

## 2 Supply trend and final demand

### (1) Outline of supply trend for final demand

#### ① Supply trend for the quarter

The outline of the supply trend for final demand for the second quarter of 2007 was as follows:

Overall industrial supply for consumption increased by 0.2% compared to the previous quarter, up for the first time in two quarters, due to increases in personal consumption by 0.2% (id.) and in government consumption by 0.1% (id.), both up for the first time in two quarters.

Overall industrial supply for investment increased by 1.0% (id.), up for the third consecutive quarter, due to an increase in private corporation facilities (by 1.3% (id.), up for the first time in two quarters), although there were decreases for the first time in three quarters in private housing (by 4.2% (id.)) and public investment (by 0.2% (id.)).

Exports decreased by 1.7% (id.), down for the first time in nine quarters, and imports increased by 1.8% (id.), up for the first time in two quarters.

IT-related consumption increased by 2.2% (id.), up for the first time in two quarters, and IT-related investment increased by 2.6% (id.), up for the second consecutive quarter.

#### Changes in the Indices of All Industries (Final demand components) (2000=100, Ratios to the previous year (quarter))

	2005 Ratio to the previous year	2006 Ratio to the previous year	2005			2006				2007	
			II	III	IV	I	II	III	IV	I	II
<b>Total of final demand sector</b>	1.5	2.3	0.5	0.5	0.5	1.0	0.5	-0.1	0.8	0.8	-0.1
Mining and manufacturing (Goods)	1.7	5.9	1.0	0.4	1.8	1.7	2.1	-0.7	2.9	1.5	-0.4
Tertiary industries (Services)	1.5	1.5	-0.1	0.4	0.4	0.4	0.5	0.2	0.5	0.5	0.1
<b>Consumption</b>	1.2	1.1	-0.1	-0.1	0.5	0.3	0.5	-0.2	0.8	-0.1	0.2
<b>Personal consumption</b>	0.9	1.4	-0.1	-0.2	0.6	0.4	0.8	-0.5	0.9	-0.1	0.2
Mining and manufacturing (Goods)	0.5	2.6	0.5	-0.5	1.1	1.0	0.9	-1.0	2.3	-2.0	0.4
Tertiary industries (Services)	1.1	1.0	-0.1	0.0	0.3	0.3	0.7	-0.3	0.3	0.7	0.2
(Special) IT-related	0.9	1.4	-1.6	0.9	4.5	-2.4	2.8	-4.1	1.4	-2.8	2.2
<b>Government consumption</b>	1.6	0.5	-0.2	0.4	-0.1	0.0	-0.2	0.7	0.2	-0.1	0.1
<b>Investment</b>	2.6	1.5	1.9	1.0	0.2	0.4	1.2	-2.0	0.9	0.4	1.0
<b>Public investment</b>	-4.2	-7.8	-1.5	0.7	-3.1	0.7	-4.9	-6.4	1.8	1.6	-0.2
<b>Private housing</b>	3.5	4.5	0.9	0.8	3.3	2.7	-1.6	-0.4	1.2	0.7	-4.2
<b>Private corporation facilities</b>	5.1	3.9	2.7	0.8	2.0	-0.9	2.9	-1.1	2.4	-0.4	1.3
Mining and manufacturing (Goods)	4.9	3.7	5.7	-1.2	1.7	-1.4	4.7	-2.6	2.3	0.9	0.7
Construction	6.9	4.6	3.2	2.1	2.5	-0.3	2.2	-0.7	0.4	-0.2	0.0
Tertiary industries (Services)	3.3	4.0	1.1	1.1	2.7	-1.5	2.0	-0.4	5.2	-3.2	4.9
(Special) IT-related	4.7	0.7	4.7	4.5	-3.6	-2.3	2.1	4.2	-6.4	1.1	2.6
<b>Exports</b>	4.1	12.5	2.3	3.6	3.3	3.8	1.3	2.7	2.8	3.0	-1.7
Mining and manufacturing (Goods)	3.5	11.9	1.7	3.7	3.8	3.0	0.9	3.2	3.1	3.1	-2.1
Tertiary industries (Services)	5.8	14.1	4.2	3.6	2.0	5.9	2.7	1.9	1.3	2.6	0.1
<b>Imports</b>	5.4	6.9	3.2	2.2	1.1	2.1	1.3	0.5	2.5	-1.8	1.8
Mining and manufacturing (Goods)	6.1	6.8	4.6	1.8	2.1	0.7	1.4	1.0	2.1	-2.6	0.0
Tertiary industries (Services)	3.3	7.2	1.1	1.8	-2.2	6.8	1.5	-2.7	4.6	1.0	7.9

Notes: 1. For details of revision of the base year to YR2000, and the definition of "IT-related consumption" and "IT-related investment" of the indices of all industrial supply, see "Outline and Creation Method of the Indices of All Industrial Supply" of the main text.

