2. Supply trends and final demand

(1) Outline of supply trends for final demand

1) Supply trends for the quarter

[Characteristics]

- Overall supply trends for final demand increased by 0.7% compared to the previous quarter, up for the first time in three quarters.
- Overall industrial supply increased by 0.6% (id.), up for the first time in two quarters due to increases in both personal consumption and government consumption.
- Overall industrial supply for investment increased by 0.6% (id.), up for the first time in four quarters due to increases in private corporation facilities and public investment albeit slightly, in spite of a decrease in private housing.
- Exports remained flat at 0.0% compared to the previous quarter, while imports decreased by 0.4% (id.), down for the first time in three quarters.
- IT-related consumption increased by 1.2% compared to the previous quarter, up for the first time in three quarters. IT-related investment increased by 0.7% (id.), up for the first time in two quarters.

Changes in the Indices of All Industries (Final demand components)

(2000=100, Rations to the previous year (quarter))

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rations to the previous year</td>
<td>Ratios to the previous year</td>
<td>Rations to the previous year</td>
<td>Ratios to the previous year</td>
<td></td>
</tr>
<tr>
<td>Total of final demand sector</td>
<td>2.3</td>
<td>1.6</td>
<td>0.5</td>
<td>0.1</td>
<td>0.8</td>
</tr>
<tr>
<td>Mining and manufacturing (Goods)</td>
<td>5.9</td>
<td>6.9</td>
<td>2.1</td>
<td>0.7</td>
<td>2.9</td>
</tr>
<tr>
<td>Tertiary industries (Services)</td>
<td>1.5</td>
<td>1.1</td>
<td>0.5</td>
<td>0.2</td>
<td>0.5</td>
</tr>
<tr>
<td>Consumption</td>
<td>1.1</td>
<td>1.1</td>
<td>0.5</td>
<td>0.2</td>
<td>0.8</td>
</tr>
<tr>
<td>Personal consumption</td>
<td>1.4</td>
<td>1.4</td>
<td>0.8</td>
<td>0.5</td>
<td>0.9</td>
</tr>
<tr>
<td>Mining and manufacturing (Goods)</td>
<td>2.4</td>
<td>4.0</td>
<td>0.9</td>
<td>1.6</td>
<td>2.3</td>
</tr>
<tr>
<td>Tertiary industries (Services)</td>
<td>1.0</td>
<td>0.8</td>
<td>0.7</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Special IT-related</td>
<td>1.4</td>
<td>1.9</td>
<td>2.8</td>
<td>4.1</td>
<td>1.4</td>
</tr>
<tr>
<td>Government consumption</td>
<td>0.5</td>
<td>0.4</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
</tr>
<tr>
<td>Investment</td>
<td>1.5</td>
<td>0.6</td>
<td>1.2</td>
<td>2.0</td>
<td>0.9</td>
</tr>
<tr>
<td>Public investment</td>
<td>1.8</td>
<td>4.5</td>
<td>4.9</td>
<td>6.4</td>
<td>1.8</td>
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<tr>
<td>Private housing</td>
<td>4.3</td>
<td>8.0</td>
<td>1.6</td>
<td>0.4</td>
<td>1.2</td>
</tr>
<tr>
<td>Mining and manufacturing (Goods)</td>
<td>3.9</td>
<td>3.0</td>
<td>2.9</td>
<td>1.1</td>
<td>2.4</td>
</tr>
<tr>
<td>Construction</td>
<td>3.7</td>
<td>5.3</td>
<td>4.7</td>
<td>2.6</td>
<td>2.3</td>
</tr>
<tr>
<td>Mining and manufacturing (Goods)</td>
<td>4.6</td>
<td>2.4</td>
<td>2.2</td>
<td>0.7</td>
<td>0.4</td>
</tr>
<tr>
<td>Tertiary industries (Services)</td>
<td>4.0</td>
<td>3.9</td>
<td>2.0</td>
<td>0.4</td>
<td>5.2</td>
</tr>
<tr>
<td>Special IT-related</td>
<td>0.7</td>
<td>1.0</td>
<td>2.1</td>
<td>4.2</td>
<td>6.4</td>
</tr>
<tr>
<td>Exports</td>
<td>12.5</td>
<td>9.1</td>
<td>1.3</td>
<td>2.7</td>
<td>2.8</td>
</tr>
<tr>
<td>Mining and manufacturing (Goods)</td>
<td>11.9</td>
<td>8.9</td>
<td>0.9</td>
<td>3.2</td>
<td>3.4</td>
</tr>
<tr>
<td>Tertiary industries (Services)</td>
<td>1.4</td>
<td>0.0</td>
<td>2.7</td>
<td>1.9</td>
<td>1.3</td>
</tr>
<tr>
<td>Imports</td>
<td>6.9</td>
<td>4.6</td>
<td>1.3</td>
<td>0.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Mining and manufacturing (Goods)</td>
<td>6.8</td>
<td>2.5</td>
<td>1.4</td>
<td>1.0</td>
<td>2.1</td>
</tr>
<tr>
<td>Tertiary industries (Services)</td>
<td>7.2</td>
<td>6.6</td>
<td>1.5</td>
<td>2.7</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Notes:
1. As the indices of all industries are calculated using various statistical data, preliminary figures are used for some basic data. Therefore, you should note that the indices of the previous quarter have been corrected to the revised figures.
2. The ratios to the previous year are original indices, and others are based on seasonally adjusted indices.
3. Due to the base revision in 2005 for some data (Breakdown List of Mining and Manufacturing Shipments and Table of Gross Supply), from January 2007 onward, data regarding the mining and manufacturing sector are processed so as to correct to those based on the 2005 base for calculating the indices of all industries (final demand components).

