and beverages, textiles; paper and pulp; petroleum and coal; cement, ceramics and glass; iron and steel; metal products; non-ferrous metals; general machinery; transportation equipment; precision machinery; and other manufacturing industries) for which the industry real demand outlook (0.2%) fell below the projected economic growth rate (1.9%) (Figure 2-1-3) and the two industries (chemicals [including pharmaceuticals] and electric machinery) for which the industry real demand outlook (3.7%) was higher than the projected economic growth rate (1.9%) (Figure 2-1-4).

The demand projection pattern for the 12 manufacturing industries is the same as that for the two non-manufacturing industries including the retail industry. The actual demand from 1993 onwards has continued to fall below the outlook (the average amount of divergence from 1993 through 1998 was ¥18 trillion, a divergence ratio of 20.2%), and the correlation coefficient for the degree of divergence and the sense of excess capital is high at 0.752. In contrast, the demand projection pattern for the two manufacturing industries is the same as the pattern for the five non-manufacturing industries including the personal services industry. In this case however the correlation coefficient is low at 0.615, a situation similar to the case when we looked at just the personal services industry.

Nevertheless, the definitive difference from the personal services industry is the relationship between realized demand and the outlook. In the case of the two manufacturing industries,

against a backdrop of the strength in demand for electric machinery the industry real demand achieved in the 1990s was 6.4% (the annual average growth rate using the 1990 actual value and the 1998 actual value), well above the outlook (3.7%). The sense of excess capital will become greater not only from the process of realized demand being less than the outlook; it can also increase from the process of actual demand stagnating and approaching the outlook, and the divergence ratio shrinking. When a sense of excess capital remains, the movement seen on capital spending for electric equipment as a force propelling information technology investment from the latter half of Fiscal 1999 can certainly be regarded as resulting from demand that exceeds the outlook once again grown stronger.

2. Comparison of Real Capital Spending with Demand Forecasts or Capital Spending Corresponding to Actual Demand

As a method to verify the possibility of excess capital we must also check the capital spending actually completed from the bubble years through the 1990s from the standpoint of whether or not it was unreasonable. For this purpose we assumed that spending activity in the manufacturing industries, the retail industry and the personal services industries was based on future demand outlooks. We used the real capital spending amount and the actual amount of capital stock in 1984 as standards. To calculate whether or not the new capital spending amounts (all enterprises, including the construction in progress) actually invested by each industry as shown in the “*Gross Capital Stock of Private Enterprises*” published by the Cabinet Office were consistent, we compared the amounts to the real capital spending amount calculated based on the industry demand outlook (the average annual growth rate [actual value] for the next five years from the time of each survey in the years 1985 through 1993) from the “*Business Activity Questionnaire Survey*” published by the Cabinet Office or to the real capital spending amount calculated based on realized demand (the average annual growth rate using the actual value for real GDP by industry for 1985~1993 and the actual value for real GDP by industry for 1990~1998) from SNA statistics.

When calculating the required capital spending for a certain rate of growth we used the following function equation, and for the ratio of the rise in the capital coefficient we utilized the trend from 1975 to 1985 that covers before the bubble years after the period of stable growth.

<p>Real capital spending $I = (\text{growth rate } g + \text{retirement rate } r + \text{rate of increase in the capital coefficient for 1975~1985 } \Delta k) \times \text{Capital stock } K$</p> <p>Where real Gross Domestic Production $Y = \frac{1}{\lambda} \times K$ (λ : capital productivity = the reciprocal of the capital coefficient)</p> <p>$\frac{Y}{Y} (=g) = \frac{\Delta Y}{Y} = \frac{\Delta (\frac{1}{\lambda} K)}{\frac{1}{\lambda} K} = \frac{\Delta (\frac{1}{\lambda})}{\frac{1}{\lambda}} + \frac{\Delta K}{K}$</p> <p>$\frac{\Delta Y}{Y} = \frac{\Delta (\frac{1}{\lambda})}{\frac{1}{\lambda}} + \frac{\Delta K}{K}$</p> <p>$\frac{\Delta Y}{Y} = -\frac{\Delta \lambda}{\lambda} + \frac{\Delta K}{K}$</p>
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Figure 2-2-1 through Figure 2-2-6 show the plots for the above three changes in capital spending (1984~1998) and the industry growth rate (1985~1998), capital coefficient (1970~1998) and capital retirement rate (1970~1998) that correspond to these for manufacturing industries, the retail industry and the personal services industries.

In the manufacturing industries, real capital spending from 1988 onward was substantially higher than either the capital spending corresponding to the expected growth rate and capital spending corresponding to the realized growth rate, and we can see that furthermore the swings

in spending were quite sharp. In particular the divergent portion that arose between the real capital spending and capital spending corresponding to the realized growth rate reached a cumulative total of ¥87.1 trillion by 1993, which amounts to 54.4% of the cumulative total of ¥160.3 trillion for real capital spending. Compared to the three growth rates, the growth rate corresponding to real capital spending from 1988 onwards was the highest; from this we calculate that future demand growth from 1987 through 1991 was expected to increase even further from 4.7% to 7.9%. Over this period of time, however, the growth rate actually achieved was exactly opposite and fell rapidly from 5.0% to 0.9%. Despite the fact that the expected growth rate declined from 2.2% to 1.8% even during the prior investment recovery phase from 1994 to 1997, the growth rate corresponding to real capital spending reflected a demand recovery and assumed an increase in the growth in future demand from 2.7% to 4.6%. The growth rate actually achieved during this period cannot be calculated at the present time. But given the strong likelihood that it remained at a low level of 0~1% and assuming that the capital spending corresponding to the realized growth rate remained lower than real capital spending, it's possible to see how the spending actually completed was carried out under expectations of high demand.

In contrast to this the real capital spending in the retail industry changed fairly consistently with the capital spending corresponding to the expected growth rate from 1985 until 1991, but has been below the capital spending corresponding to the expected growth rate since 1992. Compared to capital spending corresponding to the realized growth rate, however, the divergence between the two widened from 1988 onward, just as in the manufacturing industries. The cumulative amount of the divergence that arose until 1993 reaching ¥13.4 trillion and amounted to 35.9% of the cumulative total of ¥37.4 trillion for real capital spending. The growth rate corresponding to real capital spending during this period was calculated to stagnate and fall from 4.3% in 1988 to 1.7% in 1993, but the growth rate actually achieved moved to an even lower level (2.1% in 1988 to 0.9% in 1993). In addition, the growth rate corresponding to real capital spending since 1992 fell sharply from 2.9% in 1992 to 1.1% in 1998, providing severe demand outlooks that were constantly below the expected growth rate (3.4% in 1992 1.5% in 1998). When one considers that real capital spending in the retail industry from 1994 through 1998 takes into consideration the low level of capital spending corresponding to the realized growth rate until 1993, there is a large possibility that it has remained higher than this.

Figure 2-2-1. Manufacturing Industry Capital Spending

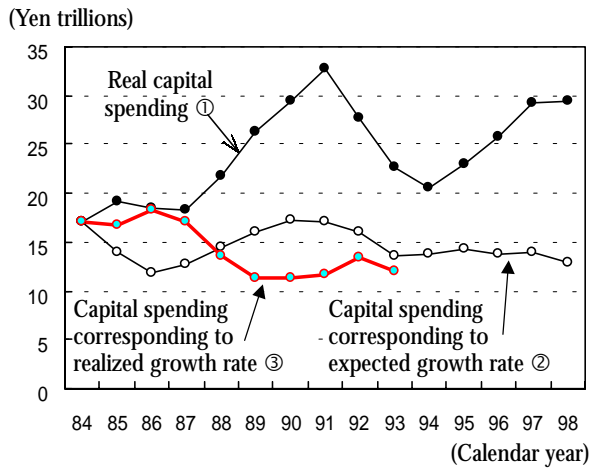


Figure 2-2-3. Retail Industry Capital Spending

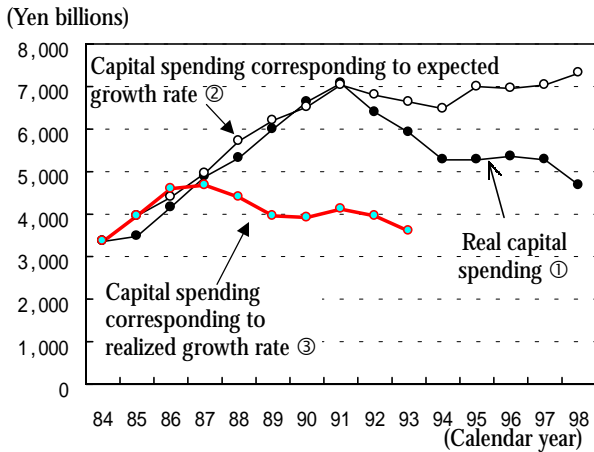


Figure 2-2-5. Personal Services Industries Capital Spending

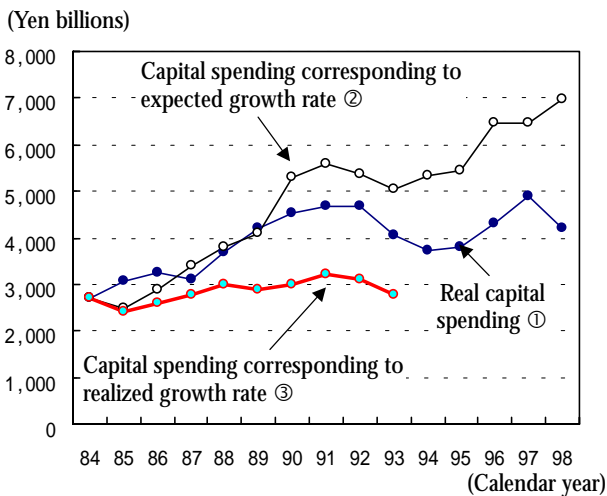


Figure 2-2-2. Manufacturing Industry Capital Coefficient, Capital Retirement Rate and Industry Growth Rate

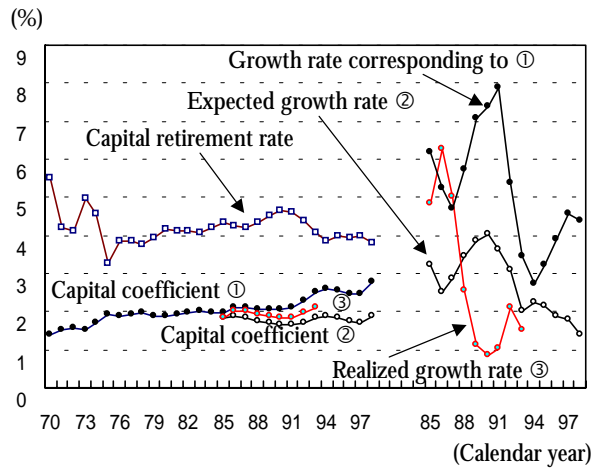


Figure 2-2-4. Retail Industry Capital Coefficient, Capital Retirement Rate and Industry Growth Rate

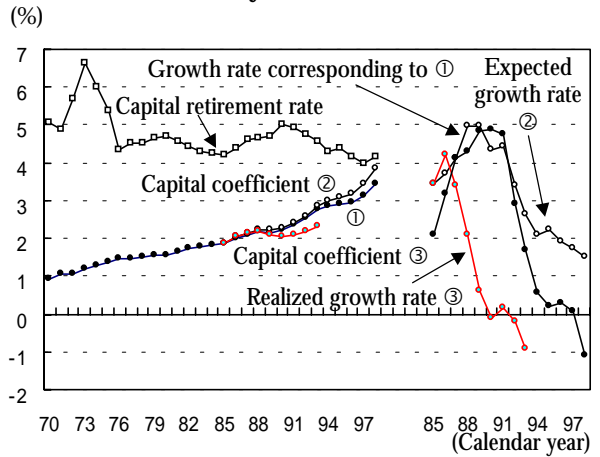
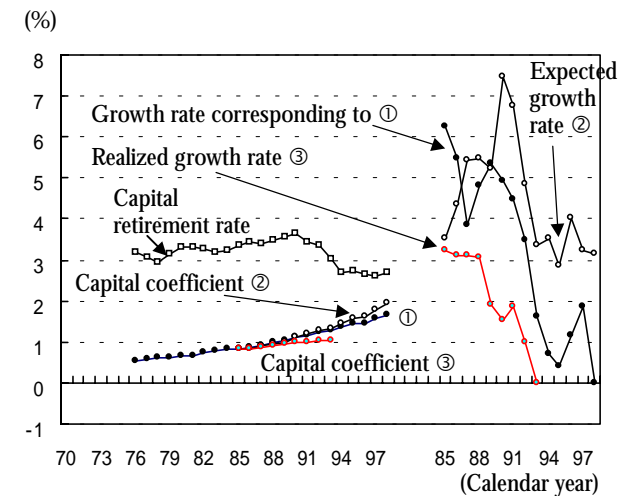


