Development Bank of Japan
Research Report
No. 48

Recent Trends in the Japanese Economy: Medium-term Outlook of Japanese Industrial Structure

January 2005

Economic and Industrial Research Department
Development Bank of Japan

This report was originally published in Japanese as *Chosa* No. 72 in December 2004.

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This report is based on statistical data published by October 21, 2004.

Recent Trends in the Japanese Economy: Medium-term Outlook of Japanese Industrial Structure

Summary

I. World – The world's major economies continue to recover, led by the U.S. and Asia.

The U.S. economy continues to expand. Growth in personal consumption is now slowing after serving as the engine of economic growth, as the effect of tax reductions wanes. Instead, economic expansion is being driven by business investment, which remains particularly strong in information technology. Production is increasing, led by equipment. The employment situation is also continuing to improve. Against this backdrop, the Federal Fund rate has been raised three times since June 2004. However, the number in work is increasing less quickly, exerting downward pressure on long-term interest rates and share prices. Although the influence of higher crude oil prices is now being felt, core prices remain stable. Looking ahead, attention will be focused on the policy of the new administration, crude oil prices and the huge current account deficit.

European economies are recovering gradually. The French and U.K. economies are growing strongly, fueled by domestic demand. Although the German economy is recovering gently on the back of exports, consumption continues to slump as unemployment remains high. Official interest rates remain low in the euro zone.

The major Asian economies are still growing rapidly, driven by exports. Consumption in Korea is finally picking up after the prolonged slump caused by sluggish growth of income and widespread defaults on personal loans. In finance, the central banks of Taiwan and Singapore have shifted toward tighter monetary policy.

While the effect of cooling measures remains to be seen, strong growth continues in China, led by fixed asset investment and private consumption. The share of inland provinces in fixed asset investment is rising. Although the tighter monetary policy is having an impact on the money stock, prices are rising mainly for raw materials and food.

China, with its rapid increase in oil demand, is making its presence felt in the world oil market, which is reportedly one of the causes of rising crude oil prices. This powerful oil demand of China may not only constrain future economic growth in China but also have a significant impact on global supply and demand, given that per capita income, and hence energy consumption, is still considerably lower in China than in developed countries, and that the country has huge potential for economic growth due to the sheer size of its population.

II. Japan – The Japanese economy continues to recover as improvements in the corporate sector begin to spill over to the household sector by easing the employment situation. Although the future of the Japanese economy closely depends on the course of crude oil prices and the world economy as a whole, the steady recovery looks set to continue for some time thanks to the positive spillover effect described above.

On the supply side, production is picking up. Inventories are still in the buildup phase and remain low overall. For some products such as electronic devices, however, supply and demand movements in the months ahead need monitoring as inventories show signs of piling up. Activity in the tertiary industry is slightly higher. Employment continues to be cut back in manufacturing, but the unemployment rate has been declining mainly in services, in which larger businesses are leading the recovery in the number of employees. The income situation is almost unchanged.

On the demand side, consumption is rising slightly as consumer confidence improves in line with the employment situation. Business investment is increasing in both manufacturing and non-manufacturing, attesting to the broadening scope of the recovery. Leading indicators also point to strong business investment for some time to come, particularly in manufacturing.

Residential investment remains flat, while public investment has declined constantly. The current account surplus has leveled off as exports slow down after leading the economic recovery. In recent years, the correlation between exports and domestic production has been strengthening as trade dependency grows again, thus implying the growing influence of trading partners' economic conditions on the Japanese economy.

Prices of corporate goods (domestic demand products) are rising mainly for energy and materials, while consumer prices are still declining somewhat as downward pressure continues from industrial products. A weakening of the linkage between the two price indicators has been observed in recent years.

Looking at the financial side, the monetary base is high as the Bank of Japan maintains its quantitative easing policy, but the money stock continues to grow slowly. The velocity of circulation of money is bottoming out. The decline in outstanding private bank loans has eased recently.

III. Medium-term outlook of the Japanese industrial structure

(1) Issues: This report analyses structural changes underway in Japan, such as reduced labor supply, changing consumption structure and the shift to the service economy and globalization of industrial structure. Also taking into consideration the changing structure of intermediate input, the analysis presents projections for the medium-term industrial and employment structures as a baseline scenario.

(2) Change in industrial structure since the 1980s: As is the case with other developed countries, the focus of the Japanese industrial structure has shifted toward the tertiary industries including services, in terms of output, value added and the number of workers. The growth of the service sector is largely attributable to the changing structure of intermediate inputs including the advancement of outsourcing.

Although many industries contributed to economic growth in the 1980s, the driving force of the Japanese economy has become concentrated since the 1990s on specific industries including services and electrical machinery. Indeed, the service sector has almost single-handedly contributed to employment growth since the 1990s. A look at GDP growth by component reveals that the manufacturing sector has relied on the rise in total factor productivity while the tertiary industries have maintained growth by injecting more capital and labor. Since the expected decrease in the workforce will necessarily limit the factor-input growth as seen in the tertiary industries, improving productivity will become a prerequisite for growth.

(3) Change in consumption structure: The consumption structure also reflects the shift toward the service economy, as 90% of household consumption is now allocated to the non-manufacturing sector. Consumption-induced production has been accelerating, which means that the shift of consumption toward services boosts non-manufacturing production. Moreover, population aging will drive service consumption through increased spending on healthcare, culture and recreation.

(4) Potential growth rates to 2020: Based on official projections, the number of workers will fall by 4 million by 2020. Business investment generally moves in parallel with the total savings ratio which will decline gradually as a decline is expected in the household sector as aging progresses. Assuming such trends in labor and capital as well as a similar pace of technological progress, and using growth accounting, the annual potential growth rate will decline to about 1.5% on average by 2010, and to 1.0% by 2020.

(5) Projected industrial and employment structures in 2020: An input-output table may be estimated by assuming the expected potential GDP growth rate, the change in consumption structure due to falling birth rate and aging, and the changing structure of intermediate inputs due to globalization and the trend toward the service economy. Based on this input-output table, average annual growth of gross real output will decline gradually to 1.7% by 2010, and to

1.3% by 2020. The relatively strong growth of the non-manufacturing sector indicates that the industrial structure will continue to move toward the service economy.

Based on estimations of real output in each industry and the trend of labor productivity growth, it is calculated that demand for labor will decline by about 4 million persons from 2000 to 2020 in the manufacturing sector as a whole, which will be partially offset by an increase of some 2 million in the non- manufacturing sector, particularly in services. On balance, this means a net decrease of some 2 million workers in all industries. The employment structure will also shift toward the service economy as the share of the tertiary industries is expected to increase from 66% to 78%.

Meanwhile, as mentioned earlier, labor supply will decline by about 4 million people over the same period. Thus, a labor shortage of over 2 million workers is expected as of 2020. Effective countermeasures are needed, such as improving productivity in services and other job-creating industries, raising the rate of participation in the labor force particularly among women, and closing various gaps in labor supply and demand.

(As of October 27, 2004)

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I World Economy: Expansion Continues

1. U.S. (1): Personal Consumption Slows, Business Investment Grows (see p. 25 for Figures)

The U.S. economy continues to expand. Real GDP in April-June 2003 (final estimate) grew 3.3% on the previous quarter (Figure 1-1), the 11th consecutive quarter-on-quarter increase.

Consumer confidence is improving slightly on the back of the brighter employment situation and increased income. However, the growth of personal consumption has been slowing (Figure 1-2). Regarding disposable income (Figure 1-3), gross income is increasing but the positive effect of tax reductions is fading. Future developments will largely depend on the effect of soaring crude oil prices on personal consumption and possible changes in policy after the presidential election including tax hike.

The strong growth of corporate profits, which was observed throughout 2003, has been slowing since January-March 2004 largely due to rising raw material prices (Figure 1-4). Higher corporate profits, however, have boosted business investment since April-June 2003, particularly in information technology.

2. U.S. (2): Recovery in Production and Employment, Weak Share Prices and Interest Rates (see p. 26 for Figures)

Industrial production has been rising gradually since July-September 2003 and has regained the peak of 2000 (Figure 1-5). However, inventories and shipments are both up over a year earlier, so the inventory cycle seems to be at a mature stage. By category of goods, equipment production has been stronger than consumer goods production, reflecting the current demand situation of slower consumption and buoyant business investment. In parallel with the increase in production, capacity utilization in the manufacturing sector has risen slightly, although the level remains low[1].

The employment situation continues to improve. The number of employees has been increasing, led by services (Figure 1-6). Employment recorded monthly increases of over 200,000 for three consecutive months from March to May 2004, leading to the change in monetary policy since June. However, the average monthly increase in employment has fallen below 100,000 since June, and the implied vulnerability of the economic recovery has depressed share prices and long-term interest rates. Employment has declined gradually to the mid-5% range.

In trade, imports continue to grow strongly, reflecting the buoyant domestic economy as compared with other countries. Combined with soaring crude oil prices, this has widened the trade deficit. Since the service balance surplus has remained flat, the current account deficit has also increased (Figure 1-7). As a percentage of nominal GDP, the current account deficit rose to a record high of 5.7% in April-June 2004. Along with the increasing budget deficit, the dollar could plunge.

As regards prices, the producer price index (PPI) and the consumer price index (CPI) both rose faster over the previous year following the hike in raw material prices including crude oil (Figure 1-8). However, the ripple effect of expensive crude oil on overall prices has been limited so far, as the core index – excluding energy and food – remains relatively stable.

In finance (Figures 1-9 and 1-10), the Dow Jones Industrial Average has hovered around 10,000 as share prices are influenced by various factors such as the state of the domestic economy including the employment recovery, rising tensions in the Middle East and the surge in crude oil prices. In view of the rise in the number of employees, the FRB raised the Federal Fund target rate in June, August and September 2004 by 0.25% each time to correct its excessive monetary easing policy. Thus, the target rate was raised by 0.75% in total to 1.75%, and many expect the rate to exceed 2% by the end of the year. However, long-term interest rates (distribution rates of 10-year U.S. bonds) have already taken

[1] The level of capacity utilization might not be accurate as some consider that production capacity is overestimated particularly for information-related equipment (i.e. capacity utilization rate may be biased downward).

these factors into account and are starting to come down due to concerns about the sustainability of the booming economy.

3. European Economies: Recovery Underway (see p. 27 for Figures)

The euro zone economies are recovering slowly. The real GDP of the EU25 grew 2.3% (annualized quarter-on-quarter growth in April-June 2004, the same applies to all GDP growth data in this section), the fourth consecutive quarter of increase (Figure 1-11).

Looking at the economies of major European countries, the recovery extends across the board, led by exports in Germany, and by domestic demand in France and the U.K.

The German economy is picking up. Real GDP growth stands at 1.9%, the fourth consecutive quarter of positive growth, led by strong exports as the appreciation of the euro has paused. The greatest concern about the economic recovery is private consumption, which remains weak due to persistently high unemployment (Figure 1-12 (1)).

Recovery has been stronger in the French economy with real GDP growing by 2.8%. Although net exports continue to decline, increases in private consumption and fixed asset formation are contributing to the economic recovery (Figure 1-12 (2)).

The U.K. economy also remains strong, with real GDP growing by as much as 3.6%. Domestic demand continues to drive the economic growth as private consumption is still on the rise, backed by the stable, low unemployment rate (Figure 1-12 (3)).

Although the euro remains high against the dollar due to the weakening dollar, the effective exchange rate has been stable since mid last year (Figure 1-13).

However, the employment situation in Germany and France has not improved, with unemployment at over 9% (according to the ILO standard). Indeed, unemployment has become a major issue particularly in Germany. In the U.K., on the other hand, employment has been supporting domestic demand, as the unemployment rate remains steady at around 4% (Figure 1-14).

Prices in the euro zone are stable and rising by just over 2% despite the rise in primary commodity prices as the currency remains strong (Figure 1-15). This has kept the official interest rate at around 2%, although price inflation has exceeded the reference value of the European Central Bank (up 2% from the previous year). In the U.K., however, the Bank of England raised the official interest rate by 0.25% in June and again in August 2004, as concerns mounted about possible inflation due to rising house prices and wages, bringing the official rate to 4.75%.

4. Economies of Major Asian Countries (Korea, Taiwan and Singapore): Rapid Growth Led by Exports, Slumping Consumption in Korea (see p. 28 for Figures)

The major Asian economies have grown rapidly since the latter half of 2003, led by booming exports. Domestic demand is being boosted by consumption and fixed capital formation in Taiwan and Singapore, which contrasts sharply with slumping consumption in Korea. Although prices are generally rising due to higher crude oil prices, differences in the scope of economic growth in individual countries have led to differences in stance of monetary policy. The following segment describes the situation in each economy.

In Korea, booming exports and fixed capital formation contributed to the growth of 5.5% in April-June 2004, despite slumping consumption (Figure 1-16). Major export items include semiconductors, mobile communication equipment and automobiles. Exports remain strong to major destinations including China, the EU and the U.S. Fixed capital formation was led by construction investment in January-March, and by business investment in April-June. Consumption has slumped since April-June 2003, mainly due to the sluggish growth of income and the surge in credit card defaults. Real wage growth, which has slowed since 2003, is starting to pick up (Figure 1-18). Credit card defaults remain high despite falling in May 2004. Prices stabilized in April-June 2003, only to rise sharply by 4.4% in July 2004, largely due to oil prices (Figure 1-19). Despite concerns about inflation pressure, the Bank of Korea eased monetary policy further, lowering the overnight call rate by 0.5% in Au-

gust to 3.5%, in view of sluggish consumption and slowing exports in the latter half of the fiscal year.

Rapid economic growth continues in Taiwan (Figure 1-16), fueled by domestic demand including consumption and fixed capital formation. The strong fixed capital formation is largely due to the construction of LC panel plants. The deflationary trend stopped and prices started to rise again in January-March 2004. With the expectation of strong growth in the months ahead and rising inflation due to oil prices, the Central Bank of China (Taiwan) raised the official discount rate by 0.25% in October.

Likewise, Singapore's economy continued its rapid growth in April-June 2004 led by domestic demand (Figure 1-16). Out of inflation worries, the central bank (MAS) is maintaining its tight monetary policy adopted in April to mitigate the slight appreciation of the Singapore dollar.

5. China (1): Mild Slowdown in Investment (see p. 29 for Figures)

Real GDP grew 9.8% in April-June 2004, far exceeding for the second consecutive quarter the annual target of 7% announced at the National People's Congress in March[2] (Figure 1-21). Rising fixed asset investment has helped sustain this powerful growth.

The growth of fixed asset investment in April-June declined slightly from the previous quarter but still increased by as much as 31.0% on the previous year (Figure 1-22). The composition of fixed asset investment in April-June shows a respite in iron/steel, chemical and other industrial facility investment, which made a positive contribution in the previous quarter. Instead, infrastructure investment including real estate, electricity, gas & water and transportation has grown strongly. By region, investment growth is faster in the central and western provinces than in the eastern provinces (coastal area), reflecting the growing importance of inland areas (Figure 1-23).

Consumption increased substantially on the previous year in April-June on the back of strong personal spending on IT equipment and in reaction to last year's sluggish consumption due to SARS (Figure 1-24). The growth of money stock has fallen steeply since April, when the government ordered financial institutions to curb lending. Growth now stands at 13.6% as of August 2004. Meanwhile, food prices have been rising as agricultural production stagnated due to bad weather and the reduction in area under cultivation. Thus, consumer prices in August rose 5.3% for a second consecutive month. Raw material prices also attest to this inflationary trend, recording double-digit increases on the previous year due to the rise in steel and other industrial material prices, as well as to surging crude oil prices on the world market (Figure 1-25).

As regards external trade, imports exceeded exports in January-March as the government adopted the policy of curtailing exports and promoting imports to avoid trade friction. However, the trade surplus returned in April-June, largely due to the increase in electrical machinery exports (Figure 1-26).

6. China (2): Oil Consumption and Imports on the Rise (see p. 30 for Figures)

China's demand for energy has come to affect the world economy, and some argue that energy constraints may hinder China's economic growth in future. This section analyzes the current energy situation of China, with specific focus on oil.

Oil consumption in China is increasing each year, accounting for an ever-larger global share. Compared with Japan's, that of China rose from less than half in 1990 to over 100% in 2002, reaching 110% in 2003. Accordingly, China's share of world oil consumption more than doubled from 3.4% in 1990 to 7.7% in 2003 (Figure 1-27).

China became a net importer of oil (crude oil and oil products) in 1993. As consumption increased, China's share of world oil imports rose gradually, reaching 5.7% in 2003. The Chinese government is seeking to diversify its sources of oil supply, which now include the Middle East, Asia, Africa and the former Soviet

[2] In its most recent announcement, the National Bureau of Statistics of China revised upward its GDP growth estimate for April-June 2003 from 6.7% to 7.9%.

Union (Figure 1-28).

Oil represented only 23.4% of total energy consumption in China in 2002, with coal accounting for almost two thirds (66.1%). Some point out the low efficiency of power generation, which mostly relies on thermal plants using coal. The rate of energy consumption still far exceeds that of the U.S. and Japan, although it has declined constantly since 1990 (Figure 1-29).

In terms of per capita energy consumption, the U.S. and Japan exceed China by a factor of over eight and four respectively. Taking account of its population and growth potential, China's energy and oil consumption is expected to rise substantially in future years (Figure 1-30). In order to meet the increase in energy demand, the Chinese government is actively diversifying energy sources through such measures as the construction of natural gas pipelines, the establishment of oil reserves, the development of overseas resources (Figure 1-31) in addition to the improvement of energy efficiency. However, further policy responses including environmental measures will be needed to cope with the future increase in energy demand that will accompany economic growth.

II Japanese Economy: Steady Recovery Continues

1. Overview: World Economy Holds the Key to Sustained Recovery (see p. 31 for Figures)

The Japanese economy continues to recover as improvements in the corporate sector begin to spill over to the household sector, such as through better employment conditions. Although the future of the Japanese economy may largely depend on the impact of soaring crude oil prices on the domestic and external economies and trends in the world economy, the steady recovery will continue for some time as the brighter corporate sector is expected to benefit the household sector.

Since starting to rise in April-June 2002, real GDP (Figure 2-1) has recorded eight consecutive quarters of year-on-year growth to April-June 2004, except January-March 2003, when the growth fell to zero largely due to slowdowns in overseas economies. Looking more closely at the annual growth rates during this period, real GDP growth fell in the second half of FY2002 to almost 0%, as growth in overseas economies slowed due to the Iraq war and SARS. In FY2003, however, exports and business investment picked up as these negative factors faded and the world economy turned up. Consequently, real GDP growth improved and stayed around 6-7% throughout the second half of FY2003. Although the growth slowed in April-June 2004, strong recovery continues, led by exports and business investment. Private consumption is also picking up gently.

Looking at the trend of each GDP (gross expenditure) component, consumption is increasing somewhat due to rising consumer confidence reflecting the better employment situation. Real private consumption recorded two consecutive quarters of decline in the second half of FY2002 because consumer confidence weakened due to growing uncertainties about the future of the economy and the fall in share prices. Since the beginning of FY2003, however, consumption has increased for five quarters in a row, as rising incomes have boosted confidence. Looking ahead, continued improvements in the corporate sector are expected to have a greater impact on the household sector through income and employment. Consumption is therefore expected to follow a gentle uptrend.

Business investment is rising in both the manufacturing and non-manufacturing sectors. Real private non-residential investment has increased for eight straight quarters since July-September 2002 due to the recovery in production and corporate profits, except July-September 2003, when the growth fell below 0% in reaction to the extraordinary increase recorded in the previous quarter. The trend by industry indicates a broad recovery of investment, with faster growth in the non-manufacturing as well as manufacturing sectors, particularly in digital home electric appliances.

Residential investment remains almost flat. Real private residential investment declined from FY2001 but has stayed almost flat since early FY2003, as construction starts continued to accelerate for owner-occupied houses in expectation of higher interest rates, even after the surge in demand to benefit from the housing loan tax break in July-September 2003.

Public investment has been falling, reflecting the financial difficulties faced by both central and local governments. Real public investment has declined for nine consecutive quarters since April-June 2002 and accounted for less than 5% of GDP (nominal basis) in 2004. Further declines are expected as structural reforms and financial difficulties continue.

The rise in exports is now slowing. As the world economy has picked up, real exports have posted a double-digit quarter-on-quarter increase for four straight periods since July-September 2003, when the impact of the Iraq war and SARS subsided. However, the growth of exports to Asia has been slowing recently.

Imports are rising gently. Real imports have increased for four quarters in a row since July-September 2003 due to the gradual recovery of the domestic economy.

To confirm from the supply side the trend of GDP described above, we now look at recent trends of key components for the index of all-industry activity: the industrial production index (2000 as base year, 22.4% weighting in 1995), the tertiary industry activity index (1995 as base year, 59.5% weighting in 1995) and the

construction activity index (1995 as base year, 8.1% weighting in 1995) (Figure 2-2, seasonally adjusted).

Although the industrial production index declined slightly in early 2003 as overseas economies stagnated due to rising tensions in Iraq and the SARS epidemic, it has risen for four quarters in a row since July-September 2003 as the world economy has recovered, led by the U.S. and East Asia, with a major contribution from the electronic device and transport equipment industries. However, the growth of production is now slowing as exports are no longer rising as fast and as inventories of electronic devices pile up. The Manufacturing Production Forecast Survey projects a monthly increase of 1.3% for September 2004. If such growth materializes, the average industrial production index for July-September 2004 will be flat from the previous quarter. Furthermore, the production index forecast is less likely to be achieved now, particularly for electronic devices, which may also be interpreted as a sign of slower production growth.

The tertiary industry activity index bottomed out in April-June 2002, rising for the first time in five quarters, then rose slightly. Looking ahead, it will be important to monitor the extent to which the recovery in the corporate sector assists the consumption sector including services and wholesale/retail/restaurants.

The construction activity index has declined since early FY2003, after holding steady throughout FY2002. Related statistics suggest that this is due to further reductions in public works, although private construction activity is bottoming out.

The inventory cycle (Figure 2-3), an important leading business indicator, triggered concern about a possible inventory adjustment in early 2003 as shipments leveled off largely due to a slowdown in overseas economies. In July-September 2003, however, shipments rose again as the world economy recovered, and the inventory cycle has since stayed in the buildup phase, with actual inventories still showing year-on-year decreases. One major concern is that the inventory cycle for electronic devices, which drove the increase in production, crossed the border between the buildup phase and the unintended accumulation phase (45-degree line) in April-June 2004, thus necessitating an inventory adjustment. Although the inventory adjustment in electronic devices has not seriously affected manufacturing production overall, any protraction of this inventory adjustment might affect the overall level of production. The sustainability of the current economic recovery will depend on whether the shipments of electronic devices, backed by the expansion of the world economy, will bounce back and support the current growth in exports and production.

2. Employment Situation Improves as Job Offers Increase (see p. 32 for Figures)

The ratio of active job openings to applicants has been rising since the bottom of 0.51 in January-March 2002 (Figure 2-4). This is because the numerator (i.e. the number of job offers) continues to increase while the denominator (i.e. the number of job seekers) declines.

The unemployment rate was high from the latter half of 2001 but has declined somewhat since July-September 2003, with monthly fluctuations. The improvement in employment situation benefits all age groups without exception (Figure 2-5). Thus, unemployment, although still high, shows clear signs of improvement.

The number of workers increased from a low in April-June 2002, but the improvement slowed after recording a year-on-year increase in April-June 2003, and then leveled off (Figure 2-6 (1)). By industrial sector,[3] the number of workers has been decreasing in manufacturing and construction, and the increase is led by the service sector, particularly in industries related to medical care and welfare. Thus, the share of the service sector is increasing gradually in total number of workers.[4]

By type of employment, temporary and daily employees[5] have been increasing, while the

[3] Based on the new industrial classification (revised in March 2002).

[4] See Chapter III for labor movement between industries and the outlook of employment by industry in light of future changes in industrial structure.

[5] Temporary and daily employees refer to those hired for a period of one year or less, and regular employees refer to executives and those hired for a period of over one year or for an undetermined period.

number of regular employees has risen over the previous year after a prolonged decline (Figure 2-6 (2)). On the other hand, the number of self-employed and family workers shows a long-term downtrend.

By size of corporation, the number of employees in large corporations (employing 500 or more workers), which declined substantially from the second half of 2001, rose in 2003 and boosted the total number of employees (Figure 2-6 (3)). The recovery is spreading to medium-sized corporations, employing 30-499 workers. Meanwhile, small-sized corporations, employing less than 30 workers, are still shedding employees, and on balance the number of employees is rising only slowly.

Overtime hours have been increasing steadily after reaching a low in October-December 2001, thanks to the recovery in corporate production (Figure 2-7). The increase is most significant in the manufacturing sector, where overtime hours surpassed the values reached during the recent two peaks.[6] This rise in overtime hours suggests a further recovery in employment, but has not translated into a significant increase in the number of employees[7], so the employment recovery will remain slow.

3. Income Holds Steady, Retail Sales Bottoming Out as Consumer Confidence Improves (see pp. 33-34 for Figures)

The year-on-year change in total cash earnings per person reveals continued sub-par performance (Figure 2-8). Specifically, overtime pay continues to rise on the previous year with the increase in overtime hours (Figure 2-7), but regular wages and salaries as well as bonus and special earnings show no improvement, partly due to the downward pressure from the rising share of part-time workers in the workforce.[8]

Nominal compensation of employees,[9] which is useful for understanding the income situation in terms of the whole economy, is bottoming out after falling since 2001 (Figure 2-9), mainly because the number of employees has almost hit the bottom although per capita wages do not appear to be improving (Figure 2-6 (3)). Thus, the income situation overall remains flat, so the negative impact of reduced income on consumption has been waning recently.

Against this backdrop, real private final consumption according to the GDP estimate has shown little quarter-on-quarter movement (Figure 2-10). Consumption based on the GDP estimate necessarily diverges from consumption based on the Family Income and Expenditure Survey due to such factors as the rise resulting from the increase in population and number of households as well as the inclusion of imputed rent. Nonetheless, the nominal consumption expenditure of all households in the Family Income and Expenditure Survey has been recovering recently as consumer confidence has improved, as will be mentioned later (Figure 2-11).[10] By type of item, the increase is led by expenditures related to car purchases and reading/recreation.

Likewise, on the supply side, the retail sales index has recently recovered somewhat, backed by the increased sales of seasonal products this summer due to the heat wave (Figure 2-12). For home appliances in particular, the sales of air-conditioners led the overall increase, supported by strong sales of flat-panel TV sets and DVD players in recent years, and especially for the Olympic Games.[11] Passenger car sales also

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[6] April-June 1997 and October-December 2000 (provisional) on a quarterly basis. The amount of overtime hours also peaked in those periods.

[7] For detailed information on overtime hours and the number of employees in the manufacturing sector, see DBJ, "Manufacturing: Production Growth Has Led to Increase in Business Investment and Overtime Hours, But Not to Increased Employment," *Monthly Economic Notes*, July/August 2004.

[8] Part-time workers receive just over 20% of the wages earned by full-time workers, in part due to the difference in hours worked. Therefore, any increase in the share of part-time workers in the workforce exerts downward pressure on wages per person.

[9] Compensation of employees refers to that part of value added which is distributed to employees for the provision of labor. This includes not only cash payments to employees but also social insurance contributions by employers and allowances in kind such as meals and commuter passes. As a rule of thumb, compensation of employees is approximately (per capita wages)×(number of employees).

[10] Some attribute the extraordinary year-on-year increase recorded in January-June 2004 to possible overestimation caused by the replacement of households covered by the survey.

[11] Data according to the Nippon Electric Big-Stores Association (NEBA).

rose, particularly small car sales with the introduction of new models, after a long decline due to a cyclical drop in demand. Sales of standard-sized cars and light vehicles also remain strong.

Against this backdrop, the medium-term trend of retail sales by type of operation is changing (Figure 2-13). Since the 1990s, sales of department stores have shrunk while those of supermarkets have risen constantly, and overtook department stores in the mid-1990s. Relatively new types of operation such as convenience stores, DIY stores and direct marketing have also seen their markets expand as total retail sales stagnate,[12] pointing to structural changes in the retail industry.

Finally, individual indicators confirm the recovery of consumer confidence. The Consumer Confidence Index for the coming six months[13] (Figure 2-14 (1)) shows improvements in all items of consumer perception, particularly in "employment" and "overall livelihood," reflecting expectations for economic recovery. The Living Insecurity Index (Figure 2-14 (2)) is recovering, though with some fluctuation. The Nikkei Consumption Forecast Index is also starting to pick up after experiencing anabasis and slump. Thus, consumer confidence indicators have strengthened, propping up the recent recovery in consumption.

4. Business Investment Increases in Manufacturing and Non-Manufacturing
(see p. 35 for Figures)

Business investment is increasing in both the manufacturing and non-manufacturing sectors. Real private business investment has increased on the previous year for seven straight quarters since July-September 2002 on the back of the recovery in exports and production, except July-September 2003, when the growth fell below zero in reaction to the extraordinary increase recorded in the previous quarter. According to the Statistical Survey of Incorporated Enterprises (Figure 2-15), business investment in the manufacturing sector has increased on the previous year for five consecutive quarters since April-June 2003, thanks to the rising return on investment. Business investment in manufacturing is led by electrical machinery including electronic devices related to digital home electric appliances. In manufacturing, the recovery has been slower although return on investment is rising. Nonetheless, non-manufacturing investment has been increasing for three quarters running since October-December 2003, and the pace of increase is accelerating. Thus, the recovery in business investment has spread, from the manufacturing sector to the non-manufacturing sector.

Figure 2-16 shows the movement of machinery orders (domestic private demand excluding ships and electric power), a good leading indicator of business investment. Machinery orders in the manufacturing sector have increased on the previous year for eight straight quarters since October-December 2002, mainly from general machinery and electrical machinery for digital home electric appliances. Since machinery orders generally lead business investment by two to three quarters, this means that business investment in the manufacturing sector will remain strong for some time to come. In the non-manufacturing sector, on the other hand, machinery orders have fluctuated, depending on orders from the heavily weighted telecommunication industry. However, the trend of building construction started (Figure 2-17), a leading indicator of building investment, indicates that non-manufacturing business investment is increasing mainly for stores and offices, as well as typical manufacturing business investment for plants. Thus, business investment in the non-manufacturing sector is expected to grow, led by building investment for stores and offices, although the growth in machinery investment is not as significant as in the manufacturing sector.

Figure 2-18 shows the diffusion index of production capacity ("excessive capacity" minus "insufficient capacity"). In both the manufacturing and non-manufacturing sectors, the lead of

[12] The data on DIY stores, direct marketing and electric appliance stores do not necessarily reflect the sales trend of the whole operation, as their coverage is limited to the members of relevant industry groups (associations).

[13] In April 2004, the Cabinet Office consolidated the former Consumer Confidence Survey, Monthly Consumer Confidence Survey and One-person Households Consumer Confidence Survey into the new Consumer Confidence Survey. Also, the item "perception of price" was excluded from the calculation of the consumer confidence index.

"excessive capacity" over "insufficient capacity" has declined to almost zero, pointing to further reduction in the perceived overcapacity. The capacity utilization index for the manufacturing sector is on the rise thanks to capacity reduction through asset consolidation and production growth on the back of increased final demand.

Thus, business investment is expected to remain strong for some time to come because: (1) machinery orders, the leading indicator, are on the rise particularly in manufacturing; (2) construction starts are increasing mainly for stores and plants; (3) the perception of overcapacity is improving; and (4) corporate profits for the current business year are expected to increase substantially.

5. Residential Investment Stays Flat (see p. 36 for Figures)

Housing starts (seasonally adjusted annual rate) have stayed around the 1.2 million mark (Figure 2-19).

The year-on-year change by component (Figure 2-20) indicates that housing starts are almost flat for all components: owner-occupied houses, housing for rent and housing for sale. Some positive factors, such as partial improvement in the income and employment situation and accelerated construction starts in anticipation of higher interest rates, are not strong enough to prop up residential investment overall, which has not shown significant movement recently.

The diffusion index of orders received for single-dwelling custom-built houses (Figure 2-21) is often regarded as a good leading indicator of construction starts for owner-occupied houses. According to the index, the construction starts will continue to improve in July-September 2004 but the improvement will slow in October-December. This is because demand for housing construction will rise in July-September before removal of the tax-break on mortgage loans,[14] followed by a reactionary decline in October-December. On average, construction starts for owner-occupied houses are expected to remain flat in the months ahead.

As can be deduced from the movement of housing starts, real private housing investment (seasonally adjusted annual rate) has stayed around ¥18 trillion since 2002 (Figure 2-22).

Looking at the condominium market[15] in the Tokyo metropolitan area, stocks which had accumulated by 2003 have been reduced to the 7,000 unit range, the lowest level since 2000 (Figure 2-23). Although this cutback would suggest that condominium starts will increase in the months ahead, some argue that the decline actually reflects fewer units marketed due to the postponement of sales.[16] Therefore, the decrease in stock may not result in an increase in housing starts for some time to come.

Figure 2-24 shows the ratio of new condominium prices to annual income (condominium prices/annual income) in the Tokyo metropolitan area. The ratio has steadily fallen since the bubble burst, thus propping up the condominium market. Despite signs of bottoming out, the ratio is still low and therefore is not expected to adversely affect the market.

6. Constant Decline in Public Investment due to Financial Squeeze (see p. 37 for Figures)

Public investment (public fixed capital formation) has declined almost constantly since 1999, due to cuts in expenditures forced by financial difficulties (Figure 2-25). Consequently, public investment now accounts for just 4.6% of GDP (seasonally adjusted nominal value).

The value of public works contracted, a leading indicator, fell 13.7% in FY2003, the fifth straight year of decline (Figure 2-26). Public works implemented by the central government continue to decline due to spending cuts in line with the budget reform policy of the Koizumi Cabinet. Although the decline was less steep in April-June, the most recent period for which data

[14] Next year, the maximum amount of outstanding loans eligible for the tax break scheme will be reduced to ¥40 million (¥50 million in 2004). Accordingly, the maximum deduction will fall to ¥3.6 million (¥5 million in 2004), and further reductions are planned for the years ahead.

