Chapter 1  Progress of globalization and trends in the macroeconomy

The progress of globalization and information technology (IT) in the economy is bringing about changes to macroeconomic mechanisms. Slipping inflation rates, weakened links between economic recoveries and job growth, productivity increases and growing imbalances in asset markets can be seen on a global scale. This chapter clarifies the microelements such as changes in company activities that have a certain influence upon these macro phenomena.

Section 1  Progress of globalization and changes in macroeconomic mechanisms

<Key points>

1. Progress of globalization and “the Great Moderation”

In parallel with the progress of globalization in the world economy, changes are also occurring in macroeconomic mechanisms, with the major developed countries simultaneously evincing a trend toward declining short-term volatility in gross domestic product (GDP) growth rates and disinflation called “the Great Moderation.”

Changes in the business environment contribute to disinflation trends to some extent, which is to say, both import growth and the increasing international business activities appear to be having an impact on price trends in some sectors.

2. Weakening link between economic cycle and job growth

Changes in the price-setting behavior of companies may be influencing the relationship between macroeconomic GDP fluctuations and job growth through corporate personnel strategies. Examination of the relationship between compensation of employees and operating surplus confirms that in the latest economic recoveries in Japan and the United States (US), companies have been constraining labor cost rises rather than expanding profit.

In both Japan and the US, it appears to be becoming increasingly difficult to link economic recovery to employment recovery, with more and more industries failing to experience job increases even in times of economic recovery.

1. Progress of globalization and “the Great Moderation”

(1) Progress of globalization with the expansion of market economies

We are currently witnessing the changes in macroeconomic mechanisms, and their start can be traced back to the end of the Cold War structure. With the unification of East and West Germany in 1990, the disintegration of the Soviet Union in 1991 and China’s advocacy of a transition to a socialist market economy in 1992, a series of socialist countries made transitions toward market economies. As a result,
the size of the global market economy expanded rapidly in the 1990s. Assuming that market economy blocs in 1990, before the end of the Cold War, consisted of the Organisation for Economic Co-operation and Development (OECD) member countries (24 countries at that time), Newly Industrializing Economies (NIEs), ASEAN4, and Central and South American countries such as Mexico and Brazil, these market economy blocs would then have had a total population of 1.57 billion people and a total nominal GDP of 18.8 trillion dollars. On the other hand, the population of these market economy blocs in 2001, with the addition of Russia, China, India and other socialist countries, grew 2.93 times to 4.59 billion people and their nominal GDP expanded 1.6 times to 29.4 trillion dollars.¹

This increase of the size of the market economy has spurred transnational global economic activities such as companies expanding their businesses in Eastern European countries and China, in order to reform their production system based on the division of labor and to have new sales hubs. Figure 1.1.1 indicates trends in global trade in goods (exports), service transactions and foreign direct investment over approximately the past 50 years, and you can see the extent to which globalization in the economy has progressed. Movements of people, goods and money across the borders continue to increase, affecting the modalities of corporate activities and competition.

![Figure 1.1.1 Trends in global trade in goods, services transactions and foreign direct investment](image)

Source: *IFS* (IMF).

¹ The countries in Central and South America are Mexico, Brazil, Argentina, Chile, Peru, Columbia and Venezuela. Mizuno (2003), p. 187-189.
(2) “The Great Moderation”

In parallel with the progress of globalization in the world economy, changes are also being observed in macroeconomic mechanisms. A trend toward declining short-term volatility in the GDP growth rates of the major industrial countries such as the G7 has been seen over the past several decades, and this in conjunction with disinflation\(^2\) is called “the Great Moderation.” This term comes from the past macroeconomic management policy aiming to control excessive changes in GDP and inflation volatility. This phenomenon was initially given attention as a change observed in the US economy, but in recent years, more people are of the view that it has spread to other major industrial countries.\(^3\)

In Stock and Watson (2003) the status of “the Great Moderation” is studied as shown in Figure 1.1.2. It reports changes in volatility of GDP growth rates with the standard deviation of the growth rate of real per capita GDP (quarterly) in the seven major industrialized countries in the two periods of 1960-1983 and 1984-2002. The standard deviation for the six countries of France, Germany, Italy, Japan, UK and US, over the period 1984-2002 is less than three-fourths what it had been during the earlier period 1960-1983, and the variance of the GDP growth rate fell to between 20 percent and 50 percent\(^4\). You can thus clearly see the declining volatility in quarterly GDP growth rates in G7 excluding Canada.