Figure 2-2-6. Personal Services Industries Capital Coefficient, Capital Retirement Rate and Industry Growth Rate



- Notes:
1. “Real capital spending ①” is the amount of new investment (all enterprises, including the construction in progress) in the capital stock of private firms; the growth rate corresponding to this amount was determined by calculation using the function equation. “Capital spending corresponding to expected growth rate ②” is the real capital spending amount calculated based on the industry demand outlook (Expected growth rate ②) from the “*Business Activity Questionnaire Survey*”. “Capital spending corresponding to realized growth rate ③” shows the real capital spending amount calculated based on the realized demand (Realized growth rate ③) from SNA statistics. All of the above were calculated using real capital spending and the actual amount of capital stock as of 1984 as the standard.
 2. For “expected growth rate ②” we adopted the average annual growth rate outlook (actual value) for the next five-year period from the time of each survey from 1985 through 1993; for “realized growth rate ③” we adopted the average annual growth rate for real GDP value by industry for 1990 through 1998 from the real GDP value by industry for 1985 through 1993.
 3. The capital retirement rate was determined by dividing the amount of capital retired in any year by the total capital stock at the end of the prior year.
 4. The capital coefficients ①~③ correspond to capital spending ①~③ and industry growth rates ①~③ and were determined by dividing the average of the capital stock at the end of the current year and end of the prior year by the real GDP for the current year.
 5. “Personal services industries” as used here is the total for inns and other lodgings, movies and recreation, and other services.
- Sources: Cabinet Office, “Annual Report on National Accounts”, “Gross Capital Stock of Private Enterprises”, and “Annual Report on the Business Activity Questionnaire Survey”

We can verify a pattern similar to the one in the retail industry for the personal services industry as well. Real capital spending changed fairly consistently with the capital spending corresponding to the expected growth rate during the years 1985 through 1989, but has been below the capital spending corresponding to the expected growth rate since 1990. Compared to capital spending corresponding to the realized growth rate however, the divergence between the two widened from 1988 onward. The cumulative amount of the divergence that arose until 1993 reached ¥7.8 trillion and amounted to 30.3% of the cumulative total of ¥25.8 trillion for real capital spending, the high level next to the retail industry. The growth rate corresponding to real capital spending during this period was calculated to stagnate and fall from 4.8% in 1988 to 1.6% in 1993, but the growth rate actually achieved changed at even lower levels (3.1% in 1988 to 0.0% in 1993). Moreover the growth rate corresponding to real capital spending since 1990 fell sharply from 4.9% in 1990 to 0.0% in 1998, and the severe demand outlooks that were constantly below the expected growth rate (7.5% in 1990 3.1% in 1998) were similar to the retail industry. During the previous capital spending recovery phase from 1994 through 1997, however, a period during which the expected growth rate barely changed and ranged from 3.5% to 3.2%, the growth rate corresponding to real capital spending reflected a recovery in demand, just as seen in the manufacturing industries. So one difference from the retail industry is that the growth rate of future demand increased gradually from 0.7% to 1.8%.

The above calculations demonstrate that the industry growth rates deduced from the capital spending actually completed in the retail and personal services industries no longer anticipated growth rates in the 1990s as high as the expected growth rates based on the “*Business Activity Questionnaire Survey*”. Nevertheless, the changes in capital spending that produced a divergence between real capital spending and the capital spending corresponding to the realized growth rate from the bubble years through the 1990s exist because the growth rates actually achieved were below the growth rates corresponding to real capital spending. In light of this point we cannot

deny the considerable possibility that when faced with the stagnation of actual demand, the capital spending actually carried out was unreasonable. Nor is it possible to minimize the relationship to the problem of capital excess when evaluating retail industry and personal services industry spending during this time period from a macro perspective.

III. Retail Industry Supply Behavior and Issues under Deregulation

1. The Effect of Deregulation of the Large-Scale Retail Store Law

We will begin by verifying the relationship of the number of stores established and reported during the decline in the retail industry growth rate that we deduced from real capital spending in the 1990s with deregulation of the Large-Scale Retail Store Law [enacted March 1, 1974 and abolished May 31, 2000 and followed by the enactment of the Large-Scale Retail Store Location Law on June 1, 2000].

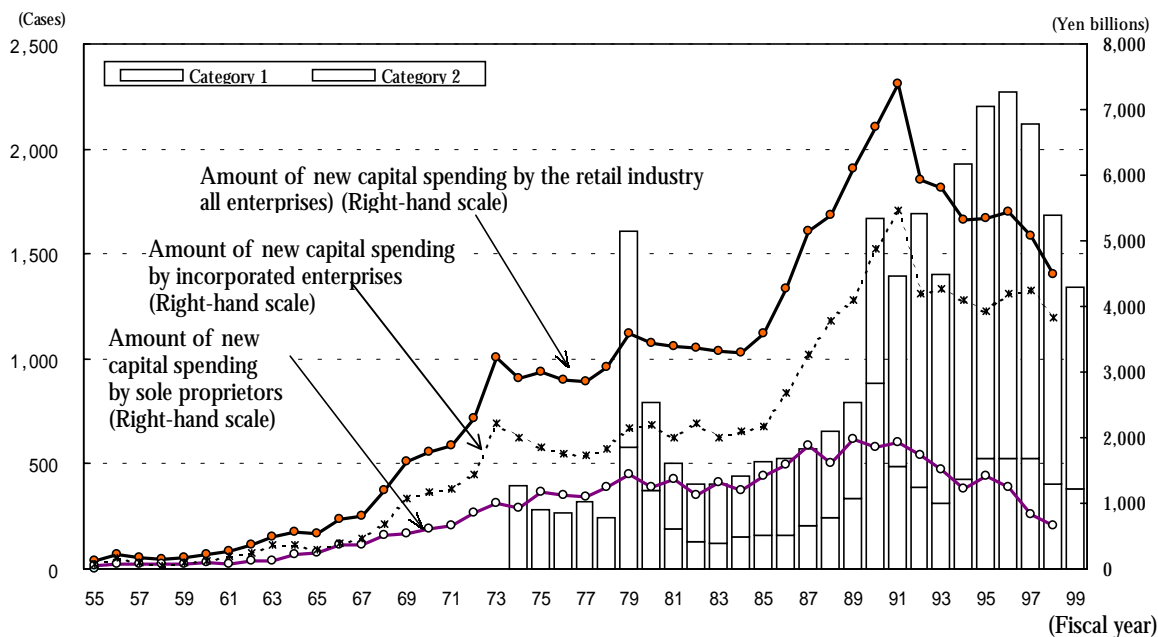
The provisions of the Large Stores Law created an obligation when building stores exceeding 500m² in total area to report the opening date, retail floor area, hours of business and number of closing days per year, principally for the purpose of protecting small and medium-size stores. Adjustments to build stores were made based on the contents of the report.

Figure 3-1 shows, for the retail industry, the reported circumstances under the Large-Scale Retail Store Law (Fiscal 1974~Fiscal 1999) and the changes in the amount of new investment for the entire retail industry (Fiscal 1955~Fiscal 1998).

The opening of new large-scale retail stores under the Large Stores Law was controlled during the 1980s with amendment of the law in 1979 to add a second class of stores subject to regulation and lengthen the time period for store coordination, and by central government official notification advising self-control on new stores or the strengthening of unique regulations by local administrations (average number of new stores opened annually during the 1980s: 560). Changes in the form of the appropriate application of the Large Stores Law declared in “*Vision for Distribution in the 1990s*” by the Ministry of Economy, Trade and Industry in June 1989 and the promise to review the Large Stores Law after three years that was incorporated in the Interim Report of the Japan-U.S. Structural Impediments Initiative issued in April 1990, however, and deregulation of the Large Stores Law implemented three times in the 1990s, all had the same effect of accelerating the opening of new stores centered on Class 2, so that the average number of stores opened annually in the 1990s was 1,770, or three times above the average of the 1980s.

When we look at the amount of new capital spending by corporations in the 1990s when the number of notifications for large-scale retail stores increased rapidly, the amount in Fiscal 1998 (¥3.8 trillion) had declined by about 30% from the peak in Fiscal 1991 (¥5.5 trillion). Nevertheless, since Fiscal 1992 corporate new capital spending has fluctuated at around ¥4 trillion per year, nearly as high level as in the bubble years, and has not declined as much as capital spending for the entire retail industry (which declined about 40% from ¥7.4 trillion in Fiscal 1991 to ¥4.5 trillion in Fiscal 1998). There was a large decline in capital spending by sole proprietors, however, which also reflected changes such as the closing of stores owned by sole proprietors as represented by the “hollowing out” of business districts in urban areas. Following its peak in Fiscal 1989 (¥2.0 trillion) spending turned downward, falling to ¥0.7 trillion in Fiscal 1998, a level not seen since the early 1970s. The result was that the percentage of retail industry corporate capital spending began to rise in the 1990s (72.5% in Fiscal 1990 85.3% in Fiscal 1998), showing activity that differs from the manufacturing industries that have fluctuated up to now at well over 90%.

Figure 3-1. Changes in Notifications for Large-Scale Retail Stores and the Amount of New Investment by the Retail Industry



- Notes:
- In addition to new capital spending, also includes spending that increased retail floor space to more than 500m².
 - The definition of “retail floor space” changed as follows as the result of amendments to the Large Stores Law in Fiscal 1979 and Fiscal 1992.
 Fiscal 1974-1978: Retail floor space of 1,500m² or greater (for Special Wards in Tokyo and ordinance-designated cities, 3,000m² or greater)
 Fiscal 1979-1991: Class 1 retail floor space of 1,500m² or greater (3,000m² or greater), Class 2 retail floor space of more than 500m² but less than 1,500m² (more than 500m² but less than 3,000m²)
 Fiscal 1992 and later: Class 1 retail floor space of 3,000m² or greater (6,000m² or greater), Class 2 retail floor space of more than 500m² but less than 3,000m² (more than 500m² but less than 6,000m²)
 - The amount of new capital spending is the real value including the construction in progress for gross assets based on the average price in 1990 (before depreciation).

Sources: Ministry of Economy, Trade and Industry, “Notifications for Large-Scale Retail Stores”, and Cabinet Office, “Gross Capital Stock of Private Enterprises”

The relationship between the fact that the number of large-scale retail store notifications increased rapidly in the 1990s and deregulation of the Large Store Law carried out at the same time cannot be ignored. The possibility is quite high that even after deregulation was effected the level of corporate capital spending in the retail industry was maintained at a high level because it was difficult to rapidly adjust spending to correspond to realized demand. But we must ask the question again: even if we assume that deregulation was implemented and the competitive environment liberalized, it was possible for businesses to check the divergence from realized demand, continually review future demand projections, and avoid the rush to open stores – but why didn't this happen? This is the major point we must consider after understanding the supply behavior of the retail industry in the 1990s. To put it another way, up to the 1980s when store

opening regulations were strict, it was assumed in many cases that the coordination time period until a store was opened had grown longer and that it was easy to anticipate obtaining medium to long-term profits after a store opened. So to what extent was there an environment in which businesses could accurately project future demand trend and continually review divergence from the demand forecast?

As we saw in Chapter 1, until the happy 1980s goods consumption demand continued to grow. For the supply side we can see that rather than focus attention on how to develop, stores focused on the medium to long-term demand trend. Under a strictly regulated environment, a store strategy of utilizing limited new store opportunities as much as possible was an easy course to adopt. Even if the initial cost of entry were high, if a store were authorized the probability that other competing companies could enter the market afterwards was low. On the other hand, during the 1990s when regulations were relaxed, we can see that as goods consumption demand stagnated, the supply side fell into a vicious circle of store building rather than search for an approach that focused on the medium to long-term demand trend. Managers at each company assumed that competing companies would continue opening as many new stores as possible, which would cause sales at their own adjusted² stores to plummet if they restricted new store openings. In order to avoid this danger each company felt compelled to open as many new stores as possible to cope with the threat.

2. Relationship of the Number of Stores and Sales Volume, by Business

In this section we will briefly examine what kind of changes appeared in the results of the retail industry supply activities that can be seen under deregulation and in the store business conditions.