[15] For the purpose of this report, the term "condominium" refers to a subdivided housing lot made of reinforced steel, ferro-concrete or steel frames.

[16] The Real Estate Economic Institute calculates the units of stock at the end of the current month as the units of stock at the end of the previous month + the units marketed in the current month – the units sold in the current month. Hence, the units not marketed are not statistically counted as stock.

are available, the downtrend is not expected to reverse in the near future.

The initial budget for FY2004 proposed reductions from the previous year of 3.3% in central government expenditures on public works projects and 8.4% in investment expenses under local finance plans. The policy to reduce public investment is not expected to change this year, as no supplementary budget is planned to stimulate the economy.[17] In line with the Basic Policies for Economic and Fiscal Management and Structural Reform 2004 (Cabinet Decision on June 4), the Ministry of Finance, in its guidelines for budget appropriation requests for FY2005 published on July 30, already envisages a further 3% cut in central government expenditure on public works projects in the FY2005 budget.

Although public investment is declining, government final consumption has stabilized at over 17% of GDP, propped up by the increase in pension payments and medical costs in particular.

Tax revenues are not expected to rise much in future in view of the shrinking population and cumulative deficit on corporate tax, despite the positive impact of economic recovery.[18] Since the budget deficits caused primarily by shortfalls in revenue have been largely financed by government bond issues and by borrowings in the special account for local allocation tax, outstanding government debts have ballooned. Indeed, the outstanding long-term debts of central and local governments will exceed ¥700 trillion for the first time, totaling ¥719 trillion at the end of FY2004 according to the initial budget (Figure 2-27).

Looking at Japan's public finance in terms of stock, outstanding general government debts (as a percentage of GDP) of Japan are far larger than those of the U.S. and EU15. In terms of flow, the primary balance (budgetary balance excluding bond issues, interest payments and bond redemptions) remains poor, but the OECD estimate projects a slight improvement starting in 2004 thanks to reduced public investment, recovery in tax revenues and the effect of pension reforms (Figure 2-28). Although the government aims to reverse the deficit of the primary balance by the early 2010s, grave concerns remain including the huge amount of outstanding long-term debts, uncertainties about future long-term interest rates and particularly the rising government bond redemption cost.

7. Exports Slow, Current Account Surplus Reaching Peak (see p. 38 for Figures)

Trends in foreign exchange rates are shown in Figure 2-29. Since 2002, the yen/dollar market rate has declined about 20% from ¥130/$ to less than ¥110/$, but the real effective exchange rate has hardly changed, due to the unilateral depreciation of the dollar against the euro and other major currencies and lower price inflation in Japan than in the U.S. It can also be attributed to the decline in the share of the U.S. dollar in the Japanese merchandise trade. Indeed, the yen appreciation against the dollar has had little impact on Japanese exports so far in the current economic recovery phase.

Japanese exports are increasing in line with economic expansion in the U.S. and Asia. Imports have also been rising gradually as the domestic economy recovers (Figure 2-30). One of the structural factors behind the simultaneous increase in exports and imports is the international division of labor within the Asian region.

Looking at a breakdown of exports by country (Figure 2-31), booming exports to the fast-growing China have led the overall growth in the current economic recovery phase since April-June 2002. Exports to the U.S. continued to decline throughout 2003 as local auto production facilities became operational and plants producing office equipment for the U.S. were transferred to other Asian countries. The decline has almost halted so far in 2004, but total exports show signs of leveling off as the growth in exports to Asia slows down.

Figure 2-32 shows the trend of trade balance. The growth in trade surplus, which continued to accelerate in line with increasing export volume, has been slowing since April-June 2004 due to slower exports and the rapid rise in crude oil prices. The rise in crude oil and other fuel prices is estimated to reduce the trade surplus by some ¥2 trillion per year. However, the impact is not

[17] *Nihon Keizai Shimbun*, July 29 and October 19, 2004.

[18] See "FY2003 Policy Evaluation Report."

comparable to the previous two oil crises as crude oil now accounts for a small share of imports.

In addition to the slower growth of the trade surplus, the rebound in the number of overseas travelers following the end of the Afghan and Iraq wars and the SARS epidemic has mitigated the service trade deficit. Thus, the expansion of the current account surplus has halted at an annual level of ¥18-20 billion (Figure 2-33).

Along with the current account, the capital account also stayed in the black from April-June 2003 to January-March 2004 due to heavy investing in stock markets by foreign investors. To combat the disruption in the balance of payments, foreign exchange reserves were increased through powerful market intervention. Since April-June 2004, however, there has been no market intervention as foreign investment in Japanese stocks has paused. Consequently, the capital account returned to deficit and the balance of payments normalized (Figure 2-34).

8. Trade Dependency Edges up as Relationship Strengthens between Exports and Domestic Production (see p. 39 for Figures)

This section looks at the long-term relationship between external trade and the Japanese economy.

Exports and imports as a percentage of GDP (Figure 2-35) declined rapidly from over 14% in the early 1980s to almost 9% in the early 1990s, due to the yen appreciation following the Plaza Accord in 1985 and the domestic demand-led economic growth in the latter half of the 1980s. Since the second half of the 1990s, however, the ratio has risen to reach 13% in April-June 2004.

By destination of exports (Figure 2-36), exports to NIEs and ASEAN expanded substantially until the mid-1990s, followed by the rapid rise in the share of China since 2000. Indeed, China's share of total exports to Asia increased from 26.3% in 1985 to 46.4% in 2003. In contrast, the share of the U.S. in total Japanese exports has declined to almost half of the share of Asia[19] (from 37.1% in 1985 to 24.6% in 2003).

The export ratio and import penetration for industrial products are both on the rise, according to the Analysis of Industrial Production Activities published by the Ministry of Economy, Trade and Industry (Figure 2-37). Since those ratios show volume changes excluding the effect of price fluctuation, the Japanese economy is increasingly dependent on both exports and imports also in terms of volume.

In order to identify chronological changes in the impact of exports on the domestic economy, we calculated the coefficient of correlation between the growth of exports and that of industrial production (seasonally adjusted change on three months earlier) on a monthly basis. Figure 2-38 shows the monthly trend of the coefficient of correlation calculated with data covering a 10-year period. The result indicates a strengthening of the correlation between exports and production in recent months. This implies that the domestic business cycle is increasingly dependent on exports, and hence on the economic growth of trading partners.

9. Import Prices and Corporate Prices on the Rise (see p. 40 for Figures)

Corporate goods prices (domestic demand products[20]) have been rising on the previous year since April-June 2004 mainly due to the rapid rise in international commodity prices. By industry, the negative contribution of machinery has been diminishing, while there has been a positive contribution from energy (crude oil and oil/coal products in particular), non-ferrous metals and iron/steel. The positive impact of chemicals is also increasing (Figure 2-39).

Meanwhile, corporate service prices are showing signs of improvement but are still falling by about 1% despite the positive contribution of transportation (overseas factor). The negative contribution of information services and leasing/rental is now shrinking (Figure 2-40).

Import prices have recorded a year-on-year increase for eight straight quarters since October-December 2002 on a contractual currency basis. By product, there has been a substantial

[19] This does not necessarily mean a decline in the influence of the U.S. on Japanese exports because a substantial part of the components exported to Asia including China may be assembled into finished products to be exported to the U.S.

[20] Domestic demand products represent the weighted average of domestic products and imports.

increase for oil, coal and natural gas due to surging crude oil prices. Metals and related products are also supporting price inflation. Import prices on a yen basis have risen on the previous year since April-June 2004. As the over-appreciation of the yen is being corrected, the rise in import prices on a contractual basis is now reflected in yen-based prices (Figure 2-41).

Although corporate prices are rising, consumer prices are still tending to fall slightly (Figure 2-42). Corporate prices were closely linked with consumer prices until the early 1990s, particularly during the oil crises. However, the linkage has substantially weakened since the late 1990s (Figure 2-42).

10. Weakened Linkage between Consumer and Corporate Prices since Late 1990s (see p. 41 for Figures)

Consumer prices, which cover goods and services, are essentially different from corporate prices, which only comprise goods traded between companies. Just as in corporate price statistics (Figure 2-39 for goods and Figure 2-40 for services), Figure 2-43 breaks down consumer prices into goods and services, and shows their respective trends since the second half of the 1990s. Consumer goods prices continue to decline slightly, with the positive contribution of food (including rice) and oil products being more than offset by the negative contribution of industrial products including food products, textiles and personal computers. Despite the positive contribution from eating out, consumer service prices remain almost flat overall as prices stagnate for personal services including culture and recreation.

Overall, corporate and consumer goods prices are diverging. Although rising oil prices positively affect corporate and consumer prices alike, the positive impact of intermediate goods such as iron and steel on corporate prices has not been passed on to final (consumer) goods prices.

As regards service prices, corporate prices continue to decline on the previous year, and consumer prices have remained almost flat except for the period when public services exerted upward pressure mainly due to the increase in the rate of copayment.[21] Corporate prices have declined faster than consumer prices, which implies that the productivity of business services, which are exposed to intense competition, is rising faster than that of personal services.

Figure 2-44 shows the timing correlation between corporate and consumer prices. From June 1970 to May 1980, the coefficient of correlation was highest at 0.74 when corporate prices impacted on consumer prices a month later. From June 1990 to August 2004, however, the time lag extends to three months, with a correlation coefficient of 0.29.

Thus, corporate prices today have less impact on consumer prices with a longer time lag. Figure 2-45 indicates that the coefficient of correlation between the growths of the two price indices has declined, particularly since around 1999.

11. Easy Money Policy Continues (see p. 42 for Figures)

As regards quantitative financial indicators, the monetary base remains large although its year-on-year growth has been slowing as the quantitative monetary easing policy is still in place with a direct guidance target set for the current account balance. However, the money stock has been recording only single-digit increases on the previous year, because the monetary base is absorbed by the persistently low credit multiplier (Figure 2-46). Meanwhile, the velocity of circulation of money is bottoming out (Figure 2-47).

Outstanding private bank loans continue to decline as a whole, as the year-on-year increase in personal loans is more than offset by the continued decline in corporate loans for both the manufacturing and non-manufacturing sectors (Figure 2-49). Nevertheless, the drop in outstanding loans has been curbed to 3.1% overall. The improvement is clearly observed in the level after adjustment for extraordinary factors (such as fluctuations caused by the mobilization or amortization of credit loans), which indicates only a 1.2% decline in the amount of outstanding loans (Figure 2-48). The attitude of private banks

[21] From April-June 2003 to January-March 2004.

toward lending has also softened. The diffusion index of lending attitude not only reached +17 points for large-sized corporation, but also turned positive for SMEs (Figure 2-50). Likewise, contracted interest rates on new bank loans are falling slightly (Figure 2-51).

As regards short-term interest rates, the overnight-unsecured call rate and yields on three-month CDs (bid) have remained at low levels of near 0% and 0.1% respectively since March 2001, when the quantitative monetary easing policy was introduced. Yields on 10-year government bonds – a good indicator of long-term interest rates – remained relatively stable after the commitment to continue the quantitative easing policy was announced in October 2003, setting clearer criteria for terminating the policy. Although the yields rose temporarily to 1.88% last summer, backed by rising expectations for economic recovery, they have since plunged due to concerns about the future of the Japanese and U.S. economies, as well as to the stabilization of consumer prices, and are currently around 1.4% (Figure 2-51).

III Medium-term Outlook of the Japanese Industrial Structure

1. Changing Industrial Structure (see p. 43 for Figures)

This section outlines the changes in Japanese industrial structure using statistical data on the output of goods and services, the amount of value added and the number of workers.

Since the 1990s, the growths of real output[22] (Figure 3-1) and real GDP (Figure 3-2) have declined in the manufacturing sector, while they have accelerated in the tertiary sector, particularly in services. The manufacturing sector has seen its nominal GDP decline since the 1990s (Figure 3-3). The share of manufacturing in real GDP stayed almost flat, moving from 26.6% in 1980 to 26.3% in 2002, but decreased seven percentage points in nominal GDP, from 31.7% in 1980 to 24.6% in 2002. The difference is explained by the gap in deflator increase between the manufacturing and non-manufacturing sectors. The share of manufacturing is higher in output than in value added because the intermediate input of the sector to value added is greater than that of the non-manufacturing sector.

The number of workers (Figure 3-4) in the manufacturing sector declined substantially in the 1990s after staying flat in the 1980s. The decline has been offset by increased employment in services. Indeed, the share of manufacturing in total employment declined six percentage points from 25.1% in 1980 to 19.0% in 2002, whereas the share of services increased more than 10 points from 19.2% in 1980 to 32.7% in 2002. Meanwhile, employment in agriculture and mining (included in "others") has declined constantly.

As will be demonstrated in the following sections, this divergence between the increase in real GDP and the decline in nominal GDP and the number of workers in the manufacturing sector was caused by the improvement of productivity and the accompanying decline in deflator in the sector.

[22] Gross amount of production before deducting intermediate input.

2. (Reference) International Comparison of Change in Industrial Structure (see p. 44 for Figures)

This section compares Japan with other developed countries (U.S., France and Germany) regarding the changes in industrial structure with special focus on the weight of the manufacturing (or industrial[23]) sector.

As shown in Figures 3-5 and 3-6, the reduced weight of the manufacturing (or industrial) sector in nominal GDP and employment reflects the productivity gap with the non-manufacturing (or non-industrial) sector. This phenomenon is commonly observed in developed countries. Also, the rise in GDP deflator is generally slower in the industrial sector (Figure 3-7). In each of the countries, the disparity in deflator growth will lead to a decline in the share of the manufacturing (or industrial) sector in nominal GDP, if its share in real GDP stays unchanged.

3. Structural Change in Consumer Demand and Intermediate Input Promotes Trend toward Service Economy (see p. 45 for Figures)

In terms of real output, the growth of the manufacturing sector has slowed since the 1990s, while that of the tertiary sector has accelerated, particularly in services (Figure 3-1). This section examines whether such change in industrial structure was brought about by the change in final demand structure or in intermediate input structure. For this purpose, using input-output tables for different periods (1980-85, 1985-90, 1990-1995 and 1995-2002), we divided the change in real output in each industry between a given period and another period into two components: the part induced by the change in final demand and the part induced by the change in intermediate input.

The result is shown in Figure 3-8. Throughout the 1980s, the manufacturing sector exceeded the service sector in real output growth, led by final demand factors including consumption, private capital formation and exports. This is because final demand for services mostly came

[23] In order to ensure statistical compatibility, the industrial sector includes electricity and gas, as well as manufacturing and mining.

from private household consumption, whereas various factors affected final demand for manufacturing, such as private capital formation and exports, as well as private household consumption. Thus, the output of the manufacturing sector increased due to robust final demand and stable growth in the early 1980s and the bubble economy in the late 1980s.

Since the 1990s, however, the manufacturing sector has slumped due to reduced private capital formation and changing intermediate input structure, while service output has risen faster than manufacturing output thanks to increased consumption and the change in intermediate input structure. In both the first half and the second half of the 1990s, the contribution of consumption to the change in real output was greater in services than in manufacturing, indicating that the primary object of consumption has shifted from goods to services. It should also be noted that the change in intermediate input structure has had a negative impact on manufacturing and positive impact on services. With the progress of globalization, raw materials and intermediate products that were previously supplied to domestic manufacturers have come to be exported directly to production sites overseas. Also, the trend toward the service economy increased intermediate demand for services, particularly business services.

Thus, the shift in industrial structure from the manufacturing sector to the tertiary sector including services became evident with the change in intermediate input structure, as consumer demand has become focused on services and economic globalization has progressed along with the trend toward the service economy since the 1990s.

4. Change in Intermediate Input Structure (see p. 46 for Figures)

Based on the SNA Input-Output Table published by the Cabinet Office, this section examines the change in industrial structure in terms of the changing intermediate input structure. Since 93SNA data are only available for 1995 onward, a comparison is made between 1995 and 2002. The input-output table used in this analysis is based on constant prices.

Figure 3-9 shows the extent to which each industry has increased its share in total intermediate input in other industries. Here, the term "other industries" refers to all industries excluding the particular industry, and the share of the industry in total intermediate input in other industries is calculated as (intermediate input from the industry to other industries/total intermediate input in other industries). The data indicate that the shares of industries such as services, finance/insurance and electrical machinery in total intermediate input in other industries have increased. Figure 3-10 breaks down the service sector into sub-sectors according to the Indices of the Tertiary Industry Activity published by the Ministry of Economy, Trade and Industry. As can be observed, the increase in the share of services in intermediate input is largely attributable to the growth of so-called business services including goods rental & leasing, information services[24] and automobile rental & leasing. This movement reflects the progress of outsourcing, including the replacement of owned equipment with leased equipment and the subcontracting of software development. In contrast, the shares of civil engineering/architectural services and engineering have declined due to reduced building and public investment. The share of personal services[25] is also on the decline.

Services and electrical machinery are major growth industries in the non-manufacturing and manufacturing sector respectively, in terms of intermediate input to other industries. The share of services in intermediate input is rising in a wide range of manufacturing and non-manufacturing industries (Figure 3-11). This implies that services are increasingly being outsourced in many industries. Meanwhile, the share of electrical machinery in intermediate input is increasing in the electrical machinery itself as well as in other mainly IT-related industries including precision instruments, transport equipment and non-metallic minerals (Figure 3-12). Apparently, this shift reflects the progressive introduction of

[24] Although information services are not included in the service sector according to the industrial classification in the Indices of Tertiary Industry Activity, they are treated here as part of the service sector in line with other statistics.

[25] Mobile phones and other communication services, which grew substantially in the 1990s, are included in the telecommunication industry, and not in personal services.

electronic components in many of the manufacturing industries.

5. Consumption Structure Also Points to Trend toward Service Economy
(see p. 47 for Figures)

This section deals with the changes in consumption structure since the 1980s, with special focus on the so-called "trend of consumption toward the service economy."

Figure 3-13 shows the share of spending on services in real final consumption expenditure of households on an SNA basis. The share of spending on services rose four percentage points from 49.5% in 1980 to 53.4% in 2002, which might suggest that the trend of consumption toward the service economy has been rather mild so far.[26] However, looking at actual value instead of share gives a very different picture. Real consumption expenditure of households amounts to almost ¥300 trillion (at 1995 prices) as of 2003. Thus, a four-point change means an increase of ¥12 trillion in actual value, which equals the real GDP of the food industry in 2002 (¥11.7 trillion). Since the impact of consumer spending on industrial structure is measured in terms of actual value, we must consider not only the change in composition but also the change in actual value in order to understand the real trend of consumption toward the service economy.

This growth of the service economy is considered to stimulate production mainly in the non-manufacturing sector. In order to identify the importance of each industry in household consumption, Figure 3-14 shows the change in final consumption expenditure of households by industry from 1995 to 2000, based on the SNA Input-Output Table.[27] The data indicate that real final consumption expenditure of households increased ¥20.7 trillion in total from 1995 to 2000, of which only ¥2.2 trillion was spent on manufacturing, while ¥18.5 trillion was allocated to the non-manufacturing sector. In other words, some 90% of the increment of expenditure from 1995 to 2000 went to the non-manufacturing sector.

Looking more closely at the non-manufacturing sector, real estate experienced the largest increase in consumption, followed by communications, public services and personal services.[28] This movement is consistent with the trend shown in Figure 3-13. Thus, the rise in consumer spending on services has increased the earnings of service-related industries and stimulated their production.

To what extent does the increase in consumption expenditure stimulate production in individual industries? An indicator called the inducement coefficient helps answer this question. The inducement coefficient indicates by how much a unit change in a final demand item (consumption, exports, etc.) induces production in each sector. The larger the coefficient, the greater the production induced by the increase in final demand.

The inducement coefficient of final consumption expenditure of households is plotted in Figure 3-15 by industry. The horizontal axis indicates the inducement coefficient as of 2002 and the vertical axis indicates the change in the coefficient from 1995 to 2002. The greater the value on the horizontal axis, the larger the increase in production induced by a unit increase in household consumption. The greater the value on the vertical axis, the larger the induced increment of production.

On the horizontal axis, the greatest values are recorded by industries such as real estate and personal services,[29] followed by retail and food & beverages. The finding that the production of those industries is sensitive to changes in household consumption is intuitive. On the vertical axis, the rise in the inducement coefficient is most significant by far in communications, followed by industries such as electrical machinery,

[26] The data represent the composition of consumption expenditure in real terms. The increase was more significant in nominal terms, up from 44.2% in 1980 to 56.4% in 2002. Since goods prices declined faster than service prices throughout this period, spending on goods necessarily becomes more important in real terms.

[27] Here, the time coverage is reduced to five years from 1995 to 2000 because 93SNA data are only available for 1995 onward in the SNA Input-Output Table.

[28] Public services include education, research, medical & health care, etc. Personal services include recreation, broadcasting, eating and drinking places, hotels, laundry/hairdressing/bathhouses, etc.

[29] By definition, house rent, which is included in real estate, is only sensitive to household consumption, thus raising the inducement coefficient for the industry.

business services and public services. The rapid rise in the inducement coefficient for communications is largely due to the increase in personal communication charges with the popularization of mobile phones and the Internet. The findings show that the inducement coefficient is generally larger in the non-manufacturing sector. Chronologically, the coefficient has been rising in many of the non-manufacturing industries. In contrast, the coefficient is small in many manufacturing industries and has been declining in most of them. Thus, it may be concluded that any increase in household consumption has a larger impact on the production of the non-manufacturing sector.

The findings in this section may be summarized as follows. The trend of household consumption points to a gradual increase in the share of spending on services, with substantial impact on industrial structure in terms of actual value. The rise in spending on services may also be confirmed from the changing composition of household consumption by industry, as almost 90% of the recent increment of household consumption has been allocated to the non-manufacturing (service) sector. Moreover, the increase in household consumption has more impact on the production of the non-manufacturing sector, which also experiences a rise in the induced increment of production. Overall, the trend of consumption toward the service economy is expected to continue and will increase production in the non-manufacturing sector.

6. Changing Consumption Structure due to Aging (see p. 48 for Figures)

Aging, combined with the declining birth rate, is a key factor in projecting future consumption structure. According to an estimate by the National Institute of Population and Social Security Research (January 2002, medium variant projection), the ratio of older persons in the total population[30] is expected to rise from 17.4% in 2000 to over 25% in 2014, which means that one in four persons will be 65 or older. At the same time, the ratio of children (0-14 years old) will decline from 14.6% in 2000 to 12.0% in 2021. Due to the difference in the composition of consumption between age groups, which is examined below, the changing demographic structure will have considerable impact on the consumption structure of the whole economy. Using simple assumptions, this section seeks to identify the direction of future change in consumption structure, which will accompany the expected change in demographic structure.

Based on the Family Income and Expenditure Survey of the Ministry of Internal Affairs and Communications, Figure 3-16 shows the consumption structure by age group of head of household.[31] As can be seen, the households led by older persons spend more on medical care and reading & recreation. Increased spending on medical care may be attributed to the higher morbidity rate for older persons and greater awareness of health. As regards the large share of reading & recreation, older persons have more leisure time and can afford to spend more on time-consuming recreational activities.[32] On the other hand, older households spend very little on education, largely because the cost of children's education in many households falls when the children leave home.

Thus, medical care and reading & recreation account for large shares in the expenditure of older households. If such consumption pattern remains unchanged, spending on those items will increase as aging progresses. Based on this assumption, the following segment projects the expected change in consumption structure using two approaches.

The first approach consists of forecasting future changes in consumption structure using examples of aged societies. This approach assumes that future changes in consumption structure can be partly predicted by focusing on geographical areas with higher-than-average ratios of aged persons and comparing the consumption

[30] For the purpose of this section, the term "older persons" refers to those aged 65 or over. Therefore, the ratio of older persons represents the share of those aged 65 or over in the total population.

[31] Since the Family Income and Expenditure Survey is often criticized for lack of statistical precision due to the small number of samples, this report adopts average data for three years from 2001 to 2003.

[32] The Survey on Time Use and Leisure Activities of the Ministry of Internal Affairs and Communications shows that older persons spend more time on leisure (tertiary) activities as compared with the average for all age groups.

structure in those areas with the national average. Here, we compare the consumption structure in the Chugoku and Shikoku districts with national average. According to the Population Census conducted by the Ministry of Internal Affairs and Communications, 28.8% of the households in the Chugoku and Shikoku districts are headed by older persons as of 2000 (national average = 23.8%). This ratio exceeds the forecast of the national average for 2005 (27.3%) and is nearer to the forecast for 2010 (30.7%).[33] Thus, the current consumption structure in those districts is indicative of the national consumption structure in 2010.[34]

Figure 3-17 compares the consumption structure of all Japan with that of the Chugoku and Shikoku districts. As compared with the national average, the consumption structure of these regions is marked by slightly smaller spending on education and heavier spending on medical care, which mirrors the future change in consumption structure deduced from Figure 3-16. However, the difference in composition is small and could be considered insignificant.

Nonetheless, a small change in composition indicates a substantial change in real value. In this context, a second approach is necessary to examine how the real value of consumption will change for which items due to a mere change in demographic structure, if all other conditions remain constant. The result of an estimate of such change between 2000 and 2010 is shown in Figure 3-18.

The estimation is made as follows. First, according to the Family Income and Expenditure Survey, the consumption expenditure for each age group of the head of household in 2000 is divided by the number of household members to obtain the expenditure per person. Then, this amount is multiplied by the estimated number of households by age group and that of household members published by the National Institute of Population and Social Security Research to calculate the consumption for each age group in 2010. In this calculation, transfer expenditure to other households such as social expenses and allowance money – treated as current transfer for the purpose of SNA – is excluded from total consumption. Since the amount of consumption expenditure thus obtained is based on the Family Income and Expenditure Survey, it is finally adjusted to the level of final consumption expenditure of households on an SNA basis.

Items for which the largest increases are expected are shown in Figure 3-18.[35] Those include expenditure items related to culture/recreation and medical care such as package tour expenses and health & medical care services, as well as other service items such as housework services and clothing-related services. Thus, future changes in demographic composition are expected to consolidate the trend of consumption toward the service economy.

The largest increase is expected for package tour expenses, which will rise almost ¥400 billion by 2010. Market expansion for those services may be even faster because the expected increase in income due to economic growth will raise per capita consumption.[36] Thus, the shift in consumption pattern will be substantial in terms of actual value.

7. Growth Factor by Industry as Observed in Growth Accounting (1) (see p. 49 for Figures)

Real economic growth slumped throughout the 1990s both in the manufacturing and tertiary sectors (Figure 3-19). In the manufacturing sector, the nominal growth rate turned negative in the early 1990s as the GDP deflator declined. The number of workers increased in the tertiary sector, but declined in the manufacturing sector.

[33] The forecast of the national average is based on the National Institute of Population and Social Security Research, "Household Projections for Japan (October 2003)."

[34] With further geographical segmentalization, it is possible to pick out areas with higher ratios of older persons. However, this report considers the Shikoku and Chugoku districts for the following reasons: (1) over-segmentalization would affect the reliability of the data as the number of samples will be reduced; and (2) the data for the Shikoku and Chugoku districts not only cover small cities but also include large cities such as Hiroshima and Okayama, and are hence considered to be more representative of the national average in future. Also, the data are adopted from the National Survey of Family Income and Expenditure (Ministry of Internal Affairs and Communications) rather than from the Family Income and Expenditure Survey, which is not necessarily reliable due to the small number of samples.

[35] Decline in consumption is expected for education-related items and general eating-out among others.

[36] Estimates in Section 10 and seq. take into account the trend of increase in consumption.

Figure 3-20 shows the trend of economic growth by industry. Various industries contributed to economic growth in the 1980s, particularly non-manufacturing industries including services and finance/insurance. Since 1991, however, contributions have been concentrated on specific industries such as services and electrical machinery. Above all, services have substantially boosted the increase in the number of workers. Although the electrical machinery industry has contributed significantly to economic growth since the 1990s, its contribution has been negative in terms of the number of workers.

8. Growth Factor by Industry as Observed in Growth Accounting (2) (see p. 50 for Figures)

Based on growth accounting, this chapter breaks down GDP growth into three factors[37]: labor, capital and total factor productivity (TFP). The labor factor is adjusted for working hours, and the capital factor is adjusted for capacity utilization, including the non-manufacturing sector.[38] TFP is calculated as the residual of economic growth after subtracting the contribution of labor and capital.

Figure 3-21 identifies the factors of the economic slump since the 1990s based on the growth accounting thus conducted. In all industries, the slowdown in TFP has made the most negative contribution. By sector, manufacturing has managed to maintain economic growth by curtailing labor input to keep TFP at a reasonable level. In contrast, the tertiary sector, faced with a substantial slowdown in TFP, has increased capital and labor inputs to sustain growth.

Those characteristics are evident if we compare typical growth industries in the manufacturing and tertiary sectors, namely electrical machinery and services respectively. The growth of the electrical machinery industry has been consistently led by TFP since the 1980s. Meanwhile, the growth of services has been led by capital and labor inputs, with TFP staying almost constant. Such input-led growth will be difficult to maintain as the labor force is expected to decline. Rising TFP is a precondition for growth, particularly in the service sector.

Figure 3-22 indicates a negative correlation between the rise in deflator and the rise in TFP both in the 1980s and since the 1990s. Most of the fastest increases in TFP belong to manufacturing industries. Thus, the relative price of manufactured goods has declined as productivity has risen, resulting in the reduction of the sector's share in nominal GDP. The deflationary trend in the 1990s is also implied by the movement of the deflator in each industry, as the rise in deflator in relation to the same growth of TFP declined throughout the 1990s.

9. Industrial Structure in 2020 (1) (Assumption of Potential Growth Rate) (see p. 51 for Figures)

Using the technique of growth accounting, this section makes an assumption for the potential macroeconomic growth rate, which is a basis for projecting the industrial and employment structure in 2020.

According to the Population Projection for Japan (medium variant projection) (Figure 3-23), the total population of Japan will decline to 124.1 million by 2020, after peaking at 127.74 million in 2006. Likewise, the number of workers will decline to 62.89 million by 2020 from the peak of 67.71 million in 1997, partly due to the decline in labor force participation rate, which is expected to accompany population aging. The decline in the number of workers will suppress the potential growth rate of the Japanese economy by reducing labor input on a manpower basis.

Capital input, another determinant of potential growth rate, is expected to follow the trend of business investment. Until 2020, the total savings ratio (Figure 3-24) is expected to decline gently, reflecting mixed movements including a decline in the household sector due to aging, a gradual improvement in the government sector and small fluctuation in the corporate sector.[39] Under these

[37] On the assumption of the Cobb-Douglas production function.

[38] Adjustment for capacity utilization in the non-manufacturing sector uses the tertiary industry activity index (index of all industry activity for agriculture and construction) divided by capital stock, after removing the trend.

[39] The savings ratio for each sector is estimated as follows.

- Household savings ratio: Using an estimated savings

circumstances, the ratio of private business investment will contract slightly in parallel with the total savings ratio.[40] The growth of capital input is expected to decline slowly from the lower 2% range to the mid-1% range due to the mild decline in the ratio of private business investment.[41]

If the trend of technological advance[42] is extended on the assumption of those movements in capital and labor, the potential growth rate of the Japanese economy is expected to decline to an annual average of the mid-1% range for 2004-2010 and then to 1% toward 2020.[43]

10. Industrial Structure in 2020 (2) (Real Output Basis) (see p. 52 for Figures)

Assuming (1) a decline in potential growth rate, (2) a change in consumption structure due to falling birth rate and aging, and (3) a change in intermediate input structure due to economic globalization and the trend toward the service economy, this section estimates the growth of real output by industry, based on the input-output table. The following method is adopted.

(1) Assumption of potential growth rate
Potential macroeconomic growth rate is estimated using the technique of growth accounting (assuming that potential growth rate equals real GDP growth rate).

(2) Assumption of final demand items
Real GDP is estimated for individual demand items: consumer demand and non-consumer demand (consumer demand is further classified into service consumption and non-service consumption). Basically, consumer demand is estimated in the same way as in Section 6 (Figure 3-18). The only difference is that this section estimates

ratio function with the ratio of older persons (65 or over) in total population as explanatory variable, the household savings ratio is calculated by extrapolating values predicted by the National Institute of Population and Social Security Research (medium variant projection) for the projection period.

(household savings ratio) =
21.23 – 0.67 (ratio of older persons)
(26.99) (-11.36)

$\overline{R^2}$ = 0.85, estimation period: 1980-2002 (calendar year basis), t values in parentheses ( ).

- Government savings ratio: For the period from 2004 to 2008, the government savings ratio is back-calculated from the savings-investment differential ratio in the Background Paper prepared by the Cabinet Office (submitted to the Council on Economic and Fiscal Policy on January 16, 2004), on the assumption that government investment will be reduced by 3% each year. For 2009 and onward, the ratio is back-calculated on the assumption that the savings-investment differential ratio will automatically improve by 0.5% each year, and that government investment will continue to be reduced by 3% each year.
- Corporate savings ratio: The total savings ratio is divided into the total savings (excluding dividends) ratio and the dividend ratio. It is assumed that the capital share will be constant and that the total savings (excluding dividends) ratio will remain unchanged from the actual figure for 2002 (17.1%). The dividend ratio is calculated by extrapolating the expected dividend propensity that integrates its upward trend (assumed to rise from the actual 2002 figure of 14% to 36% in 2020) for the projection period into an estimated dividend function with dividend propensity (dividend payout/earnings) as explanatory variable. The total savings ratio is calculated by subtracting the dividend ratio from the total savings (excluding dividends) ratio.

(dividend ratio) = –0.008 – 0.027 (dividend propensity)
(–7.664) (–2.170)

$\overline{R^2}$ = 0.14, estimation period: 1980-2002 (calendar year basis), t values in parentheses ( ).