Source: “The Indices of All Industries (Final demand components)” (Estimated value)
(2) Trends in IT-related consumption and investment

[Characteristics]

- IT-related consumption for the second quarter of 2008 increased by 1.2% compared to the previous quarter, up for the first time in three quarters. Non-IT-related consumption increased by 0.6% (id.), up for the first time in two quarters.
- Non-IT-related investment for private corporation facilities increased by 2.2% from the previous quarter, up for the first time in four quarters, while IT-related investment increased by 0.7% (id.), up for the first time in two quarters.

Notes:
1. IT-related consumption is consumption related to cellular telephones, personal handy-phone systems (PHS), personal computers, fixed telecommunications and mobile telecommunications that are supplied for personal consumption.
2. IT-related investments are investments related to communication wires and cables, power lines and optical fiber products for cables, digital and full color copying machines, key system telephone equipment, facsimile machines, electronic switching systems, digital transmission equipment, fixed communication equipment, personal handy-phone systems (PHS), basic exchanges for mobile customer premises equipment, general purpose computers, mid-range computers, personal computers, external storage input-output units, terminal equipment, software development and program creation (subcontracts) that are supplied to private corporation facilities.
3. Out of the aforementioned items, “PHS” and “facsimile machines” were excluded from the indices of industrial shipments due to the base revision in 2005. Therefore, they are excluded for the calculation of data from January 2007 onward.

Source: "The Indices of All Industries (Final demand components)" (Estimated values)
Effect which price increase has on consumption behavior

[Analysis point 1]
-Degree of contribution of the price factor to the decline in real consumption expenditure has expanded since the fourth quarter of 2007-

[Characteristics]
-Rate of increase of real consumption expenditure which maintained positive growth due to the consumption propensity factor decreased in the fourth quarter of 2007 onward because of a larger rate of drop owning to the price factor, and decreased by 1.4% compared to the same quarter of the previous year for the second quarter of 2008, down for the first time in five quarters.