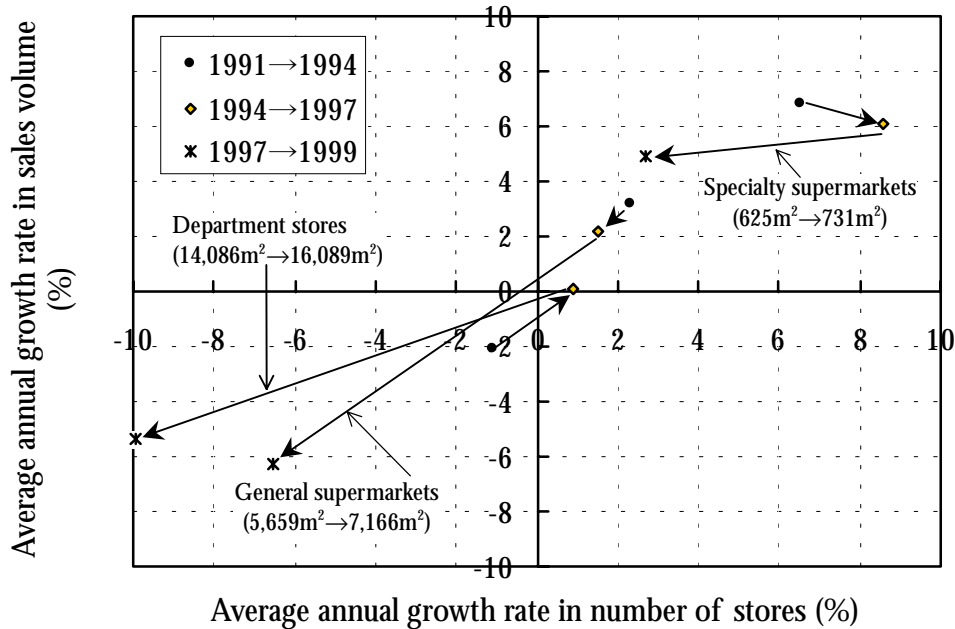
The relationships between the number of stores in the 1990s for each business (stock basis) and the average annual growth rate for each business' sales volume are plotted in Figure 3-2. Although a generally positive correlation can be discovered between the two variables, here we tried to separate them using an average retail floor space per store (stock base) of 500m² as a standard, given that 500m² is the lower limit under the Large Stores Law.

Businesses that have a retail floor space of 500m² or greater are department stores (16,089m² in 1997), general supermarkets (7,166m² in 1997) and specialty supermarkets (731m² in 1997). Throughout the 1990s, however, the only business to optimistically maintain both the number of stores and sales volume were specialty supermarkets that specialized in food, clothing and home items (average annual growth rate in number of stores: 6.5% from 1991 to 1994, 8.6% from 1994 to 1997, 2.7% from 1997 to 1999; average annual growth rate in sales volume: 6.8% from 1991 to 1994, 6.1% from 1994 to 1997, 4.9% from 1997 to 1999). Specialty supermarkets compete with department stores and general supermarkets on the point of specializing in a roadside format, but even though the retail floor space is small compared to the other two businesses they can be said to be competing vigorously.

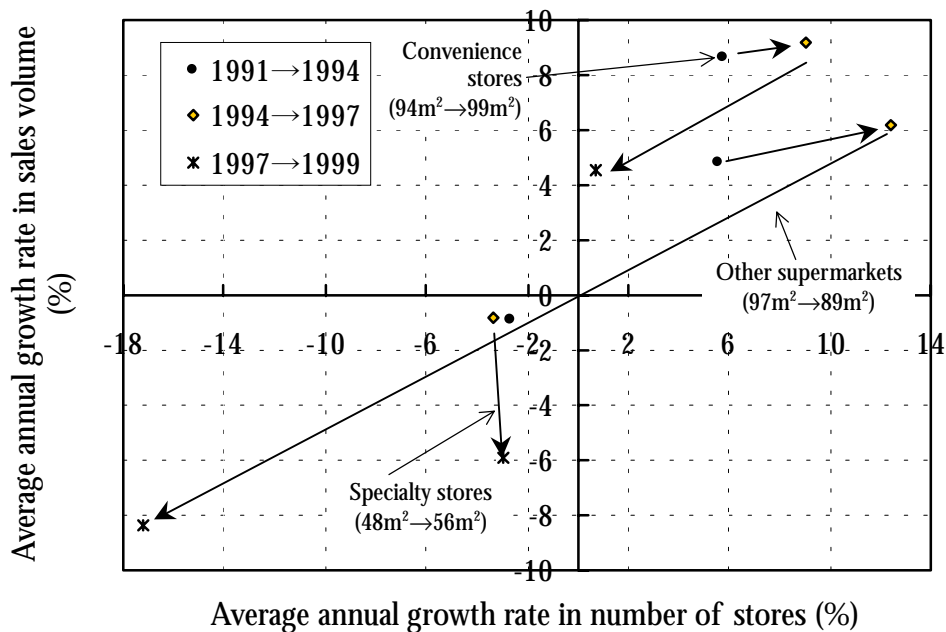
² "Adjusted" means that the percentage change is calculated only with figures collected from stores which were surveyed in both years.

Figure 3-2. Relationship between Average Annual Growth Rate in the Number of Stores, by Business and Retail Floor Space per Store and the Average Annual Growth Rate in Sales Volume

(1) Businesses with average retail floor space per store of 500m² or greater



(2) Businesses with average retail floor space per store of less than 500m²



Note: The figures within parentheses () for each business show the average retail floor space per store for 1991 through 1997. Figures from the "1999 Bulletin" base have not been published.

Sources: Ministry of Economy, Trade and Industry, "Census of Commerce - Statistical Edition by Business (Retail Industry)"

In contrast to this, for department stores and general supermarkets – which are more representative businesses when looking at the personal consumption trend from a supply perspective – the number of stores closed exceeded the number of new stores opened, particularly during the period from 1997 through 1999 when consumption slumped. As a result, together with a broad decline in the number of stores the change in sales volume also turned negative (5.4% annual average decline for number of stores and a 6.2% average annual decline for sales volume during this period) and the desperate struggle among stores intensified.

On the other hand, businesses with retail floor space per store of less than 500m² include other supermarkets (89m² in 1997), convenience stores (99m² in 1997) and specialty stores (56m² in 1997). Only convenience stores have shown bullish growth in both the number of stores and sales volume (average annual growth rate in number of stores: 5.8% from 1991 to 1994, 9.1% from 1994 to 1997, 0.7% from 1997 to 1999; average annual growth rate in sales volume: 8.7% from 1991 to 1994, 9.2% from 1994 to 1997, 4.5% from 1997 to 1999) through the 1990s, however. Convenience stores have a small retail floor space that is outside the purview of the Large Stores Law. They are specialized in industrial areas, residential neighborhoods and office districts, and have achieved high growth through aggressive product management using POS systems and 24-hours operations. This stands in contrast to specialty stores where the decline in both the number of stores and sales volume continues (average annual growth rate in number of stores: 2.6% decline from 1991 to 1994, 3.3% decline from 1994 to 1997, 2.9% decline from 1997 to 1999; average annual growth rate in sales volume: 0.9% decline from 1991 to 1994, 0.9% decline from 1994 to 1997, 5.9% decline from 1997 to 1999).

In addition to the disparity in the size of corporations and sole proprietorships seen in the first section of this chapter, in the 1990s the disparity between businesses has also become conspicuous. Specialty supermarkets and convenience stores grew bullishly but their power has lost its edge since 1997. Even among companies in the same business the performance winners and losers are gradually becoming clearer, and we might say we've reached a point where retail industry trends have taken on extremely complicated aspects.

3. Trends in the Number of Large-Scale Retail Stores (Department Stores and Supermarkets) and Real Sales Volume

In the previous section we looked at the stance taken by department stores and general supermarkets in the tough battles in the 1990s; in this section we will confirm the trends for the number of stores and sales volume for each year for large-scale stores. Considering that the 1990s were a time of price disruptions, in order to look at the changes of the quantity base we will convert sales volume into real values. Furthermore, in order to look at the effect of the increase in store openings in the 1990s, beginning with Fiscal 1991 we will examine the changes on both a total stores basis and adjusted stores basis.

Figure 3-3-1 and Figure 3-3-2 show the long-term time series from Fiscal 1973 through Fiscal 1999 for the changes in the rate of growth compared to the prior fiscal year for real sales volume and the number of stores (stock basis) for large-scale retail stores (department stores and supermarkets), taken from the “*Current Survey of Commerce*” issued by the Ministry of Economy, Trade and Industry. To restate sales amounts into real sales volume we used each indicator for “agricultural, marine and animal products”, “manufactured products”, “printed materials” and “restaurants”, which have the highest connection to the industries in question, taken from the indices for commodities and services categories in the “*Consumer Price Index*” issued by the Cabinet Office, and deflated sales to the 1995 base weight using the weighted average price index.

Looking at all large-scale retail stores, the growth rate of real sales volume on a total stores

basis was negative in Fiscal 1997 for the first time in three years (2.9% decline compared to the prior fiscal year). After remaining nearly the same as the prior fiscal year level in Fiscal 1998 and Fiscal 1999 (0.1% increase in Fiscal 1998, 0.7% increase in Fiscal 1999), however, on an adjusted stores basis sales have fallen below the prior year level since Fiscal 1997 (6.2% decline in Fiscal 1997 3.7% decline in Fiscal 1998 3.0% decline in Fiscal 1999). Behind sales remaining at the level of the prior fiscal year on a total stores basis, however, is the increase in the number of stores opened (the number of stores at fiscal year-end, beginning in Fiscal 1994, the first year for which a time series comparison is possible, expanded from 2,761 stores at the end of Fiscal 1994 to 3,632 stores at the end of Fiscal 1999, an annual rate of growth of 5.6%). Looking at the rate of growth in real sales volume converted to a per-store basis, we can see there has been no change in the situation where sales fell below the prior year level (8.5% decline in Fiscal 1997 7.7% decline in Fiscal 1998 3.5% decline in Fiscal 1999).

Looking at just department stores, initially there was only a small number of stores. Almost no increase in the number of stores is seen because in the latter half of the 1990s the number of new stores opened and the number of stores closed were nearly the same (428 stores at the end of Fiscal 1994 421 stores at the end of Fiscal 1999). For this reason there is almost no difference between total stores and adjusted stores in the rate of growth in real sales volume. For both categories, however, since Fiscal 1997 real sales have fallen below the prior fiscal year level for three consecutive years (total stores: 5.4% decline in Fiscal 1997 3.0% decline in Fiscal 1998 1.9% decline in Fiscal 1999; adjusted stores: 6.8% decline in Fiscal 1997 3.4% decline in Fiscal 1998 1.5% decline in Fiscal 1999). The rate of growth shows the same pattern after converting real sales volume to sales per store (4.7% decline in Fiscal 1997 1.9% decline in Fiscal 1998 2.4% decline in Fiscal 1999).

For supermarkets (Figure 3-3-2), on the other hand, the increase in the number of stores opened is remarkable (2,333 stores at the end of Fiscal 1994 3,211 stores at the end of Fiscal 1999, an annual rate of increase of 6.6%). As a result, although sales decreased slightly on a total stores basis in Fiscal 1992, Fiscal 1993 and Fiscal 1997, the rate of growth after converting sales to real sales volume per store rose in Fiscal 1995 but afterwards fell below the prior year level for four consecutive years (1.9% increase in Fiscal 1995 1.4% decline in Fiscal 1996 7.3% decline in Fiscal 1997 6.4% decline in Fiscal 1998 1.9% decline in Fiscal 1999). Moreover, the difference between total stores and adjusted stores in the rate of growth in real sales volume has widened (1.9% points in Fiscal 1991 7.0% points in Fiscal 1999). Considering that there was almost no increase in the number of stores in the 1980s when new store regulation was strict, by analogy there was nearly no difference at that time between total stores and adjusted stores in the rate of growth of real sales volume. So the slump during the 1990s at adjusted stores is an especially notable phenomenon in supermarket history.