[40] The ratio of private business investment is calculated by extrapolating the predicted values of the total private savings ratio calculated in Footnote 1 for the projection period into an estimated business investment ratio function with the private total savings ratio as explanatory variable. It is assumed that the ratio of borrowings for business investment will stay flat at the actual level of 2002 (8.7%).

(ratio of private business investment) =
3.60 + 0.30 (private savings ratio) + 0.44 (ratio of borrowings
(1.85) (4.44) (4.27) for business investment)

$\overline{R^2}$ =0.69, estimation: 1980-2002 (calendar year basis), t values in parentheses ( ).

[41] The growth of capital input is calculated by extrapolating the predicted values of the business investment ratio for the projection period into an estimated capital stock function that regresses the difference in capital stock with the business investment ratio.

Ln (difference in capital stock) =
21.5 + 2.2 Ln (business investment ratio)
(32.6) (6.1)

$\overline{R^2}$ =0.77, estimation period: 1991-2002 (calendar year basis), t values in parentheses ( ).

[42] The all-industry average of annual TFP growth for 1981-2002 (0.9%) is adopted as the trend of technological advance.

[43] Assuming the labor share of 0.71 and the capital share of 0.29, both representing annual averages for the 1991-2002 period.

future expenditure per household member by taking account of the growth trend of per capita real final consumption expenditure of households on an SNA basis (annual average for the period between 1981 and 2002: 2.0%). The estimate is based on the medium classification of the Family Income and Expenditure Survey (some of the estimated figures cover individual items). Service consumption covers those items that belong to the service industry in SNA. For convenience, the difference between real GDP and consumer demand is regarded as non-consumer demand.

(3) Distribution of final demand items to individual industries

Real GDP, consumer demand (service and non-service consumption) and non-consumer demand thus estimated are distributed among industries (24 endogenous sectors in SNA). Real GDP is distributed to each industry according to its share in final demand in the projection period, which is estimated from the composition of final demand by industry for the period between 1995 and 2002, taking account of the trend of change in the composition. Service consumption is allocated entirely to the service sector. Non-service consumption is distributed to each industry based on its share in actual consumer demand excluding services in 2002, which is assumed to remain constant.

(4) Estimation of intermediate input coefficient tables

Based on the SNA Input-Output Table (covering 24 endogenous sectors in SNA) for 1995 (base year) and 2000 (comparative year), input coefficient tables are estimated for 2010 and 2020 using the RAS method.[44]

(5) Calculation of real output

The estimated final demand vector for each industry is multiplied by the Leontief inverse of the input coefficient table that is found with the RAS method to calculate the amounts of induced value added and real output for each industry in 2010 and 2020.

Figure 3-26 presents the growth of real output by industry to 2020 thus estimated. For all industries, the average annual growth will decline from 1.7% in 2002-2010 to 1.3% in 2010-2020 due to the slower growth of final demand. By industrial sector, the real output of the manufacturing sector will grow 1.4% in 2002-2010 and 1.3% in 2010-2020 per annum on average, while that of the non-manufacturing sector will grow 1.8% and 1.4% respectively. Thus the growth of the non-manufacturing sector will constantly outpace that of the manufacturing sector. By industry, the growth of manufacturing will be led by electrical machinery due to the rising non-consumer demand (demand related to investment and export, for example), while the growth of non-manufacturing will be led by services due to the rising consumer demand, as well as by other tertiary industries such as transport and communications.

The share of manufacturing in total real output will decline from 32% in 2000 to 30% in 2020, although increases are expected for some industries including electrical machinery. In contrast, the share of the tertiary sector including services will rise

[44] The RAS method aims at estimating the input coefficient at a given time by statistically finding an adjustment multiplier for the coefficient from input-output tables for two different periods in the past. The process begins with the resolution of the input coefficient vector into a change along the rows (R) and a change along the columns (S). Then, assuming as given the input-output table for the base year as well as the total of intermediate demand, intermediate input and real production for the comparative year (input coefficient is not determined), a series of calculations is conducted so that the row totals and column totals of the preliminary amounts of inter-industry transactions estimated from the input coefficient for the base year and total production in the comparative year may converge respectively with the total of intermediate demand and the total of intermediate input in the comparative year. The vectors R and S of the adjustment multiplier are found in this way.

From the change in the input coefficient vector between 1995 and 2000, this report finds the adjustment multiplier vector consisting of the change along the rows (R) and the change along the columns (S) and automatically extends it to derive the intermediate input vector for 2010 and 2020. Thus,

$$A^{2010} = R^{(10/5)} \times A \times S^{(10/5)},\ A^{2020} = R^{(20/5)} \times A \times S^{(20/5)}$$

where A^{2010} and A^{2020} represent the intermediate input vectors for 2010 and 2020 respectively, R and S represent the adjustment multiplier vectors along the rows and along the columns for the five-year period between 1995 and 2000, and A represents the intermediate input vector for 2000.

from 58% in 2000 to 65% in 2020, reflecting the shift of industrial structure toward the service economy.

11. Industrial Structure in 2020 (3) (Employment Basis) (see p. 53 for Figures)

This section estimates the change in employment by industry from (1) the change in real output by industry and (2) the trend of improvement in labor productivity. The process starts with the estimation of future real output per worker (labor productivity) in the input-output table in light of the trend of improvement in labor productivity. Then, the real output thus estimated is divided by labor productivity to obtain the number of workers in each industry to 2020.

Figure 3-27 (1) shows the expected change in the number of workers from 2000 to 2020. In the manufacturing sector, where greater improvement in labor productivity is expected, the number of workers will decrease across the board (down 3.93 million), led by electrical machinery (down 1.17 million). In the labor-intensive non-manufacturing sector, however, a net increase of 1.96 million workers is expected, led by services (up 6.9 million), transport and communications (up 0.88 million) and wholesale and retail (up 0.74 million).

On the supply side, the number of employable persons, which takes account of the ratio of those in side jobs, will decline to 66.03 million in 2020 (down 3.72 million from 2002) due to aging and lower birth rate. This means that the expected number of workers on the demand side (68.29 million) will exceed the number of employable persons by 2.26 million, indicating that a labor shortage will emerge (Figure 3-27 (2)). Incidentally, the labor shortage will be reduced from 2.26 million to only 50,000 based on the potential labor force participation rate, which is estimated by taking into consideration the number of persons not in the labor force but wishing to work (see Appendix 1 for details).

Effective countermeasures are needed, such as improving productivity in services and other job-creating industries, raising the rate of participation in the labor force particularly among women, and closing various gaps in labor supply and demand.

Figure 3-27 (3) shows the expected change in employment structure. The share of the tertiary sector including services will rise from 66% in 2000 to 78% in 2020, reflecting the shift of employment structure toward the service economy.

12. (Appendix 1) Expected Mobilization of Potential Labor Force in the Young, Female and Older Populations (see p. 54 for Figures)

Population aging raises concerns about the availability of labor in Japan. The simulation presented in the previous section indicates that a labor shortage will develop by 2020.[45] The labor force participation rate (labor force[46]/population of 15 years old or more) has consistently declined since 1997 (Figure 3-28).

A comparison of the labor force participation rate by age group between 1980, 1990 and 2003 indicates that the male labor participation ratio has been almost 100% for age groups between the late 20s and the 50s. For women in their late 20s, the labor participation rate rose from 49% in 1980 to 61% in 1990 and then to 73% in 2003. In contrast, the labor participation rate has been consistently low in the younger and old age groups, for both men and women. The rate for women in their 30s is lower than for other age groups by about 10%, resulting in an M-shaped employment structure (Figures 3-29 and 3-30).

The potential labor force participation rate (by age group as of 2003) may be calculated by taking into consideration those who are not in the

[45] The Population Projection for Japan (January 2002), published by the National Institute of Population and Social Security Research, predicts in its medium variant projection that the population will begin to decline in 2007. Concerns about labor shortages are heightened by the continued decline in the birth rate and the mass retirement of baby-boomers expected in the near future. An article in the Nihon Keizai Shimbun on October 6, 2004 reported that the Ministry of Health, Labour and Welfare would establish in mid-October the Study Group on Employment Policy, an expert group to address the decrease of 3.7 million workers expected by 2015.

[46] The Labour Force Survey of the Ministry of Internal Affairs and Communications defines labor force as the sum of the employed (at work and not at work) and the unemployed aged of 15 years old or more.

labor force but who wish to work.[47] Although there has been no significant change for men (Figure 3-29), the potential ratio exceeds the actual ratio by about 10% for women, particularly in their 20s, 30s and 40s (Figure 3-30). Figure 3-31 shows by age group the main reasons why women wishing to work do not actually seek a job. "Housekeeping and childcare" accounts for the largest share among those in their late 20s and early 40s. Although concerns about future declines in labor force are focused on such issues as the reduction and aging of population and the mass retirement of baby-boomers, efforts should be made to bring this latent labor force to the market.[48]

13. (Appendix 2) Divergence on Preferred Type of Employment between Employers and Unemployed Persons (see p. 55 for Figures)

This section examines the current situation of the labor market. Looking at the trend of employment by sex, the unemployment rate is rising in all age groups for both men and women, particularly in the younger groups (Figure 3-32).[49] As regards the preferred type of employment, (1) both men and women prefer regular employment in the younger groups, (2) most unemployed men under 55 years of age prefer regular employment and do not wish to take part-time work (Arbeit), and (3) unemployed women increasingly prefer part-time work after they have reached 35 years of age (Figure 3-33).

Figure 3-34 shows the number of employees by type of employment. Regular employment has been decreasing while other types of employment have been increasing, particularly part-time work (Figure 3-34). The composition of employees by industry and by type of employment as of 2003 shows that manufacturing, services[50] and other non-manufacturing industries have large shares in male employment. Most of the male employees are regular staff, although the share of part-time workers is larger in services. On the other hand, services have the largest share in female employment. It follows that many of the female employees are part-time workers (Figure 3-35).

The discussion in this section may be summarized as follows. In the labor market, the share of regular employees has been declining while that of part-time workers has been increasing. In particular, the part-time employment ratio[51] has been rising gradually among female workers. By industry, a large proportion of female workers are employed in services or wholesale and retail as part-time workers. On the other hand, most of the unemployed, particularly men and those in the younger groups, strongly prefer regular employment, implying a mismatch between employers and the unemployed in terms of preferred type of employment.

14. (Appendix 3) Increase in Part-time Employment in the Robust Service Sector, Labor Movement Mostly Constrained within Industries (see p. 56 for Figures)

In the labor market, the net hiring (entering – leaving) rate[52] has been negative since the late 1990s, as all industries other than services have made negative contributions. By type of employment, the rate tends to be negative for gen-

[47] The difference between the unemployed and those not in the labor force but wishing to work is that the latter conducted some sort of job-seeking activity in the survey period.

[48] An increase in the number of NEET (not in employment, education or training) people has been pointed out recently, although they are not included in the potential labor force for the purpose of this report. The term "NEET" generally refers to those under 25 who do not wish to work even though they are neither students nor houseworkers (see for example Kosugi and Hori (2003)).

[49] The average unemployment rate in the 15-19 and 20-24 age groups rose substantially for both men and women: from 4.6% in 1980 to 5.6% in 1990 and to 12.3% in 2003 for men, and from 3.0% to 4.7% and to 9.4% for women.

[50] Services: eating and drinking places, accommodations, medical/health care and welfare, education, learning support, compound services and other services.

[51] Part-time employment ratio (by sex) = part-time and temporary employees (according to Ministry of Internal Affairs and Communications, "Labour Force Survey") / total employees excluding executives (according to Ministry of Internal Affairs and Communications, "Labour Force Survey").

[52] According to Ministry of Health, Labour and Welfare, "Survey on Employment Trends,"
net hiring rate = hiring rate – separation rate.
Thus, a positive net hiring rate indicates that hiring exceeds separation.

eral workers,[53] particularly in manufacturing. As regards part-time workers, however, the net hiring (entering – leaving) rate tends to be positive in services and wholesale/retail/eating & drinking places. Time-series data also indicates that the inflow of part-time and temporary workers has been increasing in services and wholesale/retail (Figure 3-36).[54]

The composition of job changers in 1995, 2000 and 2002 indicates that many of them find new employment in the same industry. By Industry, (1) former construction workers are now less likely to find new employment in the industry but the share of those who find a job in another industry is still small, (2) former manufacturing workers have become more likely to find new employment in services and wholesale & retail, as well as in the same industry, and (3) former employees in other non-manufacturing sector tend to find new employment in services. Those findings imply that workers have progressively shifted to the labor-absorbing service sector (Figure 3-37).

[53] In the Survey on Employment Trends of the Ministry of Health, Labour and Welfare, general workers refer to regular workers minus "part-time workers."

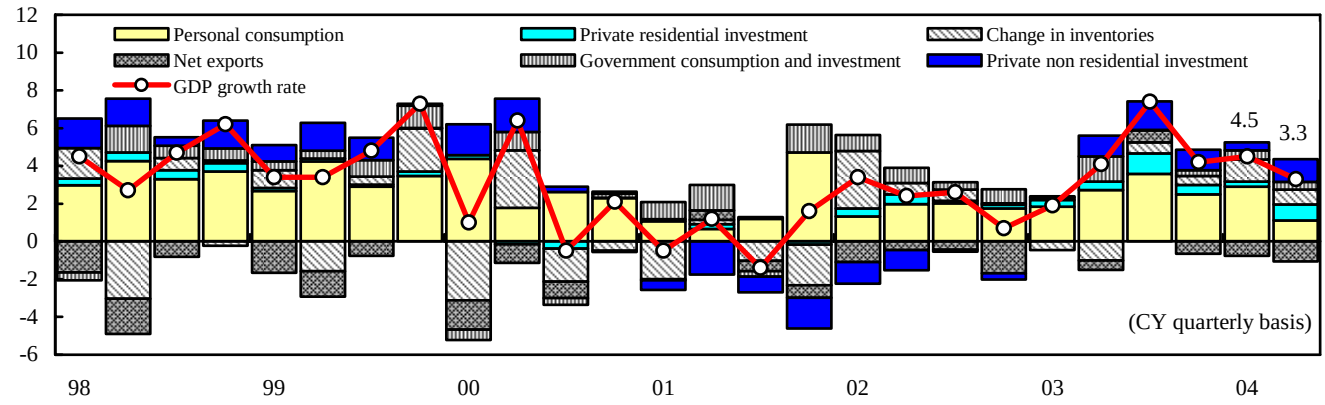
[54] This does not necessarily reflect the current movement, as 2002 is the most recent year for which relevant data are available in the Survey on Employment Trend.

I. World Economy: Expansion Continues

U.S. (1): Personal Consumption Slows, Business Investment Grows

Figure 1-1. Trends in Real GDP

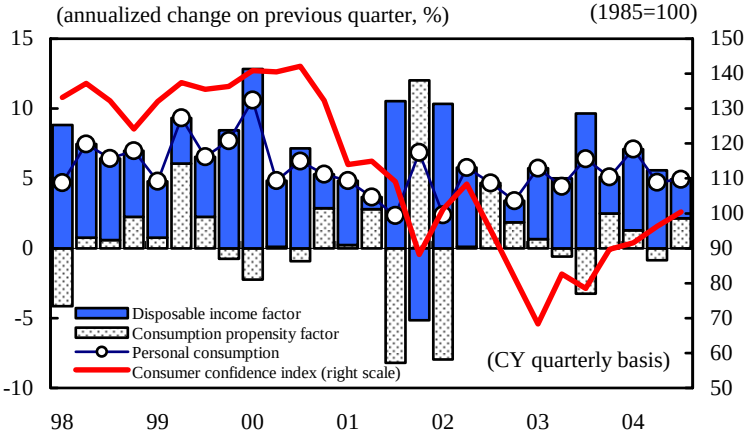
(annualized change on previous quarter, %)



Source: U.S. Department of Commerce, "National Income and Product Account."

Figure 1-2. Personal Consumption Trends

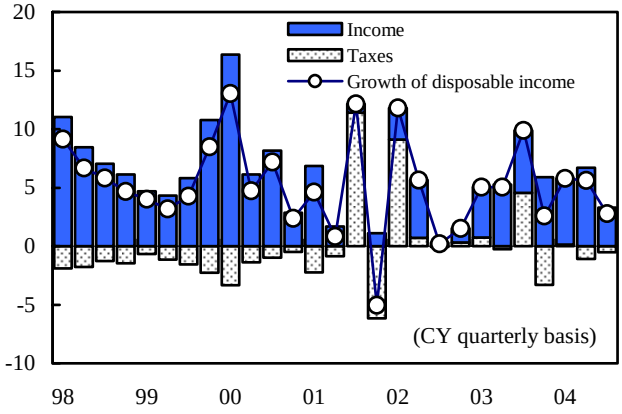
(annualized change on previous quarter, %) (1985=100)



Source: U.S. Department of Commerce, "Personal Income and Outlays."

Figure 1-3. Change in Disposable Income by Component

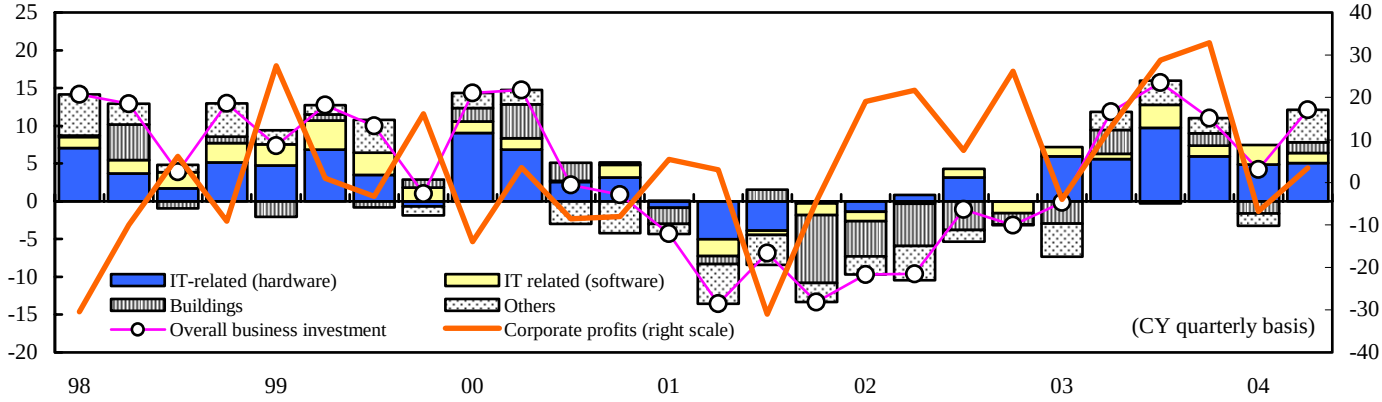
(annualized change on previous quarter, %)



Source: U.S. Department of Commerce, "Personal Income and Outlays."

Figure 1-4. Trends in Real Business Investment and Corporate Profits

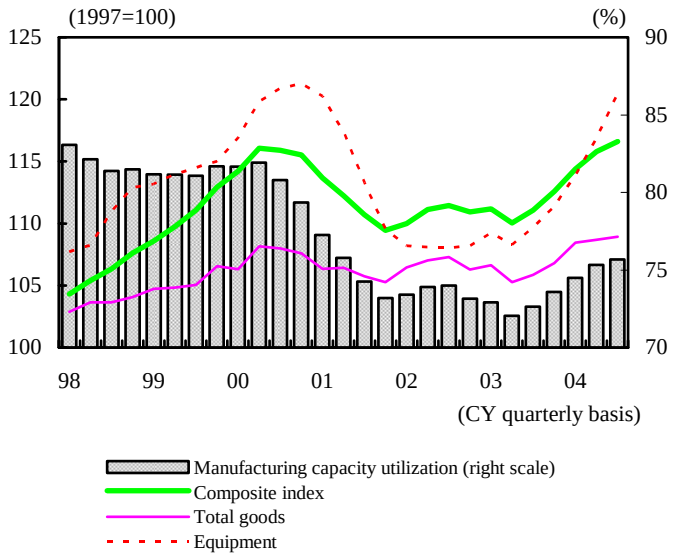
(annualized change on previous quarter, %) (annualized change on previous quarter, %)



Source: U.S. Department of Commerce, "National Income and Product Account."

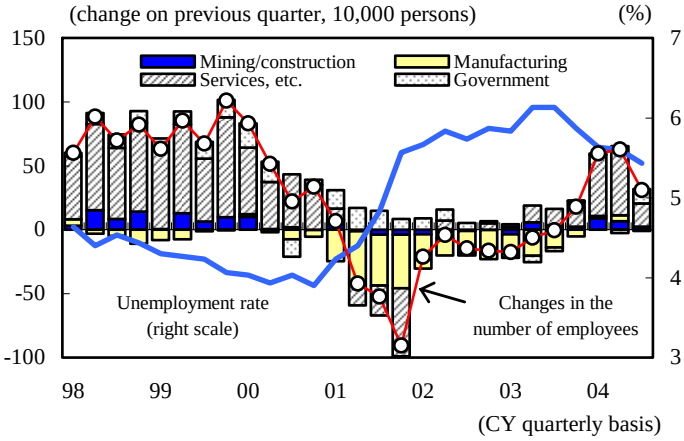
U.S. (2): Recovery in Production and Employment, Weak Share Prices and Interest Rates

Figure 1-5. Industrial Production Index and Capacity Utilization in Manufacturing



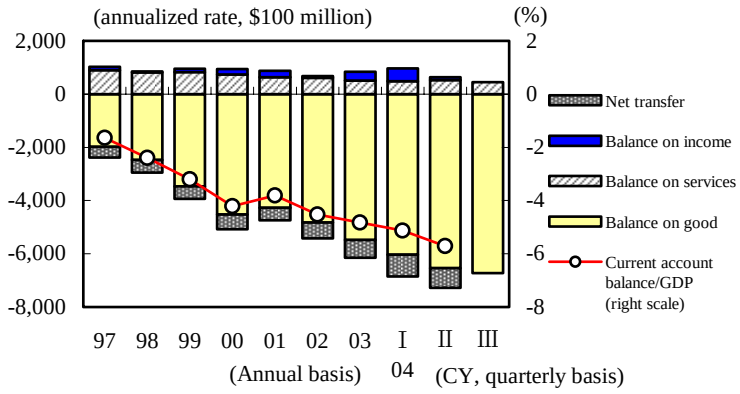
Source: FRB, "Industrial Production and Capacity Utilization."

Figure 1-6. Change in Number of Employees and Unemployment Rate



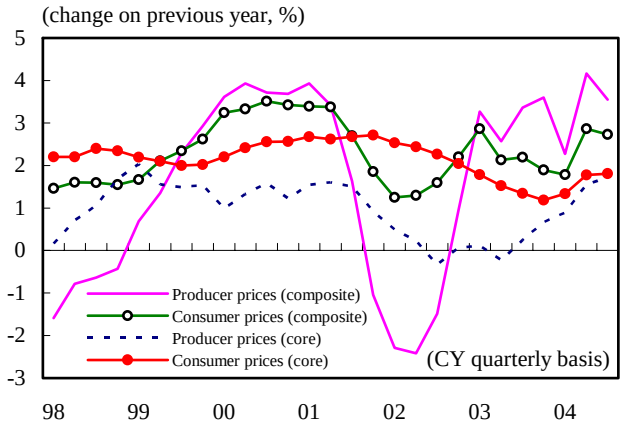
Note: The number of employees represents monthly average for the non-agricultural sector.
Source: U.S. Department of Labor, "Employment Situation."

Figure 1-7. Current Account Balance



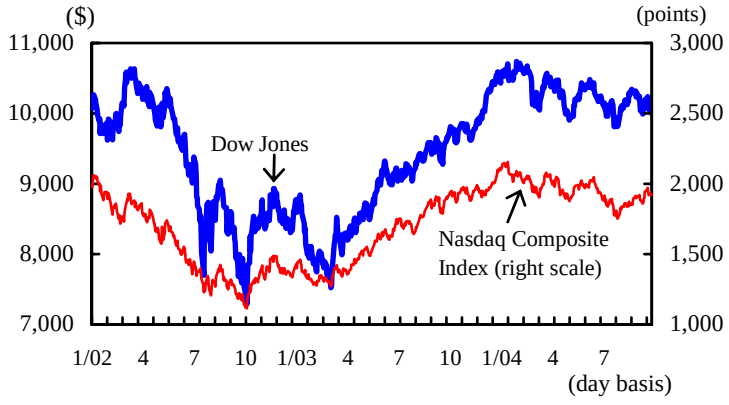
Note: Annual data to 2003. Annualized quarterly data since 2004.
Sources: U.S. Department of Commerce, "Balance of Payment" and "US International Trade in Goods and Services."

Figure 1-8. Prices



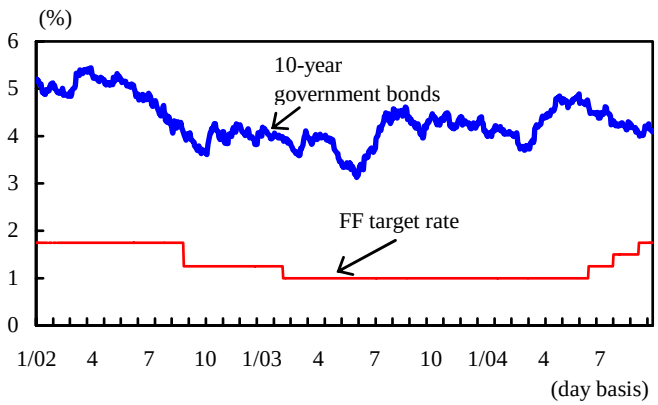
Sources: U.S. Department of Labor, "Producer Price Index" and "Consumer Price Index."

Figure 1-9. Stock Market Indexes



Sources: Dow Jones; DRI database.

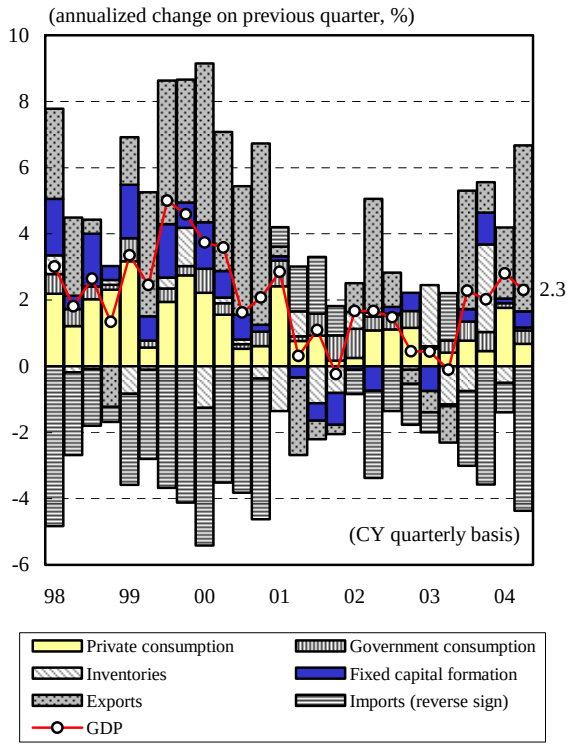
Figure 1-10. Long- and Short-term Interest Rates



Sources: FRB data; Wall Street Journal.

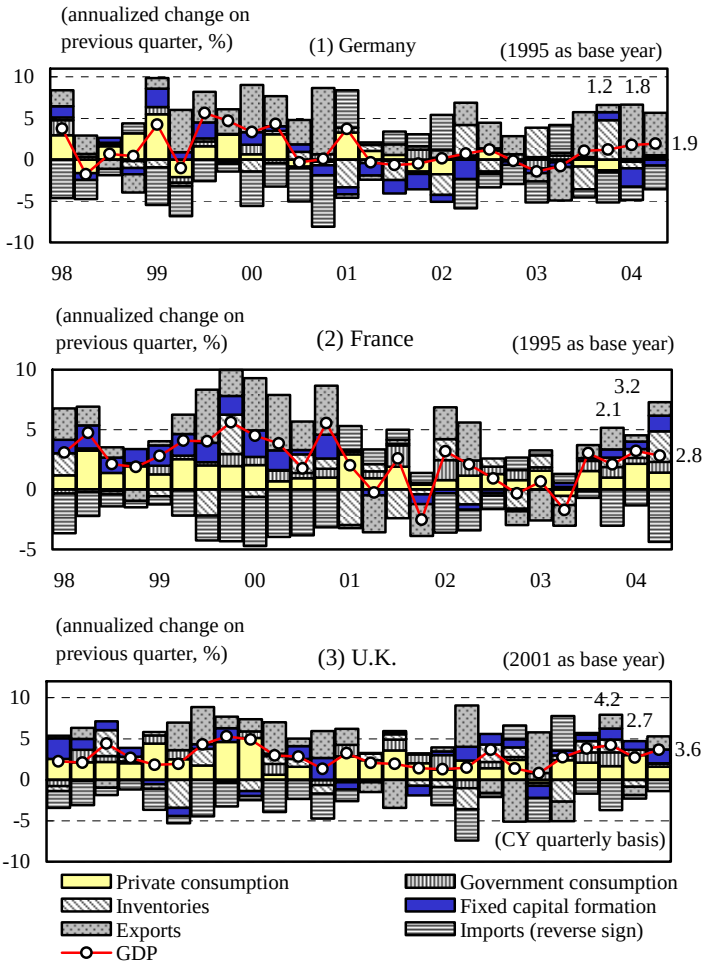
European Economies: Recovery Underway

Figure 1-11. Real GDP of EU25 (quarter-on-quarter change by component)



Source: Eurostat

Figure 1-12. Real GDP of Major European Countries (annualized change from previous quarter by componen



Sources: Statistisches Budesamt (StBA), Direction Générale de l'Institut National de la Statistique et des Etudes Economiques (INSEE) and U.K. Central Statistical Office data.

Figure 1-13. Trends in Foreign Exchange Rates

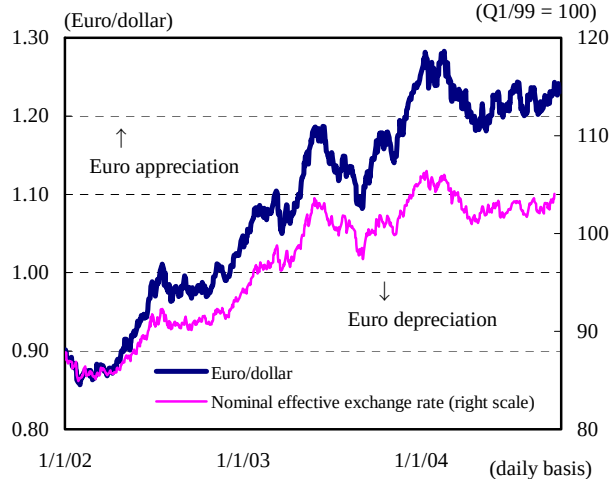


Figure 1-14. Trend of Unemployment Rates

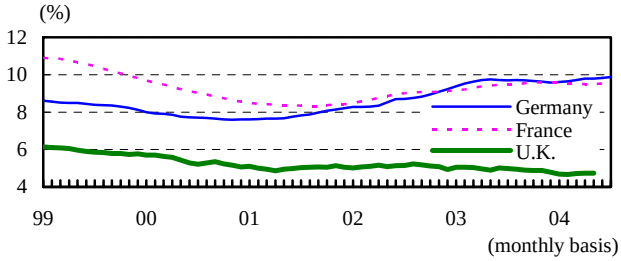
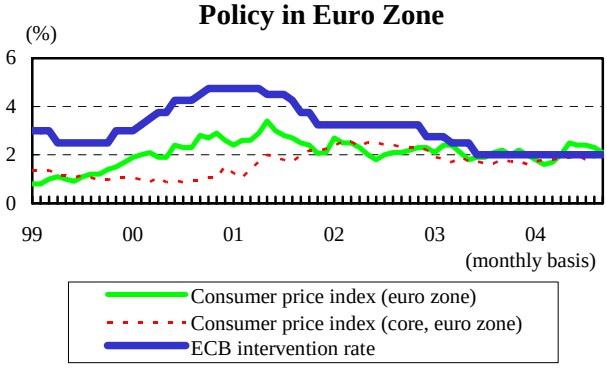


Figure 1-15. Consumer Prices and Monetary Policy in Euro Zone



Notes: 1. Values in Figures 1-14 and 1-15 are seasonally adjusted.
2. Unemployment is based on ILO standard for international comparison.

Sources: European Central Bank; Eurostat; OECD.