Figure 1.1.2 Changes in volatility of four-quarter growth of real GDP per capita in the G7, 1960-1983 and 1984-2002

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>2.3</td>
<td>2.2</td>
<td>0.96</td>
<td>0.91</td>
</tr>
<tr>
<td>France</td>
<td>1.8</td>
<td>1.4</td>
<td>0.71</td>
<td>0.51</td>
</tr>
<tr>
<td>Germany</td>
<td>2.5</td>
<td>1.5</td>
<td>0.60</td>
<td>0.36</td>
</tr>
<tr>
<td>Italy</td>
<td>3.0</td>
<td>1.3</td>
<td>0.43</td>
<td>0.19</td>
</tr>
<tr>
<td>Japan</td>
<td>3.7</td>
<td>2.2</td>
<td>0.59</td>
<td>0.35</td>
</tr>
<tr>
<td>UK</td>
<td>2.4</td>
<td>1.7</td>
<td>0.71</td>
<td>0.50</td>
</tr>
<tr>
<td>US</td>
<td>2.7</td>
<td>1.7</td>
<td>0.63</td>
<td>0.40</td>
</tr>
</tbody>
</table>

Notes: Entries in the first two columns are the standard deviations of the four-quarter growth in GDP over the indicated periods. The third column contains the ratio of the standard deviation in the second column to that in the first; the final column presents the square of this ratio, which is the ratio of the variances of four-quarter GDP growth in the two periods.


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\(^2\) The text follows *The White Paper on the World Economy 1999*, and disinflation is “a phenomenon in which the consumer price inflation rate decreases.”


\(^4\) Figure 1.1.2 uses the 1984 data of the volatility shift in the US (Kim and Nelson (1999); Ahmed, Levin and Wilson (2002)), due to the limit in paper space and the lack of sufficient research results. This data or the single-break model might not be appropriate for other countries, because macro economic volatility differs among the countries. However, we did not obtain any sufficient research results for the 6 countries beside the US.
Alongside the reduction in GDP volatility, a similar situation can be seen with inflation rates. Steady-moving low inflation rates have been seen in many countries and regions\(^5\) as shown in Figure 1.1.3, which reports the rates of change of consumer price indexes from 1971 to 2002. Inflation volatility was high from 1971 until around the mid-1980s, but following the mid-1980s, inflation rates for most countries declined to 10 percent. You can see that this moved to stay below five percent in and after 2000.

![Figure 1.1.3 Trends in consumer price index](image)

Why has “the Great Moderation” spread among industrial countries? This is discussed and analyzed in diverse ways, and many types of explanations are suggested for it. They are briefly introduced below and categorized into those related to macro phenomena and those related to micro structural changes. The general view is that none of these causes alone brought about “the Great Moderation,” but instead multiple causes together produced a trend of a new pattern of economic cycles.

(a) Macro phenomena

Some people see macro policy as the cause of “the Great Moderation.” They believe that the monetary policy management methods of industrial countries have improved and that due to successful monetary policy management, the inflation volatility and GDP volatility have been controlled. Others focus instead on “luck.” In other words, because there were no large-scale supply shocks after the mid-1980s, such as oil price shocks, large fluctuations in the macro economy did not occur.\(^6\)

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\(^5\) A strong correlation between output volatility and inflation volatility is pointed out (Blanchard and Simon (2000); Dalsgaard, Elmeskov and Park (2002); Stock and Watson (2003); Bernanke (2004)).

\(^6\) Besides oil price shocks, there are fiscal shocks such as tax increases, etc., productivity shocks, and other
(b) Micro structural changes

Some people see “the Great Moderation” as being caused by changes in micro market structures and the behavior of companies. For example, production management technology has improved due to IT and other factors, and this has made it possible to adjust production quickly in response to fluctuations in demand. As a result, companies are able to cut down on their inventory holdings, which has weakened the connection between inventory cycles and economic cycles. Another explanation is that various barriers in commodity markets and capital markets have been removed through deregulation, and this has resulted in an increased level of freedom for corporate activities, allowing companies to respond quickly to changes in economic environments. It goes without saying that one of the factors for an increase in the level of freedom for corporate activities is a decrease in the barriers between countries, namely economic globalization.

(3) Disinflation trends and competitive environments

As indicated above, it is generally understood that “the Great Moderation” was brought about by multiple causes. We would now like to consider the relationship between disinflation trends and changes in competitive environments.

In looking at the situation in Japan, two items which are included in Japan’s consumer price index items, imported goods and domestic goods which compete against imports, are placed together into one group as imported and import-competing goods (i.e., alcoholic beverages [beer, wine], electric equipment [room-air conditioners, refrigerators], clothing [suits, skirts, children’s clothing]). Changes in the price of these goods are compared with those of other goods in Figure 1.1.4.