Figure 3-3-1. Department Store Real Sales Growth Rate and Number of Stores

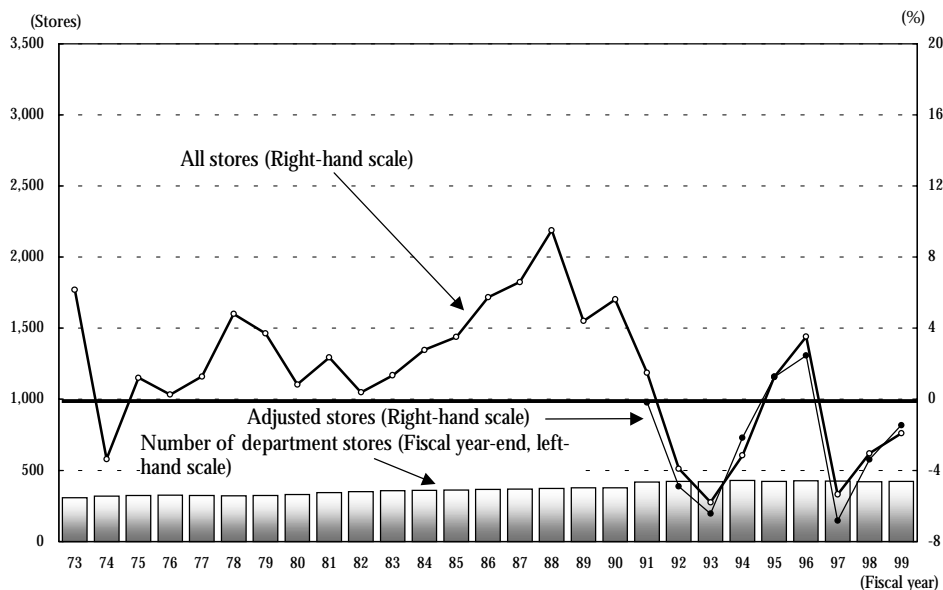
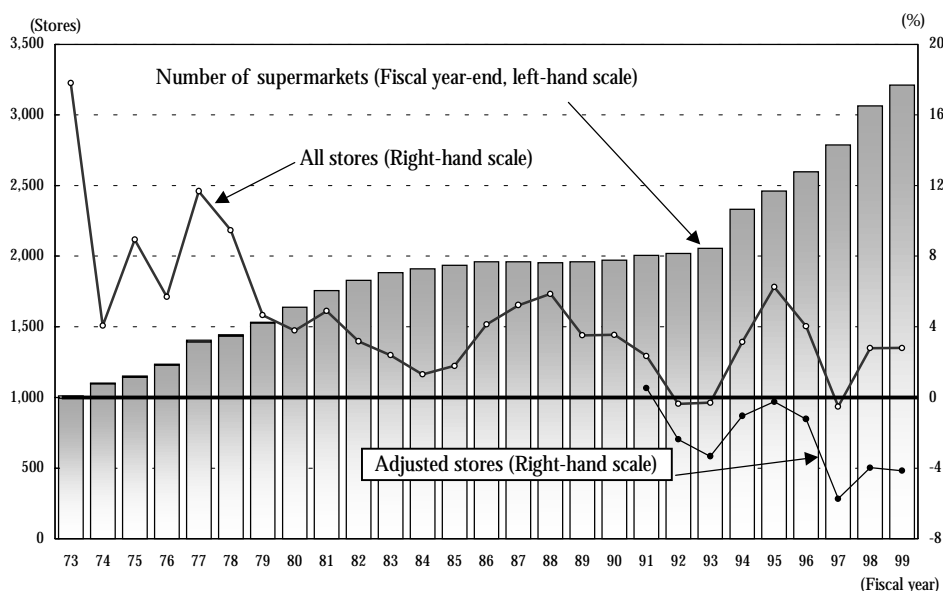


Figure 3-3-2. Supermarket Real Sales Growth Rate and Number of Stores



Note: The definition of “large-scale store” was changed as follows (amendments to the Law in July 1978 and July 1991).
 Department store: A shop that is a retail store with 50 or more employees and does not fall under the definition of a “supermarket”, and has a retail floor space of 3,000m² or greater in Special Wards in Tokyo and ordinance-designated cities or 1,500m² or greater in other areas.
 Supermarket (“self-service store” before Fiscal 1991): Until Fiscal 1991, a retail store with 50 or more employees and which has adopted self-service methods for 50% or greater of the retail selling space; since Fiscal 1991, a store which has a retail floor space of 1,500m² or greater.

Sources: Ministry of Economy, Trade and Industry, “Summary of Dynamic Statistics of Commerce”, and Ministry of Public Management, Home Affairs, Posts and Telecommunications, “Annual Report on the Current Survey of Commerce”

4. Case study: An Examination of the New Store Effect and Store Efficiency in Supermarkets

Until now the phenomenon where the sales trend at adjusted stores worsened as the efforts of supermarkets to open new stores grew more aggressive in the 1990s has always been a result from aggregate data. In the “*Current Survey of Commerce*”, if one year has passed since a store was opened that store is counted as an adjusted store. So stores opened in the 1980s and stores opened in the first half of the 1990s, for example, are all counted as adjusted stores as long as they are still in business at the time of the survey. In this situation the phenomenon of a sales slump at adjusted stores is effected greatly by the sales slump at old stores opened in the 1980s, and we cannot ascertain whether new stores opened in the 1990s are steadily improving their operating results.

The rate of increase in the retail industry capital coefficient (=capital stock/real GDP), which is an indicator of capital efficiency from a macro perspective, has been faster than the average rate of increase for manufacturing industries (retail industry: 0.9 in 1970 2.2 in 1990 3.4 in 1998; manufacturing: 1.4 in 1970 2.1 in 1990 2.8 in 1998) and has been increasing even more rapidly since the beginning of the 1990s (see Chapter 2, Section 2, Figure 2-2-2 and Figure 2-2-4). This suggests it is necessary to verify the investment in stores opened in the 1990s and make corrections accordingly. When we compare the change over time in store sales or store efficiency after a store opens to those of stores opened in the 1980s, and assuming it was not possible for stores opened in the 1990s to follow the route to higher revenue and that store efficiency is not always very good, then in the face of stagnant consumption demand the approach to investing in stores based on the premise of long-term investment recovery should probably be reconsidered.

In order to clarify this point we selected supermarkets as one example of a business with a remarkable number of new store openings. For 48 companies for which individual stores can be randomly chosen from securities information resources, we created panel data (time-series tracking data) for stores that were newly opened since the 1980s and were still in existence as of March 1999³. We divided this into two groups according to business, for general super markets

³ The following points required careful attention when creating the panel data.

The number of data was 1,925 stores out of 2,242 stores (excluding 317 stores that fall in the categories below) for 48 supermarkets for which sales, invested capital (land, buildings, structures, etc.) and retail floor space for each store newly opened from 1980 through 1998 are publicly disclosed in the “operating conditions” and “capital conditions” in each company’s marketable securities information (600 stores opened from 1980 through 1989, 1,325 stores opened from 1990 through 1998; the names and number of stores opened by each company are shown in Table 3-1).

- Store was closed during this time period
- Management of the store was transferred to a company outside the subject group during this time period
- Stores integrated or merged into another store of the same company during this time period
- Stores included among the stores added through merger with another company during this time period, but excluding stores newly opened in the year of the merger.
- Stores that ceased operations for a period of time for renovations, etc. during this period of time and which did not provide continuous data

By referring to the business classifications in the “*Current Survey of Commerce*” of the Ministry of Economy, Trade and Industry and using whether sales of special departments were 70% or greater of the company’s recent sales as a criteria, the 2,242 stores of the 48 supermarket companies were divided into 1,012 stores at 18 supermarket companies with less than 70% and 913 stores at 30 specialized (food product) supermarket companies with 70% or greater.

The average monthly sales were annualized and the resulting numbers deflated to calculate the real value by using a weighted average price index using the 1995 standard weight that was chosen from the indices for “agricultural, marine and animal products”, “manufactured products”, “printed materials” and “restaurants” from the commodity and service classification indices in the Cabinet Office *Consumer Price Index* as having the highest relationship to the business in question.

To aggregate total the number of stores by when stores opened we grouped stores by the number of years passed until it was possible to follow-up all of the stores in each five-year period (the 15th year from store opening for stores opened from

and specialty (food products) supermarkets, and compared the changes over time in sales or store efficiency after the store opened based upon the difference between when the stores opened or whether the land was owned when the store was built. The results are arranged in graphs in Figure 3-4 through Figure 3-8. From the graphs we can understand the following.

- (1) The number of store openings for both general supermarkets and specialty supermarkets increased rapidly in the 1990s. Simultaneously there was a tendency for the retail floor space per store to increase at both types of supermarkets (general supermarkets: 5,957m² in 1990 7,549m² in 1998; specialty supermarkets: 1,375m² in 1990 2,018m² in 1998). Looking at the cumulative total stores, specialty supermarkets increased as a percentage of the number of large-scale stores with a retail floor space of 1,500m² or greater (29.2% in 1990 56.0% in 1998), while general supermarkets remarkably expanded the retail floor space per store on a new store basis (6,610m² in 1990 8,969m² in 1998).

The amount of capital spending per store to open a store grew larger for general supermarkets from 1989 through 1993 and for specialty supermarkets from 1990 through 1993. During this period the average investment per retail floor space for both types of stores reached roughly ¥1.1 million per 3.3m². The average investment to open a store from 1994 through 1998, however, was less than 50 to 60% of this level (¥520,000 per 3.3m² for general supermarkets, ¥630,000 per 3.3m² for specialty supermarkets), declining to nearly the level of the average investment to open a store during the 1980s (an average of ¥510,000 per 3.3m² from 1980 through 1988 for general supermarkets, and an average of ¥540,000 per 3.3m² from 1980 through 1989 for specialty supermarkets).

- (2) We compared the change in real sales over time by dividing the stores into four groups for 1980-84 (294 stores), 1985-89 (306 stores), 1990-94 (481 stores) and 1995-98 (844 stores), depending upon when the stores opened, and using the level of real sales per store at the time the stores opened as 100. When we examine the cases for stores opened in the first half of the 1980s and those opened in the second half of the 1980s, the number of years until sales reached a peak after the store opened declined from the 10th year to the 6th year. Moreover, the increased revenue effect at the time of peak sales compared to the time the stores opened also declined slightly from 23% growth to 19% growth. On the other hand, the sales after store opening for stores opened in the first half of the 1990s did not exceed sales at the time of store opening but showed no growth. For stores opened in the latter half of the 1990s, the sales after the store opened fell by approximately 10% compared to sales at the time of store opening. Here is a situation where supermarkets were unable to find a path to increased revenue after store opening in the manner seen at stores opened in the 1980s. This trend appears to be a new pattern for general supermarkets. At specialized supermarkets, in the case of stores opened in the latter half of the 1980s the increased revenue effect at the time of sales peak compared to when a store opened as a 31% increase, higher than in the case of stores opened in the first half of the 1980s (increased revenue

1980 through 1984, the 10th year from store opening for stores opened from 1985 through 1998, and the 5th year from store opening for stores opened from 1990 through 1994), and by each year for stores opened from 1995 through 1998 (for stores opened in 1998, only the first year when opening)

To aggregate total the number of stores by whether or not they owned the land for stores, we used <1,847 stores covered by the study [of which 431 stores owned land (general supermarkets 241 stores, specialty supermarkets 190 stores) and 1,416 stores leased land (general department stores 712 stores, specialty department stores 704 stores)]>, excluding stores for which the form of land use changed during the period of time since the store opened (stores for which the land was owned when the store opened but which was sold or converted to a land lease, or stores for which the land was leased when the store opened but which was later purchased).

Tangible fixed asset turnover ratio = Nominal sales/average of the tangible fixed asset balances at the beginning and end of the period (excluding the price of land). The subject number of stores was the 1,847-store base indicated above. To calculate the store turnover ratio for just the first year when the store opened we used the year-end balance.

effect of 25% increase). But this is related to the fact that at stores opened in the latter half of the 1980s, the scale of real sales at the time of store opening was at a level nearly 30% lower than at stores opened in the first half of the 1980s. Furthermore, the change in sales after store opening at specialty supermarket stores opened in the latter half of the 1990s has not dropped as in the case of general supermarkets.

- (3) When we try breaking down the percentage change over the prior year of real sales per store by time of store opening into components for retail floor space per store and store efficiency (real sales per store retail floor space), frequently the increase in retail floor space per store after store opening contributes a positive effect. The time period to improve store efficiency grows shorter however, the newer the store, and looking at just that from when a store opened, the time until store efficiency declines has shortened (time when store efficiency begins to decline: tenth year for stores opened in the first half of the 1980s, fifth year for stores opened in the latter half of the 1980s, fourth year for stores opened in the first half of the 1990s). At stores opened in the latter half of the 1990s, however, the decline in store efficiency in the second year after store opening is remarkable. This tendency can be confirmed for both general supermarkets and specialty supermarkets. But the fact that at specialty supermarket stores opened in the latter half of the 1990s the change in sales after store opening has not plunged as much as that at general supermarkets is because the decline in store efficiency in the second year after store opening is relatively small. The fact that even after the second year store efficiency is maintained at specialty supermarkets is a large factor.
- (4) We also compared the change over time by dividing stores on the basis of whether or not the land for the store was owned at the time of store opening and using the level of real sales per store at the time the store opened, looked at by year of store opening, as 100. In the case of stores opened in the 1990s, both types of supermarkets are identical on the point that neither was able to find a route to increased revenues after store opening, but the following characteristics can be highlighted by looking at the stores by business.
 - ① At stores on land that was owned, the performance of stores opened in the latter half of the 1990s compared to that of stores opened in the 1980s deteriorated remarkably at specialty supermarkets. In the case of stores opened in the latter half of the 1990s, both general supermarkets and specialty supermarkets showed the same degree of large decline (a decline of 10% to 15% compared to when stores opened).
 - ② For stores on land that was leased, specialty supermarkets opened in the 1990s did not do as badly as general supermarkets, maintaining sales at nearly the same level as when stores opened.
- (5) When we divided stores on the basis of whether or not the land was owned at the time of store opening, and examined them by breaking down the change from prior year in real sales per store looked at separately by year of store opening into components for retail floor space per store and store efficiency (real sales per retail floor space), frequently an increase in retail floor space per store after store opening contributes a positive effect. The time period to improve store efficiency grows shorter to the extent the store is new, however, and looking at only the time from when a store opened, both types of supermarkets are identical on the point that the time until store efficiency declines has shrunk. The following characteristics can be highlighted by looking at the stores by business.
 - ① At stores on land that was owned, at specialty supermarkets the performance of stores opened in the first half of the 1990s compared to that of stores opened in the 1980s show an obvious degree of deterioration. At both general supermarkets and specialty supermarkets, store efficiency in the case of stores opened in the latter half of the