2. As the indices of all industrial supply 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.

3. The ratios to the previous year are original indices, and others are based on seasonal adjustment indices.

Source: "The Indices of All Industries (Final demand components)" (Estimated values).

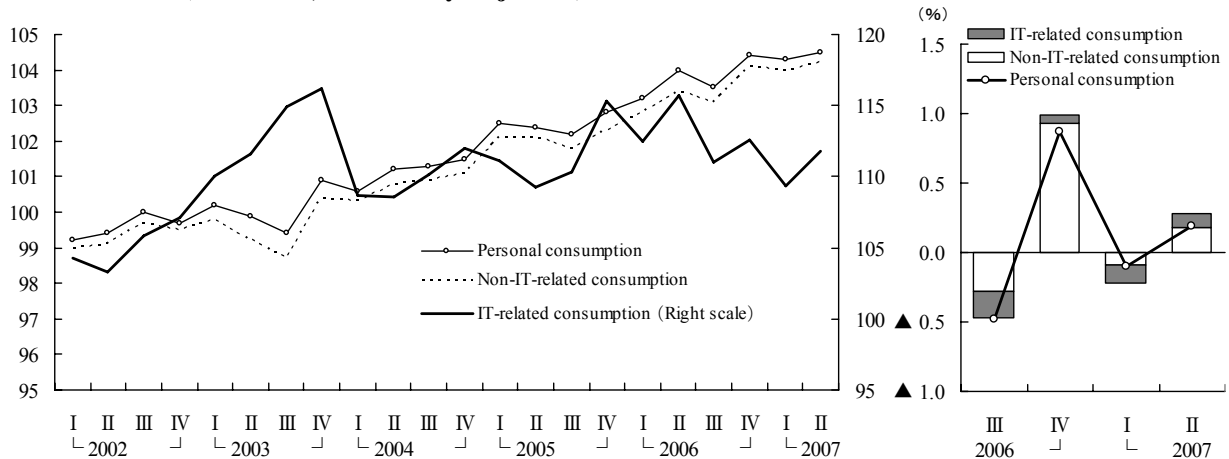
## ② Trend of IT-related consumption and investment

IT-related personal consumption for the second quarter of 2007 increased by 2.2% compared to the previous quarter, up for the first time in two quarters. Non-IT-related consumption also increased by 0.2% (id.), up for the first time in two quarters.

IT-related investment for private corporation facilities increased by 2.6% (id.), up for the second consecutive quarter, due to increases in mid-range computers, etc. Non-IT-related investment also increased by 1.0% (id.), up for the first time in two quarters.

### Changes in IT-related Consumption

Index level (2000=100, Seasonally adjusted)