Figure 1.1.4 Consumer prices of imported and import-competing goods and other goods

-4 -2 0 2 4 6
-4 -2 0 2 4 6
91 92 93 94 95 96 97 98 99 00 01 02 03 04
(year-on-year, %)

Notes:
1. Imported goods consist of items common to both the Import Price Index and the Consumer Price Index, and their substitutes consist of items considered to be substitutable for import products but not covered by the Import Price Index.
2. Goods covered here exclude petroleum products and agricultural & aquatic products.
3. Adjusted to exclude the effects of the tobacco tax increases in Dec. 1998 and Jul. 2003, and biscuits, prices of which were heavily affected by changes in monitored brands. Weight applies to all goods (excluding agricultural & aquatic products).
4. Adjusted to exclude the effects of the consumption tax hike on the assumption that prices of all taxable goods fully reflect the rise in the tax rate.

commodity price shocks (Stock and Watson (2002), p. 31-34). Rising tensions in the Middle East can have effects similar to oil shocks, and some are of the opinion that it is not necessarily the case that there were no external shocks (Bernenke (2004)).

8 Data for 1990 and after is shown, as that for the 1980s is not available.
According to the figure, the rate of change in the price of imported and import-competing goods was lower than that of other goods throughout almost the entire period from January 1991 to January 2004 excluding December 1997. It is possible to say that the imported and import-competing goods thus have the effect of pushing down the overall consumer price index, and they are one cause of the disinflation trend.

With the influx of low-priced imported goods into the Japanese market, domestic goods that compete with imported goods are faced with intense price competition. As a result, it appears that companies cannot mark up, or otherwise, they must cut prices.

Consumer prices are affected not only by imports, but also by the changes in the competitive environment, such as deregulation and the distribution revolution\(^9\)\(^,10\). In Figure 1.1.5, goods of the consumer price index (overall) are classified into goods influenced by deregulation, goods influenced by the distribution revolution, imported goods and domestic goods which compete with imports, and goods that overlap in these above categories. Figure 1.1.6 compares movements in the index of goods which are imported and import-competing goods and overlap with goods influenced by both deregulation and the distribution revolution (Figure 1.1.5, Category C) and goods which are imported and import-competing goods and do not overlap (Figure 1.1.5, Category D). The figure also shows the relationship between those two categories and the import volume index.

Figure 1.1.5 Breakdown of Japan's consumer price index

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Deregulated goods (excludes imported and import-competing goods)</td>
<td>12.7%</td>
</tr>
<tr>
<td></td>
<td>Examples: electricity bills, telephone bills, gasoline bills, etc.</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Distribution revolution goods (excludes imported and import-competing goods)</td>
<td>2.7%</td>
</tr>
<tr>
<td></td>
<td>Examples: development and printing bills, other expendable supplies (wraps, pesticides, etc.), detergents, etc.</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Deregulated or distribution revolution goods that are import-competing goods</td>
<td>7.8%</td>
</tr>
<tr>
<td></td>
<td>Examples: women's clothes, beer, boy's clothes, personal computers, etc.</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Imported and import-competing goods (excluding deregulated goods and distribution revolution goods)</td>
<td>8.5%</td>
</tr>
<tr>
<td></td>
<td>Examples: tobacco, handbags, imported automobiles, etc.</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Perishable foods</td>
<td>4.5%</td>
</tr>
<tr>
<td></td>
<td>Examples: fish and seafood, vegetables, fruits, etc.</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Other goods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Examples: rent (includes rent under the jurisdiction of private management, public management and for property in one's possession), general dining out, etc.</td>
<td>63.9%</td>
</tr>
<tr>
<td>Consumer prices (overall)</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>


\(^9\) The distribution revolution is, according to *Daijirin* (second edition), “a rapid change in the area of product distribution accompanying an expansion in production and consumption, which allows the large-scale distribution of products and reduced distribution costs. Also, the development of supermarkets, the exclusion of wholesale businesses and advancement of keiretsu, and the development of cold chain system (a low temperature distribution system, that is a mechanism for the distribution of fresh food products consistently stored at low temperatures with refrigerators or freezers from producers to consumers).”