Fig. II-1-13 Factor analysis of real consumption expenditure (year-on-year/worker household)

Note
1. Factor analysis of real consumption expenditure is as follows:
   \[ \frac{C - P \cdot C_p \cdot (Y - T)}{P} \]
   - C: Nominal consumption expenditure
   - Y: Real income
   - T: Non-consumption expenditure
   - P: Consumer Price Index
   - C_p: Average propensity of consumption
   - P: Consumer Price Index

2. Non-consumption expenditure indicates direct tax and social insurance premium, etc.
   Source: “Family Income and Expenditure Survey”, “Consumer Price Index” (Ministry of Internal Affairs and Communication)

[Analysis point 2]
-Foods affected by price increases-

[Characteristics]
-What we could confirm the effect of price increase was foods only. For other items, effect to real consumption expenditure was not observed hitherto mainly due to the difficulty of expenditure adjustment.
-Of foods, bulk buying behavior of such items as flour and butter is seen.

Fig. II-1-15 Changes in consumer price index and real consumption expenditure (cycle charts) (compared to the same month of the previous year (April 2007 to June 2008))

Source: “Family Income and Expenditure Survey”, “Consumer Price Index” (both by the Ministry of Internal Affairs and Communication)
[Analysis Point 3]
-Tendency where average purchase price stays below CPI has begun to be observed-

[Characteristics]
- For items that can be bought at low prices and those which relatively do not reflect one’s preference, we can see the tendency where their average purchase price stays lower than CPI.
- Meanwhile, average purchase prices of some items whose supply are decreasing are moving above CPI.

Fig. II-1-19
Major items in which rate of change of CPI is moving above rate of change of average purchase price in basic expenditure
(Ratios to the previous year (month)/12-month backward moving average)

Fig. II-1-20
Major items in which rate of change of CPI is moving below rate of change of average purchase price in basic expenditure
(Ratios to the previous year (month)/12-month backward moving average)

Fig. II-1-21
Major items in which rate of change of CPI is moving above rate of change of average purchase price in selective expenditure
(compared to the same month of the previous year/12-month backward moving average)

Source: "Family Income and Expenditure Survey" & "Consumer Price Index (Ministry of Internal Affairs and Communications)"
"Statistics on Milk and Daily Products" (Ministry of Agriculture, Forest and Fisheries)

Note: In the “Family Income and Expenditure Survey” (Ministry of Internal Affairs and Communications), expenditure items where expenditure elasticity (rate of increase in expenditure of each item when consumption expenditure increases 1%) is less than 1 are classified as basic expenditure items, those whose expenditure elasticity is above 1 are classified as selective expenditure items.
[Analysis Point 1]
- The index of capital investment for mid-sized enterprises and SMEs has been on a declining trend since the second quarter of 2007-

[Characteristics]
- The index of capital investment in the 14th cycle by size of business shows that the index for all sizes has been on a declining trend after reaching the highest point of 132.0 in the first quarter of 2007 and reduced to 126.0 in the first quarter of 2008.
- The index of large enterprises reached the highest point in the third quarter of 2007 and declined to 128.0 in the first quarter of 2008. Mid-sized enterprises and SMEs also reached the highest point in the first quarter of 2007 and declined to 123.0 in the first quarter of 2008.

[Analysis Point 2]
- The service industry made a contribution to the decline regardless of its size of business-

[Characteristics]
- Since hitting a peak, the period average growth rates of the index of capital investment between the first quarter of 2007 and the first quarter of 2008 (geometric average using seasonally adjusted indices) per size of business were 0.00% for large enterprises and a decrease of 2.84% for mid-sized enterprises and SMEs.
- Looking at the contribution ratios to the period average growth rate during the same period, although the real estate industry and the electricity industry contributed significantly to the growth in large enterprises, the service industry made a significant contribution to the decline. In the meantime, the service industry particularly made a substantial contribution to the decline in mid-sized enterprises and SMEs.

Note: Because the index of capital investment for all sizes in the 14th cycle reached the highest point in the first quarter of 2007, we have assumed that this period was the peak.