Economies of Major Asian Countries: Rapid Growth Led by Exports, Slumping Consumption in Korea

Figure 1-16. Real GDP Growth Rate

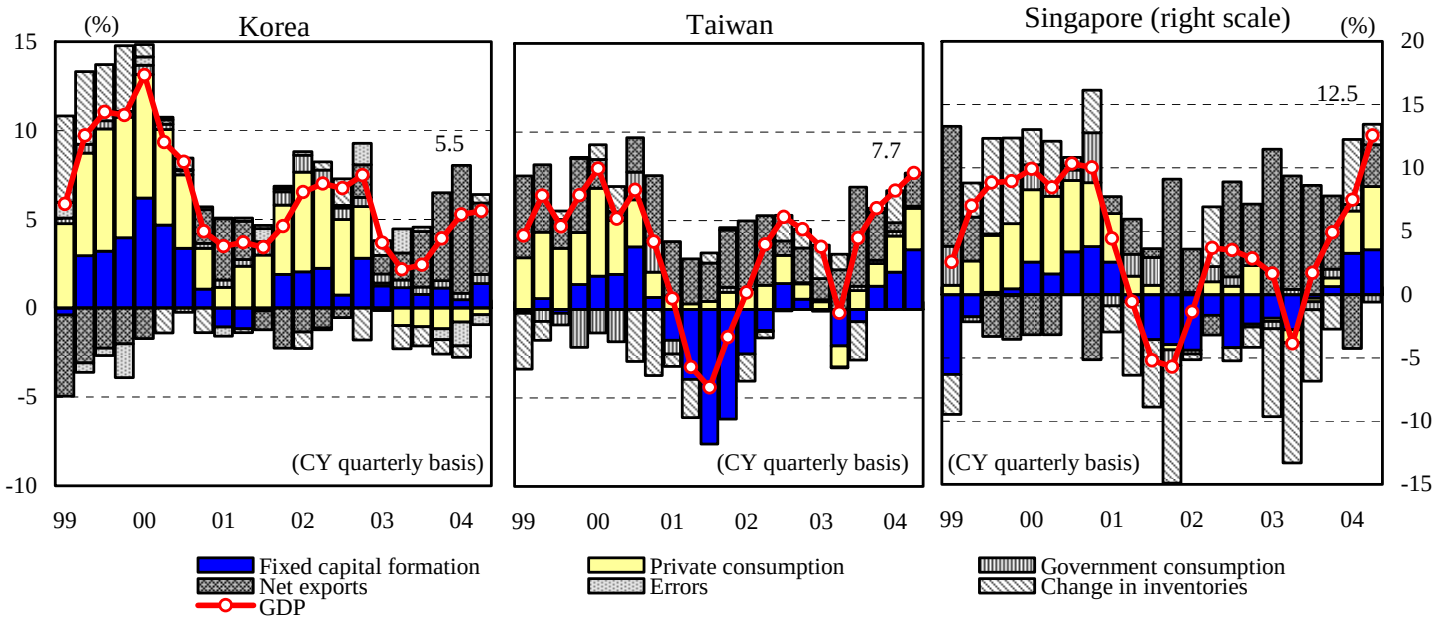


Figure 1-17. Manufacturing Sector Production Index

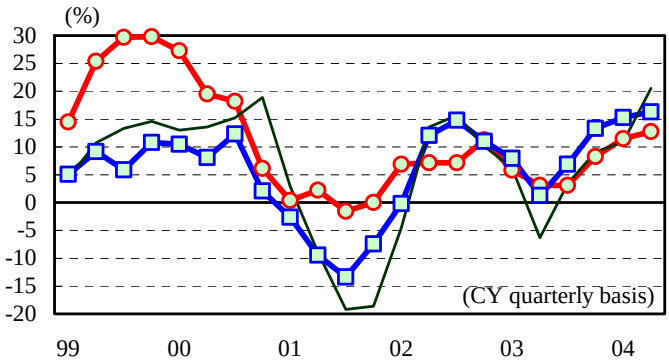
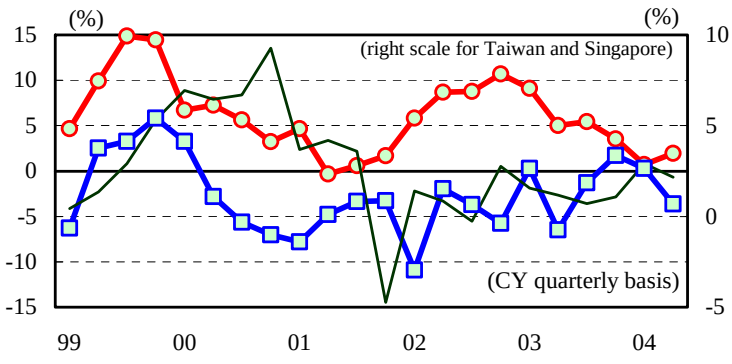


Figure 1-18. Real Wage Increase



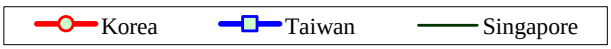


Figure 1-19. Price Inflation

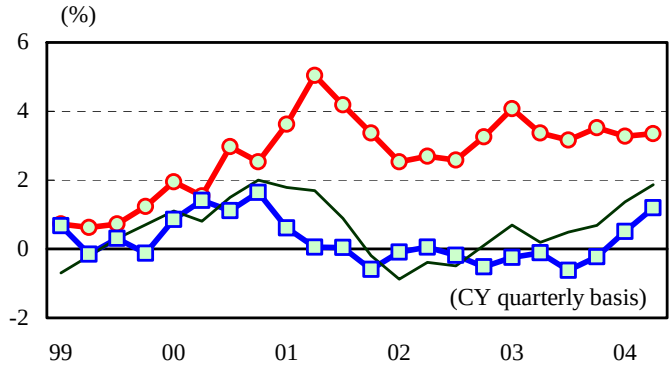
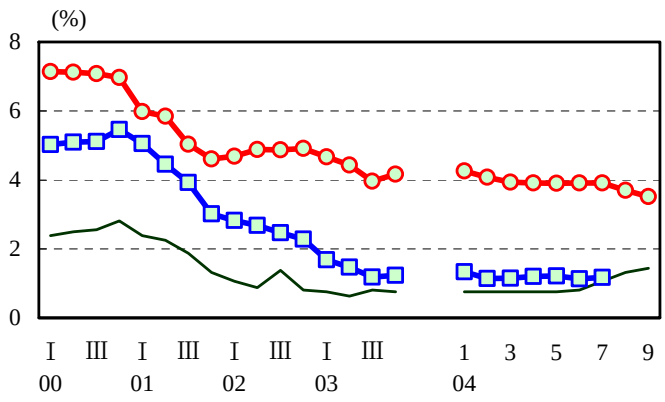


Figure 1-20. Interest Rates (Three months)



Note : Growth rates represent year-on-year.
Sources : National statistics

China (1): Mild Slowdown in Investment

Figure 1-21. Real GDP Growth

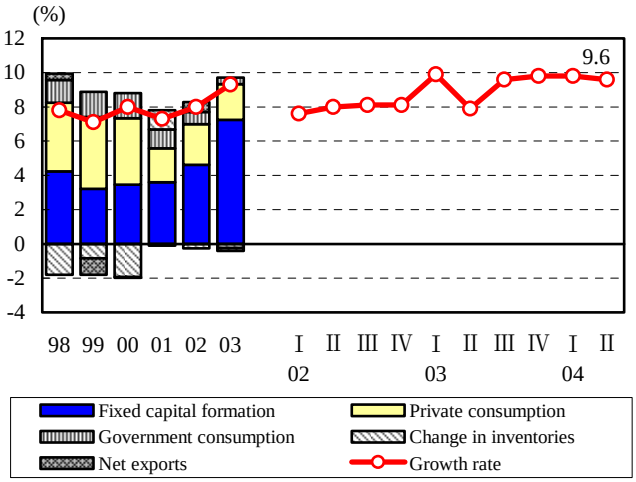


Figure 1-22. Composition of Investment Completed (1)

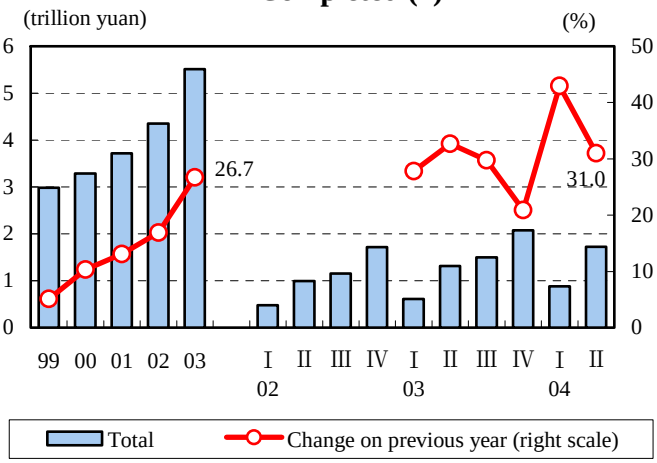


Figure 1-23. Composition of Investment Completed (2)

<Industries with largest contribution> (Apr.-Jun. 2004)

	Change on previous year	Share	Contribution
1) Real estate	22.1%	24.6%	22.8%
2) Electricity/gas/water	46.9%	9.3%	15.2%
3) Transport	19.2%	11.5%	9.5%

<By region>

	January-March		April-June	
	Change on previous year	Share	Change on previous year	Share
Eastern provinces	47.8%	64.2%	20.1%	54.6%
Central and western provinces	45.4%	35.8%	22.8%	45.4%
Total	47.8%	100.0%	24.3%	100.0%

Figure 1-24. Retail Sales of Consumer Goods

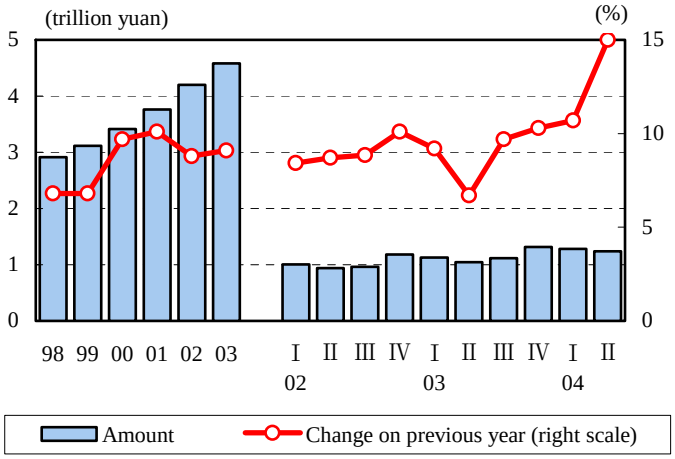


Figure 1-25. Prices and Money Stock

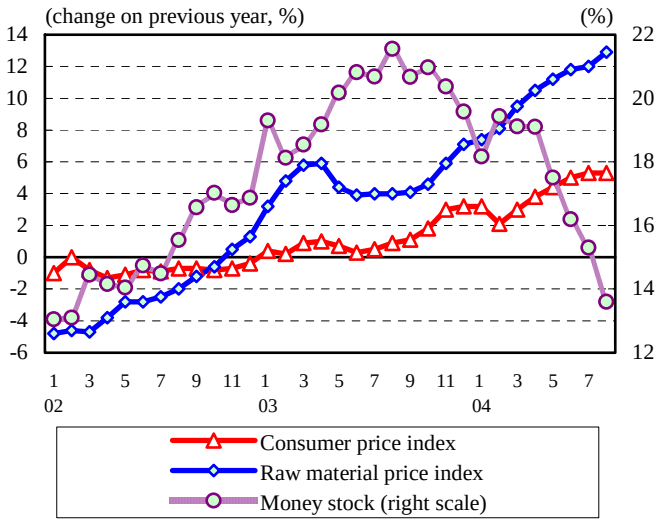
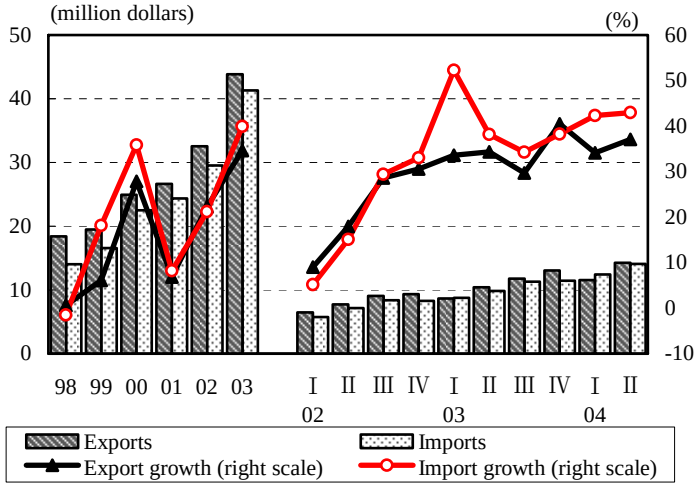


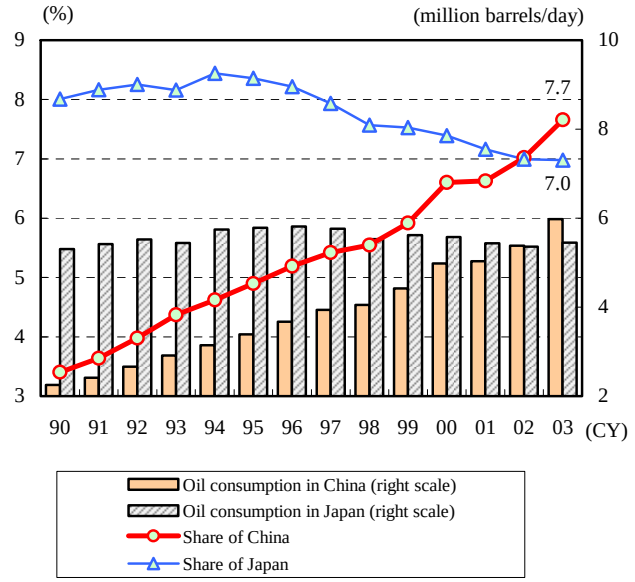
Figure 1-26. Exports and Imports



Note: The growth rate represents change on the previous year.
Sources: IMF, "International Finacial Statistics," China Statistical Yearbook, China Monthly Economic Inicators and People's Bank of China data.

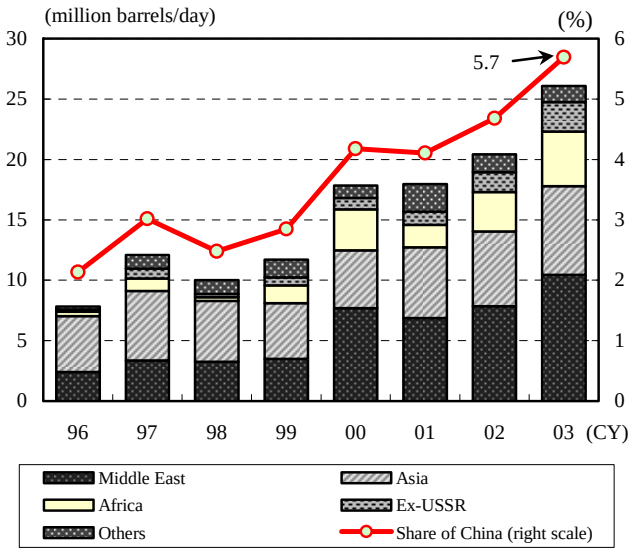
China (2): Oil Consumption and Imports on the Rise

Figure 1-27. Oil Consumption and Share in Global Consumption



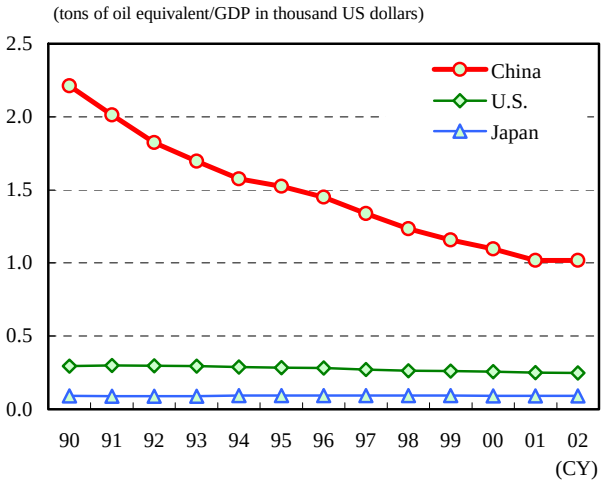
Note: Data include crude oil and oil products.
Source: BP

Figure 1-28. Oil Imports of China (world share and by imports origin)



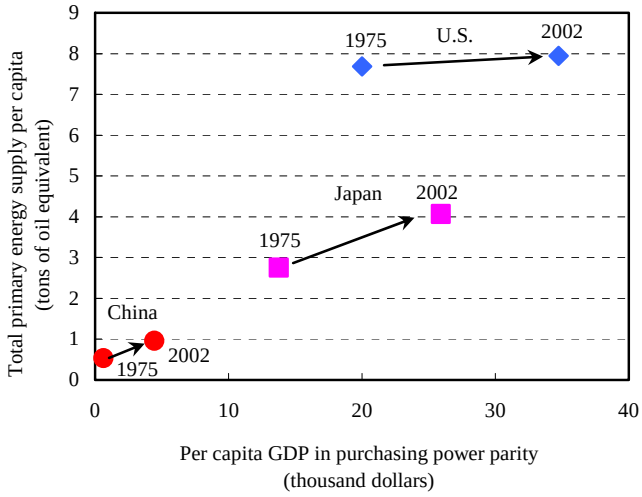
Note: Data include crude oil and oil products.
Source: BP

Figure 1-29. Trend of Energy Intensity



Note: Energy intensity = Total primary energy supply (tons of oil equivalent)/GDP in dollars (1995 prices in thousand US dollars).
Sources: IEA; World Bank.

Figure 1-30. Per Capita GDP in PPP and Energy Consumption per Capita (1975, 2002)



Sources: IEA; World Bank.

Figure 1-31. Chinese Government Policy Measures on Energy

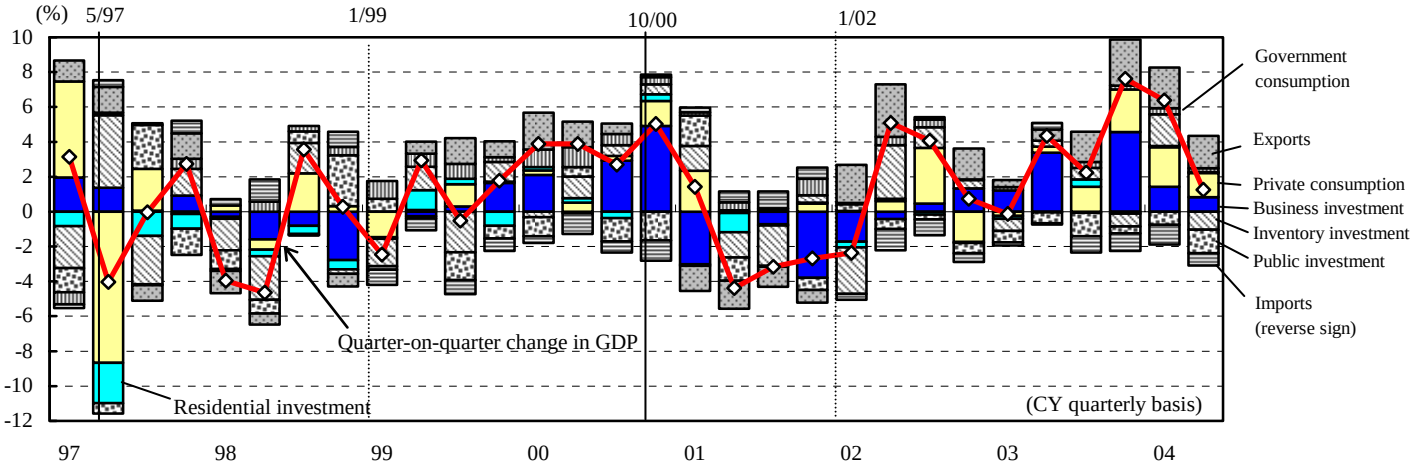
West-east gas pipeline project	A natural gas pipeline construction project. Construction started in July 2002 and was completed on October 1, 2004 (between Xinjiang and Shanghai). Commercial operation is envisaged from January 2005, with the objective of supplying 12 billion cubic meters per year by 2007.
National oil reserves plan	In March 2003, an Energy Department was established in the National Development and Reform Commission. National oil reserves are planned in Dalian (Liaoning Province), Huangdao (Shandong Province), Zhenhai and Zhoushan (Zhejiang Province), which will be completed in 2006-2008. Its aim is to stockpile oil equivalent to 90 days' imports by 2015.
Overseas resource development	Overseas resource development is to be accelerated with the restructuring of the three major oil corporations (CNPC, SNPC and CNOOC). Agreements have been reached in Kazakhstan, Sudan, Indonesia and Australia among others mainly for the acquisition of interests in oil and gas fields and the construction of pipelines.

Sources: National Development and Reform Commission website, etc.

II. Japanese Economy: Steady Recovery Continues

Overview: World Economy Holds the Key to Sustained Recovery

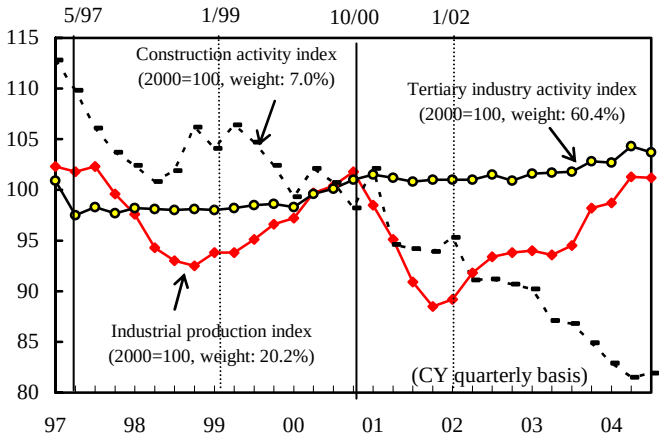
Figure 2-1. Trends in Real GDP
(annualized rate of change from the previous quarter by component, seasonally adjusted)



Notes: 1. 1995 as base year.
2. Contribution to annualized GDP is prorated to each item based on its share in contribution before annualization. Government consumption includes the contribution of public inventories.

Source: Cabinet Office, "National Accounts."

Figure 2-2. Trends in Production Indicators (seasonally adjusted)

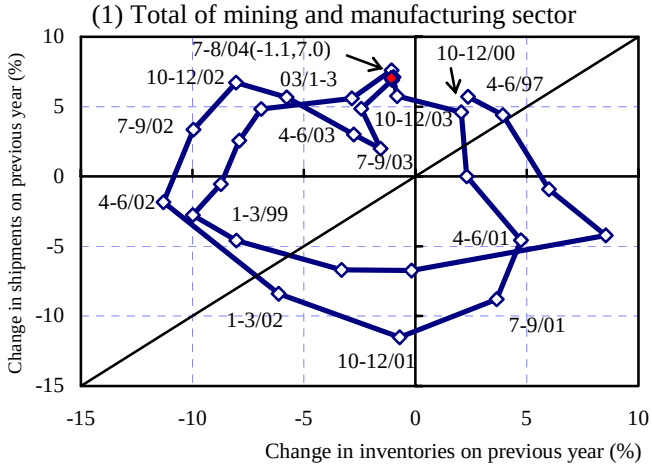


Notes: 1. Weights represent shares in all-industry activity index (GDP from the supply side) and add up to 100 in sum with the agriculture, forestry and fishery production index (weight: 1.6%) and public service activity index (10.8%).
2. For July-September 2004, the industrial production figures represent the average of actual figures for July and August and estimate for September based on the Survey of Manufacturing Production Forecast. The construction and tertiary industry figures represent July only.

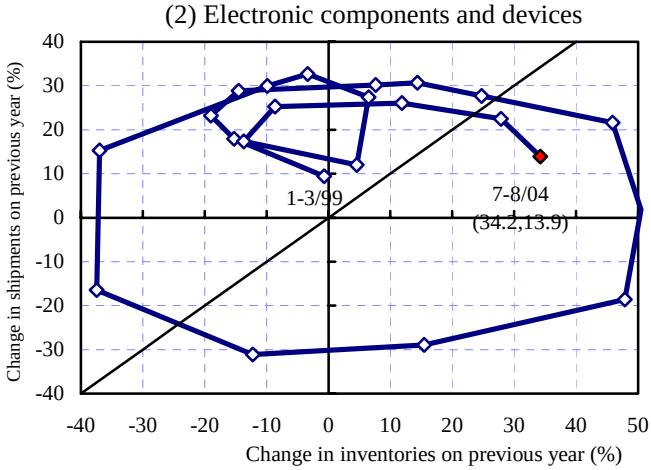
Source: Ministry of Economy, Trade and Industry

Figure 2-3. Inventory Cycle

(1) Total of mining and manufacturing sector

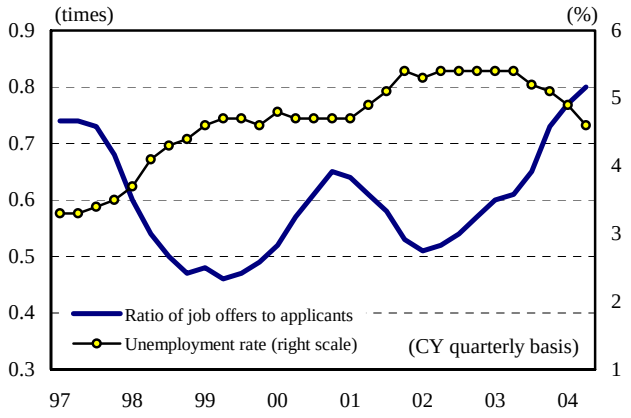


(2) Electronic components and devices



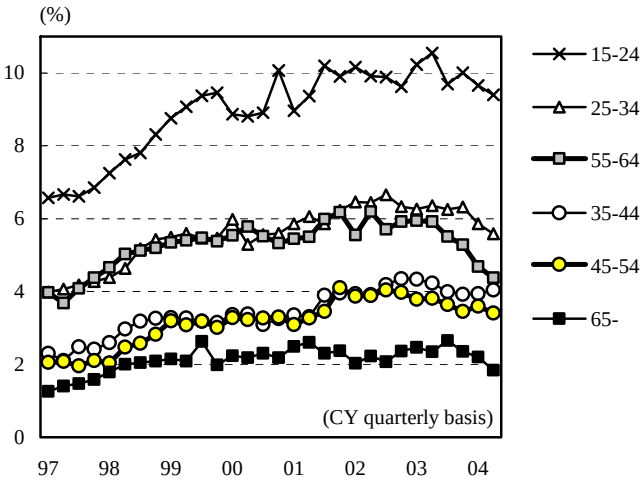
Employment Situation Improves as Job Offers Increase

Figure 2-4. Trends in Ratio of Job Offers to Applicants and Unemployment Rate



Note : Seasonally adjusted.
Sources : Ministry of Internal Affairs and Communications, "Labour Force Survey;" Ministry of Health, Labour and Welfare, "Statistics on Placement Activities."

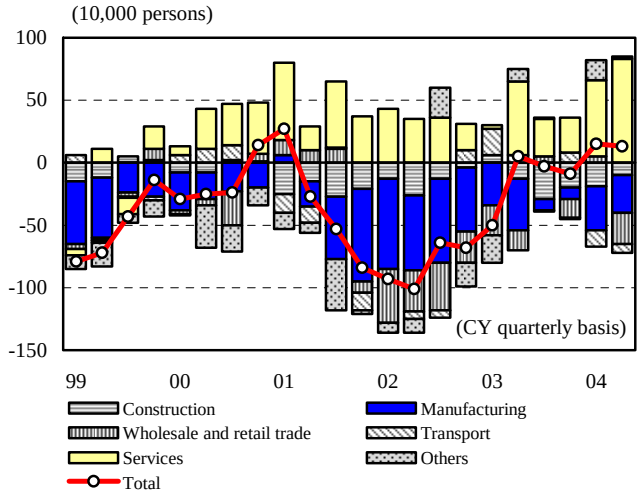
Figure 2-5. Unemployment Rate by Age Group



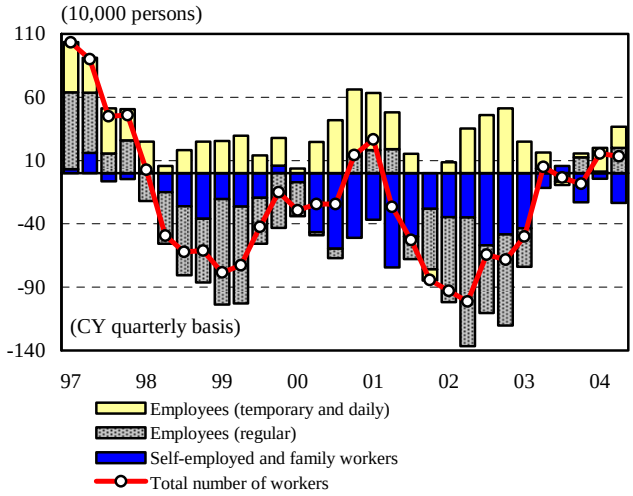
Note : Seasonally adjusted.
Source : Ministry of Internal Affairs and Communications, "Labor Force Survey."

Figure 2-6. Trend of Year-on-Year Change in Number of Workers and Employees by Component

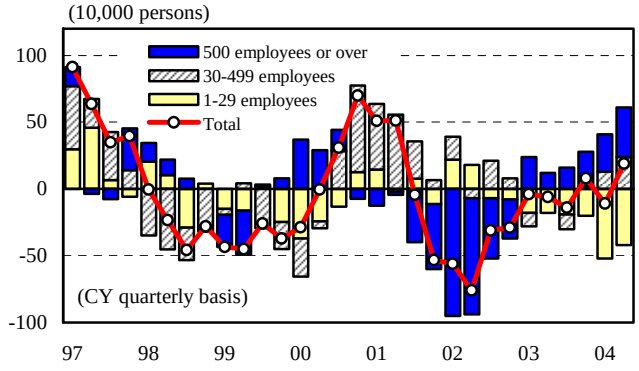
(1) By industry (new industrial classification)



(2) By status

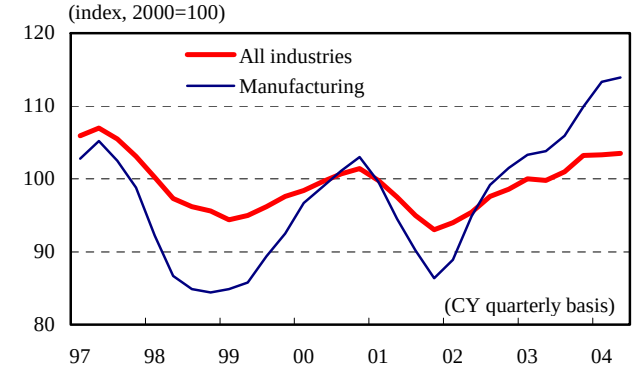


(3) By size of corporation (excluding agriculture, forestry, fisheries and government)



Source : Ministry of Internal Affairs and Communications, "Labour Force Survey."

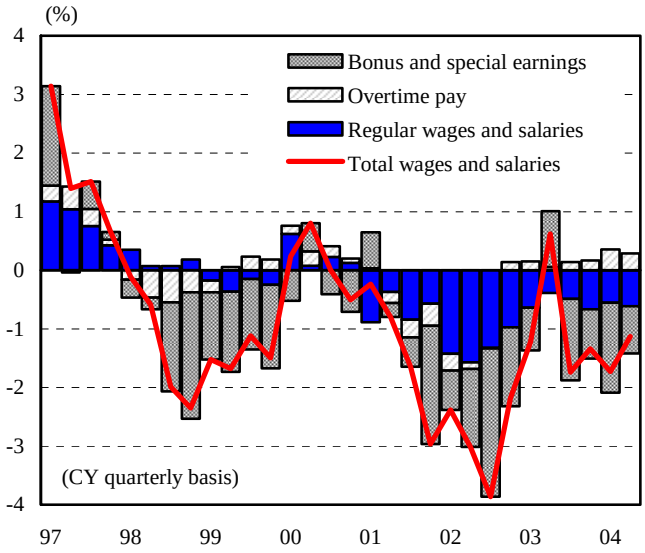
Figure 2-7. Overtime Hours (seasonally adjusted)



Source : Ministry of Health, Labour and Welfare, "Monthly Labour Survey."

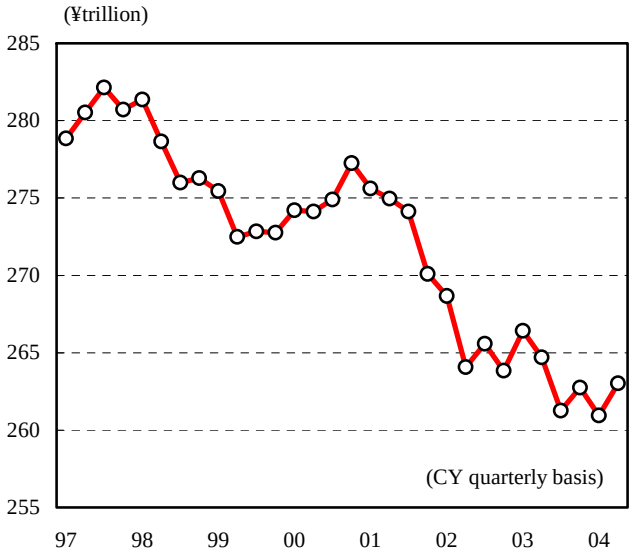
Income Holds Steady

Figure 2-8. Year-on-Year Change in Wages and Salaries per Person



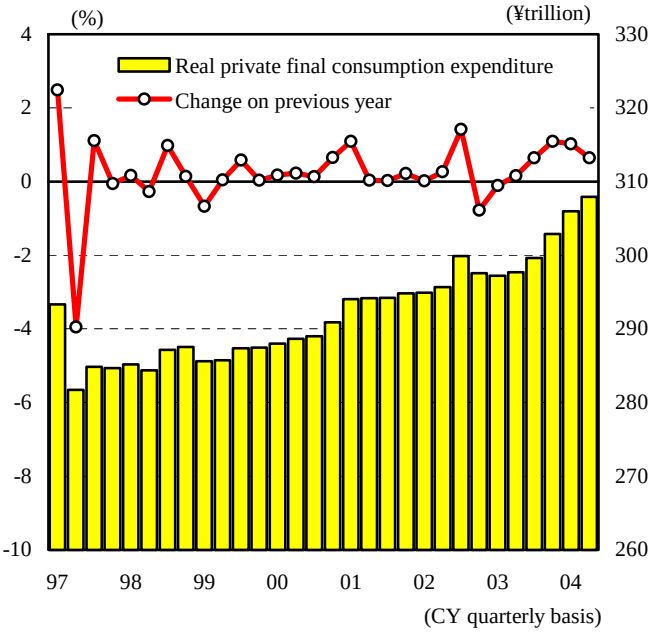
Note : Business establishments with five or more employees.
Source : Ministry of Health, Labour and Welfare, "Monthly Labour Force Survey."