\(^10\) Mizuno (2003), p.89-93.
Figure 1.1.6 shows that there was a significant drop in the price index for Category C between 1999 and 2001. Because an increase in the volume of imported goods runs parallel with this, it is possible to assume that the increase in imports had an effect on movements in the prices of items in Category C. The price index for items in Category D, on the other hand, remained almost flat. It thus appears that prices decreased in areas in which deregulation and the distribution revolution progressed in Japan (Category C). Of the goods in Category C, approximately three percent overlapped with deregulation items, and approximately 97 percent overlapped with distribution revolution goods. Looking only at the movement of goods not in competition with imported goods, which are influenced by deregulation or the distribution revolution (Figure 1.1.5, Categories A and B, respectively), Figure 1.1.7 shows a decreasing trend for these items, but the decrease is greater for Category C. As such, it appears that prices decline more sharply when imported goods are involved in deregulation and the distribution than when they are not.

In a specific example, apparel is included in Category C and clothing-related retail businesses carry out direct overseas production and re-import products. These businesses are then able to offer low-priced products in the market by adopting a business strategy of direct sales without dealing in the wholesale sector.

Clearly, trends in imports and international business activities affect price development in some sectors.
Taking a general look at the situation in the US, Figure 1.1.8 indicates the low movement of price increases of imported and import-competing goods compared with other goods. Imported and import-competing goods are putting downward pressure on the consumer price index (overall) in the US also.\textsuperscript{11}

\textbf{Figure 1.1.8}  Consumer prices of US imported and import-competing goods and other goods

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure1.1.8.png}
\caption{Consumer prices of US imported and import-competing goods and other goods.}
\end{figure}

\textbf{Note}: Based on the method of the Bank of Japan, the US Consumer Price Indexes were reclassified so that imported and import-competing goods collectively calculate both imported goods as well as domestic goods that are supposedly competitive with imported goods. Specifically, these goods are commonly cited in both the Import Price Index and the Consumer Price Index. Furthermore, the bulk of the percentage distribution (percentage distribution based on the amount of consumption expenditures) weighted towards import-competing goods on average total 37.5% in 1999 and 2000.


\textsuperscript{11} The case of the US is somewhat different from that of Japan. Structural reforms had already been carried out before the 1990s in the US, and we do not focus on goods related to structural reforms. The imported and import-competing goods in Figure 1.1.8 are imported goods or domestically-produced goods which are supposed to compete with imported goods. Based on the methods of the Bank of Japan, we collected the goods included in both the import price index and the consumer price index.
2. Weakening link between economic cycle and job growth

(1) Trends in compensation of employees and operating surplus

It has been observed that changes in micro competition environments have a certain degree of effect on price trends. The Survey of Price-Setting Behavior of Japanese Companies, which is a questionnaire survey carried out by the Bank of Japan in April-May 2000, shows that changes in competition environment influences the companies’ price setting behavior. Approximately 90 percent of companies gave the response “Competition in products has become more intense compared with around 1996-1997.” More than 60 percent of companies answered, “We have started to focus more on profit margin than securing market share,” and approximately 90 percent of companies said, “In order to meet a target, we will secure a profit margin by improving productivity further and reducing costs.”

![Figure 1.1.9 Changes in compensation of employees and operating surplus in Japan](image)

There is a possibility that these changes in the behavior of companies, through corporate personnel strategies, have an impact on the link between GDP and job growth. Firstly, focusing on the compensation for employees and operating surplus, Figure 1.1.9 shows changes in compensation for employees and operating surplus (four-quarter moving average) between the first quarter of 1990 and the third quarter of 2002. The three ellipses in the figure mark movements in compensation for employees and operating surplus during three quarters from a trough in the economy (beginning of a recovery). Looking at the movement of operating surplus from the fourth quarter of 1993 (the ellipse on the left),

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12 Reasons for intensified product competition in manufacturing industries include: (i) overall demand has fallen; (ii) purchasers are now more stringent in their selection of sellers; and (iii) the entry (share) of foreign companies (imported goods) has increased (these reasons are listed in descending order of the number of respondents).
the rate of decline narrowed for the most part, on the other hand, the rate of increase in compensation for employees fell. It means that the profits of companies moved further downward, but the rate of decrease improved, and also, that while compensation for employees increased, it shows the low increase rate. From the first quarter of 1999 (the ellipse in the middle) the rate of decrease in operating surplus narrowed and became slightly positive (0.08 percent) in the third quarter of 1999. During this time, the rate of decrease of compensation for employees also narrowed, and a situation in which operating surplus and compensation for employees moved in the same direction. Finally, looking at the period from the first quarter of 2002 (the ellipse on the right), operating surplus increased significantly, moving from -2.40 percent to 2.89 percent to 4.77 percent. The rate of compensation for employees, on the other hand, was negative, moving from -2.67 percent to -3.00 percent to -2.76 percent. Thus, a trend in recent years has been one in which compensation for employees does not increase, even if the operating surplus improves.13