Fig. II-2-13 Period average growth rate of the index of capital investment by size of business (2000=100, Seasonally adjusted, 4-quarter backward moving average, All industries)

Note: 1. The amount of capital investment is adjusted originally by the X-11 Default of X-12-ARIMA method.
2. Large enterprise: capitalized at over 1 billion yen; Mid-sized enterprise and SME: capitalized at over 10 million yen and less than 1 billion yen

Source: “Financial Statements Statistics of Corporations by Industry” (Ministry of Finance)
[Analysis Point 3]
-The amount of capital investment for mid-sized enterprises and SMEs in the 14th cycle turned negative earlier than ordinary income-

[Characteristics]
- Looking at ordinary income and the amount of capital investment in the 14th cycle compared with four quarters before by size of business, large enterprises concurrently turned negative both in ordinary income and the amount of capital investment, but the amount of capital investment for mid-sized enterprises and SMEs turned negative earlier than ordinary income.
- Growth rate of ordinary income compared to four quarters before indicates that large enterprises turned negative in the first quarter of 2008 for the first time in 22 quarters and mid-sized enterprises and SMEs also fell into a negative territory in the first quarter of the year for the first time in 20 quarters.

Fig. II-2-14 Changes in ordinary income and the amount of capital investment by size compared to four quarters before (4-quarter backward moving average, All industries)

Note: Large enterprise: capitalized at over 1 billion yen; Mid-sized enterprise and SME: capitalized at over 10 million yen and less than 1 billion yen
Source: “Financial Statements Statistics of Corporations by Industry” (Ministry of Finance)
(2) Outline of exports and imports

Trends of exports and imports for the second quarter of 2008

[Characteristics]

• Exports trends (on a quantity basis) for the second quarter of 2008 in terms of supply index of all industries show that the total exports remained flat due to a decline of 1.5% from the previous quarter in exports of goods (mining and manufacturing) though exports of services increased by 1.9% (id.).

• Exports of goods by region indicate that while exports to Europe and the Middle East declined, those for the U.S., East Asia and ASEAN increased.

![Changes in exports by region (Goods, 2005=100, Seasonally adjusted)](image)

[Characteristics]

• Import trends (on a quantity basis) for the second quarter of 2008 in terms of supply index of all industries show that the entire imports declined by 0.4% from the previous quarter because imports of goods (mining and manufacturing) decreased by 1.6% (id.) in spite of an increase in imports of services (tertiary industry) by 0.8% (id.).

• Imports of goods by region indicate that while imports from East Asia, the U.S. and the Middle East declined, those from Europe and ASEAN increased.

![Changes in imports by region (Goods, 2005=100, Seasonally adjusted)](image)

Notes: 1. Export index by regions is estimated by reorganizing the trade statistics into the shipments index classification, and import index is estimated by reorganizing the trade statistics into the total supply index.

2. The regions include the following countries and regions.
   ASEAN: Singapore, Thailand, Malaysia, the Philippines, Indonesia, Vietnam, Myanmar, Laos, Brunei and Cambodia.
   East Asia: South Korea, Taiwan, China (including Hong Kong)
   Middle East: Iran, Iraq, Bahrain, Saudi Arabia, Kuwait, Qatar, Oman, Israel, Jordan, Syria, Lebanon, UAE, Gaza and Yemen

Source: "Breakdown List of Mining and Manufacturing Shipments" and "Table of Total Supply of Mining and Manufacturing" (both estimated values)
Expansion of production infrastructure of foreign subsidiaries of Japanese companies and development of intra-industry trade

[Analysis Point 1]

- Foreign subsidiaries of Japanese companies located in Asia have steadily improved production infrastructure.

[Characteristics]
- An increase in Asia generally made a larger contribution to a rate of increase (from the previous year) in the number of employees of foreign subsidiaries of Japanese companies.
- Tangible fixed assets increased in Asia and Europe while they decreased in North America.
- Production infrastructure of human and material capitals steadily improved at foreign subsidiaries of Japanese companies in Asia.

Fig. II-3-9 Number of employees and tangible fixed assets (manufacturing) by region of foreign subsidiaries of Japanese companies

![Graph showing number of employees and tangible fixed assets by region]

Notes: 1. Tangible fixed assets are degree of contribution by region to rates of increases in world total from fiscal 1998 to fiscal 2004.
2. Tangible fixed assets are total amounts of land, buildings and machinery, etc. excluding accumulated depreciation.
Source: “Survey of Overseas Business Activities” (Ministry of Economy, Trade and Industry)

[Analysis Point 2]

- Value added per head substantially increased in North America while it remained almost flat in Asia.