- 1990s deteriorated substantially in the second year after opening, and continued to decline thereafter in the case of general supermarkets.
- ② For stores on land that was leased, in contrast to general supermarkets where the store efficiency at stores opened in the 1990s deteriorated substantially in the second year after opening and did not improve in following years, the decline in store efficiency at specialty supermarkets was relatively small and, moreover, improved somewhat in the case of stores opened in the latter half of the 1990s.
- (6) We compared the change over time in the tangible fixed asset turnover ratio viewed by the year of store opening. At stores opened in the first half of the 1990s the turnover ratio declined to the extent a store is new, but this was greatly effected by the decline in the turnover ratio at general supermarket stores on leased land. At specialty supermarkets the turnover ratio of stores opened in the first half of the 1990s declined remarkably compared to that of stores opened in the 1980s, without regard to whether or not the land was owned. On the other hand, in general the turnover ratio at stores opened in the latter half of the 1990s is higher than the turnover ratio at stores opened in the first half of the 1990s, regardless of the business or whether or not the land is owned. In particular the turnover ratio at general supermarkets opened in 1995 and 1996 on owned land was much higher than the turnover ratio at stores opened in the first half of the 1980s. This is because the initial amount of capital investment declined nearly to the level of the initial capital investment at stores opened in the first half of the 1980s, as well as the fact that compared to stores opened in the first half of the 1980s the scale of sales at the time a store opened was much larger. At stores opened in 1997 and 1998, however, the level of the turnover ratio declined to a level near that of stores opened in the first half of the 1980s, effected by the increase in initial capital investment.

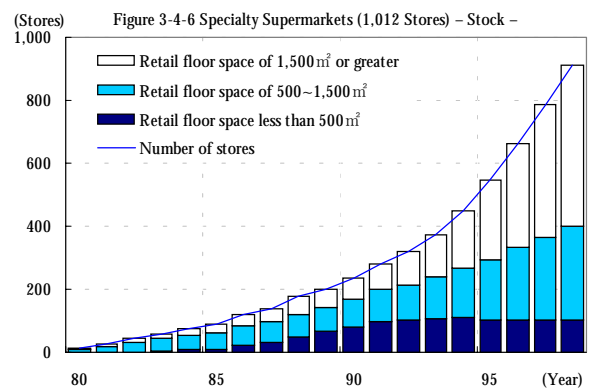
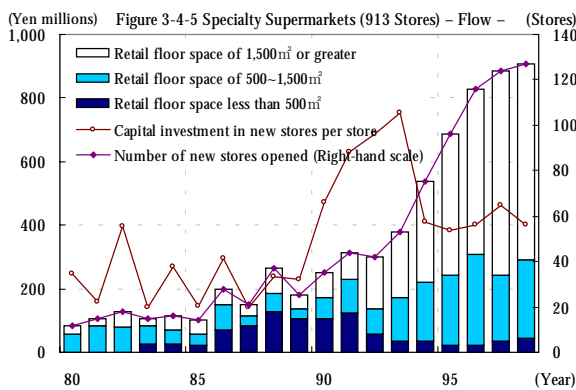
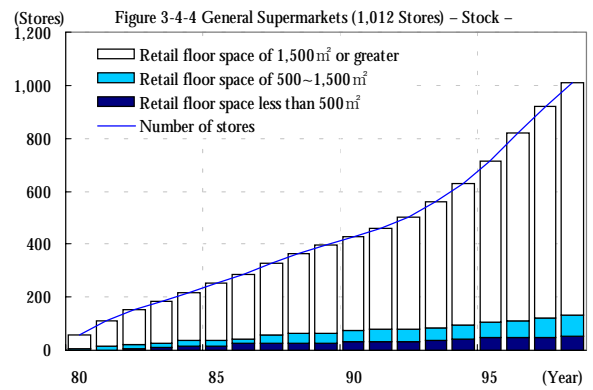
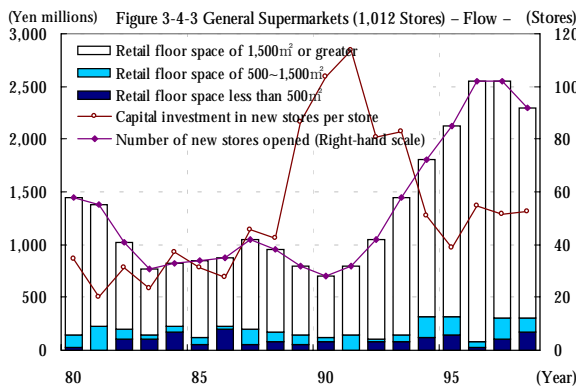
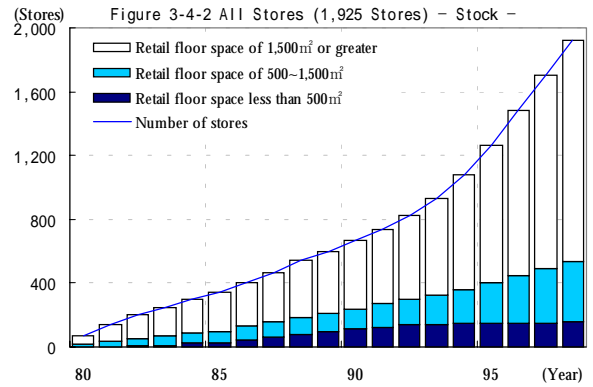
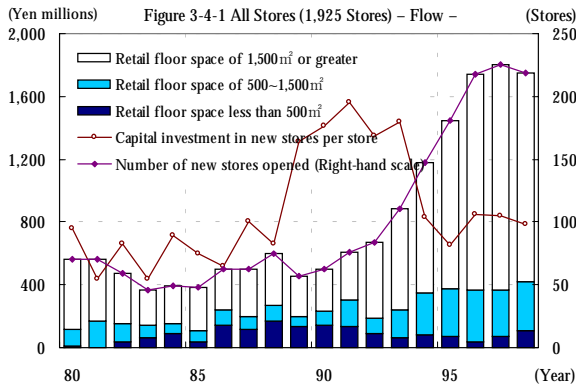
Table 3-1 Names of Companies Studied and New Store Openings by Company

(Unit: stores)

	Stores opened from 1980-84					Subtotal	Stores opened during 1985-89					Subtotal	Stores opened during 1990-94					Subtotal	Stores opened during 1995-98				Subtotal	Total
	80	81	82	83	84		85	86	87	88	89		90	91	92	93	94		95	96	97	98		
	General supermarkets	58	55	41	31		33	218	34	35	42		38	32	181	28	32		42	58	72	222		
Jusco Co., Ltd.	5	8	6	2	3	24	5	4	7	5	5	26	4	2	8	11	10	35	14	20	23	22	79	164
Ito-Yokado Co., Ltd.	10	4	7	4	5	30	3	4	5	4	3	19	2	3	3	6	4	18	6	6	8	9	29	96
Daiei, Ltd.	6	7	3	4		20	2	5	5	5	3	20	3	5	4	5	7	24	12	6	7	4	29	93
Uny Co., Ltd.	5	3		2	2	12	5	2	2	2	5	16	1	3	2	2	6	14	9	14	7	10	40	82
MyCal Group, Inc.	7	6	4	3	5	25	3	2	2	3	3	13	4	3	2	3	4	16	5	6	5	6	22	76
Seiyu, Ltd.	6	8	6	4	3	27	2	2	1	4	1	10	2		5	3	5	15	4	3	7	2	16	68
Izumi Corp.	1		1	2	1	5	2	3	2	1	1	9	2	2	3	6	9	22	6	8	5	3	22	58
Heiwado		2	3	1	3	9	3	5	6	4	3	21	2	3	1	3	4	13	2	7	5	1	15	58
Nagasakiya Co., Ltd.	6	5	2	4	3	20	3	2	1	1	7	2	2	3	2	1	10	1	3	2	2	8	45	
Shinshu Jusco Ltd.								1	3	2	1	7	3		5	4	2	14	9	3	4	6	22	43
Kotobukiya Co., Ltd.	8	8	5	2	1	24	2	2	3		1	8		1	1		2	2		1	4	7	41	
Valor Co., Ltd.														6	4		10	4	5	6	8	23	33	
Tokyu Store			2	1	4	7	1		3	3	7		3	1	4	2	10	1	2	4	2	9	33	
Izumiya Co., Ltd.	1	2	1	1	2	7	2	1	2		1	6	1	1	1		2	5	4	3	5	2	14	32
Fuji Co., Ltd.								1	2		3			2	2	3	7	2	9	4	4	19	29	
Tobu Store	3	2	1	1	1	8	1	2	2	1	1	7	2				3	5	1	2	3	2	8	28
Olympic Corp.									1	1	2		1	1	1	4	7	2	3	4	4	13	22	
Domy Co., Ltd.													3				5	1	2	2	1	6	11	
Specialty (Food) supermarkets	12	15	18	15	16	76	14	28	21	37	25	125	35	44	42	53	75	249	96	116	124	127	463	913
Life Corp., Ltd.			5	1	2	8	1	5	4	4		14		2	1	7	10	20	17	22	27	19	85	127
Maruetsu, Inc.	3	7	1	5	6	22	3	6	3	4	1	17	5	4	5	6	5	25	8	11	5	7	31	95
Inageya	4	4	6	5	2	21	3	5	2	4	2	16	2	4	4	2	6	18	5	6	7	4	22	77
York-Benimaru Co., Ltd.	4	4	3	2	2	15	1	1		3	2	7	2	4	4	3	5	18	5	5	8	2	20	60
Chainstore Okuwa								8	7	4	19	3	2	6	3	2	16	4	6	3	7	20	55	
Kasumi Co., Ltd.			1	2		3	3	2		1	1	7	2	4	3	3	4	16	8	5	5	7	25	51
Wellmart Co., Ltd.									4	4	8	4	5	1	5	2	17	3	5	6	6	20	45	
Yamanaka Co., Ltd.	1		2		1	4	1	1	1	2	2	7	2	3	3		3	11	4	4	5	4	17	39
Marukyu					3	3	2	6	1	4	4	17	3	3	1			8			2	1	3	31
Yaoko Co., Ltd.									1	1	2	2	1	2	2	1	5	11	2	4	5	6	17	30
Taiyo														1	3	4	8	6	4	7	3	20	24	
Marukyo Corp.													1	1	2	3	7	3	6	4	4	17	24	
Super Daiei Co., Ltd.												1	3	3	1	2	10	3	3	2	5	13	23	
Sotetsu Rosen							2		1	2	5	3	1	1	2	2	9	2	1	3	1	7	21	
Kansai Super Market Ltd.													1	2	3	2	8	2	2	3	4	11	19	
Harashin												1	2	1	2	3	9	3	3	4		10	19	
Flex								2	2	2	6	4	1	1		1	7	3	1		1	5	18	
Ralse Co., Ltd.														4	4		8		3	2	5	10	18	
Hymart Co., Ltd.												1	1	1		1	4		2	2	9	13	17	
Fukuhara Co., Ltd.														1	3	4	8	2	4	4	3	13	17	
Maruya														3	3		6	6	3	1	3	13	16	
Mammy Mart Corp.												1	1	4	2		8	2	1	1	3	7	15	
Yamazawa Co., Ltd.																		2	4	4	3	13	13	
SSV																			6	6		12	12	
Maruwa Co., Ltd.												1		1	3	1	6	2		2	1	5	11	
Tairaya Co., Ltd.																			3	2	5	10	10	
Belc Co., Ltd.															1	1	1	1	2	1	3	7	8	
Matsuya																		1	2	1	3	7	7	
Aoki Super Co., Ltd.															1	1	2	2	1	1	1	5	6	
Fuji Co., Ltd.																			3	1	1	5	5	
Total	70	70	59	46	49	294	48	63	63	75	57	306	63	76	84	111	147	481	181	218	226	219	844	1,925