A situation like this can be seen in the US as well. Figure 1.1.10 shows changes in the four-quarter moving average of the rate of changes in compensation for employees and operating surplus between the first quarter of 1990 and the second quarter of 2003. The ellipses in the figure show movements during three quarters from a trough in the economy (beginning of a recovery). Looking at the first quarter of 1991 (the ellipse on the left), both compensation for employees and operating surplus increased. The

13 The movement in compensation for employees is affected not only by the number of employees, but also by decreased wages. The rate of change in the total amount of salary in cash (annual average) in the Monthly Labour Survey (of business establishments with five people or more) was between 0.3 percent and 4.4 percent in 1991-1997 and between -2.9 percent and 0.1 percent in 1998-2003.
The growth rate of compensation for employees was higher than that for operating surplus with compensation for employees moving from 4.18 percent to 3.45 percent to 3.39 percent, and operating surplus moving from 1.12 percent to 0.53 percent to 0.88 percent. Looking at the period from the trough in the fourth quarter of 2001 (the ellipse on the right), the rate of increase of compensation for employees was low, moving from 1.56 percent to 1.23 percent to 1.26 percent, while the rate of operating surplus grew significantly, moving from 4.15 percent to 7.03 percent to 8.58 percent. As such, it can be confirmed that compared with the early 1990s, increases in labor costs were restrained compared with growth in the profits of companies in the most recent period of economic recovery.

(2) Changes in the relationship between economic cycles and job growth

It appears that changes in the behavior of companies, which can be inferred from the relationship between compensation for employees and operating surplus shown above, are bringing about changes in the relationship between GDP and job growth.

Figure 1.1.11 shows the relationship between economic cycles and increases and decreases in employment in Japan. The figure shows changes in the regular employment indices (trough=100) regarding two troughs in the 1980s (February 1983 and November 1986) and three troughs after 1990 (October 1993, January 1999 and January 2002). In the 1980s, employment either grew or stayed almost

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14 Data from the Monthly Labour Survey of business establishments is used with the aim of analyzing changes in the behavior of companies, in particular corporate personnel strategies including restructuring and new hiring.
flat during both periods of recession and periods of recovery, and it appears that employment increased regardless of economic cycles. After the trough in October 1993, employment increased during a period of recession and decreased during a period of recovery. In January 1999 and January 2002, employment decreased during periods of recession and continued to decrease during periods of recovery, and there was a downward trend in the regular employment index even beyond one year after the trough. As such, employment decreased independently of economic cycles after 1990, and it appears that there was a trend in which economic cycles were not connected easily with job growth structurally. There is also strong evidence of a trend in which the regular employment index curve shifts downward as the troughs of economic cycles become more recent.

Part of this change in the employment environment is attributed to structural reforms carried out through the 1990s, and there is a possibility that a different trend will arise in the future. The similar trend seen in the US shown below shows that it cannot necessarily be said that this phenomenon has been unique to the Japanese economy during approximately the past 10 years.

In the same manner, looking at changes in the nonfarm sector employment indices (trough=100) from troughs in the US economy, from the trough of November 1982 you can see that employment increased immediately. During the period with the trough in November 1991, however, employment did not increase, even in a period of recovery (Fig. 1.1.12). The economic recovery at that time is described as being “a Jobless Recovery” because employment did not increase for approximately one year after the trough in the economy. In the period of recovery, with November 2001 as the trough in the economy, the non-farm sector employment index did not rise above its level at that time, even 28 months after the trough. Although statistical data shows improvements in the employment environment in recent months, there appears to be evidence, as with Japan, of changes in the relationship between economic cycles and job growth.

15 There are two types of employment statistics in the US: “Current Employment Statistics (CES) surveys” and “Current Population surveys (CPS).” This paper uses the former, while some people are of the opinion that the CPS is more reliable than the CES surveys, because those: (i) do not include self-employed workers, meaning that the number of people who have become self-employed after being unemployed cannot be counted; and (ii) cannot completely capture increases in employment accompanying the establishment of new businesses during periods of economic recovery. In fact, the number of persons employed has been decreasing according to the CES surveys in recent years, and conversely, the number is said to be increasing according to the CPS. However, the UFJ Institute (2003) found that the difference between the total employment from the CES surveys in recent years, and conversely, the number is said to be increasing according to the CPS surveys and that from the CPS is not that substantial, after estimating the employment number from the CPS under the same concepts as the CES surveys. For example, when including the effects of the establishment of new businesses in the CES surveys, the number of persons employed did not increase by very much.