Figure 2-9. Nominal Compensation of Employees



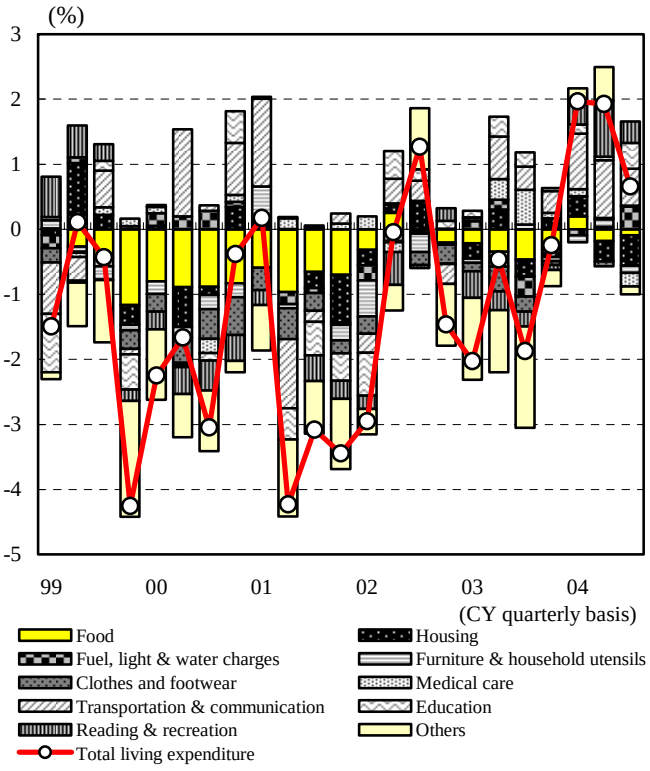
Note : Seasonally adjusted annual rate.
Source : Cabinet Office, "National Accounts."

Figure 2-10. Consumption on GDP Basis



Note : Seasonally adjusted annual rate.
Source : Cabinet Office, "National Accounts."

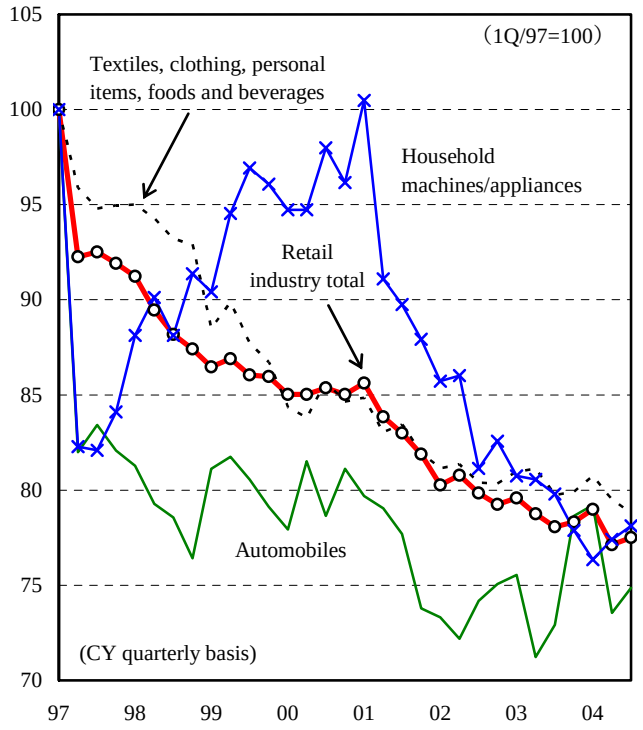
Figure 2-11. Nominal Living Expenditure of All Households (year-on-year change by component)



Note : Data for July-September 2004 represent average for July and August.
Source : Ministry of Internal Affairs and Communications, "Family Income and Expenditure Survey."

Retail Sales Bottoming Out as Consumer Confidence Improves

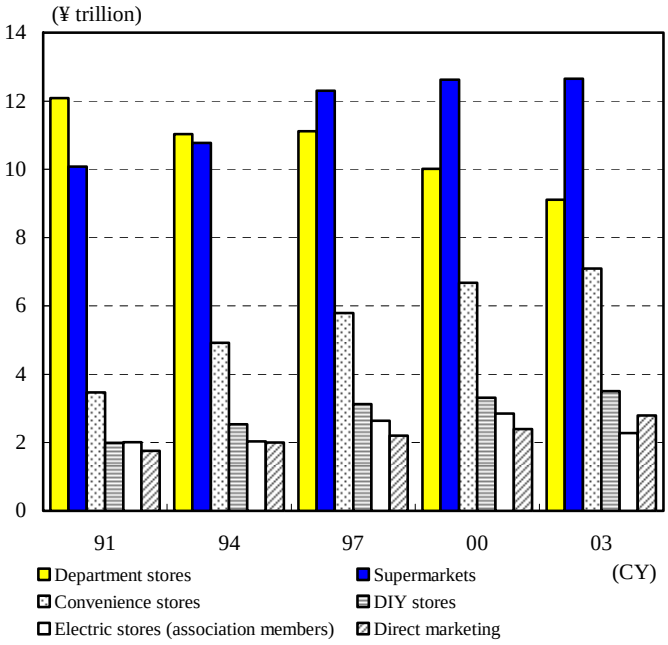
Figure 2-12. Retail Sales Index (seasonally adjusted)



Notes: 1. Retail sales index except for total represents the average of published seasonally adjusted figures weighted by the sales of each industry.
2. Data for July-September 2004 represent average for July and August.

Source: Ministry of Economy, Trade and Industry, "Report of the Current Survey of Commerce."

Figure 2-13. Retail Sales by Type of Operation

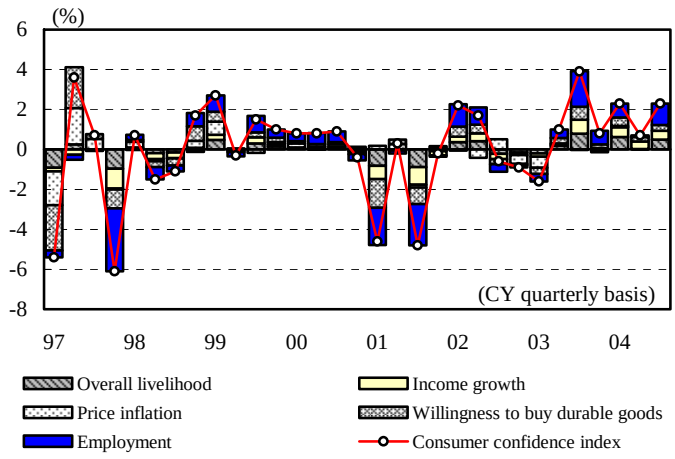


Notes: 1. Data for convenience stores (before FY1997) and direct marketing represent annual values.
2. Data for convenience stores are taken from "Small-scale General Merchandise Store Chains in Japan" for the years to 1996 and from "Report of the Current Survey of Commerce" since 1997.

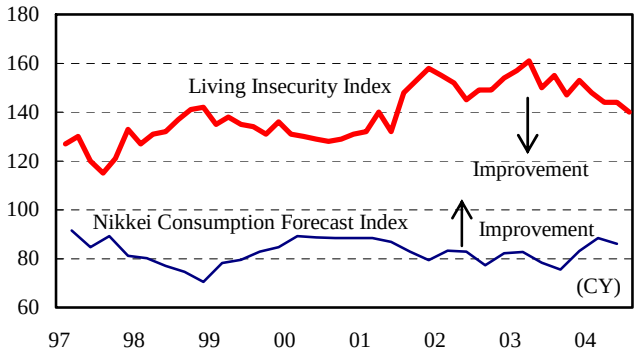
Sources: Ministry of Economy, Trade and Industry, "Report of the Current Survey of Commerce;" Itemize, "Small-scale General Merchandise Store Chains in Japan;" Home Center Institute, "Home Center Directory;" Japan Direct Marketing Association; Nippon Electric Big-Stores Association (NEBA).

Figure 2-14. Consumer Confidence Indicators

(1) Quarterly change in consumer confidence index



(2) Other Confidence Indexed

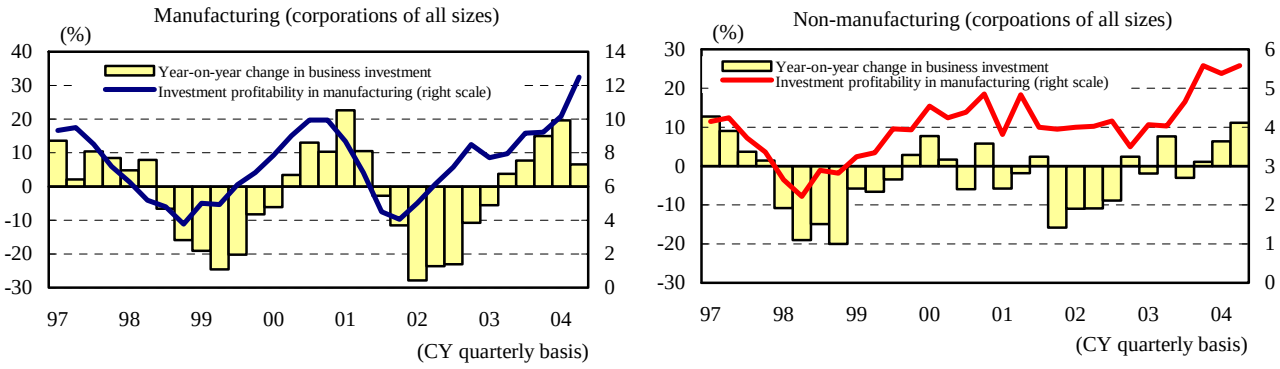


Note: Consumer confidence index is based on surveys for the coming six months. Figures for individual components were redistributed from seasonally adjusted data.

Sources: Cabinet Office, "Consumer Confidence Survey;" Japan Research Institute, "Consumer Sentiment Index;" Nikkei Industrial Consumption Research Institute data.

Business Investment Increases in Manufacturing and Non-Manufacturing

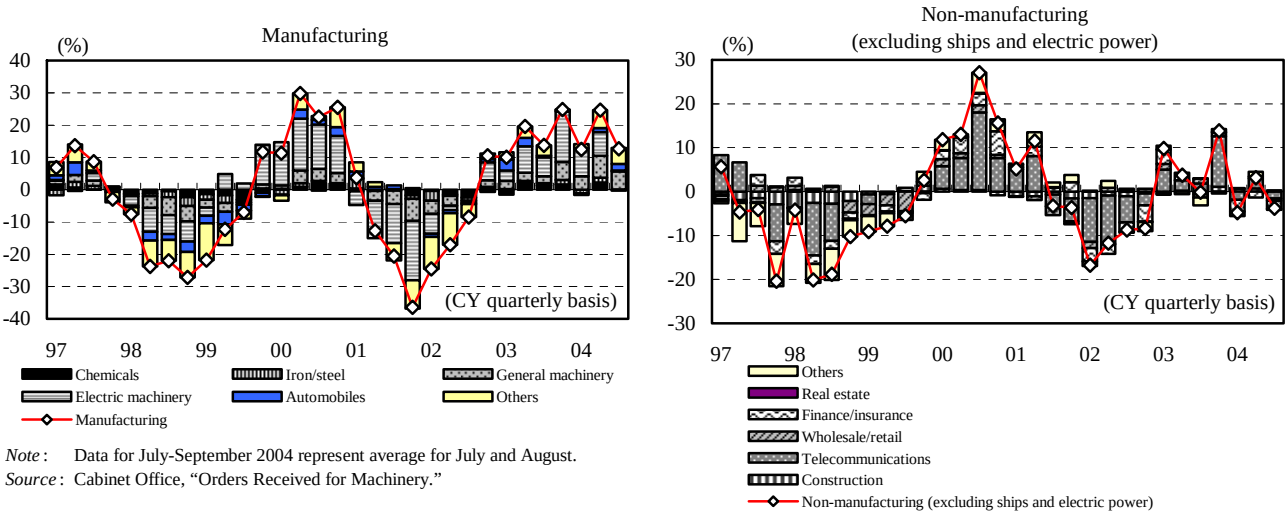
Figure 2-15. Year-on-Year Change in Nominal Business Investment and Investment Profitability



Notes: 1. Business investment excludes software.
2. Return on investment = operating asset-profit rate – average contracted interest rates of banks (new loans, total), where operating asset-profit rate = operating profit/(tangible fixed assets + inventories).

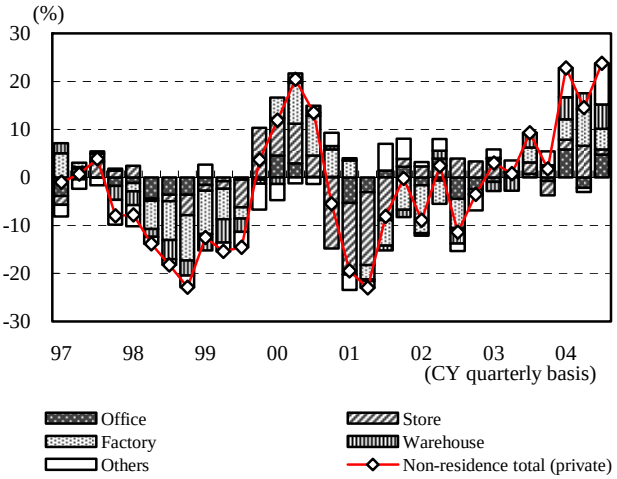
Sources: Ministry of Finance, "Quarterly Report of Statistical Survey of Incorporated Enterprises," etc.

Figure 2-16. Machinery Orders (change on previous year)



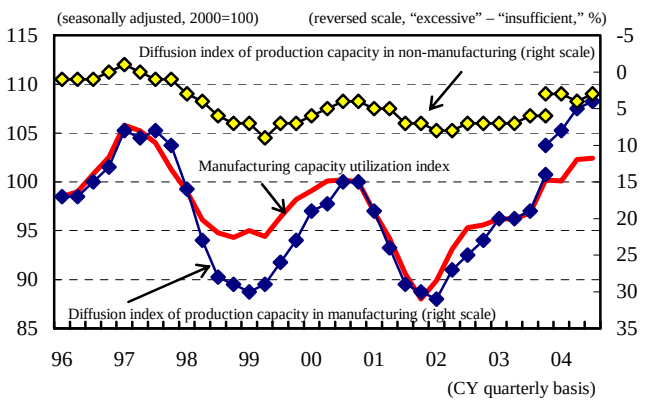
Note: Data for July-September 2004 represent average for July and August.
Source: Cabinet Office, "Orders Received for Machinery."

Figure 2-17. Floor Area of Building Construction Started (by use) (change on previous year)



Source: Ministry of Land, Infrastructure and Transport, "Building Construction Started."

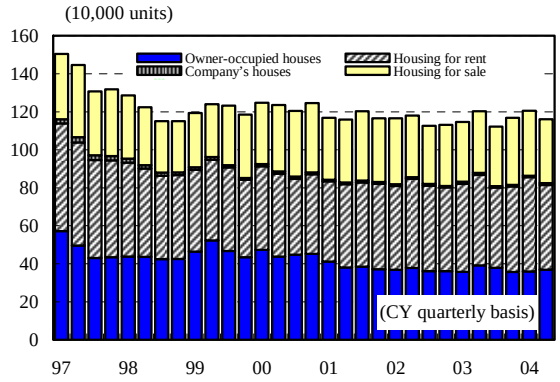
Figure 2-18. Capacity Utilization Index and Diffusion Index of Production Capacity



Note: The diffusion index of production capacity has a discontinuity due to a revision to its coverage in March 2004.
Sources: Ministry of Economy, Trade and Industry, "Industrial Index;" Bank of Japan "Short-term Economic Survey of Enterprises in Japan (*Tankan*)."

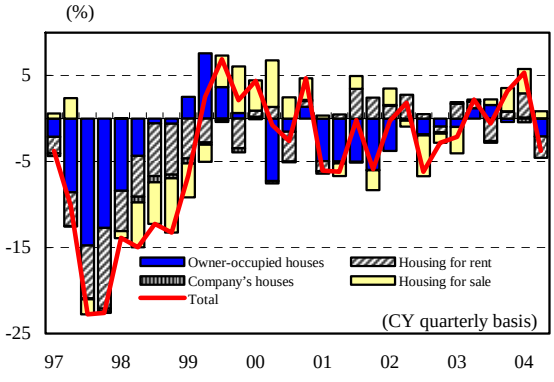
Residential Investment Stays Flat

Figure 2-19. Trend of Housing Starts (seasonally adjusted annual rate)



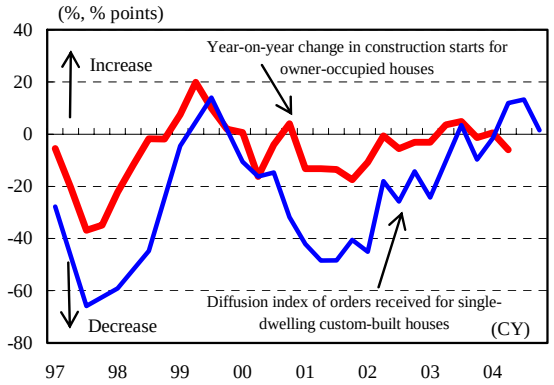
Source: Ministry of Land, Infrastructure and Transport, "Building Construction Started."

Figure 2-20. Housing Starts (trend of year-on-year change by component)



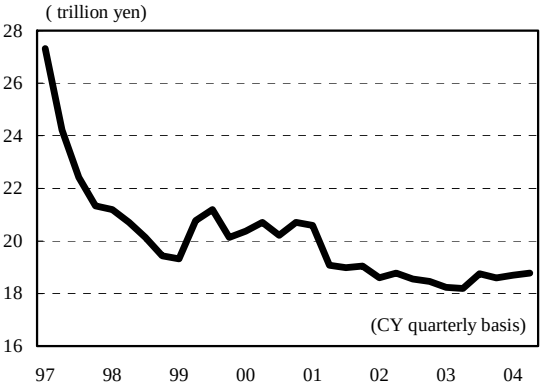
Source: Ministry of Land, Infrastructure and Transport, "Building Construction Started."

Figure 2-21. Year-on-Year Change in Construction Starts for Owner-Occupied Houses and Diffusion Index of Orders Received



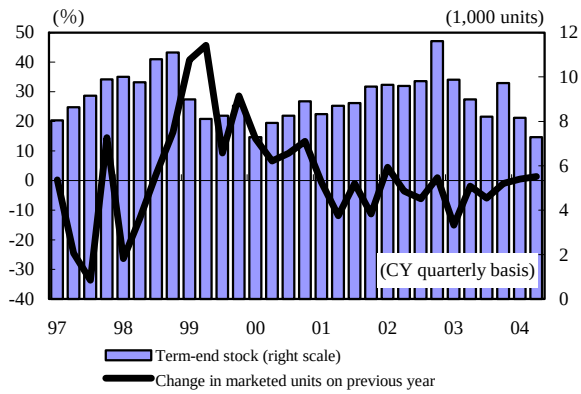
Note: The diffusion index figures for Q3 and Q4 2004 are estimates.
Sources: Ministry of Land, Infrastructure and Transport, "New Dwellings Started;" Government Housing Loan Corporation, "National Housing Market Survey."

Figure 2-22. Real Residential Investment (seasonally adjusted annual rate)



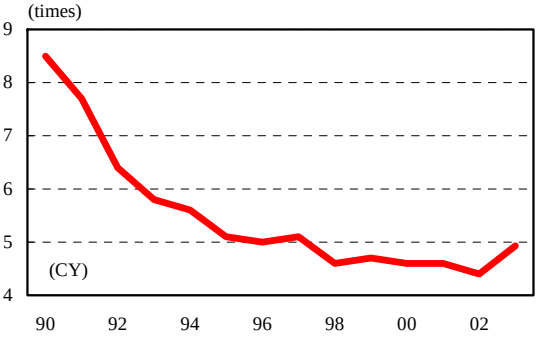
Source: Cabinet Office, "National Accounts."

Figure 2-23. Contract Rate and Stock of Condominiums (Tokyo metropolitan area)



Note: Contract rate refers to the quarterly average of the percentage of housing sales contracts that were actually closed from among the total number of contracts started for any given month. Stock refers to the figure at the end of the quarter.
Source: Real Estate Economic Institute Co., Ltd.

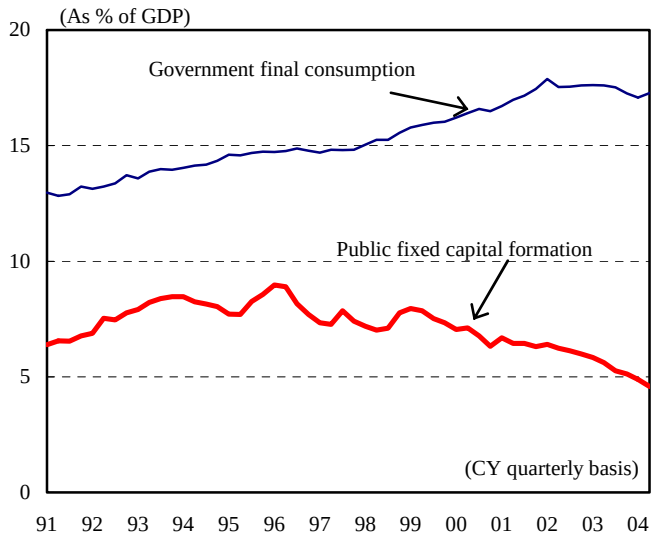
Figure 2-24. Condominium Prices as Compared with Annual Income (Tokyo metropolitan area, new construction)



Note: Average price of condominiums per 70 square meters divided by average annual income of worker's households (for Tokyo metropolitan area including parts of Kanagawa and Chiba Prefectures).
Sources: Real Estate Economic Institute Co., Ltd., "Trends in Condominium Market;" Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Family Income and Expenditure Survey;" Mitsui Fudosan, "Statistics on Real Estate."

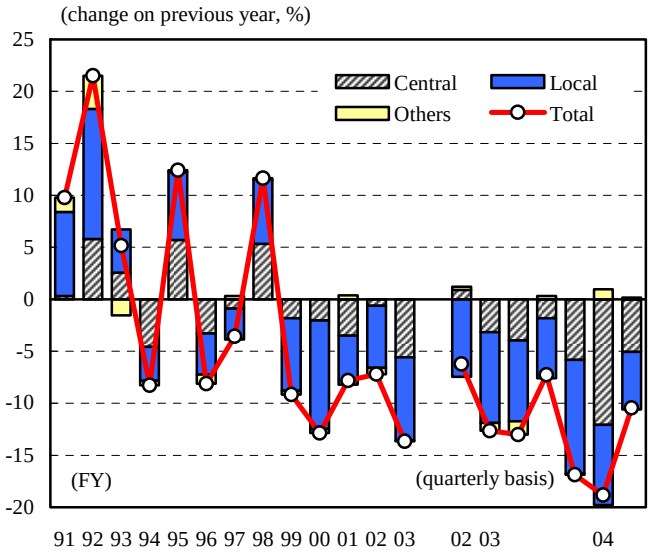
Constant Decline in Public Investment due to Financial Squeeze

Figure 2-25. Public Investment and Government Consumption



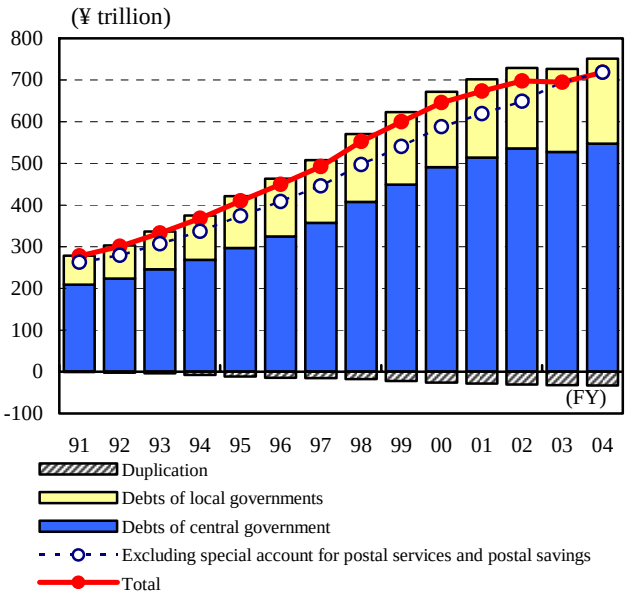
Note: Data represent seasonally adjusted annual rate.
Source: Cabinet Office, "National Accounts."

Figure 2-26. Trend of Contract Value for Public Works



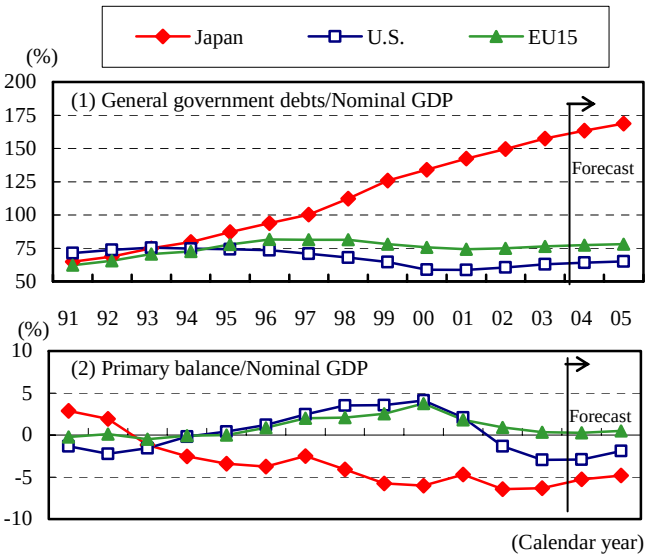
Note: In the legend, "Local" represents the total of prefectures and municipalities. "Others" represent the total of central and local public business entities.
Source: East Japan Construction Surety etc., "Public Works Prepayment Surety Statistics."

Figure 2-27. Long-term Outstanding Debts of Central and Local Governments



Notes: 1. Figures for fiscal 2003 represent estimates after supplementary budget and those for fiscal 2004 are estimates based on the initial budget.
2. The special account for postal services and postal savings (outstanding debts of some ¥49 trillion as at the end of FY2002) was abolished at the end of FY2002.
Source: Ministry of Finance, "Budgetary Data (August 2004)."

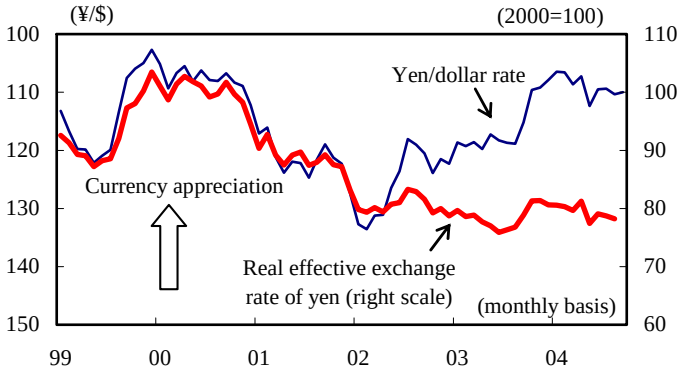
Figure 2-28. International Comparison of Financial Situations



Notes: 1. Values for 2004 are estimates.
2. Figures for some European countries in 2000 include income from the selling of cellular phone licenses (around 1% of the primary balance).
Source: OECD, "Economic Outlook 75 (June 2004)."

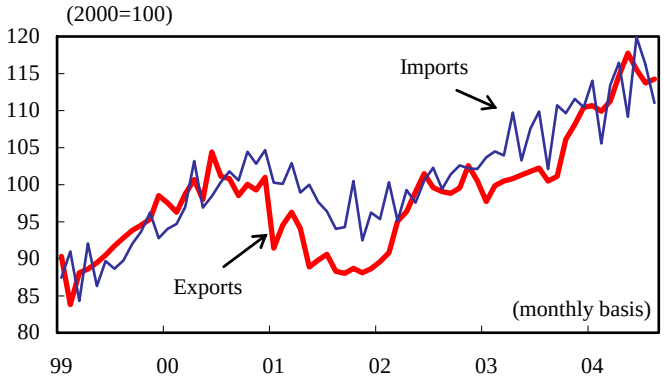
Exports Slow, Current Account Surplus Reaching Peak

Figure 2-29. Trends in Foreign Exchange Rate



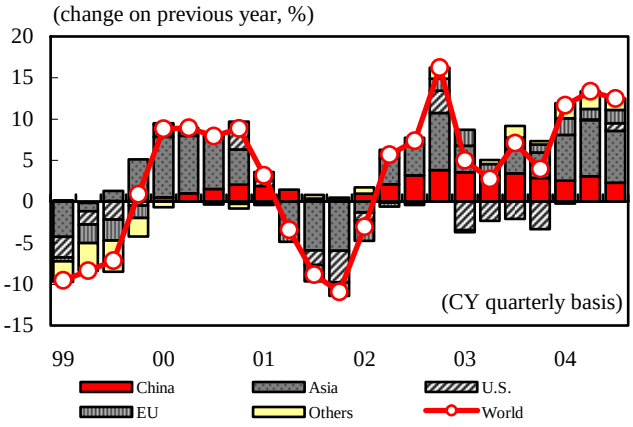
Source: IMF

Figure 2-30. Export and Import Quantum Indices



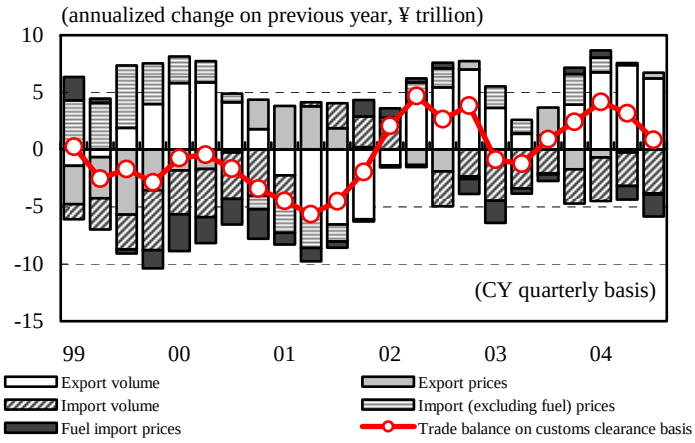
Source: Ministry of Finance, "Trade Statistics."

Figure 2-31. Export Value by Region



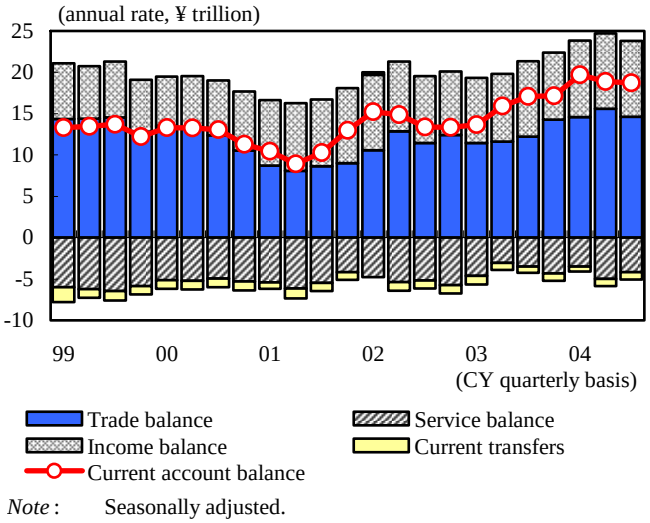
Note: Asia excludes China.
Source: Ministry of Finance, "Trade Statistics."

Figure 2-32. Trade Balance on Customs Clearance Basis (year-on-year change by component)



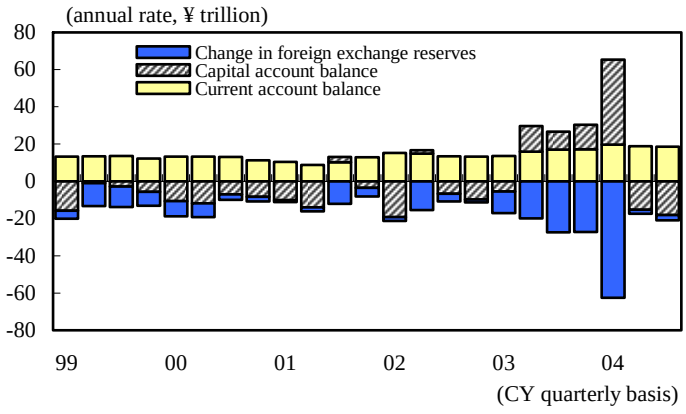
Source: Ministry of Finance, "Trade Statistics."

Figure 2-33. Current Account Balance



Note: Seasonally adjusted.
Sources: Ministry of Finance; Bank of Japan, "Balance of Payments."

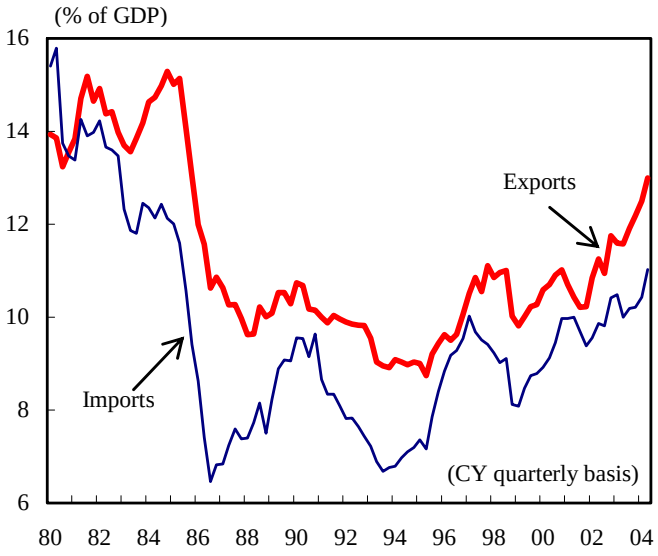
Figure 2-34. Balance of Payments and Change in Foreign Exchange Reserves



Note: Seasonally adjusted figures for current account balance.
Raw data for others.
Sources: Ministry of Finance; Bank of Japan, "Balance of Payments."