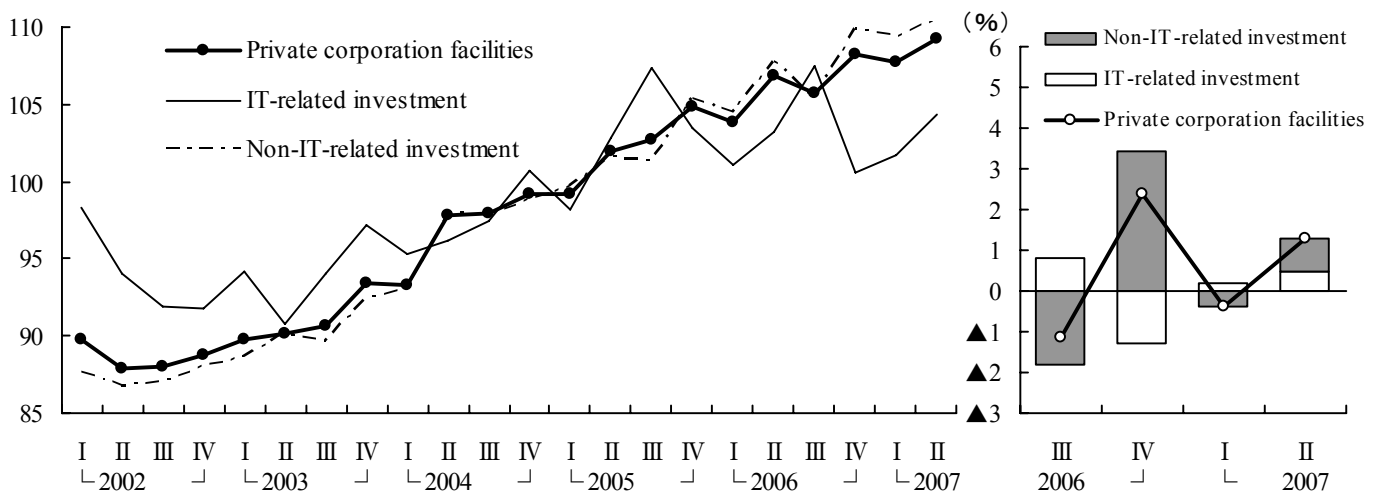


Note: IT-related consumption is consumption related to cellular telephones, personal handy phone systems, personal computers, fixed telecommunications business and mobile telecommunications business that are supplied for personal consumption.

Source: "The Indices of All Industries (Final demand components)" (Estimated values)

### Changes in IT-related Investment

Index level (2000=100, Seasonally adjusted)



Note: 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, basic exchange 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.

Source: "The Indices of All Industries (Final demand components)" (Estimated values)

### ③ Relations between economic fluctuations and consumption

Looking at the changes in consumption of households and compensation of employees<sup>Note)</sup> in National Accounts, both figures showed a similar upward trend during the economic expansion stage in the 12th cycle, but since the economic expansion stage in the 13th cycle, the former has been on a moderate upward trend, while the latter has had repeated ups and downs. Therefore, we examined the changes in the relations between consumption of households and compensation of employees through comparison with the past records.

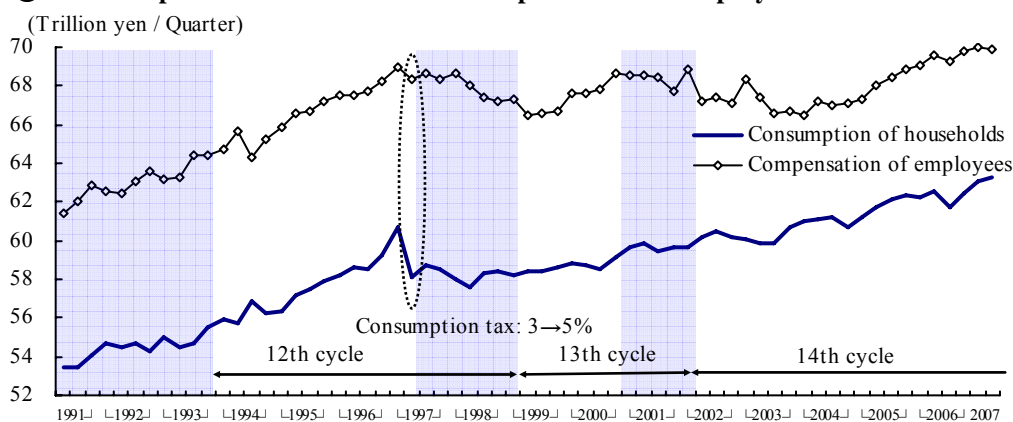
Compensation of employees can be viewed in terms of the total number of employees and per-capita compensation. During the economic expansion stage in the 14th cycle, the total number of employees was leveling off until the first quarter of 2005 and has been on a rise after that. In the meantime, per-capita compensation, which had been declining until the first quarter of 2004, rebounded moderately but has been almost leveling off since the first quarter of 2006.

In addition to compensation of employees, consumer confidence (Consumer Confidence Index, the survey item on “enriching daily life” in the “Public Opinion Poll on Quality of Life” (hereinafter referred to as the “Public Opinion Poll”)) and ups and downs in consumption propensity due to changes in the persons per household are considered to have impacts on consumption of households.