16 Concerning employment statistics, this paper uses the Japanese Monthly Labour Survey (of business establishments with 30 people or more) and the US Current Employment Statistics (CES) surveys (of nonfarm sector employees). In the Monthly Labour Survey the employees are those employed by business establishments and paid a salary (excluding seamen stipulated in the Seaman Law) that either: (i) are hired for an indefinite period or for longer than one month; or (ii) are hired by the day or for less than one month and who were hired for 18 days or more in each of the two preceding months. Data for business establishments with 30 people or more was used (approximately 16,700 business establishments). The workers in the CES
Figure 1.1.12 Payroll job growth during recoveries in the US
(non-agricultural sector)

Notes:
1. Employees in the non-agricultural sector include part-time workers, who work for 35 hours or less per week.
2. Months “0” indicates a trough in the economic cycle.

Figures 1.1.13 through 1.1.20 show a comparative analysis by industry regarding the relationship between economic cycles and employment in Japan and the US, with reference to the methods of the Federal Reserve Bank of New York. Periods of recession and periods of recovery in the 1980s and 2000s are set as shown in Figure 1.1.21, based on the economic cycle turning points announced by the Cabinet Office in Japan and the National Bureau of Economic Research (NBER) in the US. Figures 1.1.13 through 1.1.20 show the job growth rate during those time periods set in Figure 1.1.21.\textsuperscript{17} The sizes of the circles show the number of persons employed at the start of the period of recession, and the patterns of the circles indicate differences in production amount in corresponding industries.

Industries placed in the first quadrant gain their jobs structurally, for which employment increases during both periods of economic recovery and periods of recession. Industries placed in the second quadrant gain and lose their jobs procyclically, for which employment increases during periods of economic recovery and decreases during periods of recession. Industries placed in the third quadrant loss their jobs structurally, for which employment decreases during both periods of recovery and periods of economic recession. Finally, industries placed in the fourth quadrant adjust their jobs countercyclically, for which employment moves counter to movements in the economy.

surveys are people hired for fixed periods of time at nonagricultural business establishments (including temporary employees). Approximately 400,000 business establishments were surveyed.
\textsuperscript{17} Regarding the periods of recovery in Figure 1.1.21, we did not use the economic cycle turning points announced by the Cabinet Office and NBER. Instead, the periods of recovery in the 2000s are set from most recent troughs to points in time in which statistical data are available (February 2004 for Japan and March 2004 for the US). The periods of recovery in the 1980s are set to be the same length as the periods of recovery in the 2000s.
Figure 1.1.13 Job adjustments by industries during the recession and recovery of the 1980s in Japan (manufacturing)

Notes:
2. For establishments with 30 employees or more. The size of the circle indicates the number of employees during the economic peak.
3. The pattern of circles indicates the share of GDP by industry for the year including the economic peak. Black - 10% or higher, grey - over 6% and below 10%, grid pattern - over 2% and below 6%, vertical lines pattern - over 1% and below 2%, intersections - over 0.5% and below 1%, and white - below 0.5%.

Figure 1.1.14 Job adjustments by industries during the recession and recovery of the 2000s in Japan (manufacturing)

Notes:
2. For establishments with 30 employees or more. The size of the circle indicates the number of employees during the economic peak.
3. The pattern of circles indicates the share of GDP by industry for the year including the economic peak. Black - 10% or higher, grey - over 6% and below 10%, grid pattern - over 2% and below 6%, vertical lines pattern - over 1% and below 2%, intersections - over 0.5% and below 1%, and white - below 0.5%.
Figure 1.1.15 Job adjustments by industries during recession and recovery of the 1980s in the US (manufacturing)

Notes:
2. The size of the circle indicates the number of employees during the economic peak.
3. The pattern of circles indicates the share of GDP by industry for the year including the economic peak. Black - 10% or higher, grey - over 6% and below 10%, grid pattern - over 2% and below 6%, vertical lines pattern - over 1% and below 2%, intersections - over 0.5% and below 1%, and white - below 0.5%.