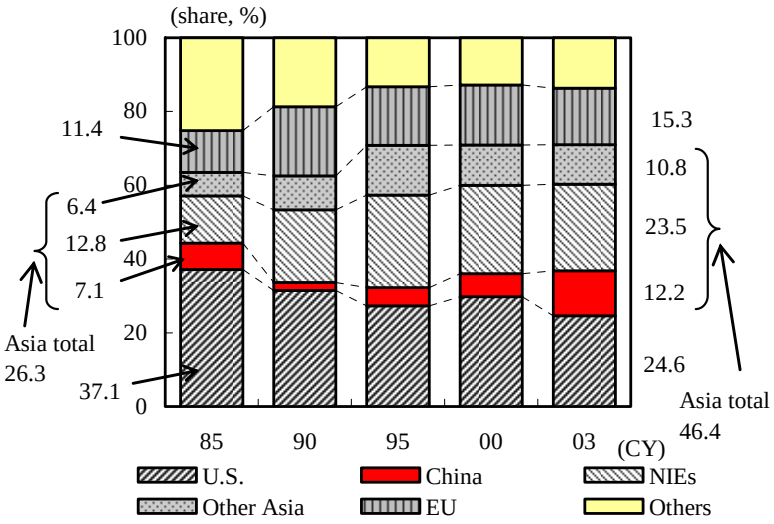
Trade Dependency Edges up as Relationship Strengthens between Exports and Domestic Production

Figure 2-35. Exports and Imports as % of GDP



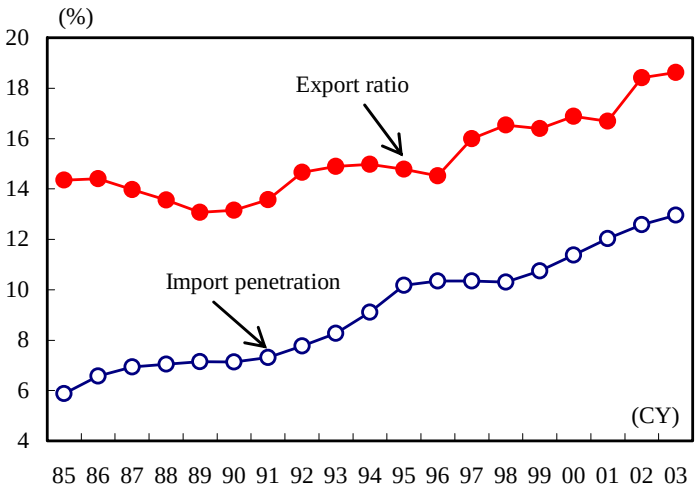
Note: Seasonally adjusted nominal values.
Source: Cabinet Office, "Preliminary Estimates of National Expenditure."

Figure 2-36. Exports of Japan by Destination



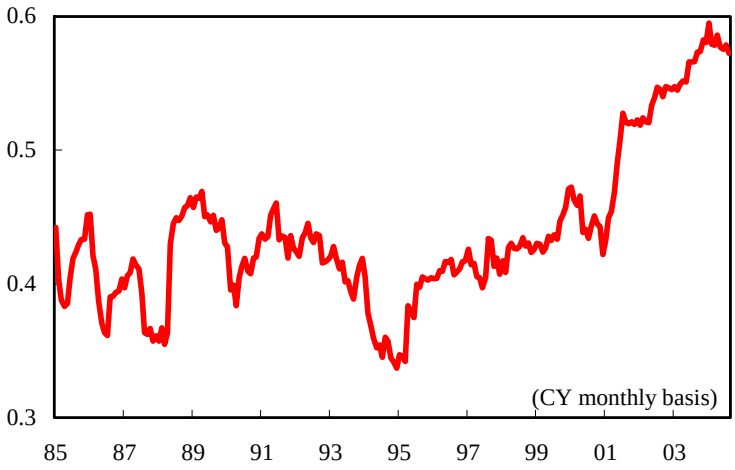
Note: Data for EU cover 15 countries.
Source: Ministry of Finance, "Trade Statistics."

Figure 2-37. Export Ratio and Import Penetration in Industrial and Mining Sector



Note: Export ratio = exports/shipments
Import penetration = imports/aggregate supply
Source: Ministry of Economy, Trade and Industry, "Analysis of Industrial Production Activities."

Figure 2-38. Coefficient of Correlation between Exports and Production



Note: The coefficient of correlation is calculated on a monthly basis for the growth of exports and production on three months earlier during the previous 10 years.
Sources: Ministry of Finance, "Trade Statistics;" Ministry of Economy, Trade and Industry, "Industrial Index."

Import Prices and Corporate Prices on the Rise

Figure 2-39. Trends in Corporate Goods Prices (domestic demand products)

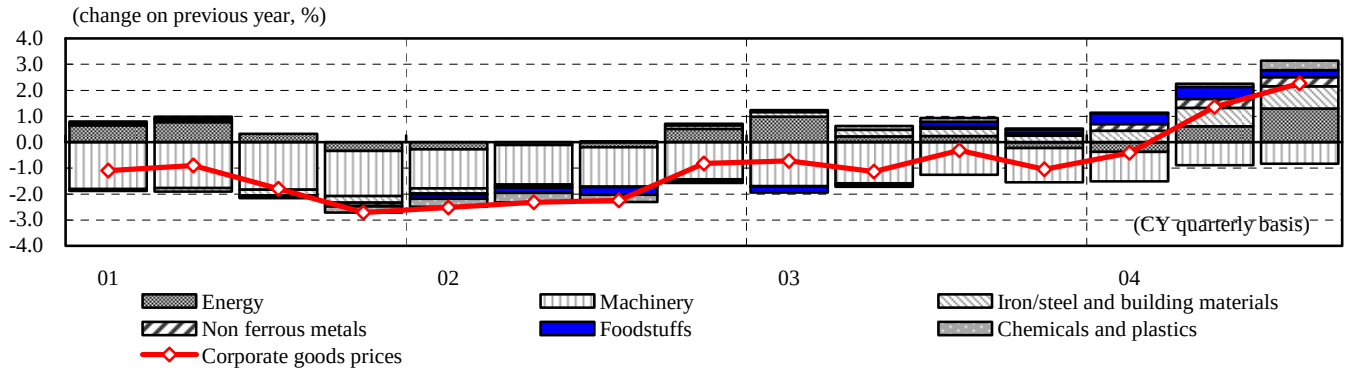
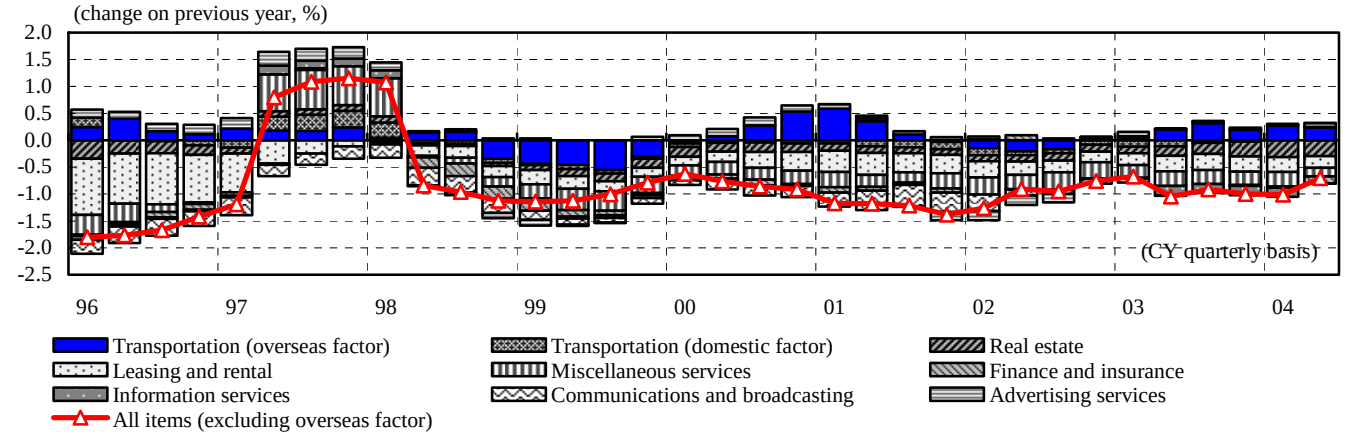


Figure 2-40. Trends in Corporate Service Prices

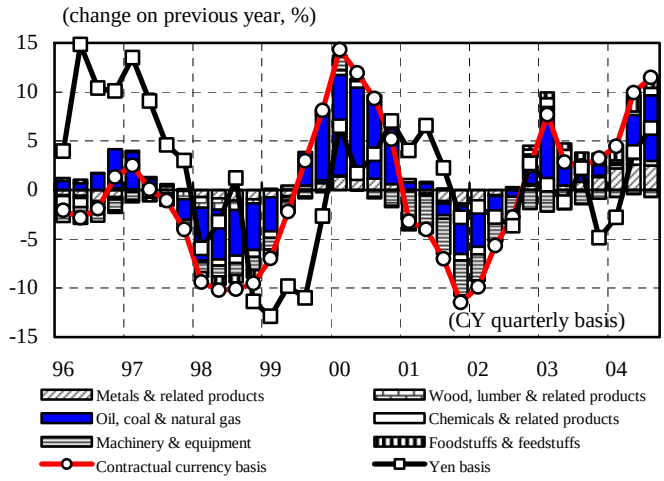


Notes: 1. In Figure 2-39, "Machinery" includes electrical machinery & equipment, general machinery & equipment, precision instruments and transportation equipment. "Iron/steel and building materials" includes iron & steel, metal products, ceramic, stone & clay products, lumber & wood products and scrap & waste. "Energy" includes electric power, gas & water, oil & coal products and minerals. "Others" includes agriculture, forestry & fishery products, processed foodstuffs, other manufacturing industry products, pulp, paper & related products and textile products.

2. In Figure 2-40, "Transportation (overseas factor)" includes ocean freight transportation, international air freight transportation and international air passenger transportation.

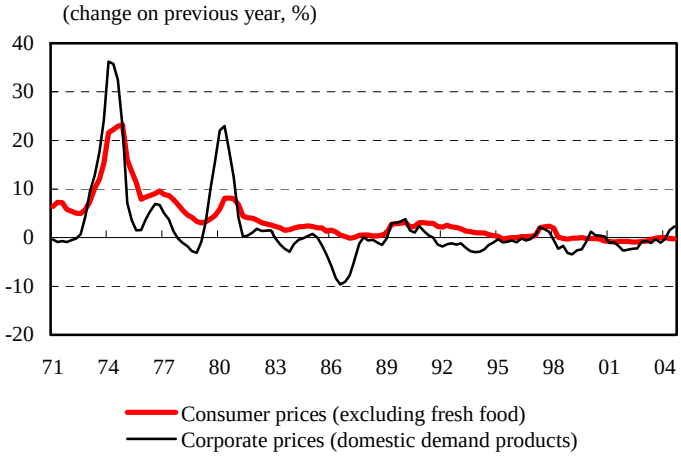
Source: Bank of Japan, "Price Indexes Monthly."

Figure 2-41. Trends in Import Price Index (contractual currency basis)



Source: Bank of Japan, "Price Indexes Monthly."

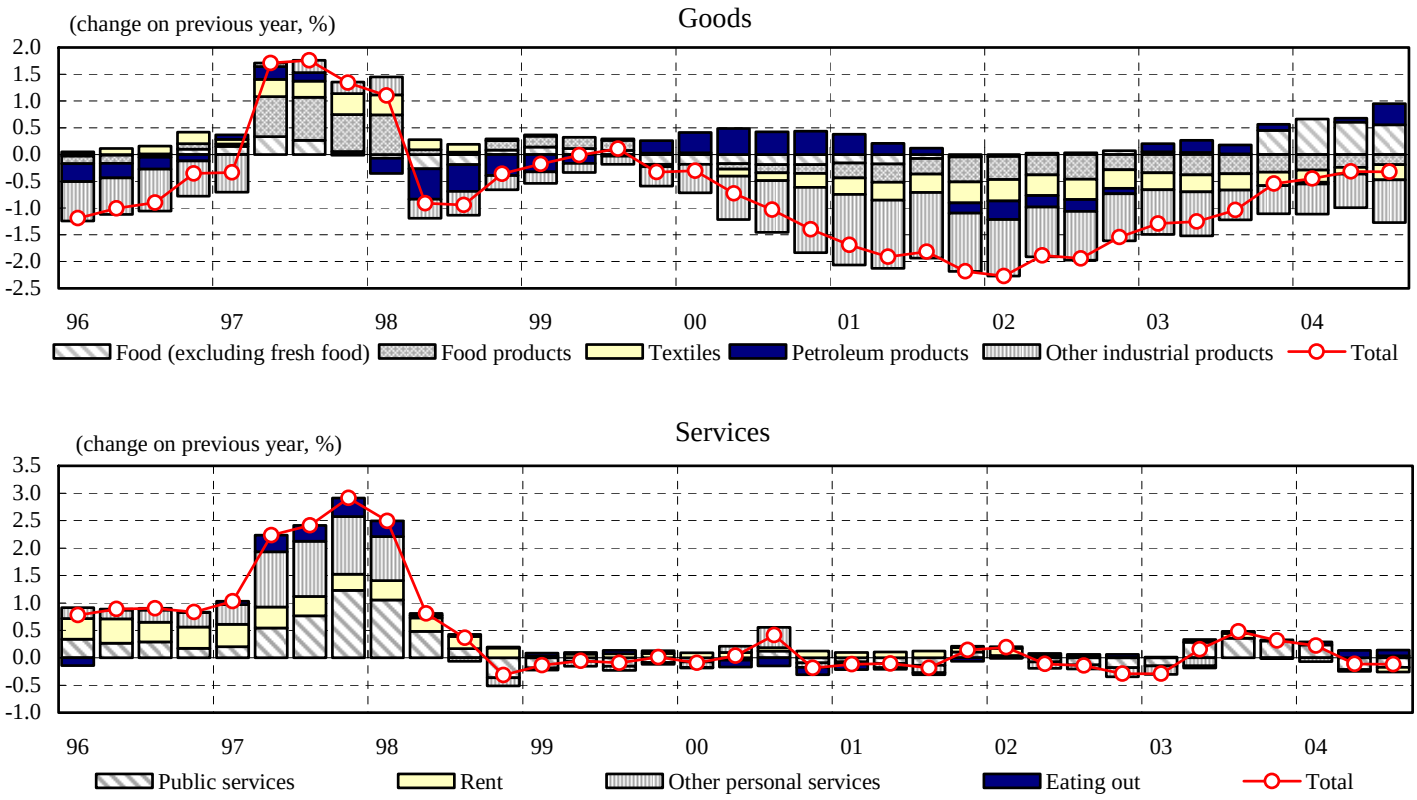
Figure 2-42. Corporate Prices and Consumer Prices



Sources: Ministry of Internal Affairs and Communications, "Monthly Report on Consumer Index;" Bank of Japan, "Price Indexes Monthly."

Weakened Linkage between Consumer and Corporate Prices since Late 1990s

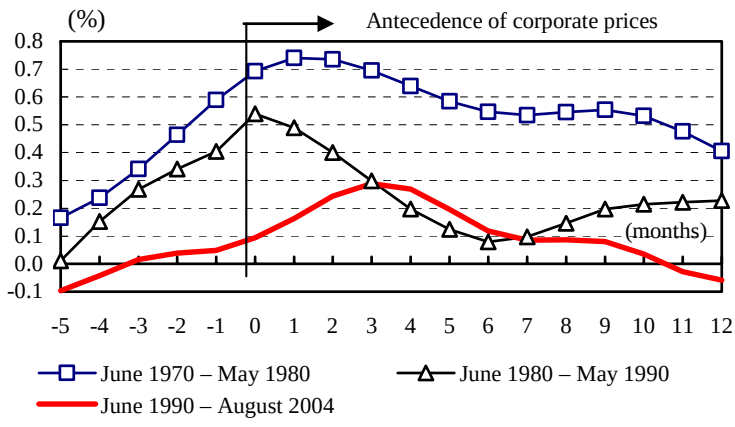
Figure 2-43. Trends in Consumer Prices (excluding fresh food)



Notes: 1. "Other personal services" includes publications. "Public services" includes electricity, gas and watercharges.
2. "Rent" includes private house rent and imputed rent.
3. Data for Q3 2004 represent July-August average.

Source: Ministry of Internal Affairs and Communications, "Monthly Report on Consumer Price Index."

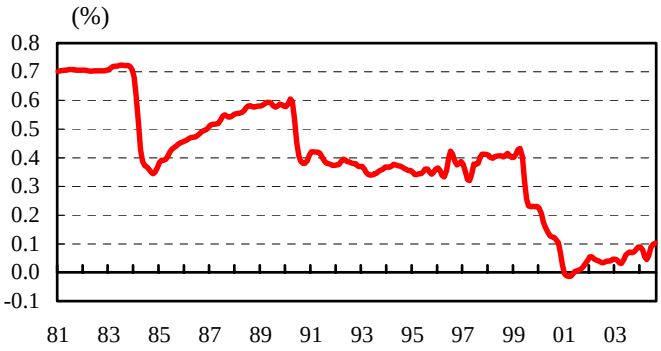
Figure 2-44. Timing Correlation between Corporate and Consumer Prices



Note: Corporate prices cover domestic demand products. Consumer prices do not include fresh food.

Sources: Ministry of Internal Affairs and Communications, "Monthly Report on Consumer Price Index;" Bank of Japan, "Price Indexes Monthly."

Figure 2-45. Correlation between Corporate and Consumer Prices

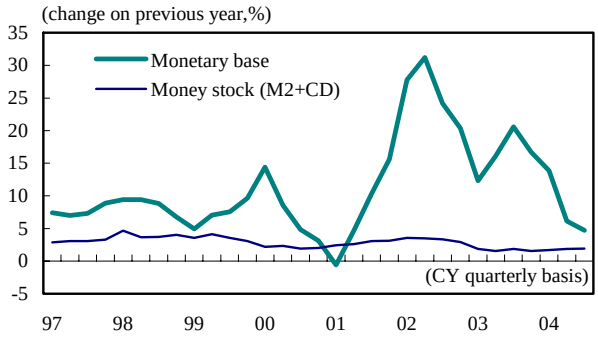


Notes: 1. Corporate prices cover domestic demand products. Consumer prices do not include fresh food.
2. The coefficient of correlation is calculated for monthly change (on three months earlier) during the previous 10 years.
3. As regards the shaded portion (since April 2000), it cannot be said with a significance at the 5% level that the coefficient of correlation is not zero.

Sources: Ministry of Internal Affairs and Communications, "Monthly Report on Consumer Price Index;" Bank of Japan, "Price Indexes Monthly."

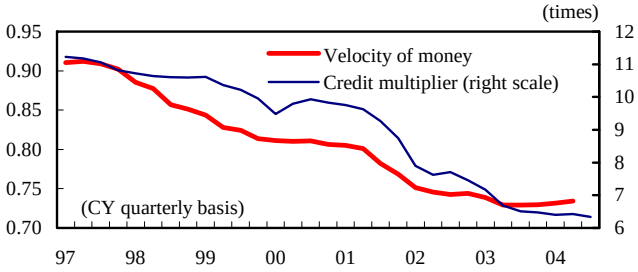
Easy Money Policy Continues

Figure 2-46. Monetary Base and Money Stock



Source: Bank of Japan, "Financial and Economic Statistics Monthly."

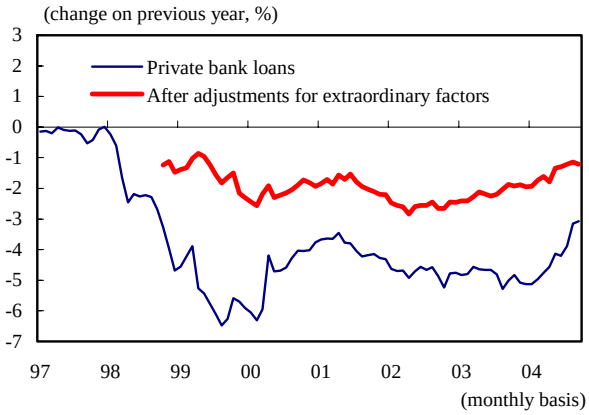
Figure 2-47. Velocity of Money and Credit Multiplier



Notes: 1. Change on previous year is based on average balance for each quarter.
2. Credit multiplier = (M2+CD)/monetary base.
Velocity of money = nominal GDP/(M2+CD).
Both are seasonally adjusted.

Sources: Cabinet Office, "Annual Report on National Accounts;" Bank of Japan, "Financial and Economic Statistics Monthly."

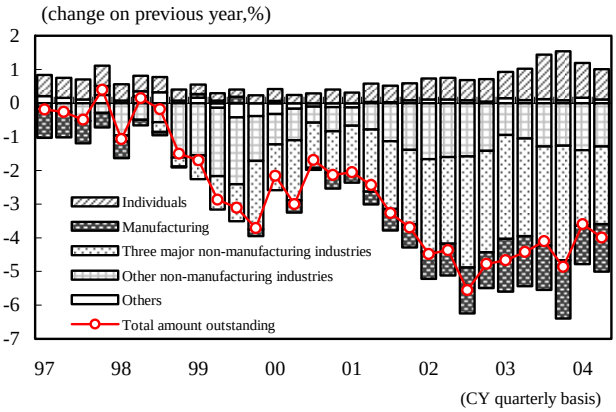
Figure 2-48. Loans and Discounts Adjusted for Special Items



Note: Adjustments for extraordinary factors include adjustments for fluctuation caused by the mobilization or amortization of credited loans.

Source: Bank of Japan, "Financial and Economic Statistics Monthly."

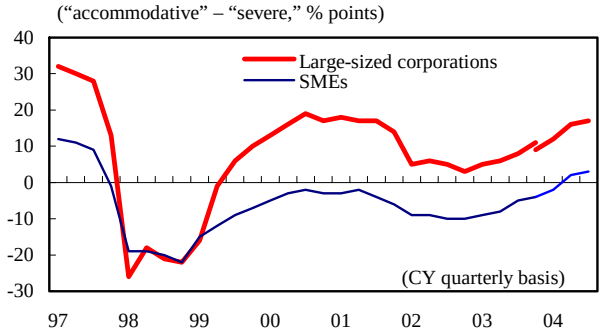
Figure 2-49. Loans and Discounts Outstanding by Category of Borrower



Notes: 1. Data represent the total of domestically licensed banks' banking accounts and trust accounts. The borrowing sector of "finance" does not include deposit-taking institutions.
2. The three major non-manufacturing industries include construction, wholesale & retail and real estate.

Source: Bank of Japan, "Financial and Economic Statistics Monthly."

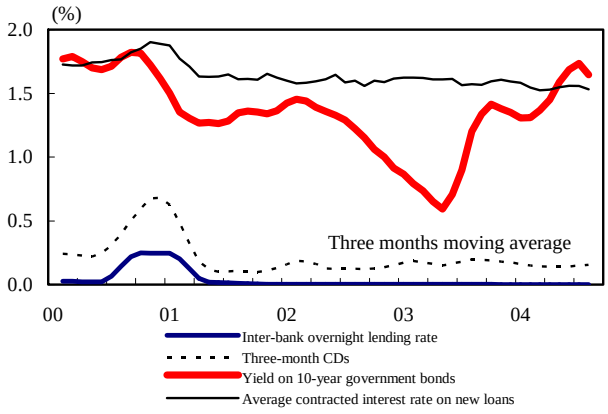
Figure 2-50. Diffusion Index of Lending Attitude of Financial Institutions



Note: The diffusion index of lending attitude of financial institutions has a discontinuity due to a revision to its coverage in March 2004.

Source: Bank of Japan, "Short-term Economic Survey of Enterprises in Japan (*Tankan*)."

Figure 2-51. Selected Interest Rates



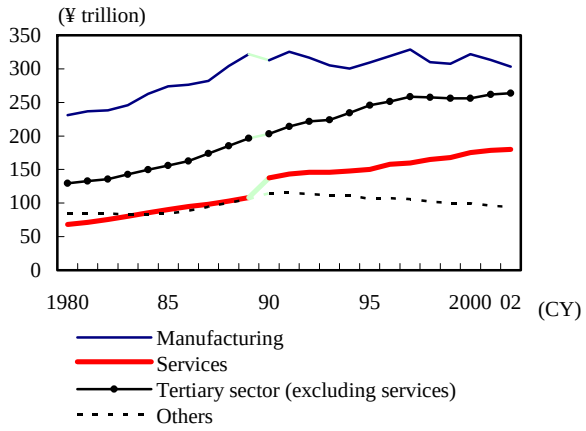
Note: Average contracted interest rate on new loans is based on monthly statistics. Others represent the monthly averages of daily closing prices.

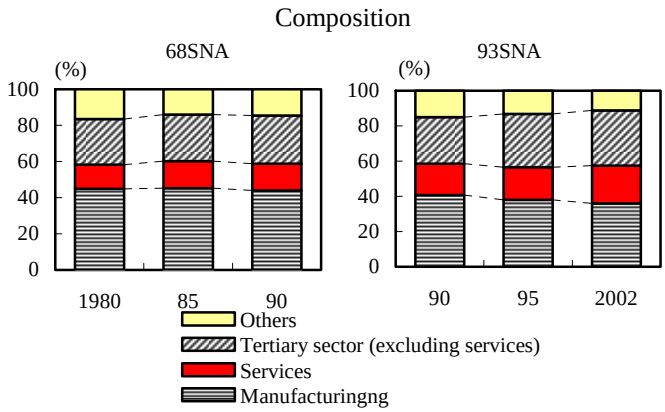
Sources: Nihon Keizai Shimbun; Bank of Japan, "Financial and Economic Statistics Monthly."

III. Medium-term Outlook of the Japanese Industrial Structure

Changing Industrial Structure

Figure 3-1. Trends in Real Output

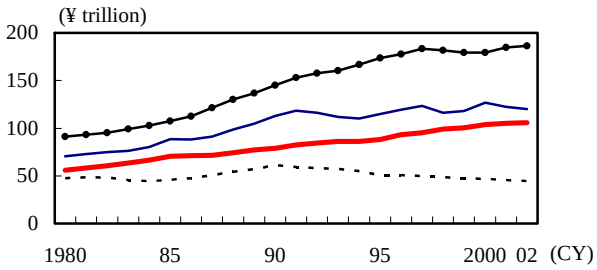




Notes: 1. Data on real output have a discontinuity as they are based on 68SNA until 1989 and on 93SNA since 1990.
2. Adjustments are made for imputed rent included in real estate.
3. These Notes and Source also apply to the following three Figures.

Source: Cabinet Office, "Annual Report on National Accounts."

Figure 3-2. Trends in Real Value Added (GDP)



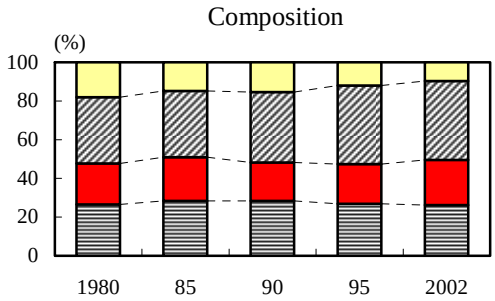
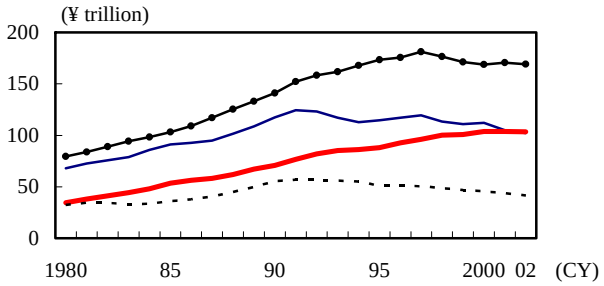


Figure 3-3. Trends in Nominal Value Added (GDP)



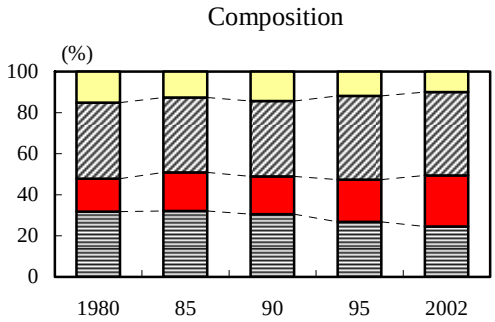
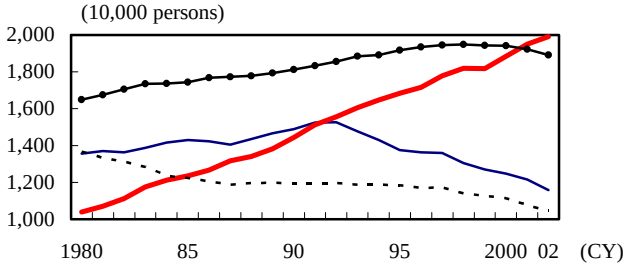
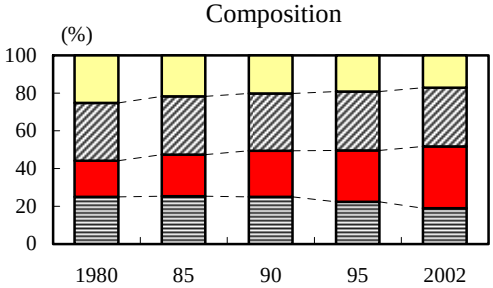


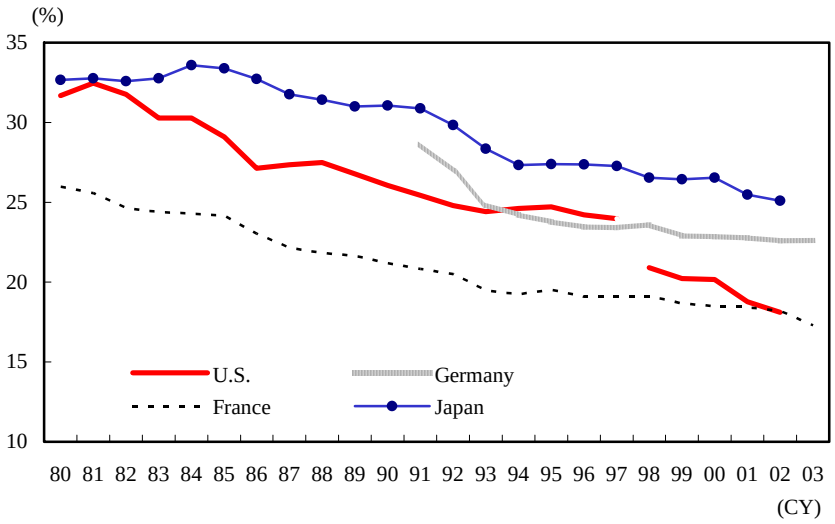
Figure 3-4. Trends in Number of Employed Persons





(Reference) International Comparison of Change in Industrial Structure

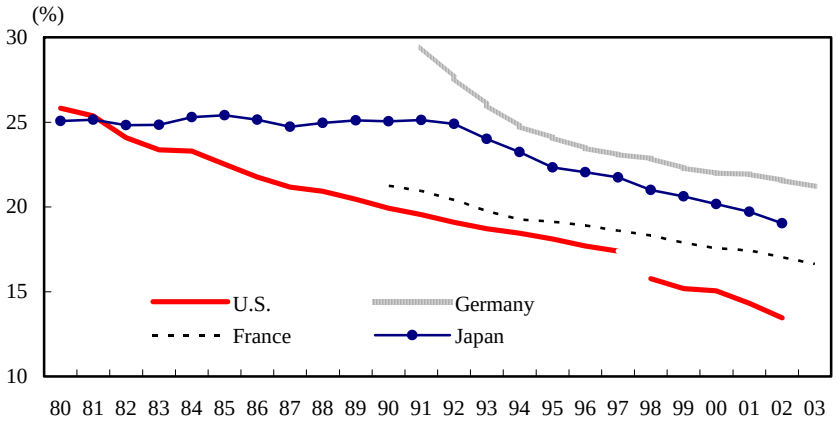
Figure 3-5. Share of Industries in Nominal GDP



Notes: 1. Industries include electric power.
2. U.S. data have a discontinuity between 1997 and 1998 due to a change in the coverage of the manufacturing sector.

Sources: Cabinet Office, "Annual Report on National Accounts;" U.S. Department of Commerce; OECD.

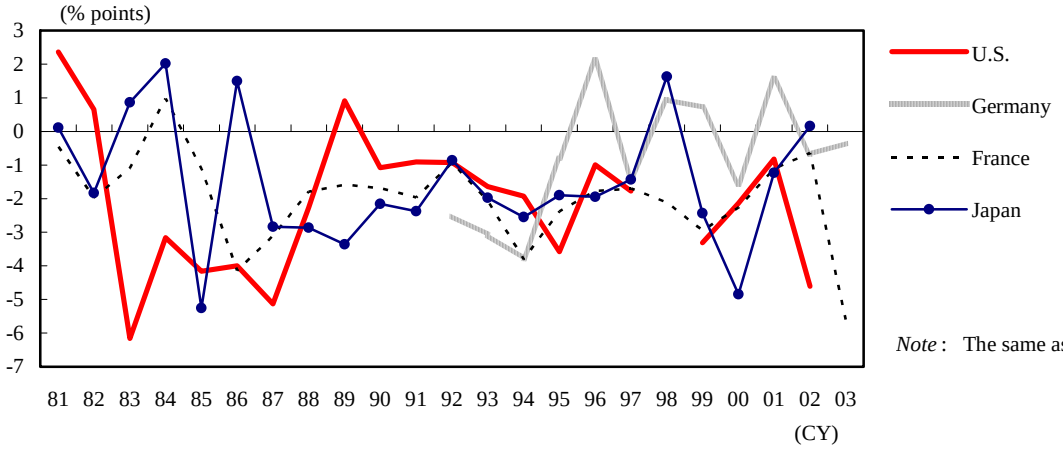
Figure 3-6. Share of Manufacturing in Employment



Notes: 1. Data indicate the share of manufacturing in the number of persons employed in the private sector for Japan, U.S. and France, and the share of industries (including electric power) in the total number of persons employed for Germany.
2. U.S. data have a discontinuity between 1997 and 1998 due to a change in the coverage of the manufacturing sector.

