2. Supply trends and final demand

(1) Outline of supply trends for final demand

- Supply trends for the quarter

**[Characteristics]**

- Overall supply trends for final demand declined by 5.9% from the previous quarter, down for the third consecutive quarter.
- Overall industrial supply for consumption decreased by 3.0% (id.), down for the third consecutive quarter, due to a decrease in personal consumption, in spite of an increase in government consumption.
- Overall industrial supply for investment also decreased by 6.5% (id.), down for the third consecutive quarter, due to declines in private corporation facilities and private housing, although there was an increase in public investment.
- Exports decreased by 24.6% (id.), down for the third consecutive quarter, and imports also decreased by 12.4% (id.), down for the fourth consecutive quarter.
- IT-related consumption decreased by 7.0% (id.), down for the third consecutive quarter, and IT-related investment also decreased by 7.0% (id.), down for the first time in two quarters.

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

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

<table>
<thead>
<tr>
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<td>▲ 2.5</td>
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<td>▲ 6.3</td>
<td>2.2</td>
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<td>0.1</td>
<td>0.0</td>
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<td>0.8</td>
<td>▲ 0.2</td>
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<td>▲ 2.4</td>
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<td>Personal consumption</td>
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<td>0.1</td>
<td>0.2</td>
<td>0.5 ▲ 0.9</td>
<td>0.5</td>
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<td>▲ 2.4</td>
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<td>Public investment</td>
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<td>1.1</td>
<td>5.3</td>
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<td>▲ 8.2</td>
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<tr>
<td>Mining and manufacturing (Goods)</td>
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<td>▲ 0.1</td>
<td>▲ 1.8</td>
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<td><strong>Imports</strong></td>
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</tr>
<tr>
<td>Mining and manufacturing (Goods)</td>
<td>4.4</td>
<td>▲ 0.6</td>
<td>1.3</td>
<td>0.1</td>
<td>0.5</td>
<td>▲ 0.7</td>
<td>▲ 1.9</td>
<td>0.1</td>
<td>▲ 0.4</td>
<td>▲ 0.8</td>
<td>▲ 1.5</td>
<td>▲ 12.4</td>
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<td>Tertiary industries (Services)</td>
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<td>▲ 3.5</td>
<td>▲ 2.8</td>
<td>▲ 2.3</td>
<td>0.8</td>
<td>▲ 3.0</td>
<td>▲ 1.9</td>
<td>▲ 4.6</td>
<td></td>
</tr>
</tbody>
</table>

Notes: 1. As the indices of all industries (final demand components) are calculated using various statistical data, preliminary figures are used for some basic data. Therefore, note that the indices of the previous quarters have been corrected to the revised figures.
2. Ratios to the previous year are original indices and other figures 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 connect to those based on the 2005 base for calculating the indices of all industries (final demand components).
4. With the revision to the YR2005 base around the corner, the Indices of All Industries (final demand components) for 2008 (based on the YR2000 base) are not annually adjusted.

Source: “The Indices of all Industrial Supply (Final demand components)” (Estimated values)
Trends in IT-related consumption and investment

Characteristics

IT-related consumption for the first quarter of 2009 decreased by 7.0% from the previous quarter, and non-IT-related consumption decreased by 4.4% (id.), both for the third consecutive quarter. Non-IT-related investment for private corporation facilities decreased by 12.3% (id.), down for the third consecutive quarter, and IT-related investment decreased by 7.0% (id.), down 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 wires 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, and 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 from the calculation of data from January 2007 onward.

Source: "The Indices of All Industries (Final demand components)" (Estimated values)
(2) Outline of exports and imports

Export and import trends for the quarter

**Characteristics**

- Looking at the trends of exports for the first quarter of 2009 (on a quantity basis), in terms of the indices of all industries (final demand components), exports as a whole decreased by 24.6% from the previous quarter, due to a decline of 25.5% (id.) in exports of goods (the mining and manufacturing industry) and a decline of 15.2% (id.) in received services (the tertiary industry).
- By region, exports of goods to Europe, the United States, East Asia, ASEAN, and the Middle East all decreased.

![Changes in Exports by Region (Goods) (2005=100; Seasonally adjusted)](image)

**Characteristics**

- Looking at the trends of imports for the first quarter of 2009 (on a quantity basis), in terms of the indices of all industries (final demand components), imports as a whole decreased by 12.4% from the previous quarter, due to a decline of 14.4% (id.) in imports of goods (the mining and manufacturing industry) and a decline of 4.6% (id.) in service payments (the tertiary industry).
- By region, imports of goods from ASEAN, the United States, Europe, and the Middle East decreased, while those from East Asia increased.