Figure 1.1.16 Job adjustments by industries during the recession and recovery of the 2000s in the US (manufacturing)

Notes:
2. The size of the circle indicates the number of employees during the economic peak.
3. The pattern of circles indicates the share of GDP by industry for the year including the economic peak. Black - 10% or higher, grey - over 6% and below 10%, grid pattern - over 2% and below 6%, vertical lines pattern - over 1% and below 2%, intersections - over 0.5% and below 1%, and white - below 0.5%.
Figure 1.1.17  Job adjustments by industries during the recession and recovery of the 1980s in Japan (non-manufacturing)

Electricity, gas, heat and water supply industry
Transportation and communications industry
Wholesale and retail industry
Service industry
Real estate industry

Notes:
2. For establishments with 30 employees or more. The size of the circle indicates the number of employees during the economic peak.
3. The pattern of circles indicates the share of GDP by industry for the year including the economic peak. Black - 10% or higher, grey - over 6% and below 10%, grid pattern - over 2% and below 6%, vertical lines pattern - over 1% and below 2%, intersections - over 0.5% and below 1%, and white - below 0.5%.

Figure 1.1.18  Job adjustments by industries during the recession and recovery of the 2000s in Japan (non-manufacturing)

Electricity, gas, heat and water supply industry
Transportation and communications industry
Wholesale and retail industry
Service industry
Real estate industry

Notes:
2. For establishments with 30 employees or more. The size of the circle indicates the number of employees during the economic peak.
3. The pattern of circles indicates the share of GDP by industry for the year including the economic peak. Black - 10% or higher, grey - over 6% and below 10%, grid pattern - over 2% and below 6%, vertical lines pattern - over 1% and below 2%, intersections - over 0.5% and below 1%, and white - below 0.5%.
Figure 1.1.19  Job adjustments by industries during the recession and recovery of the 1980s in the US (non-manufacturing)

Wholesale industry  Retail industry  Transportation industry  Utilities  Communications industry  Service industry  Finance industry  Insurance industry  Real estate industry

Notes:
1. Period of recession is from Jul. 1981 (peak) to Nov. 1982 (trough); period of recovery is from Nov. 1982 (trough) to Mar. 1985.
2. The size of the circle indicates the number of employees during the economic peak.
3. The pattern of circles indicates the share of GDP by industry for the year including the economic peak. Black - 10% or higher, grey - over 6% and below 10%, grid pattern - over 2% and below 6%, vertical lines pattern - over 1% and below 2%, intersections - over 0.5% and below 1%, and white - below 0.5%.

Figure 1.1.20  Job adjustments by industries during the recession and recovery of the 2000s in the US (non-manufacturing)

Wholesale industry  Retail industry  Transportation and warehousing industry  Utilities  Communications industry  Service industry  Finance and insurance industry  Real estate industry  Retail industry

Notes:
1. Period of recession is from Mar. 2001 (peak) to Nov. 2001 (trough); period of recovery is from Nov. 2001 (trough) to Mar. 2004.
2. The size of the circle indicates the number of employees during the economic peak.
3. The pattern of circles indicates the share of GDP by industry for the year including the economic peak. Black - 10% or higher, grey - over 6% and below 10%, grid pattern - over 2% and below 6%, vertical lines pattern - over 1% and below 2%, intersections - over 0.5% and below 1%, and white - below 0.5%.
Looking at Figures 1.1.13 through 1.1.16, which show employment trends in manufacturing industries, many manufacturing industries, for which employment is placed in the structural gain or procyclical flow quadrants in the 1980s, moved to the structural loss quadrant in and after 2000. This lack of increases in employment during periods of economic recovery in recent years appears to be common to Japan and the US. It appears that restructuring in the manufacturing industries of both Japan and the US is progressing and jobs are not easily being created even during periods of economic recovery.

Meanwhile, looking at Figures 1.1.17 through 1.1.20, which show employment trends in nonmanufacturing industries, trends in service industries in Japan and the US are somewhat different. The retail and wholesale industry in Japan is placed in the quadrant of “the structural gains” in the 1980s, but it is placed in “the structural losses” in recent years. The retail industry in the US in the 1980s is placed in “the structural gains” and the wholesale industry is placed in “the procyclical flows”, and in recent years these are placed in “the countercyclical flows” and “the structural losses”, respectively. Service industries such as the restaurant and hotel industry, the medicine and welfare industry, and the education and learning assistance industry in Japan are placed in “the structural gains” in the 1980s and 2000s. The rate of increase in employment of the abovementioned service industries in the US is less than that in Japan, and even though they are placed in “the structural gains,” the rate of change is close to zero. One possible factor behind this is that in the US, adjustments were being carried out to counter the extremely large growth in employment in service industries in the 1990s (Fig. 1.1.22). Regarding employment trends in service industries, some people also point to the effect of the outsourcing of professional and business services overseas (“offshore outsourcing”). The section 2 looks at trends in offshore outsourcing in Japan and the US.