Sources: Cabinet Office, "Annual Report on National Accounts;" U.S. Department of Commerce; Direction Générale de l'Institut National de la Statistique et des Etudes Economiques (INSEE) ; Statistisches Bundesamt (StBA).

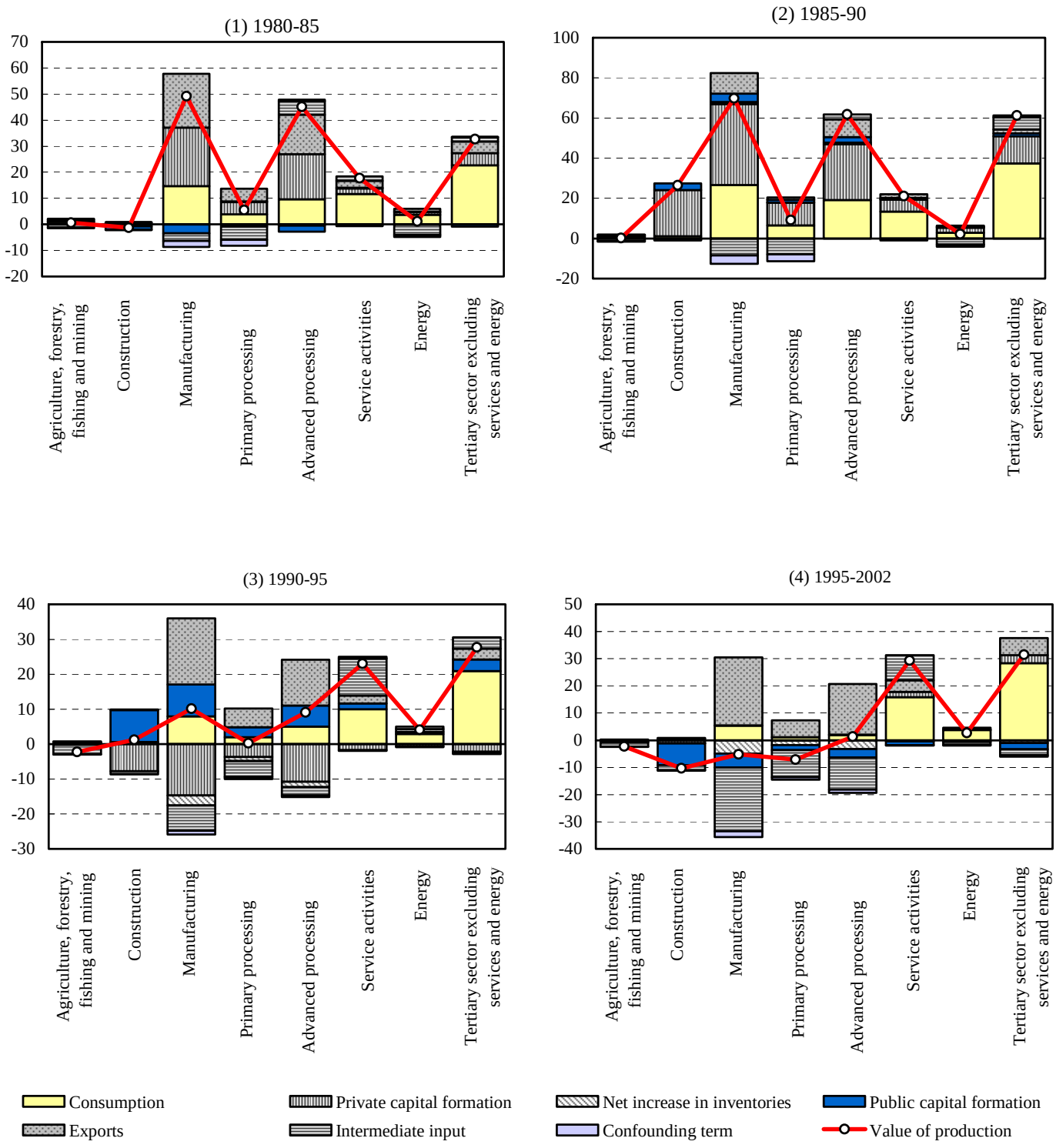
Figure 3-7. Disparity in GDP Deflator Growth (Industrial Deflator Growth – Non-industrial Deflator Growth)



Note: The same as in Figure 3-5.

Structural Change in Consumer Demand and Intermediate Input Promotes Trend toward Service Economy

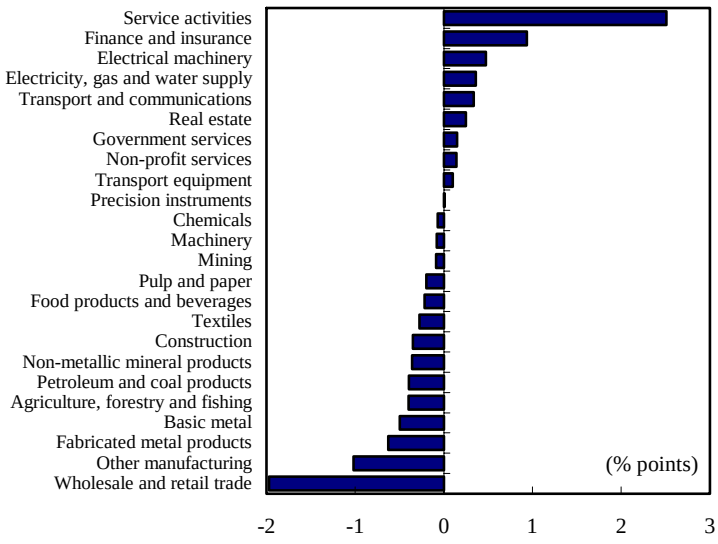
Figure 3-8. Change in Industrial Structure by Component (real output, ¥ trillion)



Source: Cabinet Office, "SNA Input-Output Table."

Change in Intermediate Input Structure

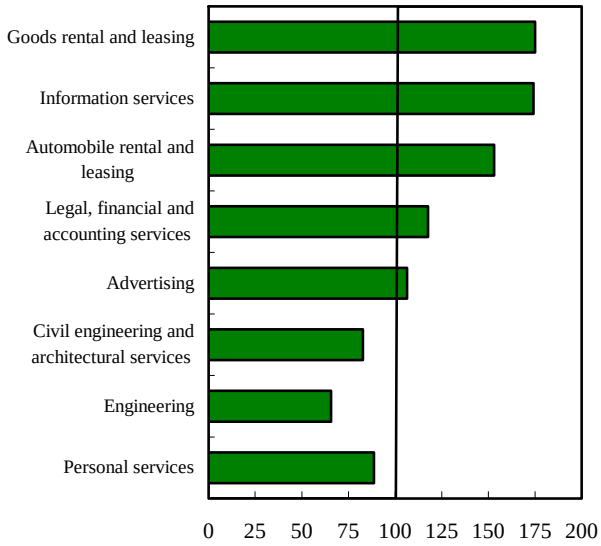
Figure 3-9. Changing Share of Each Industry in Intermediate Input in Other Industries (1995-2002)



Note : Intermediate input from the industry to other industries/total intermediate input in other industries.

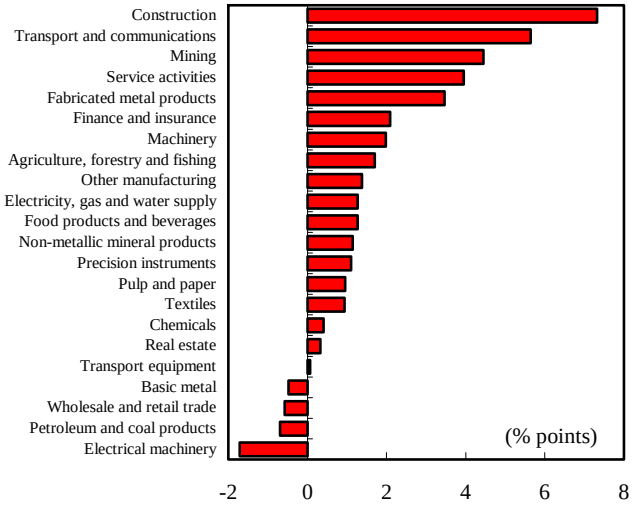
Source : Cabinet Office, "SNA Input-Output Table."

Figure 3-10. Growth of Service Sector (2003 values, 1993 = 100)



Source : Ministry of Economy, Trade and Industry, "Indices of Tertiary Industry Activity."

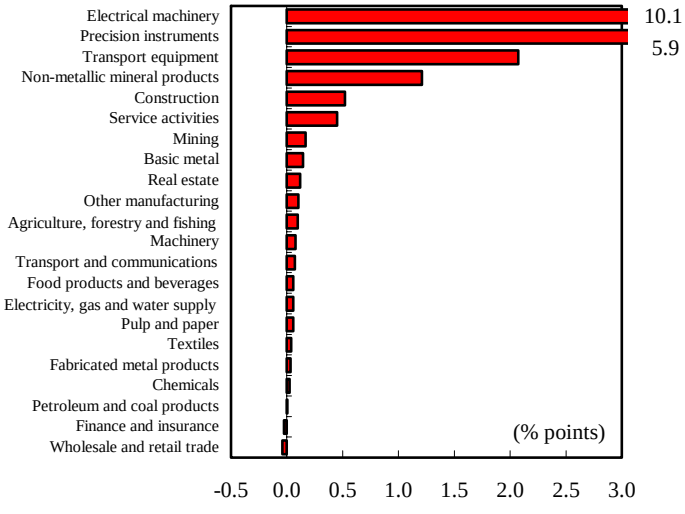
Figure 3-11. Changing Share of Services in Intermediate Input in Each Industry (1995-2002)



Note : Intermediate input from services to the industry/total intermediate input in the industry.

Source : Cabinet Office, "SNA Input-Output Table."

Figure 3-12. Changing Share of Electrical Machinery in Intermediate Input in Each Industry (1995-2002)

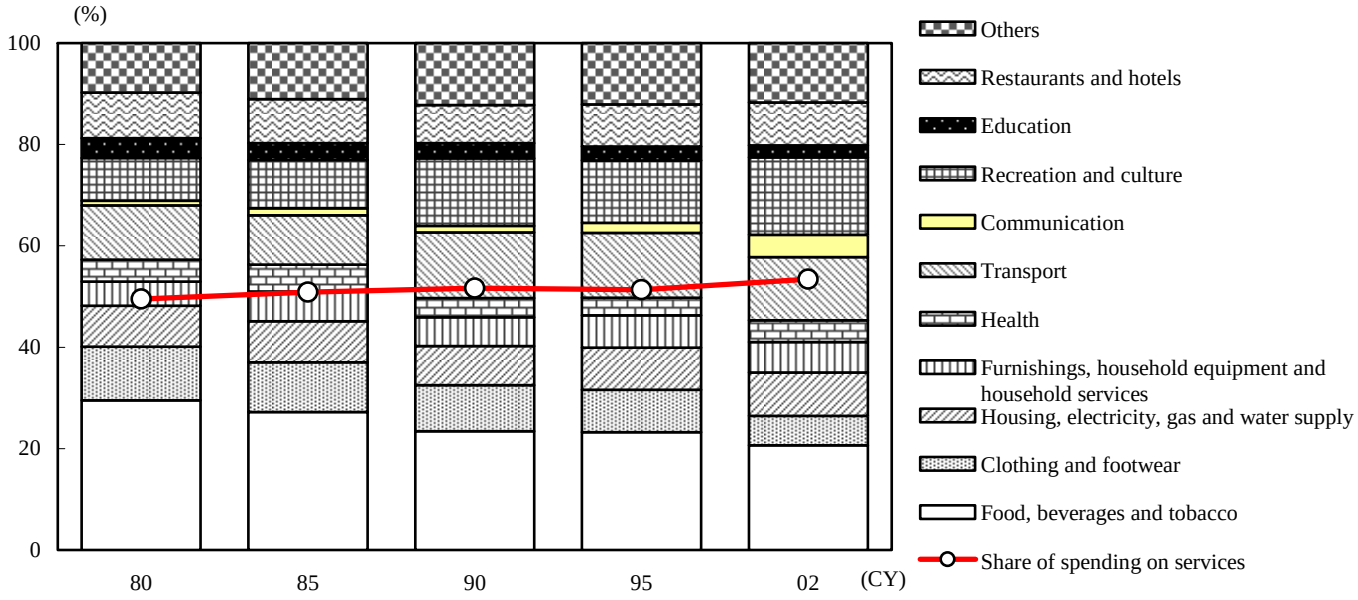


Note : Intermediate input from electrical machinery to the industry/total intermediate input in the industry.

Source : Cabinet Office, "SNA Input-Output Table."

Consumption Structure Also Points to Trend toward Service Economy

Figure 3-13. Final Consumption Expenditure of Households



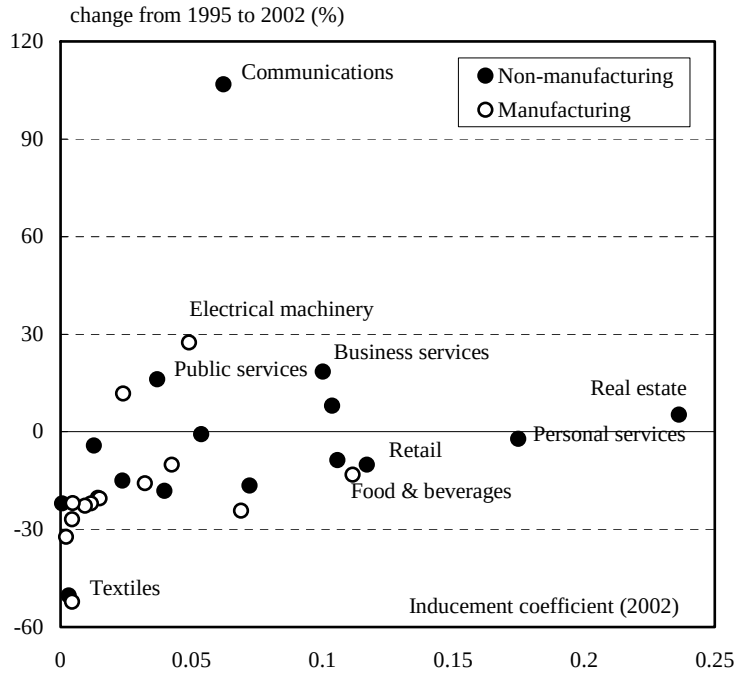
Note: Final consumption expenditure of households is at constant (1995) prices. Imputed service of owner-occupied dwellings is excluded from its composition.
Source: Cabinet Office, "National Accounts."

Figure 3-14. Change in Final Consumption Expenditure of Household by Industry (1995-2000)

(¥ billion)

Manufacturing		2,247
	Food products and beverages	-1,636
	Petroleum and coal products	2,113
	Electrical machinery	4,333
Non-manufacturing		18,482
	Wholesale and retail	1,258
	Finance and insurance	1,995
	Real Estate	6,820
	Communications	6,114
	Service activities	4,530
	Public services	2,157
	Business services	398
	Personal services	1,975
Total		20,729

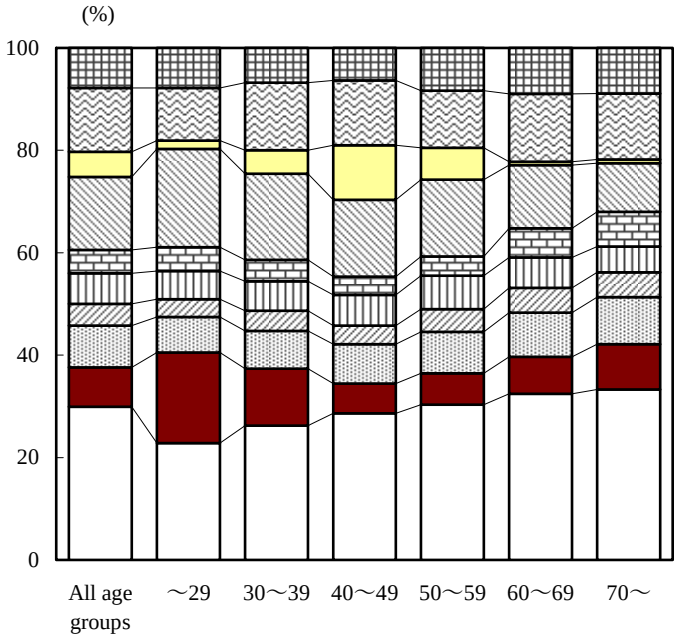
Figure 3-15. Inducement Coefficient of Household Consumption



Note: Final consumption expenditure of households is at constant prices.
Source: Cabinet Office, "SNA Input-Output Table."

Changing Consumption Structure due to Aging

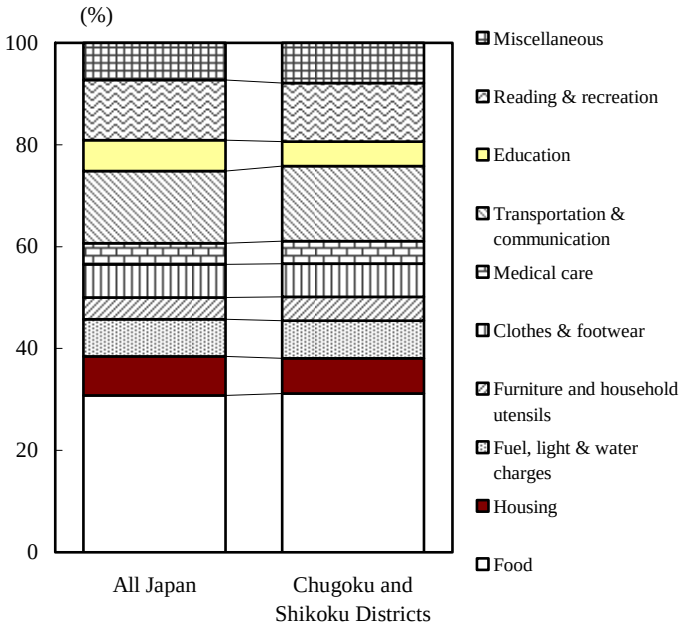
Figure 3-16. Consumption Structure by Age Group of Household Head



Notes: 1. 2001-2003 average.
2. "Miscellaneous" does not include transfer expenditure to other households, such as social expenses and allowance money.

Source: Ministry of Internal Affairs and Communications, "Family Income and Expenditure Survey."

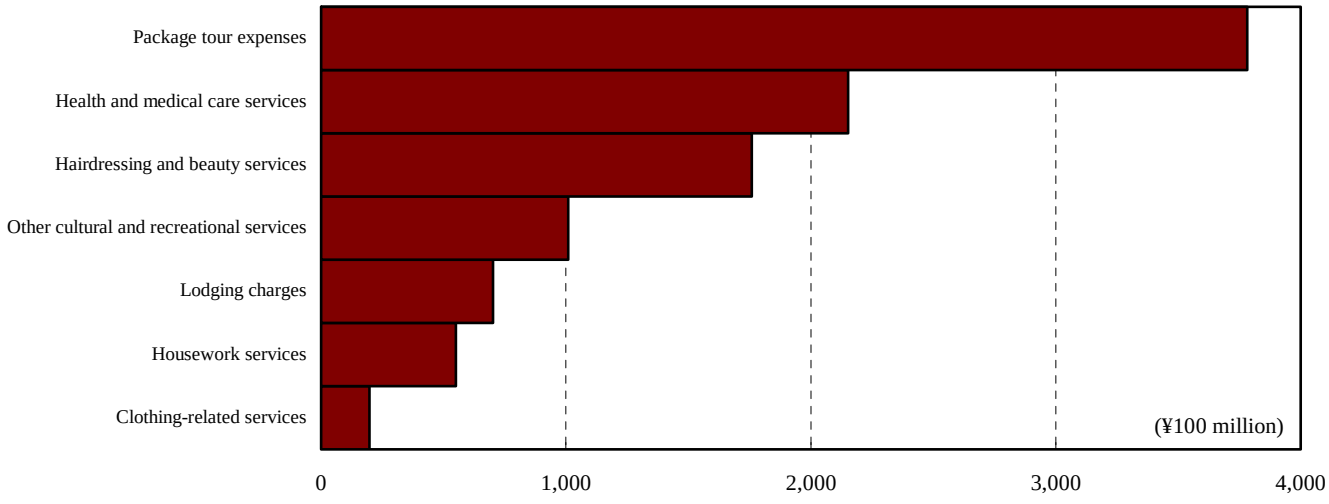
Figure 3-17. Consumption Structure in All Japan and Chugoku and Shikoku Districts



Notes: 1. 1999 data.
2. "Miscellaneous" does not include transfer expenditure to other households, such as social expenses and allowance money.

Source: Ministry of Internal Affairs and Communications, "National Survey of Family Income and Expenditure."

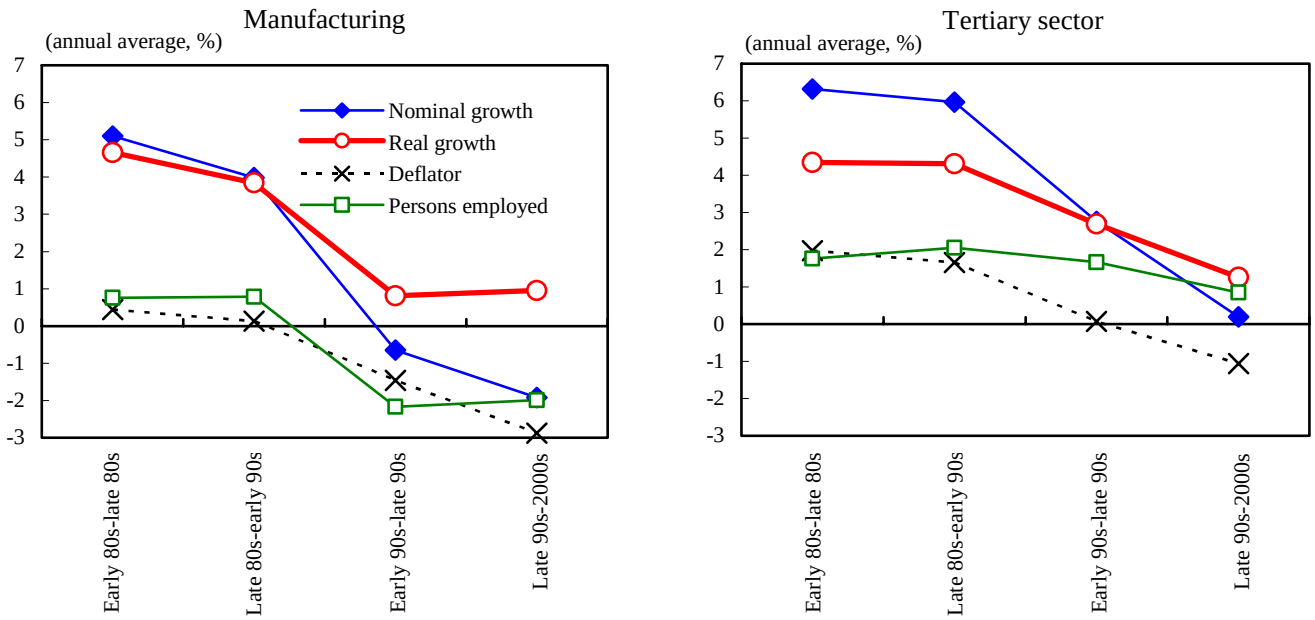
Figure 3-18. Change in Consumption Expenditure by Item (2000-2010)



Sources: Cabinet Office, "National Accounts;" Ministry of Internal Affairs and Communications, "Family Income and Expenditure Survey."

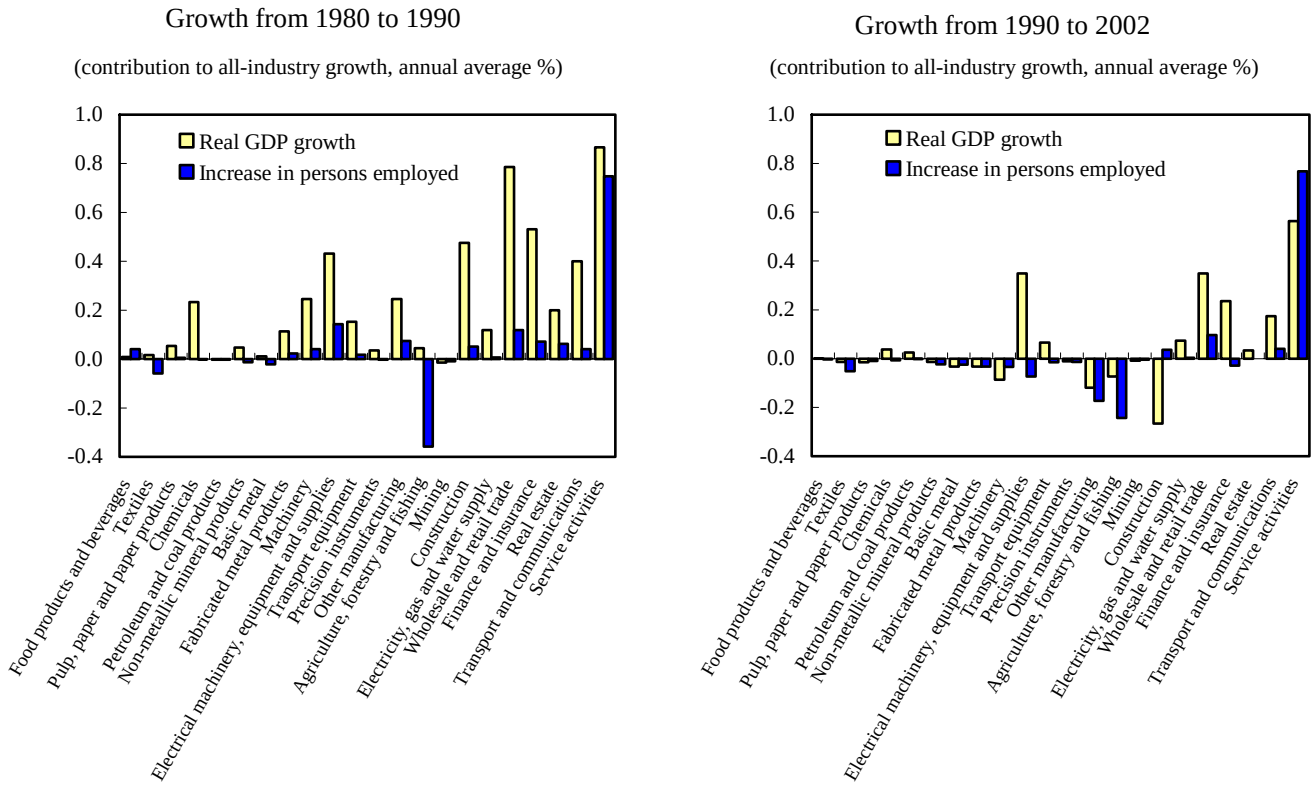
Growth Factor by Industry as Observed in Growth Accounting (1)

Figure 3-19. Economic Growth and Increase in Persons Employed by Industrial Sector



Source: Cabinet Office, "Annual Report on National Accounts."

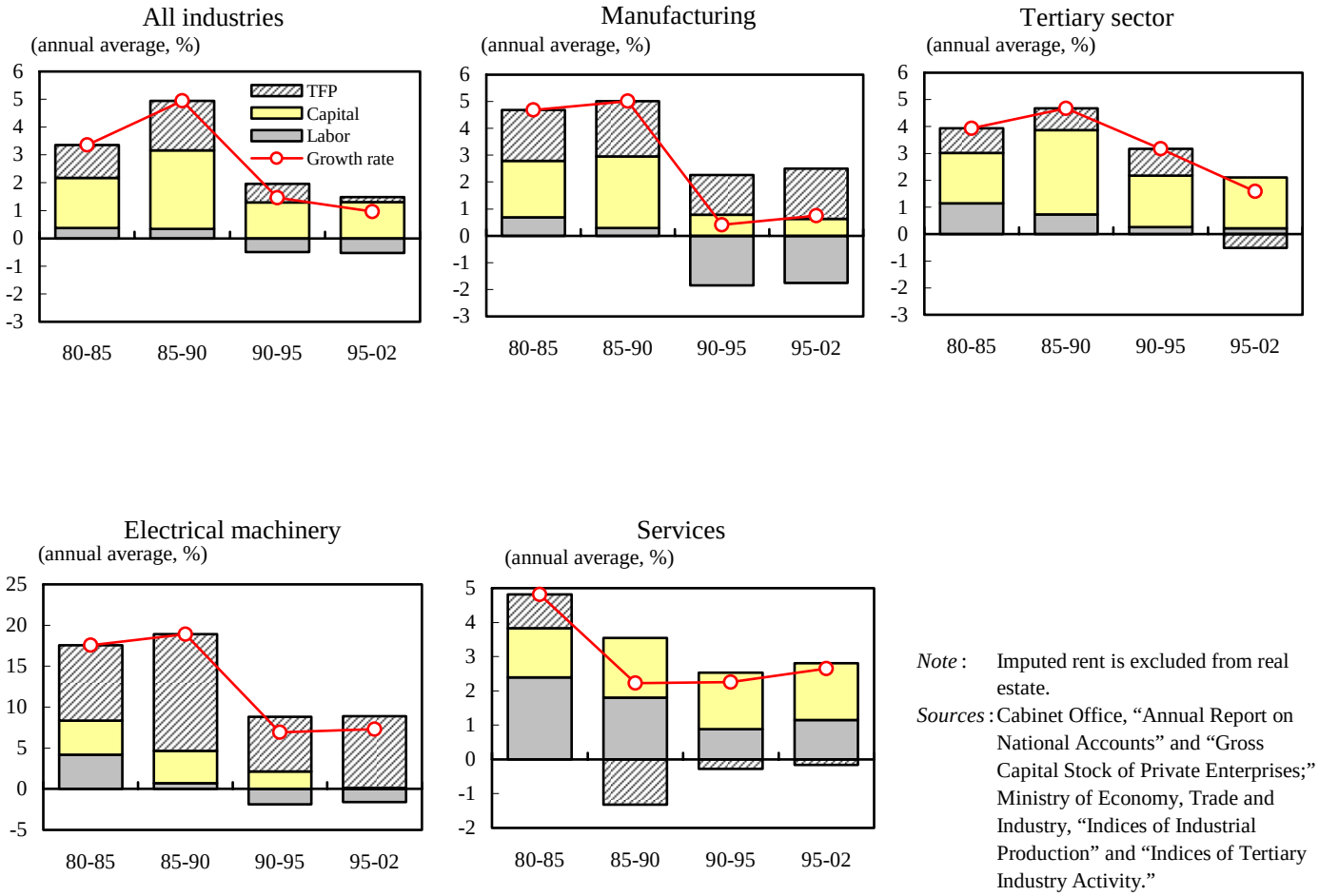
Figure 3-20. GDP Growth and Increase in Persons Employed by Industry



Source: Cabinet Office, "Annual Report on National Accounts."

Growth Factor by Industry as Observed in Growth Accounting (2)

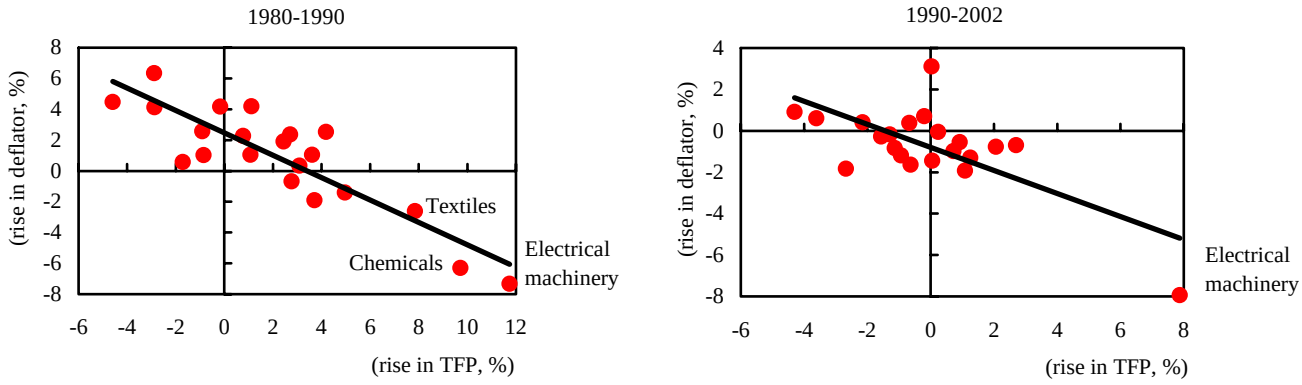
Figure 3-21. GDP Growth by Factor



Note : Imputed rent is excluded from real estate.

Sources : Cabinet Office, "Annual Report on National Accounts" and "Gross Capital Stock of Private Enterprises;" Ministry of Economy, Trade and Industry, "Indices of Industrial Production" and "Indices of Tertiary Industry Activity."