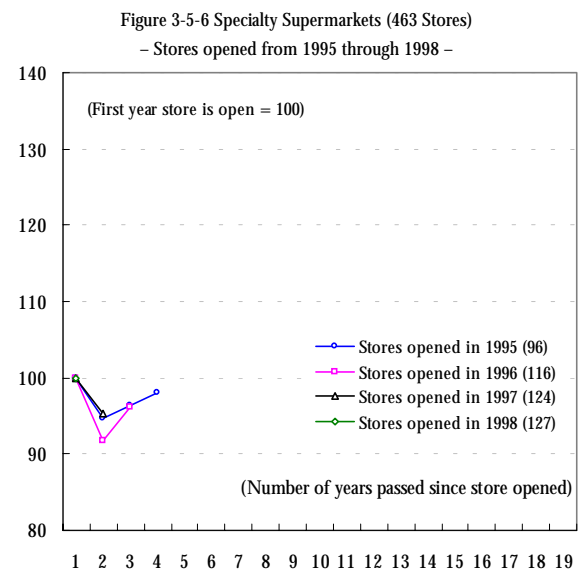
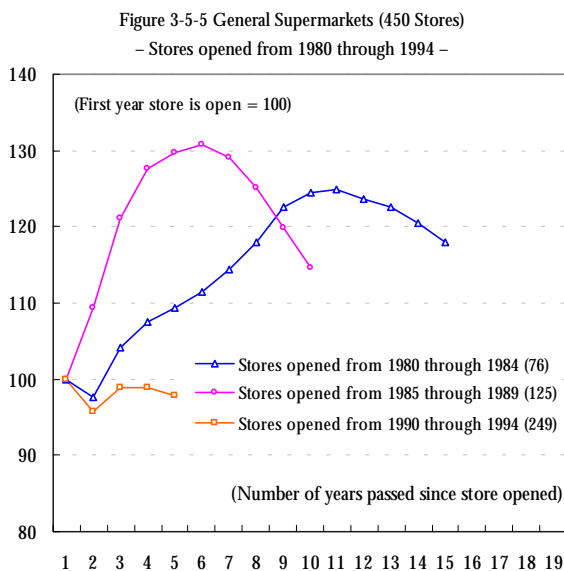
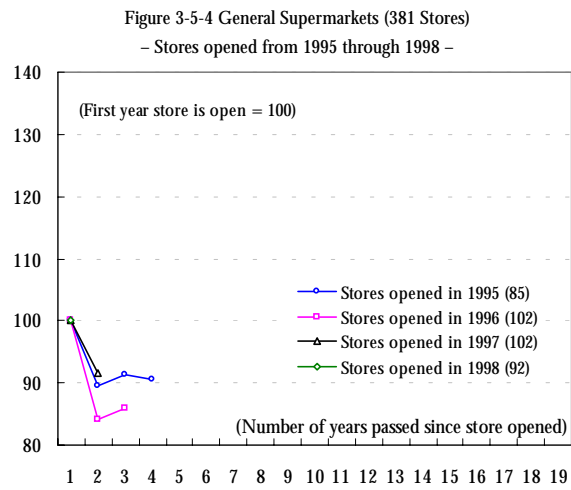
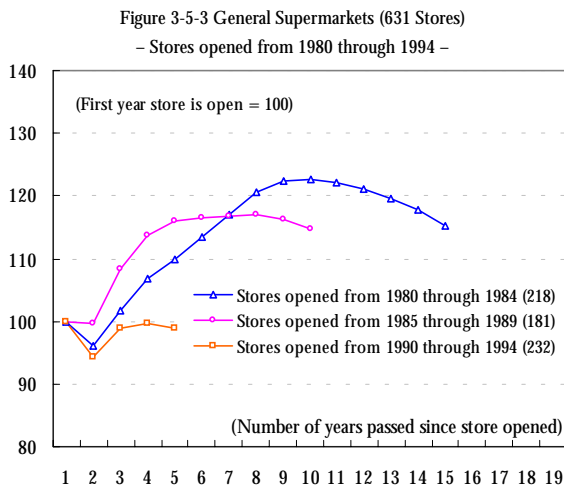
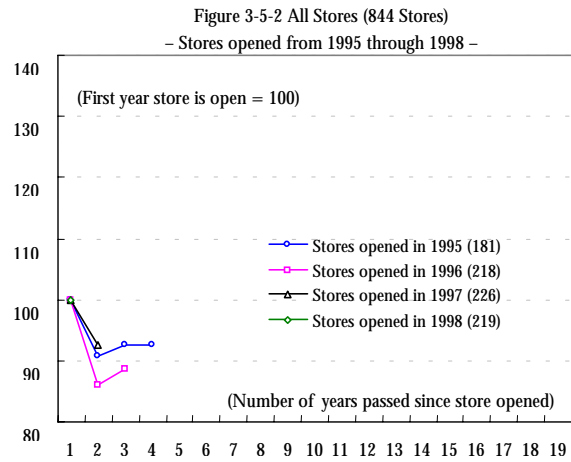
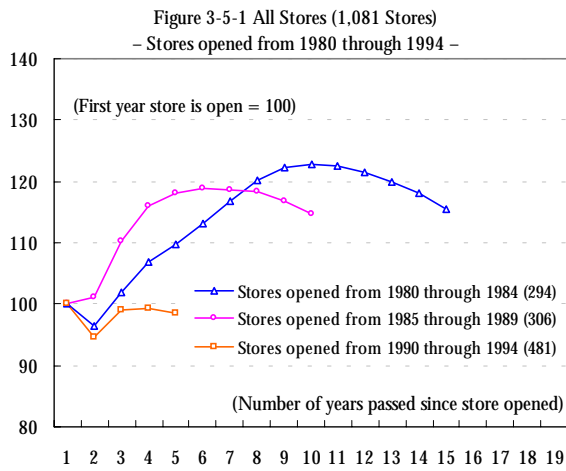
Sources: The marketable securities reports of each company

Figure 3-4. Changes in the Number of New Stores Opened by Business, Capital Investment in New Stores per Store, Number of Stores (Cumulative) and Retail Floor Space per Store



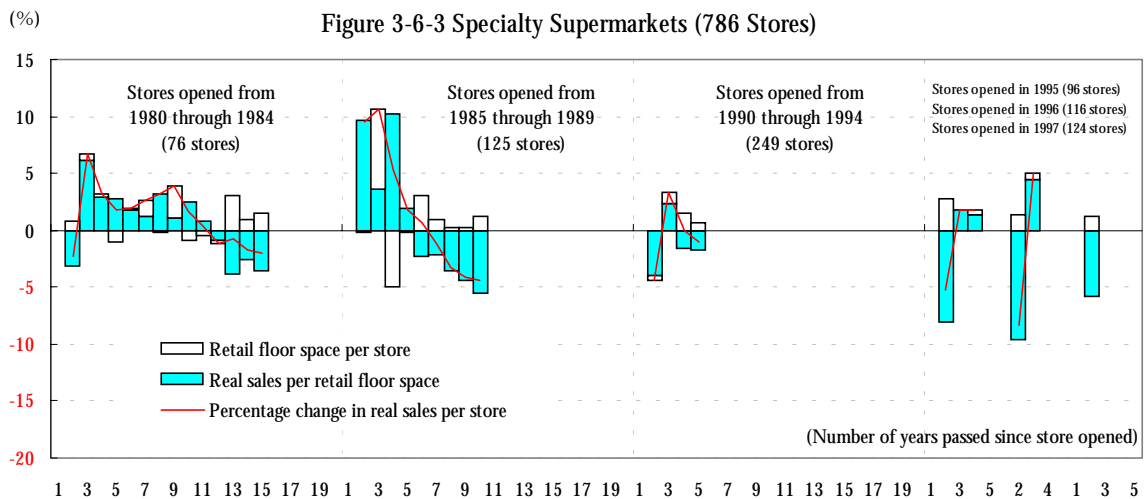
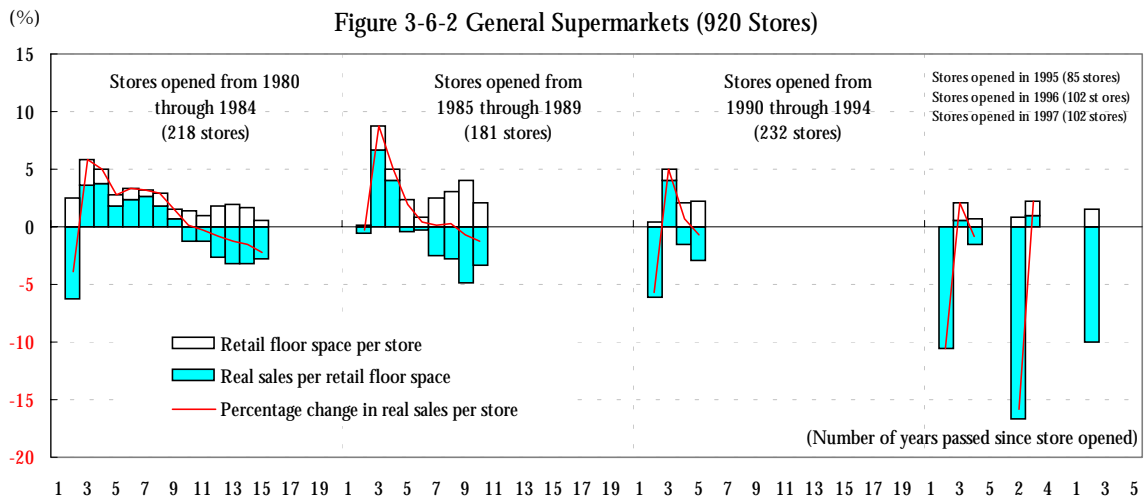
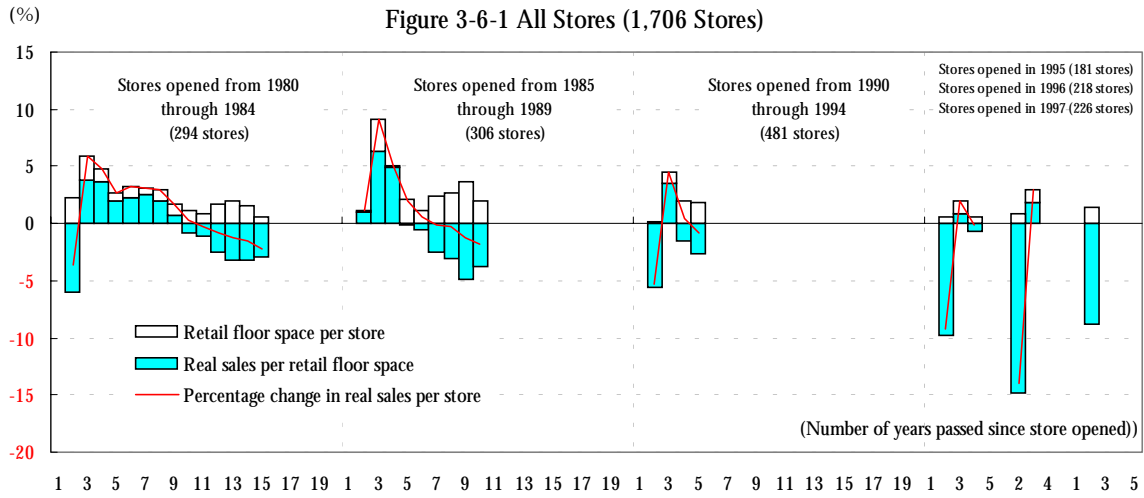
Sources: The marketable securities reports of each company

Figure 3-5. Change Over Time in the Indices of Real Sales per Store, by Business and by Time of Store Opening



Sources: The marketable securities reports for each company, and Cabinet Office “*The Annual Report on the Consumer Price Index*”.