<table>
<thead>
<tr>
<th>Years</th>
<th>Recession period</th>
<th>Recovery period</th>
</tr>
</thead>
</table>

Figure 1.1.21 Recession and recovery periods of the economy

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>US</th>
</tr>
</thead>
</table>

Figure 1.1.22 Changes in the number of employees in the services industry in Japan and the US

<table>
<thead>
<tr>
<th>Years</th>
<th>Japan</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990 - 2000</td>
<td>23.9%</td>
<td>37.9%</td>
</tr>
</tbody>
</table>


(3) Differences in job growth according to business category and business model

As shown above, looking at the overall economy, industries for which employment decreases even during periods of economic recovery (structural losses), are increasing. Focusing on the situation by company, business category and business model, however, there are differences in trends in employment.
First, regarding the retail and wholesale industry in Japan, the industry as a whole is placed in “the structural losses” in and after 2000 (Fig. 1.1.18). Figure 1.1.23 indicates employment trends for convenience stores, department stores and general supermarkets within the retail industry, and the number of employees in the business category of convenience stores increased in particular, compared with the other two business categories. Figure 1.1.24 compares the number of employees in these business categories between 1999 and 2002, excluding part-time and temporary workers, in order to see if this trend is not limited to part-time or temporary workers. According to this figure, the number of employees at department stores and general supermarkets decreased, while at convenience stores, the number increased by approximately 1.5 percent, thus showing that there is significant difference in employment trends among these business categories even when part-time and temporary workers are excluded.

Note: There are gaps in the data for 1997-1999 due to supplements for targeted surveys.
Source: Census of Commerce (Ministry of Economy, Trade and Industry).

Figure 1.1.23 Trends in the number of employees in department stores, general supermarkets and convenience stores

Figure 1.1.24 Changes in the number of employees in department stores, general supermarkets and convenience stores, excluding part-time and temporary workers, etc.

Notes:
1. The number of employees represents the total number of sole proprietors and unpaid household workers, paid officials and regular employees. Furthermore, the number of regular employees can be divided into "full-time workers" and "part-time or temporary workers."
2. Sole proprietors and unpaid household workers are comprised of owners of privately-managed businesses who engage in the actual work at the workplace, and family members of sole proprietors, who receive no wages or salaries and who regularly provide assistance at the workplace.
3. Paid officials represent executive officials of corporations and bodies regardless of whether in full- or part-time positions and who receive a salary.
4. Regular employees are those who are called "full-time workers" and "part-time or temporary workers," and fall under one of the following categories: a) those who are employed for an indefinite length of time; b) those who are employed for a period of at least one month; or c) those who are employed who do not fall under categories a) or b) and who were employed for over 18 days during the month of the survey period.
Source: Census of Commerce (Ministry of Economy, Trade and Industry).
In addition to business categories, it appears that differences in the business models of individual companies also have an effect on employment trends. Though there are few statistics that look at the relationship between business models and employment trends, here we will introduce the results of “the Report on the 2003 Corporate Governance Index Survey” carried out by the Japan Corporate Governance Research Institute (JCGR), which studies the relationship between the level of the corporate governance and employment trends. (The results of this survey are covered in detail in Chapter 2, Section 1.)

In the report, the corporate governance of companies is given an index called the JCGIndex, setting as standard an administrative organization of separation between governance by the board of directors and management by senior executives. Although the report is not statistically significant (significance level18: 10 percent), it shows that companies with a higher JCGIndex have larger increases in the number of employees compared with companies with a low JCGIndex (Fig. 1.1.25). Actually, it is not so easy to understand the relationship between business category and business model and employment trends through the statistics that are currently available. As will be discussed in Chapter 2, clarifying individual companies’ placement of human capital in raising value creation capacity will be the first step in carrying out these types of evaluations.

Figure 1.1.25 Increases in the number of employees (average of past three years)

Note: Companies to participate in the survey: 181 companies; companies with a high JCGIndex: 28 companies; companies with a low JCGIndex: 22 companies. The increase in the number of employees for companies with a high JCGIndex is greater than that for companies with a low JCGIndex; however, the difference is not statistically-significant (significance level: 10%).

Source: Japan Corporate Governance Research Institute, Inc. (JCGR) (2003).

18 Significance level is the standard level that determines whether a null hypothesis can be rejected, when carrying out statistical hypothesis testing. A null hypothesis is devised to determine whether original hypothesis is valid. Testing with a significance level of 10 percent means that even if a null hypothesis is valid, there is a 10-percent risk that the null hypothesis is rejected by error. This means, whenever carrying out surveys and testing, there is a 10 percent-risk that the conclusions could be incorrect.