![Changes in Imports by Region (Goods) (2005=100; Seasonally adjusted)](image)

Notes: 1. The export index by region is estimated by rearranging the trade statistics into shipment index groups, and the import index by region is estimated by rearranging the trade statistics into supply index groups.
2. The names of each country or region are as follows:
   - ASEAN: Singapore, Thailand, Malaysia, Philippines, Indonesia, Vietnam, Myanmar, Laos, Brunei and Cambodia
   - East Asia: Republic of Korea, Taiwan and China (including Hong Kong)
   - Middle East: Iran, Iraq, Bahrain, Saudi Arabia, Kuwait, Qatar, Oman, Israel, Jordan, Syria, Lebanon, the United Arab Emirates, Gaza and Yemen
Sources: “Breakdown List of Mining and Manufacturing Shipments,”
“Table of Total Supply of Mining and Manufacturing” (both estimated values)
Trends in recent exports of Japan

Analysis point 1

~Decrease in exports to Asia and North America has contributed notably to a recent decline of overall exports of Japan~

Characteristics

Significantly affected by the recent global recession, Japan’s exports decreased sharply by 14.4% from the previous quarter in the October-December quarter of 2008 and by 29.3% (id.) in the January-March quarter of 2009, with the magnitude of decline expanding.

Regions that have contributed to the decline notably were Asia and North America. Among Asian countries, the contributions of Thailand, Singapore, and Indonesia, as well as those of China (including Hong Kong), South Korea, and Taiwan were notable.

Fig. II-3-8 Changes in Japan’s Exports by Region
(Comparison with the previous quarter, On a dollar basis, Seasonally adjusted)

Note: Asia means China (including Hong Kong), NIEs3, and ASEAN4. Export values are seasonally adjusted originally, using the default X-11 (hereinafter the same).
Source: “World Trade Atlas” (Global Trade Information Services)

Analysis point 2

~Decreases in Japan’s exports to the above-mentioned countries and those countries’ exports to China and the U.S. are largely attributable to decreases in exports of machinery-related items~

Characteristics

Presuming a simple export route from Japan to the United States, decreases in exports of machinery-related items (general machinery, electrical machinery, and transport equipment, in particular) have generally contributed significantly to decreases in Japan’s exports to the above-mentioned countries and those countries’ exports to China and the United States.

By item, decreases in exports of transport equipment and general machinery contributed significantly to a quarter-on-quarter decrease in Japan’s exports to the United States in the first quarter of 2009. The contributions of decreases in exports of electrical machinery and general machinery to a decrease in Japan’s exports to China were large.

Table II-3-6 Comparison of Each Country’s Export Value
(On a dollar basis, Seasonally adjusted, Contribution ratio to changes from the previous quarter)

<table>
<thead>
<tr>
<th>Country/Region</th>
<th>U.S.</th>
<th>China (including Hong Kong)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>▶</td>
<td>▶</td>
</tr>
<tr>
<td>Food</td>
<td>▶</td>
<td>▶</td>
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<tr>
<td>Chemical</td>
<td>▶</td>
<td>▶</td>
</tr>
<tr>
<td>Petroleum and coal products</td>
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<td>▶</td>
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<tr>
<td>Iron and steel</td>
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<td>▶</td>
</tr>
<tr>
<td>Non-ferrous metals</td>
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<td>▶</td>
</tr>
<tr>
<td>Electric machinery</td>
<td>▶</td>
<td>▶</td>
</tr>
<tr>
<td>Electrical machinery</td>
<td>▶</td>
<td>▶</td>
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<tr>
<td>Transport equipment</td>
<td>▶</td>
<td>▶</td>
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<tr>
<td>Electronic instruments</td>
<td>▶</td>
<td>▶</td>
</tr>
<tr>
<td>Other manufacturing</td>
<td>▶</td>
<td>▶</td>
</tr>
<tr>
<td>Others</td>
<td>▶</td>
<td>▶</td>
</tr>
</tbody>
</table>

Notes: 1. Figures show contribution ratios to changes in the total from the previous quarter. ▶ and ▶ are added to items with the top two largest contribution ratios.
2. Two-digit HS commodities are ranked into 13 categories. Machinery-related items are shaded.
Source: “World Trade Atlas” (Global Trade Information Services)
【Analysis point 3】
Deterioration of the U.S. economy has been affecting Japan’s exports, directly decreasing those of transport equipment and general machinery (finished products) and indirectly decreasing those of electronic parts and devices.