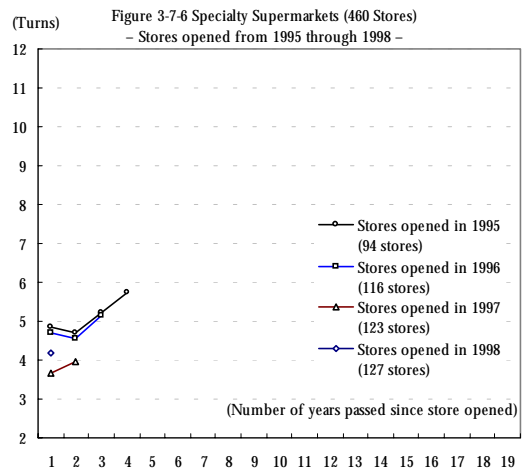
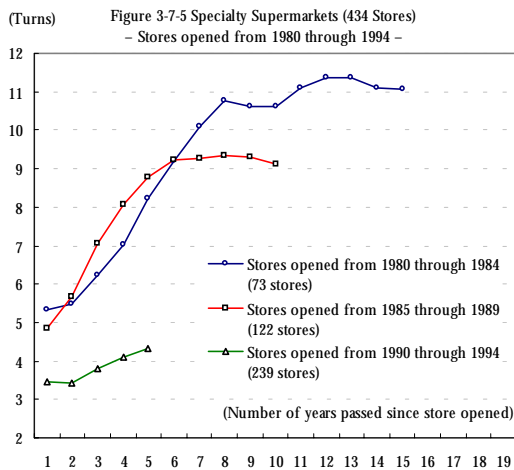
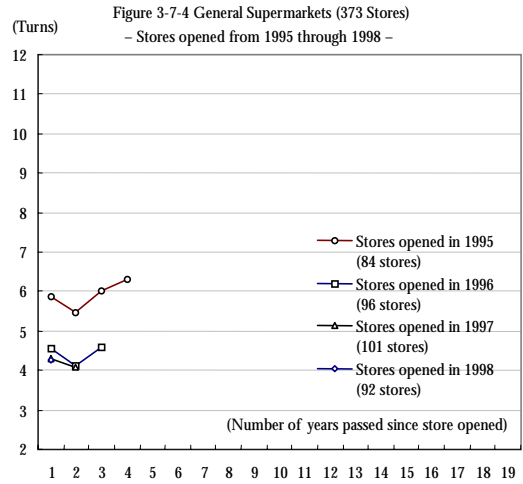
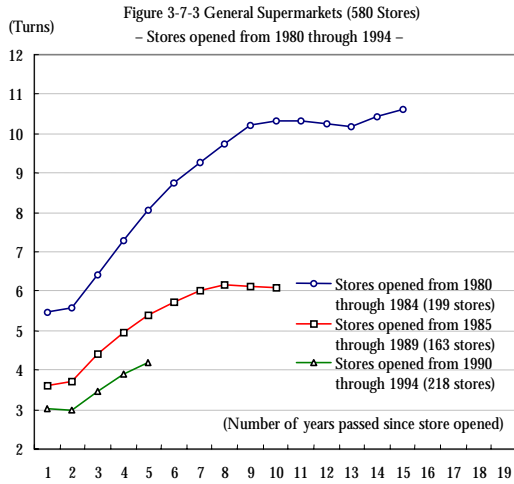
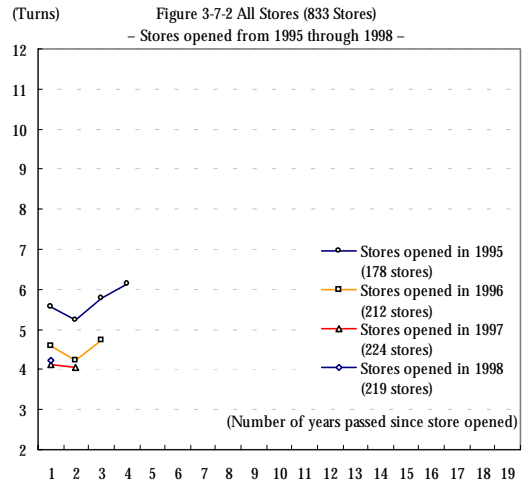
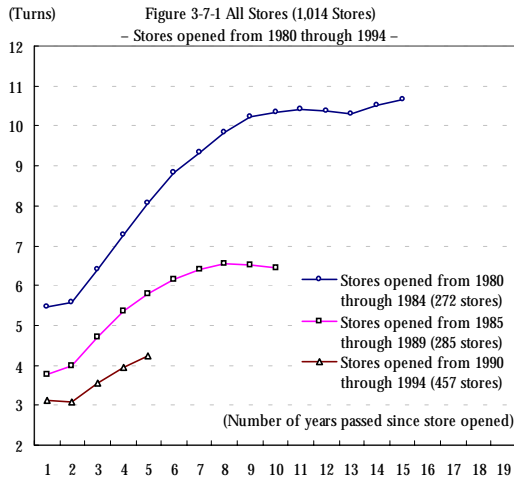
Figure 3-6. Breakdown of the Principal Causes of the Percentage Change in Real Sales per Store Over Time after the Store Opened, by Business



Note: Excludes stores opened in 1998

Sources: Same as for Figure 3-5.

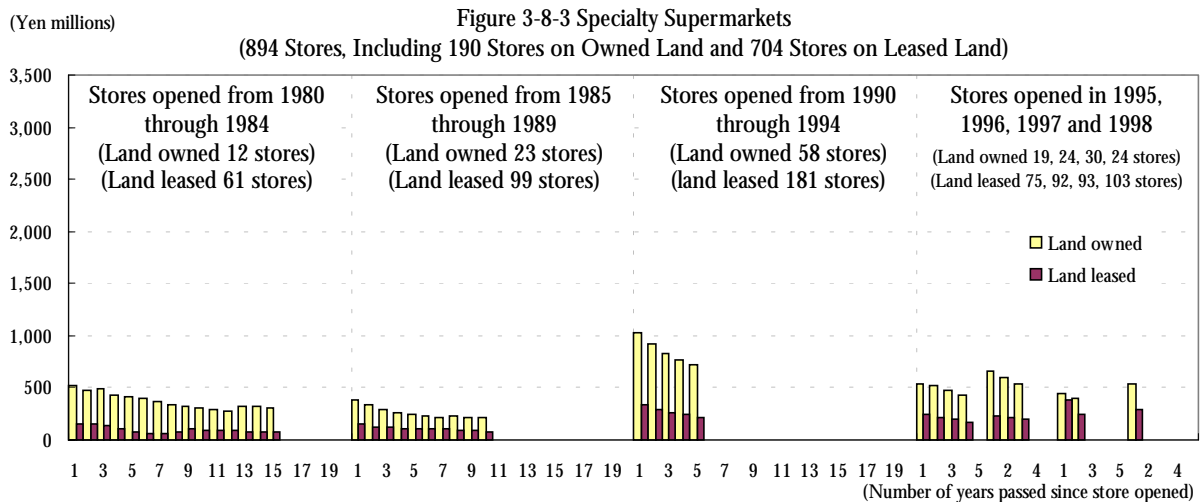
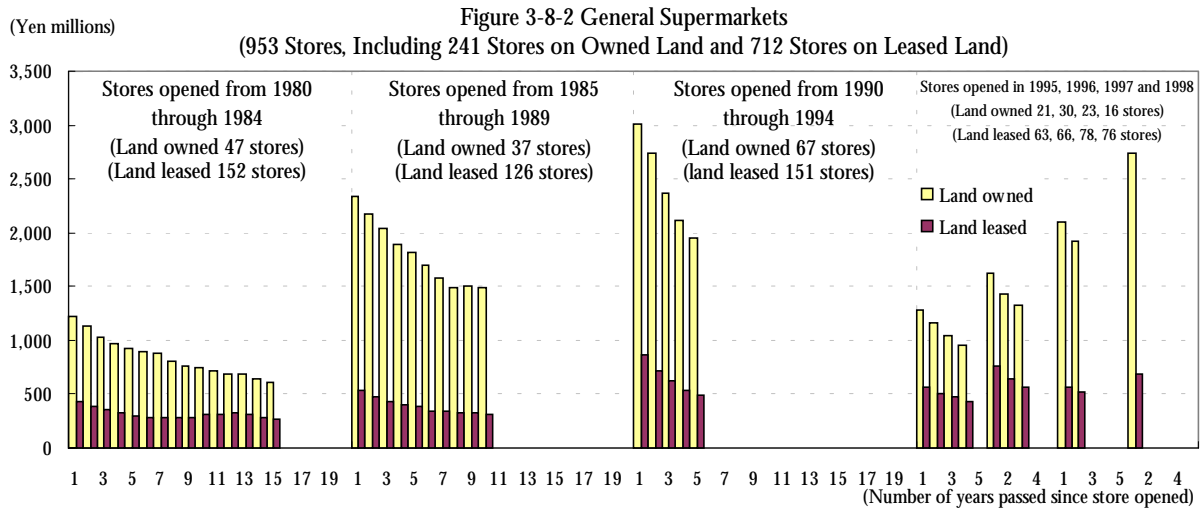
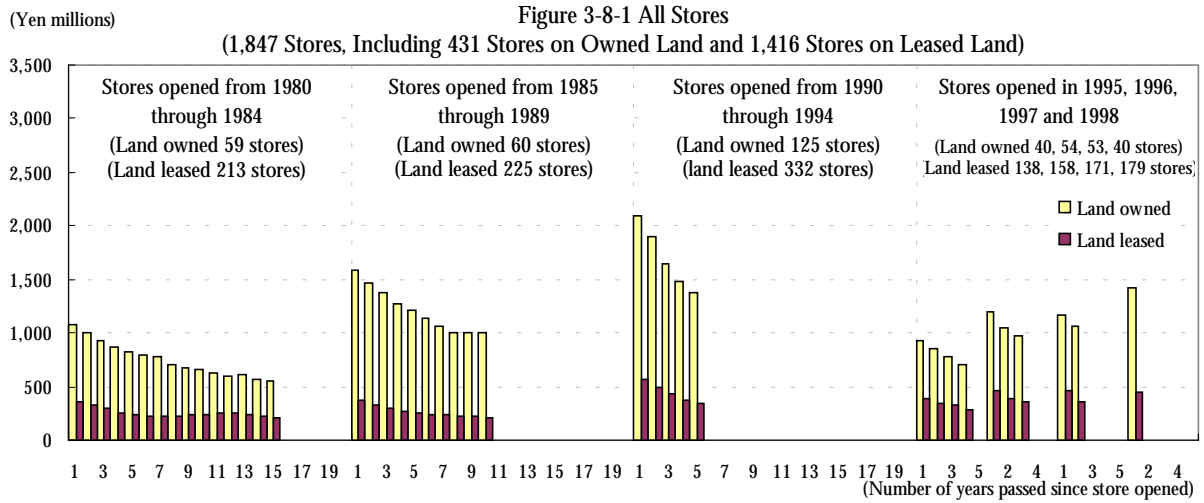
Figure 3-7. Change Over Time in the Tangible Fixed Asset Turnover Ratio, by Business and by Time of Store Opening



Note: Tangible fixed asset turnover ratio = Nominal sales / the average of the beginning and end of period balances for tangible fixed assets (excluding land prices). For the calculation of the turnover ratio in the first year when a store opened, the end of period balance was used.

Sources: Same as for Figure 3-4.

Figure 3-8. Change Over Time in Capital Spending per Store, by Business and by Time of Store Opening (Excluding Land Prices)



Sources: Same as for Figure 3-4.

Based on the analytical results using this panel data, looking just at supermarkets that aggressively opened stores following deregulation in the 1990s we can detect a situation where the store efficiency of newly-opened stores has not always been good. This is despite small variations depending on the business or whether or not the land was owned at the time of store opening. This must of course be determined more rigorously by tempering profitability by looking at the profit of each store, not just those taken from marketable securities information. But at the very least, the fact that stores opened in the 1990s were unable to follow the same path to increased revenue after store opening as the stores opened in the 1980s suggests that conditions have changed and a long-term customer pulling effect is difficult to anticipate. In addition, the fact that after store efficiency is improved the time until the efficiency begins to decline is much shorter indicates that stores are faced with a situation where they will have to rethink their approach to store investment based on the premise of long-term investment recovery.

In conclusion we can summarize the results of the analysis in the above three sections as follows.

Based on the above analysis, the environment in which the retail industry finds itself has become more severe as evidenced in the long-term trend in consumption demand viewed from a macro perspective. During the 1990s, demand in line with the industry's expected growth rate was never achieved. Add the timing of deregulation, and the 1990s can be seen as a period when it was difficult for the retail industry to rapidly adjust its supply behavior in ways consistent with realized demand. Nevertheless, as actual demand remains stagnant, the performance winners and losses are gradually becoming clearer, not only among companies with differences in company size or business conditions but even among companies faced with the same business conditions.

In addition, up until now retail industry capital spending had the effect of causing a trend-like rise in the capital coefficient while lowering capital efficiency. Looking just at supermarkets that aggressively built new stores, we can also note that the efficiency of stores newly opened in the wake of deregulation has not always been good. In this environment we expect that during Fiscal 2000 and Fiscal 2001 the magnitude of swings in investment will grow larger because of the stores built in the rush before enactment of the Large-Scale Retail Store Location Law and the cutbacks in reaction to them. The likelihood is quite high that the move to the new law will bring with it short-sighted retail industry investment activity.

In the future it will be important to apply IT (information technology) as a tool to improve the accuracy of consumption demand forecasts and the store sales multiplier effect. There will also be an urgent need, however, to use the opportunity created by the enactment of the Large-Scale Retail Store Location Law and its emphasis on regional and environmental protection to earnestly address the management issue of how to ensure the efficiency of new stores, when greater consideration of a balance with urban planning or revitalization of central business districts is demanded.

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(Supplement) Information Technology Investment in the Retail Industry and the Status of Internet Sales
– Results of the Development Bank of Japan’s Survey on Planned Capital Spending Supplemental Survey (August 2000) –

For its “*Survey on Planned Capital Spending for Fiscal Years 1999, 2000 and 2001*” conducted in August 2000, the Development Bank of Japan implemented for the first time a survey concerning information technology investment trends (sent to 3,495 companies, with 1,763 firms returning valid responses; a response rate of 50.4%). Because applications of IT (information technology) with the principal goal of timely and appropriate understanding of consumers’ needs was attracting attention at that time as the latest of recent activities in the retail industry, the bank conducted the survey by combining it with a supplemental survey concerning Internet sales in the so-called “Business to Consumer” (B to C) electronic commerce marketplace as part of information technology investment⁴.