Figure 3-22. Relationship between Productivity and Deflator (21 industries)

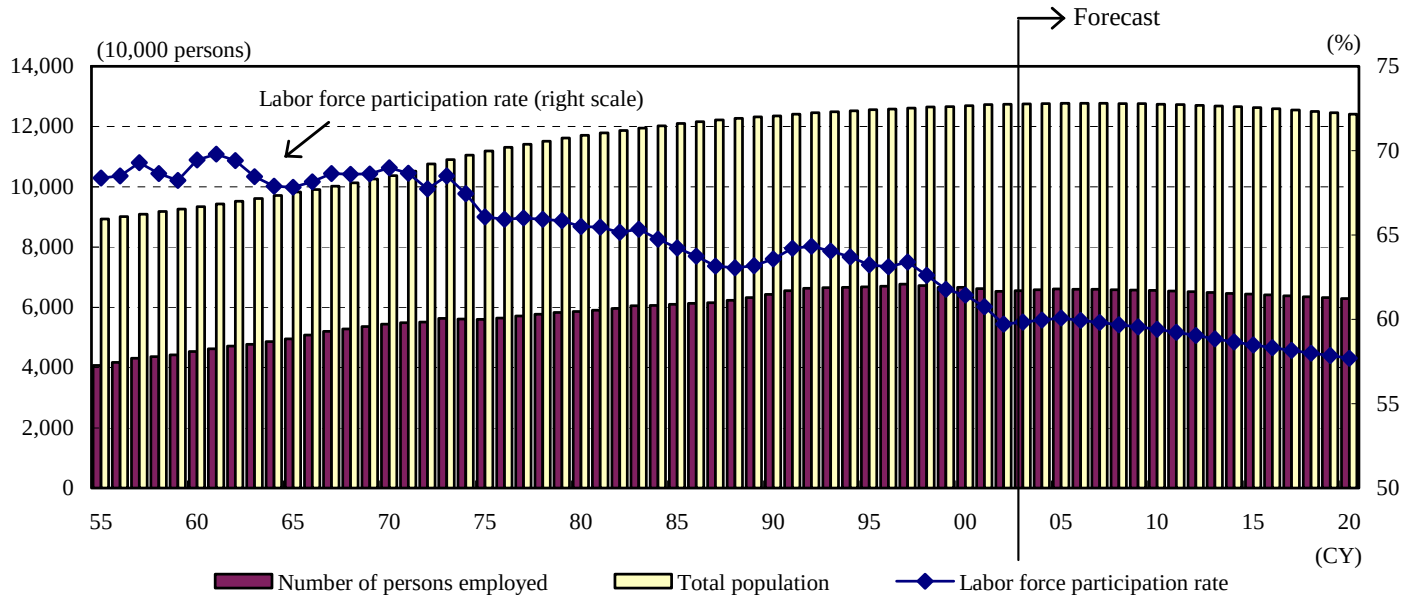


Note : Data indicate average annual increase.

Sources : Cabinet Office, "Annual Report on National Accounts" and "Gross Capital Stock of Private Enterprises;" Ministry of Economy, Trade and Industry, "Indicates of Industrial Production," etc.

Industrial Structure in 2020 (1) (Assumption of Potential Growth Rate)

Figure 3-23. Projected Population and Number of Persons Employed



Sources: Cabinet Office, "Annual Report on National Accounts;" National Institute of Population and Social Security Research, "Household Projections for Japan (January 2002)" and "Population Statistics of Japan."

Figure 3-24. Savings Ratio by Sector and Private Business Investment Ratio

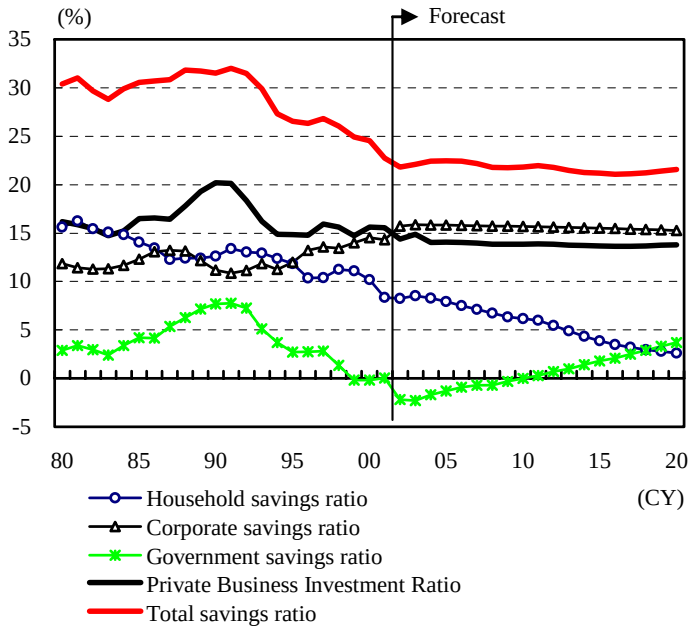
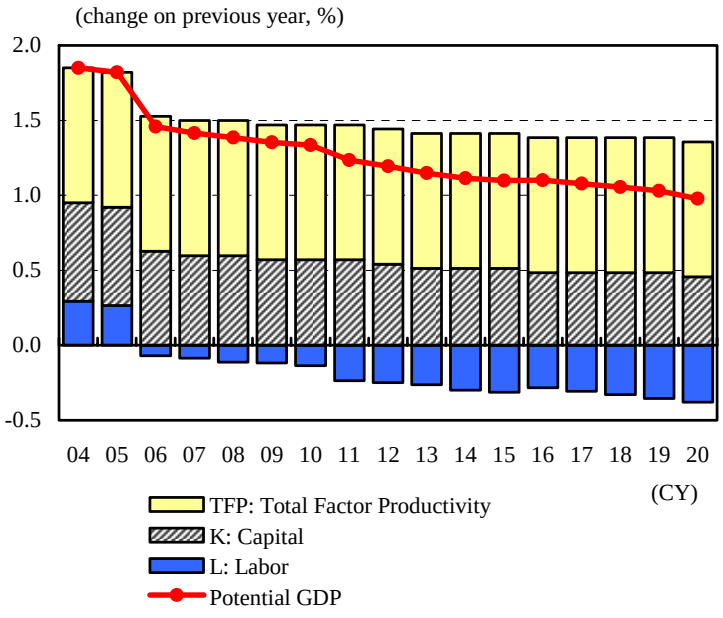


Figure 3-25. Trends in Potential GDP

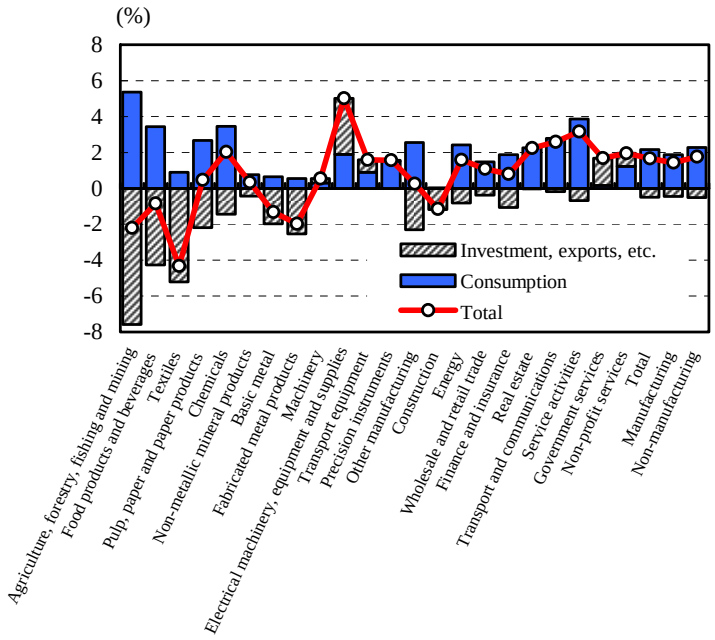


Sources: Cabinet Office, "Annual Report on National Accounts" and "Gross Capital Stock of Private Enterprises;" National Institute of Population and Social Security Research, "Household Projections for Japan (January 2002)," etc.

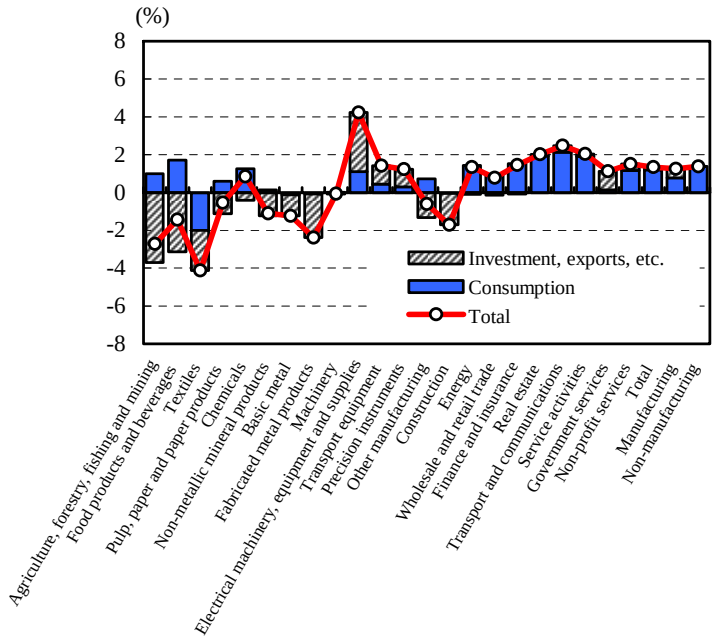
Industrial Structure in 2020 (2) (Real Output Basis)

Figure 3-26. Expected Change in Industrial Structure to 2020 (real output basis)

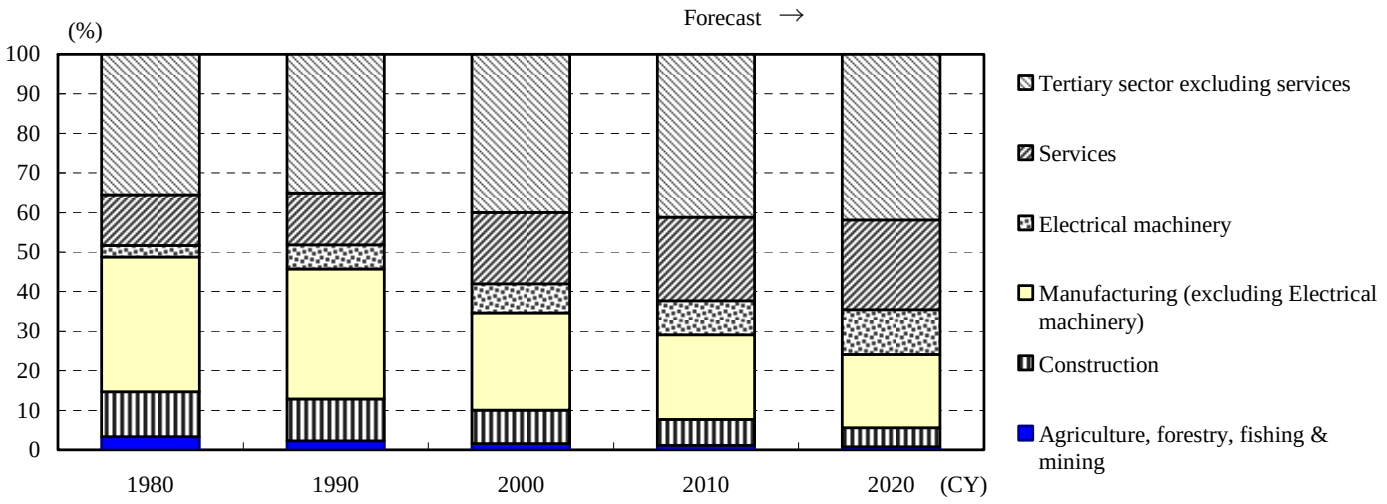
(1) Average annual growth (2010/2002)



(2) Average annual growth (2020/2010)



(3) Composition

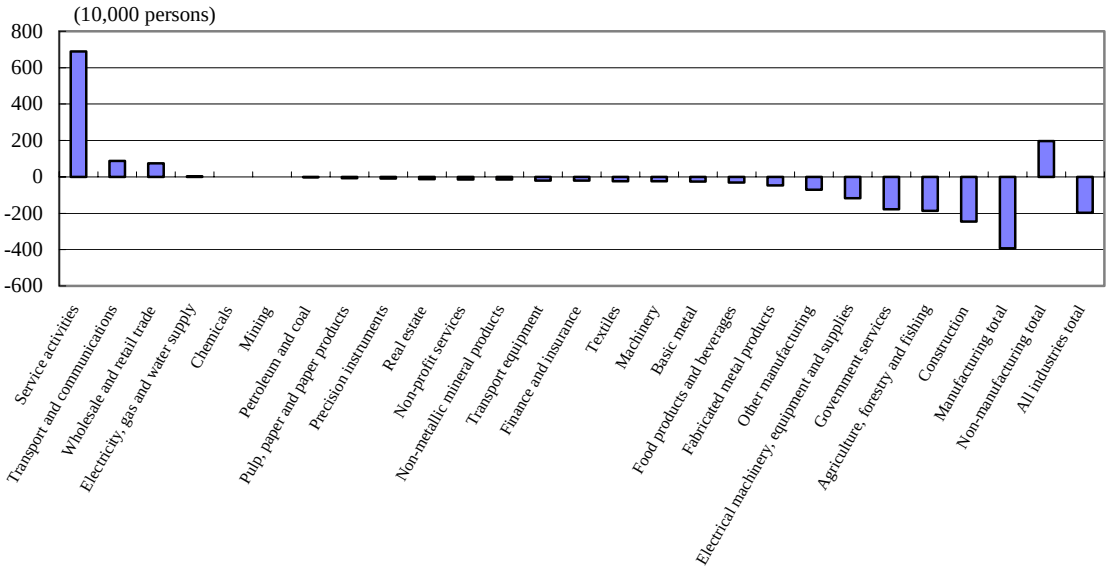


Sources: Cabinet Office, "SNA Input-Output Table" and "Annual Report on National Accounts."

Industrial Structure in 2020 (3) (Employment Basis)

Figure 3-27. Industrial Structure in 2020 (number of persons employed)

(1) Change (2000-2020)



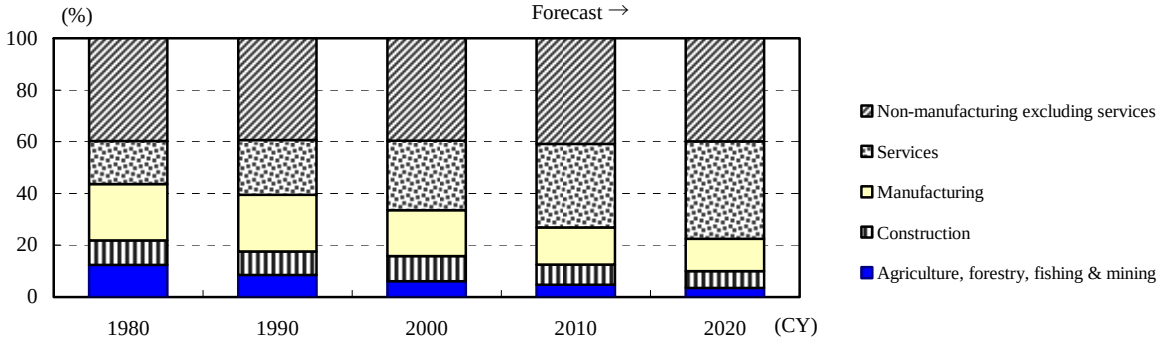
(2) Number of employed persons

Forecast → (10,000 persons, %)

	1980	1990	2000	2010	2020	Change 2000-2020
Manufacturing	1,357	1,489	1,248	1,016	856	-393
Non-manufacturing	4,877	5,308	5,778	6,062	5,974	196
Of which: wholesale and retail trade	1,040	1,104	1,201	1,383	1,276	74
Of which: transport and communications	338	360	402	437	489	88
Of which: service activities	1,040	1,445	1,885	2,291	2,575	690
(1) Total number employed	6,233	6,796	7,026	7,078	6,829	-196
(2) Persons employed (medium scenario)	5,866	6,427	6,661	6,560	6,289	-372
(3) Side job ratio (1)/(2)	1.06	1.06	1.05	1.05	1.05	
(4) Expected number of employable persons (2)×side job ratio (1.05)				6,888	6,603	
(5) Expected supply-demand gap in labor (1) – (4)				190	226	
(6) Future labor force participation rate (medium scenario)				59.4	57.7	
(7) Supply-demand gap in labor after adjustment for potential labor force participation rate				-21	5	

Notes: 1. "Side job ratio" is assumed to remain at the level of 2000 (1.05) in 2010 and 2020.
2. "Supply-demand gap in labor after adjustment for potential labor force participation rate" is estimated on the basis of potential growth rate, which represents the sum of expected labor force participation rate (4) in 2010 and 2020 and the gap (4.9%) between the potential labor force participation rate calculated in Appendix 1 (65.7% in 2003) and actual labor force participation rate (60.8%).

(3) Composition



Sources: Cabinet Office, "SNA Input-Output Table" and "Annual Report on National Accounts."

(Appendix 1) Expected Mobilization of Potential Labor Force in the Young, Female and Older Populations

Figure 3-28. Trends in Labor Force Participation Rate

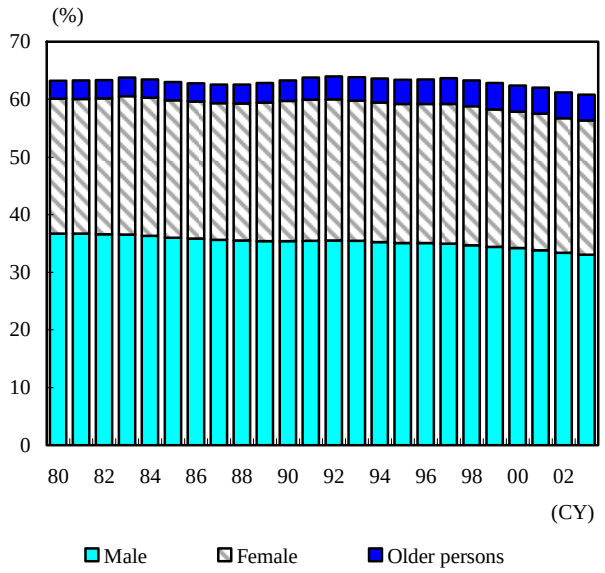


Figure 3-29. Actual and Potential Labor Participation Rate

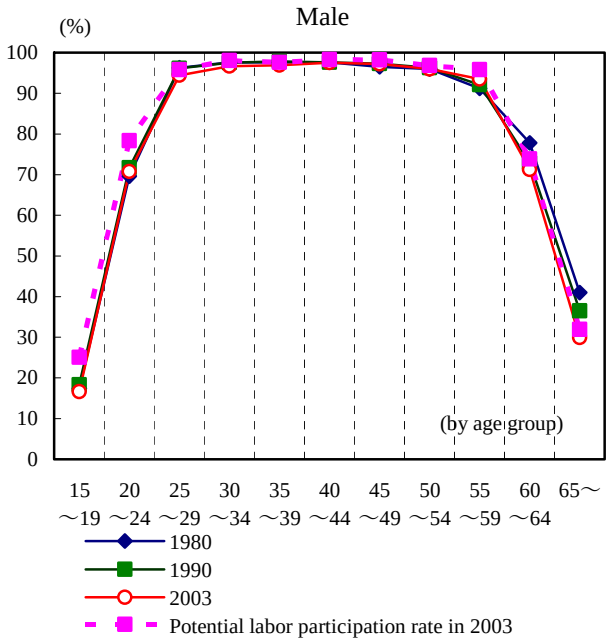


Figure 3-30. Actual and Potential Labor Participation Rate

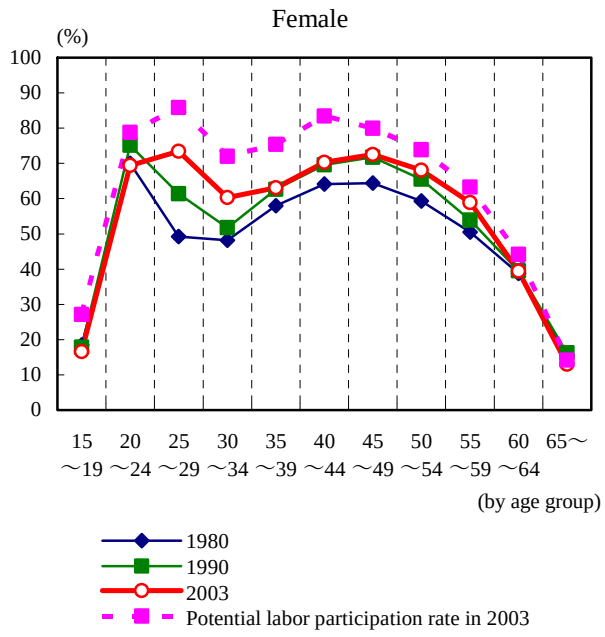
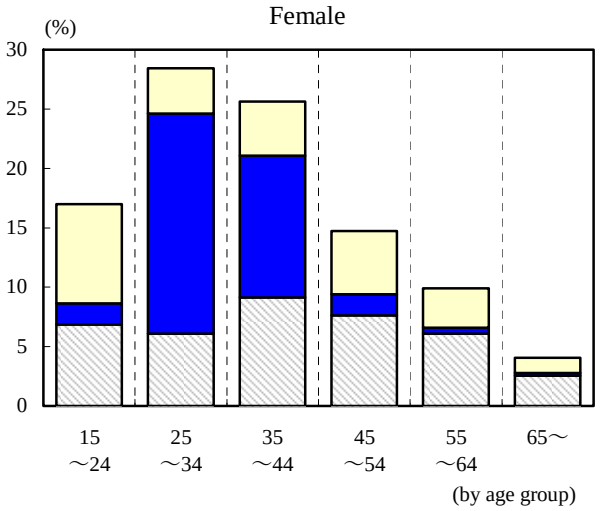


Figure 3-31. Wishing to Work by Reason for Not Seeking a Job



Note: Potential labor force participation rate, calculated by age group, is defined as follows:

$$\frac{\text{Labor force + persons not in labor force but wishing to work}}{\text{population of 15 years old or more}} \times 100$$

Source: Ministry of Internal Affairs and Communications, "Labour Force Survey."

(Appendix 2) Divergence on Preferred Type of Employment between Employers and Unemployed Persons

Figure 3-32. Unemployment Rate by Age

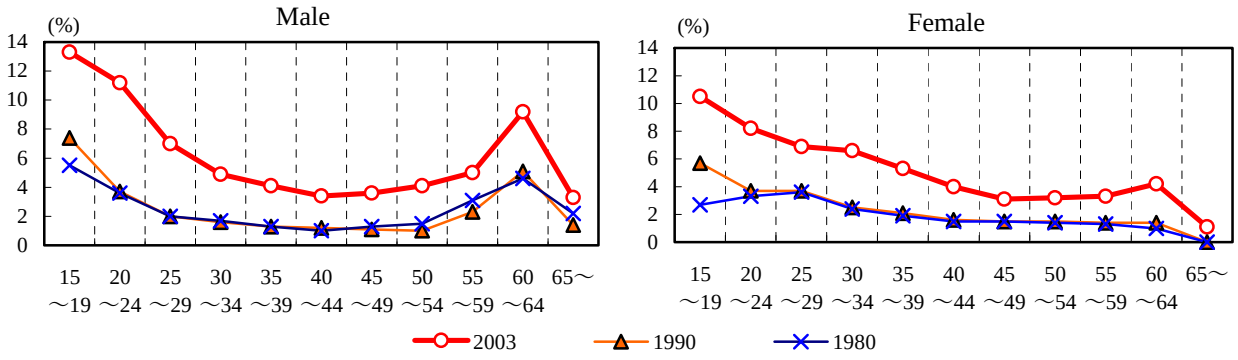


Figure 3-33. Type of Employment Preferred by Unemployed Persons (as of 2003)

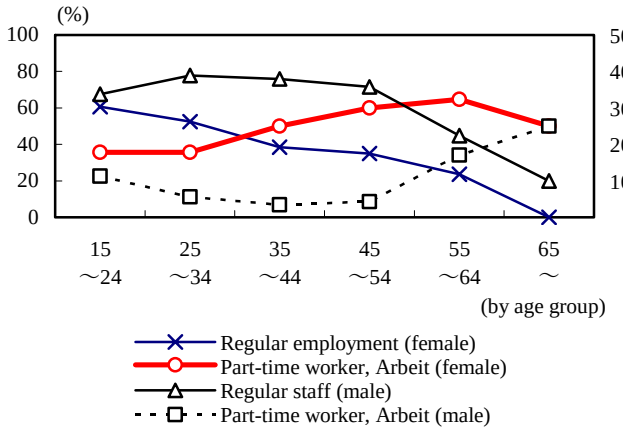
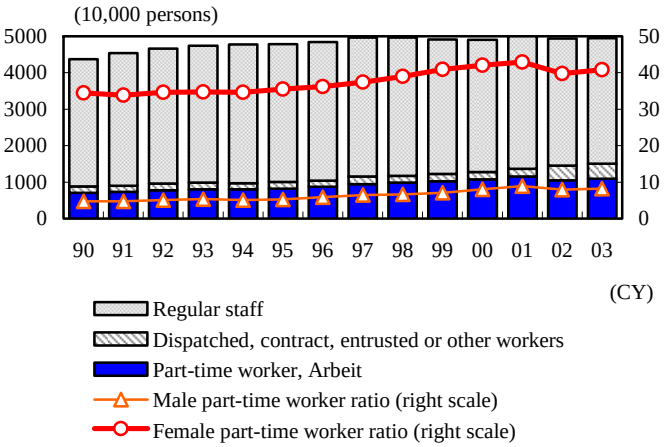
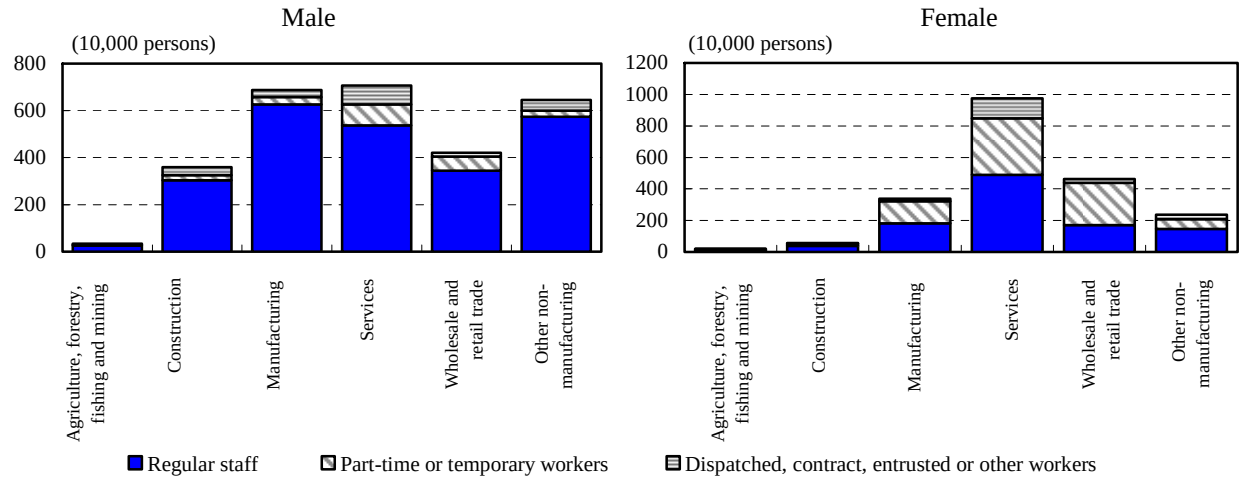


Figure 3-34. Number of Employees by Type of Employment



Source: Ministry of Internal Affairs and Communications, "Labour Force Survey."

Figure 3-35. Number of Employees by Industrial Sector and Type of Employment (as of 2003)



Notes: 1. "Services" includes eating and drinking places, accommodations, medical/health care and welfare, education, learning support, compound services and (other) services.

2. "Other non-manufacturing" includes electricity, gas, heat and water, information and communications, transport, finance and insurance, real estate, government, and industries unable to classify.

Source: Ministry of Internal Affairs and Communications, "Labour Force Survey."

(Appendix 3)

Increase in Part-time Employment in the Robust Service Sector, Labor Movement Mostly Constrained within Industries

Figure 3-36. Net Hiring (entering - leaving) Rate

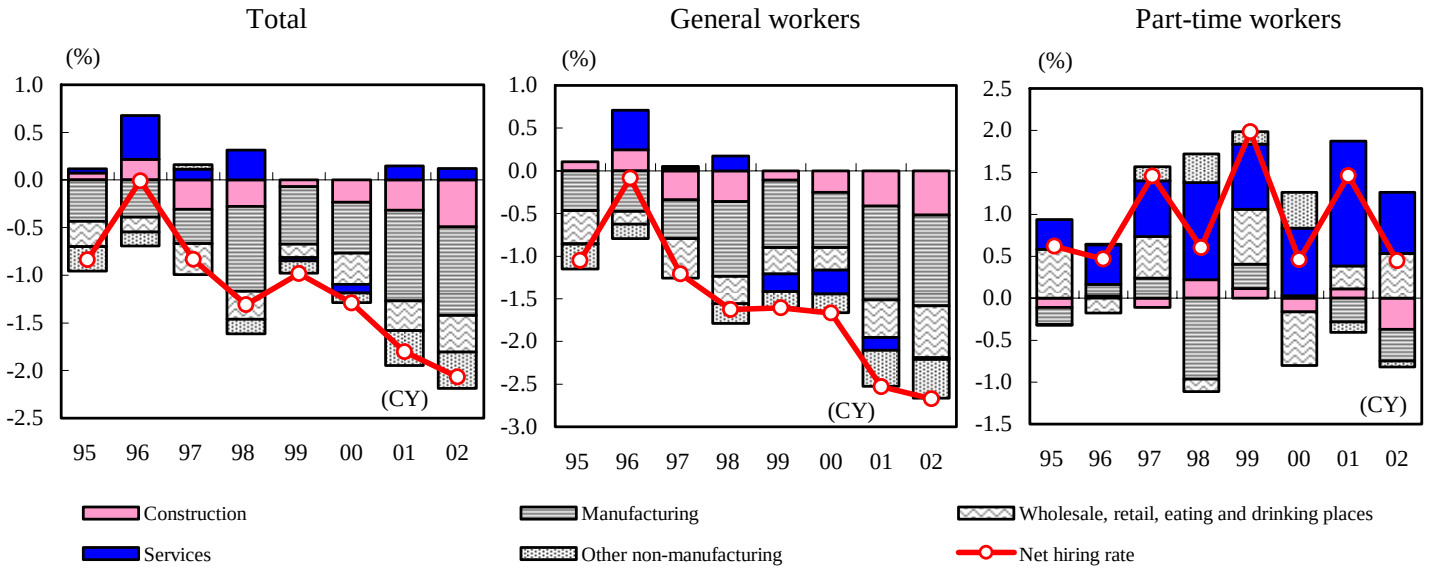
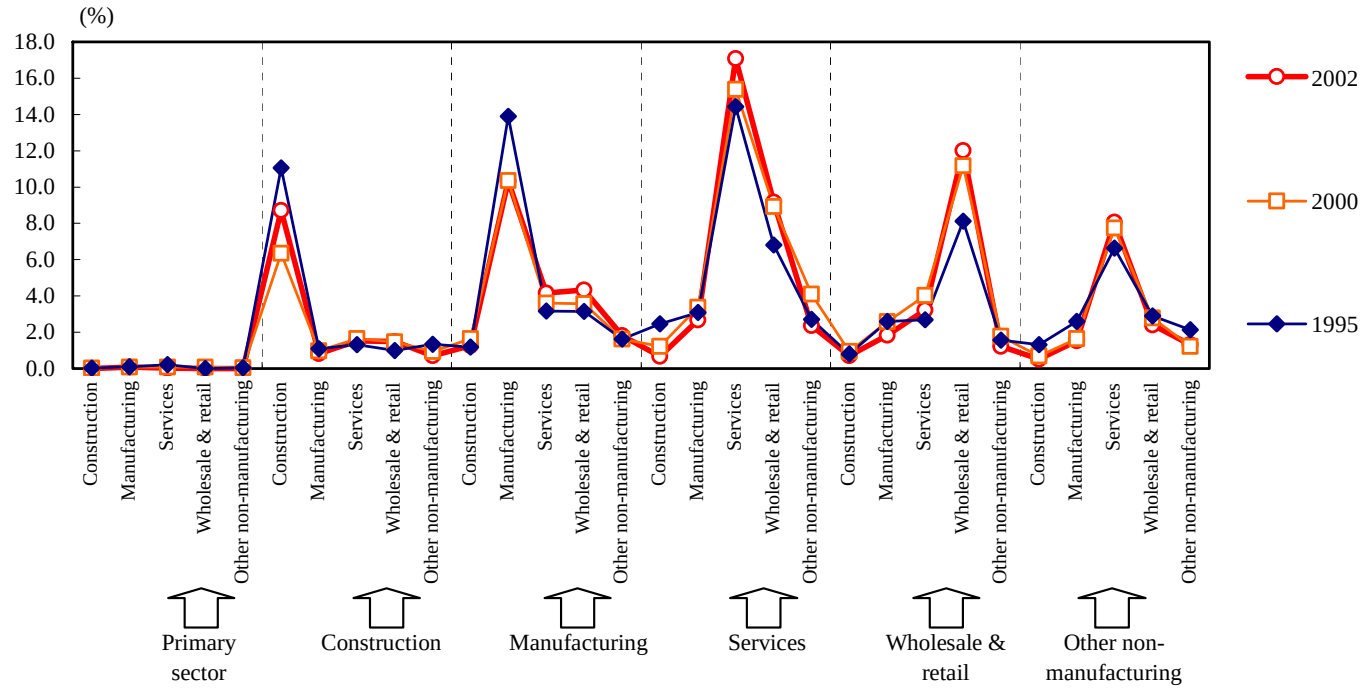


Figure 3-37. Intra- and Inter-Industry Job Changers (Share)



Notes: 1. "Wholesale & retail" includes eating and drinking places.
2. "Other non-manufacturing" includes electricity, gas, heat and water supply, transport and communications, finance and insurance, and real estate.

Source: Ministry of Health, Labour and Welfare, "Survey on Employment Trends."

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