【Characteristics】
Breaking down machinery-related export items of the above-mentioned countries and compiling items contributing largely to overall decreases into a chart, a significant decrease is observed in exports of information and communication electronics equipment (finished products) from China to the United States.
Decreases are also observed in exports to the United States of information and communication electronics equipment (finished products and parts) from Singapore, those of information and communication electronics equipment (finished products) from Thailand, and those of electrical machinery (finished products) from Taiwan.
It is inferred that such decreases have caused a decrease in exports of electronic parts and devices from Japan to these countries (the decrease may have been brought about partly by sluggish domestic demand in these countries).
Japan’s recent exports have been directly affected by the deterioration of the U.S. economy, seeing decreases in finished products of transport equipment and general machinery. Furthermore, due to the progress in triangular trade via China, there seems to have been indirect influence as seen in a decrease in Japan’s exports of electronic parts and devices.

Fig. II-3-9 Items Contributing Significantly to Quarter-on-Quarter Decreases in Each Country’s Exports of Machinery-related Items (On a dollar basis, Seasonally adjusted)

Notes:
1. Solid lines show contribution ratios to the quarter-on-quarter decline of the total exports of machinery-related items in the first quarter of 2009 and dashed lines show those in the fourth quarter of 2008.
2. Four-digit HS commodities are ranked into machinery-related items (finished products and parts of general machinery, electrical machinery, information and communication electronics equipment, and transport equipment, and electronic parts and devices).
3. (F) means finished products and (P) means parts.
4. In comparison among countries, time lags are not considered.
Source: “World Trade Atlas” (Global Trade Information Services)
**Analysis point 4**

Recent correlation between Japan’s exports and the U.S. real GDP may have been affected by the progress of triangular trade via China to the U.S.

**Characteristics**

In order to assess the influence of the U.S. economy on the Japanese economy and the export values of the above-mentioned countries, we examine the correlation of Japan’s real GDP and nominal export values of each country with the U.S. real GDP. From the January-March quarter of 2004 to the October-December quarter of 2008,

- regarding exports from Asian countries to the United States, relatively high correlation with the U.S. real GDP can be observed in exports from China to the United States;
- regarding exports from Asian countries to China, exports from Singapore, Taiwan, Thailand, and South Korea show the correlation; and
- regarding Japan’s exports to other Asian countries, those to Taiwan and South Korea show the correlation.

Such high correlation with the U.S. real GDP may be attributable to the progress of triangular trade via China to the United States and increases in domestic demand in importing countries.

**Fig.II-3-17 Correlation Coefficient with the U.S. Real GDP of Each Country’s Export Value and Japan’s Real GDP (Comparison with 4 quarters before of 4-quarter backward moving average, Seasonally adjusted)**

*China includes Hong Kong.

Notes: 1. GDP data are real values of YR2000 prices, on a Japanese yen basis for Japan and on a dollar basis for the United States.
2. Export value is on a dollar basis and “A→B” means exports from A to B.
3. For assessing the correlation, the target period is divided almost in half into the term from the October-December quarter of 1998 to the October-December quarter of 2003 (21 time points) and the term from the January-March quarter of 2004 to the October-December quarter of 2008 (20 time points).
4. Correlation is assessed with regard to the part excluding the levels where the correlation coefficients are not significant (levels where absolute values of correlation coefficients are closer to 0 than 0.444) by using the decorrelation test. More specifically, see the main text on p. 87.

Sources: “World Trade Atlas” (Global Trade Information Services), “GDP” (U.S. Department of Commerce), “National Accounts of Japan” (Cabinet Office)
【Analysis point 5】

Japan’s exports may have been led strongly by the U.S. economy in recent years

【Characteristics】

As shown in Fig. II-3-17, correlation between the U.S. real GDP and Japan’s real GDP emerged during the January-March quarter of 2004 and the October-December quarter of 2008.

It is considered that the emergence of such correlation is attributable to influences of an increase in China’s exports to the United States due to the U.S. demand expansion and the following increase in Japan’s exports to China, and an increase in Japan’s exports to South Korea and Taiwan, which increased exports to China (such increases may have been brought about by expanding domestic demand in importing countries).

One of the factors that have contributed to the recent growth of the Japanese economy was an expansion of exports, which may have been led strongly by the U.S. economy. Adversely, the recent deterioration of the U.S. economy may have had a significant negative effect on the Japanese economy.

Fig. II-3-13 Changes in Export Dependence of Japan’s Real GDP (Seasonally adjusted)

Note: Figures are on a Japanese yen basis and are YR2000 chained prices.

Export dependence = Exports (goods and services) / GDP

Source: “National Accounts of Japan” (Cabinet Office)

Fig. II-3-18 Changes in Each Country’s Export Value (On a dollar basis)

Fig. II-3-15 Changes in Japan’s Export Value (On a dollar basis)

Source: “World Trade Atlas” (Global Trade Information Services)