The responses for actual and planned investment in information technology by the retail industry in Fiscal 1999 and Fiscal 2000 are compiled in Supplemental Table 1. The responses for the current status of Internet sales and the actual and planned investment for Fiscal 1999 and Fiscal 2000 are compiled in Supplemental Table 2. The results of the survey are summarized below.

- ① Information technology investment for the entire retail industry accounts for a less than 20% of all capital spending. Looked at in detail, the category “other companies” was the highest, at slightly less than 30% in both fiscal years. This was primarily investment for new or renewed POS and store controller technology by convenience chain stores, investment attributed to system software development related to the above or installation of new multi-media terminals to handle electronic transactions. The percentage of information technology investment is relatively large at departments stores, accounting for about 30% of planned capital spending in Fiscal 2000 and almost 20% of actual investment in Fiscal 1999. This was boosted by spending in areas such construction of in-house LAN or systems development, and POS-related investment. Compared to the other two categories, supermarket information technology investment is low. Behind this number, however, lie conditions that make it hard to grasp the investment in information technology at the time of store opening (it is difficult to provide an answer on information technology separate from the total store investment). Added to this is the fact that in Fiscal 2000 store openings were front-loaded, resulting in a lower plan percentage.
- ② Turning to the details of information technology investment, for the entire retail industry the investment accounted for as tangible fixed assets ranges from 20% to a little more than 30%, the amount accounted for in intangible fixed assets ranges between 20% and 30%, and the investments accounted for as leasing agreements or as expenses range from less than

⁴ The supplemental survey targeted 260 firms in the retail industry excluding companies with capital of ¥1.0 billion or greater, which are mainly companies such as automobile dealers, which are the subject of capital spending surveys of the bank. The survey asked the following questions concerning Internet sales (282 companies were covered by the survey on information technology investment).

Please circle the number of the appropriate response concerning your Internet sales.

(1) Now selling via the Internet (2) Plan to begin Internet sales in the future (3) Have no plans now or in the future

Please indicate how much of your information technology spending is investment related to Internet sales. Enter “0” (zero) if you have no such investment.

Fiscal 1999 actual investment ¥ _____ millions Fiscal 2000 planned investment ¥ _____ millions

40% up to 50% (of this amount, 49.6% of actual investment in Fiscal 1999 and 33.5% of planned investment in Fiscal 2000 is accounted for as lease agreements). Thus as a share of capital spending, the percentage of information technology investment accounted for as tangible fixed assets (= IT ratio) is low at 3.6% of real capital spending in Fiscal 1999 and 5.6% of planned capital spending in Fiscal 2000. For department stores and supermarkets, the share of real capital spending in Fiscal 1999 accounted for by leasing agreements was high (58.4% for department stores and 63.6% for supermarkets), a reflection of POS-related investment and the introduction of stocking and inventory control systems and terminals to handle debit cards. For planned information technology investment in Fiscal 2000, the percentage of spending to build in-house LAN and introduce software for product control, debit card systems and POS-related functions accounted for as intangible fixed assets is high (40.5% at department stores and 35.3% at supermarkets). At other retail stores, the percentage of planned information technology investment in Fiscal 2000 that will be accounted for as tangible fixed assets will exceed 40%, which is attributed to spending such as new installations of multi-media terminals to handle electronic commerce at convenience stores.

- ③ Comparing the percentage change for information technology investment and for capital spending excluding information technology investment (referred to below as “store investment”) for Fiscal 2000/Fiscal 1999, for the retail industry as a whole the growth rate for the latter category will exceed that of the former. Looked at by business, at department stores the squeeze on store investment will lead to a rise in investment in information technology. At supermarkets, store openings are front-loaded and store investment will increase broadly, while the investment in information technology will decline. Other retailers are planning to increase the growth rate of investment in information technology higher than the growth of store investment. So differences are appearing in the respective investment activities.
- ④ With regard to the current status of Internet sales, more than 30% of all retail industry companies that responded indicated they are “now selling via the Internet”, and this climbed to 57.3% when combined with the companies that indicated they “plan to begin Internet sales in the future”. More than 40% of the companies that responded indicated they “have no plans now or in the future” (including companies that are studying the issue now or answered unclearly). A high percentage of department stores responded they are “now selling via the Internet”, and this reached 78.7% when combined with the department stores that indicated they “plan to begin Internet sales in the future”. In contrast, the percentage of supermarkets that indicated they are “now selling via the Internet” was low, while the percentage of supermarkets that indicated they “have no plans now or in the future” was greater than 50%.
- ⑤ When we inquired about each company’s current Internet sales activities,
 - (1) At department stores, where the percentage of “now selling via the Internet” responses was high, the earliest companies started selling from around 1995 in ways that were reflexive in cases where they limited selling to just their own company’s original goods. In the current situation, however, Internet sales are minimal and are less than 0.1% of total sales and amounts only to practically handling New Year’s or the mid-summer gifts. Cases of companies that open stores in a virtual shopping center rather than build Internet sales at their own expense can also occasionally be seen, corroborating the reaction. This also includes cases of department stores that tried and then halted such sales at a number of stores from the standpoint of cost-effectiveness, because of having to regularly renew the information on the website.

- (2) At supermarkets, where the percentage responding “now selling via the Internet” was low, the time since the startup time is short and in many cases stores began experimentally using existing products or gift products, or stop at introducing local products without moving on to full-fledged development. We can also see cases where there is a broad difference in site access depending upon the products, where stores are working hard at website maintenance. As reasons the percentage of “have no plans now or in the future” responses was high, we can point to the difficulties of Internet sales activity arising from food supermarkets business characteristics, the initial lack of mail-order sales know-how, the difficulty of projecting profitability for Internet sales aimed at customers who do not come to a store, the lack of urgency even when studying the issue internally, and the fact that it is not a specific issue for study at the present time. In addition, there are also efforts to find an approach not as a company alone but for a group as a means of spreading the risk.
- (3) In addition to the above there are numerous cases where convenience stores, catalog mail-order companies, home centers, and consumer appliance and electronic mass merchandisers have just begun their efforts, and at this point in time evaluation of actual performance is difficult. If there are cases of companies grabbing a good lead by handling products such as books, CDs and DVDs, which come near to being Internet sales specialty industries, then among the consumer appliance and electronics mass merchandisers that entered the market comparatively early there are also cases where companies compete with their own stores even if they have inquiries from customers in areas where they have no stores, just as seen in the phenomenon of opening many stores all at one and seeing sales decline. As with supermarkets, we also can observe cases where companies will not “go it alone” but will tackle the issue in a group. In addition, a comparatively high number of companies in cooperatives and the restaurant industry responded “have no plans now or in the future”, including now studying Internet issues inside the company.
- ⑥ Investment related to Internet sales by the retail industry as a whole (referred to below as “direct sales”) will expand sharply by 11.7 times from ¥1.4 billion in Fiscal 1999 to a planned amount of ¥15.9 billion in Fiscal 2000. The percentage of investment in direct sales as a share of information technology investment is planned to increase from 2.3% of actual investment in Fiscal 1999 to 19.8% in Fiscal 2000. The main factor is full-fledged investment for direct sales by convenience stores. The percentage at other businesses will remain small.

Looking just at the results of the recent supplemental survey, efforts are being made to address information technology investment in the retail industry but we can find differences when we examine this activity by business. For Internet direct sales in particular, overall the retail industry is at the beginning stage and it is still too early at this point in time to make a decision regarding its success or failure.

With regard to the issues of whether the investment by the retail industry in information technology that we have confirmed here will increase industry growth prospects by improving forecasting accuracy for consumption demand or increasing productivity at companies that aggressively invest in information technology, whether Internet sales can bring greater store sales and have a multiplier effect, and especially whether the convenience stores that grew so rapidly in the past can again begin to take a path to growth by entering the Internet market, all will require the accumulation and investigation of more data and are topics to address in the future.

Supplemental Table 1 Actual and Planned Investment in Information Technology by the Retail Industry in Fiscal 1999 and Fiscal 2000

(1) 136 companies responding in Fiscal 1999 and Fiscal 2000 (Out of 282 companies; 48.2% response rate)

(Unit: Yen millions, %)

	Fiscal 1999 actual investment				Fiscal 2000 planned investment			
	Number of companies	Capital spending A	Information technology investment		Number of companies	Capital spending A	Information technology investment	
			B	B/A			B	B/A
Retail industry	136	441,957	78,834	17.8	136	568,713	94,086	16.5
Department stores	28	63,663	11,873	18.6	28	53,511	14,158	26.5
Supermarkets	36	210,895	19,133	9.1	36	296,297	15,114	5.1
Other	72	167,399	47,828	28.6	72	218,905	64,814	29.6

Note: Capital spending = Investment accounted for in tangible fixed assets – the purchase of land.

(2) Details of Information Technology Investment in Fiscal 1999 and Fiscal 2000

(Unit: Yen millions, %)

	Fiscal 1999 actual investment				Fiscal 2000 planned investment			
	B	Information technology investment			D	Information technology investment		
		Tangible fixed assets	Intangible fixed assets	Leased or expensed		Tangible fixed assets	Intangible fixed assets	Leased or expensed
Retail industry	78,834	15,737	18,846	44,251	94,086	31,620	26,474	35,992
Composition	100.0	20.0	23.9	56.1	100.0	33.6	28.1	38.3
(IT ratio)		(3.6)				(5.6)		
Department stores	11,873	788	2,629	8,456	14,158	979	5,733	7,446
Composition	100.0	6.6	22.1	71.2	100.0	6.9	40.5	52.6
(IT ratio)		(1.2)				(0.9)		
Supermarkets	19,133	2,208	3,291	13,634	15,114	2,799	5,329	6,986
Composition	100.0	11.5	17.2	71.3	100.0	18.5	35.3	46.2
(IT ratio)		(1.0)				(0.9)		
Other	47,828	12,741	12,926	22,161	64,814	27,842	15,412	21,560
Composition	100.0	26.6	27.0	46.3	100.0	43.0	23.8	33.3
(IT ratio)		(7.6)				(12.7)		

Note: Information technology (IT) ratio = The share of information technology investment accounted for as tangible fixed assets/capital spending * 100.

(3) Percentage Change in Information Technology Investment and the Trend in Capital Spending Excluding Information Technology Investment

(Unit: Y millions, %)

	2000/1999 percentage change				Capital spending excluding information technology investment			
	Total	Tangible fixed assets	Intangible fixed assets	Leased or expensed	Fiscal 1999 E	Fiscal 2000 F	2000/1999 Percentage change	B/E D/F
Retail industry	19.3	100.9	40.5	18.7	426,220	537,093	26.0	18.5 17.5
Department stores	19.2	24.2	118.1	11.9	62,875	52,532	16.5	18.9 27.0
Supermarkets	21.0	26.8	61.9	48.8	208,687	293,498	40.6	9.2 5.1
Other	35.5	118.5	19.2	2.7	154,658	191,063	23.5	30.9 33.9

Note: Capital spending excluding information technology investment = Capital spending – the information technology investment that is accounted for as intangible fixed assets

Supplemental Table 2 Current Status of Internet Sales and Actual and Planned Investment in Fiscal 1999 and Fiscal 2000

- (1) 157 Companies that Responded Concerning the Status of their Internet Sales (Out of 260 companies; 60.4% response rate)

(Unit: Companies, %)

	Number of companies	Number of companies			Component ratio		
		Have completed	Plan to invest	No plans	Have completed	Plan to invest	No plans
Retail industry	157	52	38	67	33.1	24.2	42.7
Department stores	33	18	8	7	54.5	24.2	21.2
Supermarkets	45	9	11	25	20.0	24.4	55.6
Other	79	25	19	35	31.6	24.1	44.3

Note: "Have no plans" also includes companies that are now studying or answered unclearly.

- (2) 112 Companies that Provided an Answer Concerning Information Technology Investment (Out of 260 companies; 43.1% response rate)

(Unit: Yen millions, %)

	Number of companies	Fiscal 1999 actual			Number of companies	Fiscal 2000 plan		
		Information technology investment G	Investment related to Internet sales			Information technology investment I	Investment related to Internet sales	
			H	H/G			K	K/I
Retail industry	112	59,846	1,352	2.3	112	80,241	15,862	19.8
Department stores	24	10,978	253	2.3	24	12,841	430	3.3
Supermarkets	29	14,283	23	0.2	29	11,329	195	1.7
Other	59	34,585	1,076	3.1	59	56,071	15,237	27.2

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