[Characteristics]
- Human and material production infrastructure of foreign subsidiaries of Japanese companies is relatively capital-intensive in North America and relatively labor-intensive in Asia. NIEs3 is relatively capital-intensive in Asia.
- The more the region’s production infrastructure is capital-intensive, the more value added per head and the capital investment efficiency is significantly higher in the region.

Fig. II-3-10 Changes in capital intensity of labor, etc. of foreign subsidiaries of Japanese companies (manufacturing)

![Graph showing changes in capital intensity]

Note: Starting year is fiscal 1998 and ending year is fiscal 2004. Labor equipment ratio = Tangible fixed assets/number of employees. Capital investment efficiency = Value added/Tangible fixed assets.
Source: “Survey of Overseas Business Activities”
[Analysis Point 3]
-Total factor productivity is higher in North America, Asia and Europe in descending order-

[Characteristics]
- We have estimated the total factor productivity that is deemed to be a rate of technical progress in the broad sense of the word (innovation). North America is the highest, followed by Asia and Europe. Of Asia, ASEAN4 is high.
- It is estimated that an increase of royalty in North America and Europe and an increase of research & development cost per sales in ASEAN4 has affected an increase in total factor productivity.

Fig. II-3-11 Factor analysis of increase rates of real value added of foreign subsidiaries of Japanese companies (degree of contribution by region and factor against the increase of the total three regions (fiscal 2004/fiscal 1998), manufacturing)

Note: For calculating formula, see page 121 of this text.
Source: “Survey of Overseas Business Activities”, etc., see p121 of this text.

Fig. II-3-12 Comparison of research & development cost and royalty to sales of foreign subsidiaries of Japanese companies (manufacturing)

Note: Starting year is fiscal 1998 and ending year is fiscal 2004.
Source: “Survey of Overseas Business Activities”

[Analysis Point 4]
-International division of labor centering on the intra-industry trade between Japan and Asia has been developed-

[Characteristics]
- We have estimated the Grubel-Lloyd Index which indicates the degree of intra-industry trade.
- The GL Index in Asia is generally on an increasing tendency. Trade value between Japan and Asia of both finished goods and parts in processing and assembly type products also substantially increased due mainly to trade with China and Hong Kong. We have estimated that this is reflecting the advancement of international division of labor positioning the intra-industry trade between Japan and Asia at its core.
- Of the GL Index in Asia, that of NIEs3 where the production infrastructure is relatively capital-intensive and the technology level is high has significantly increased and China and Hong Kong has consistently maintained its growth. ASEAN4, which is assumed to have a high rate of technology progress, is also on an increasing trend.

Fig. II-3-14 Grubel-Lloyd Index of Japan’s trade with Asia (average of all the items)

Note: See page 127 of this text for computation method of GL Index. Here “Asia” includes China plus Hong Kong, NIEs3 and ASEAN4 (in the following pages this will be applied).
Source: “World Trade Atlas” (GTI of the U.S.)
[Analysis Point 5]
-Division of labor to differentiate products has made progress in parts of Asia-

[Characteristics]
- It is estimated that some parts of Asia are undertaking a role as supply bases of relatively high value added products for Japan in processing and assemble type products and the division of labor to differentiate products (the division of labor according to price and quality, etc. of the same product) has progressed.
- We have estimated that in processing and assemble type of products Korea and Taiwan of NIEs3 are playing a role of supply bases of finished goods and parts to Japan, respectively, both of relatively high value added products, while in ASEAN4 Malaysia is assuming a role of supply bases of relatively high value added parts to Japan.

Fir. II-3-15 Changes in trade value by region of Japan related to processing and assemble type products (between 1995 and 2007)

Note: “E” stands for exports and “I” means imports. See pages 128, 129 of this text for products of processing and assemble type and finished goods and parts.
Source: “World Trade Atlas” (GTI of the U.S.)