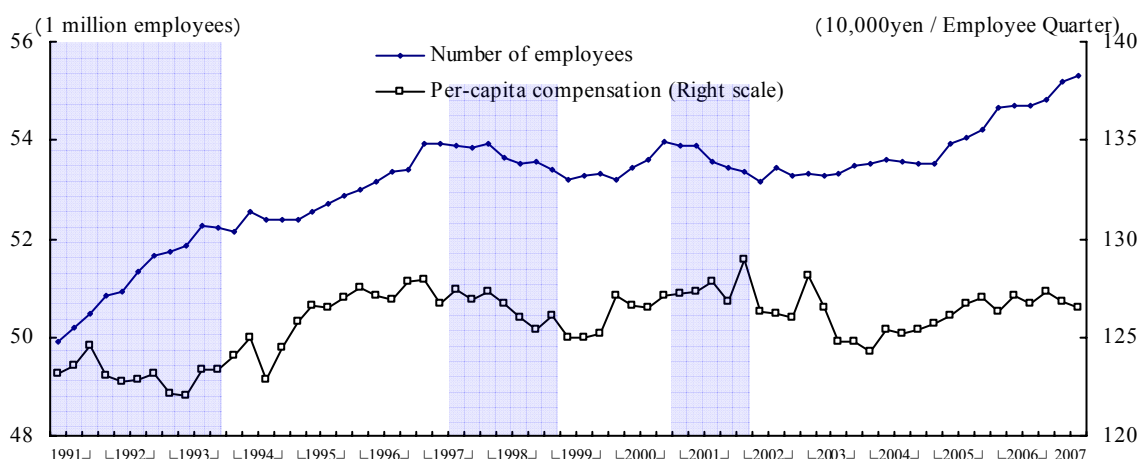
Note: In this text, real consumption of households (excluding imputed service of owner-occupied dwellings) is used as final consumption expenditure and real compensation of employees is used as compensation of employees (both figures are seasonally adjusted).

#### Changes in Consumption of households and Compensation of Employees, etc.

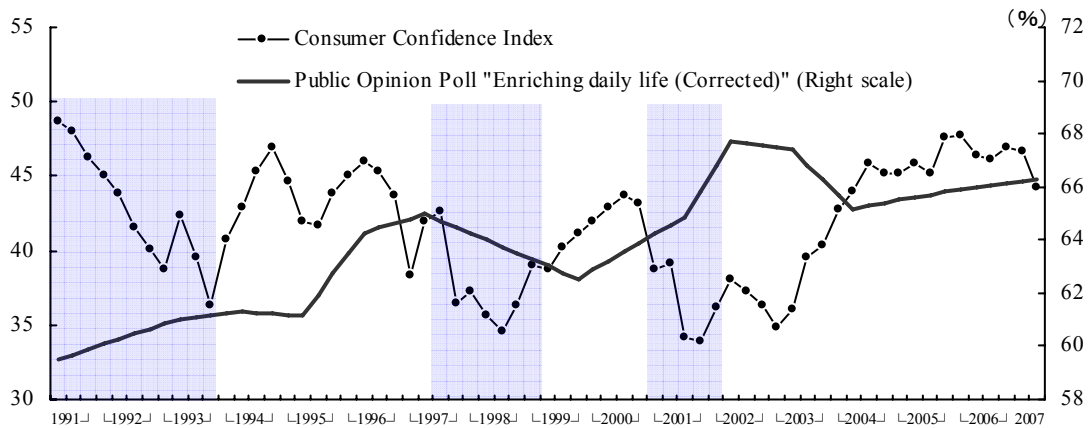
##### ① Consumption of households and compensation of employees



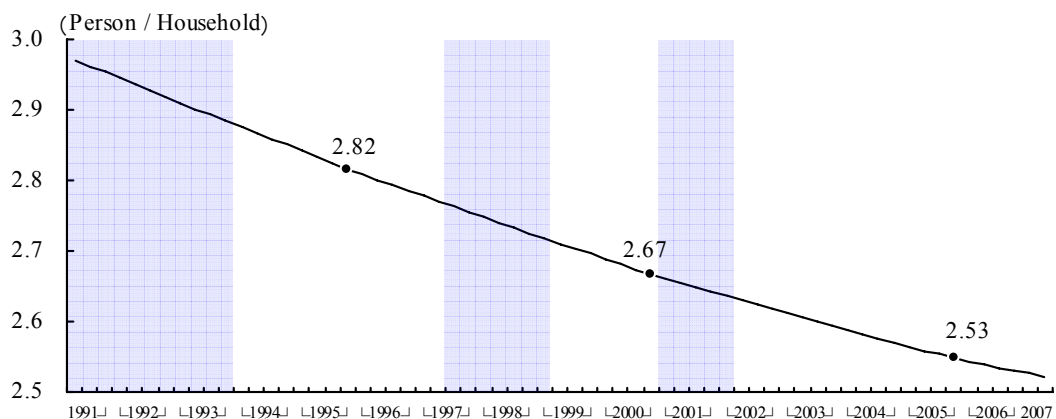
##### ② Number of employees and per-capita compensation



### ③ Consumer confidence



### ④ Persons per household



- Notes
1. Shaded parts are economic contraction stages.
  2. Consumption of households and compensation of employees are real values seasonally adjusted (on year 2000 basis).
  3. "Public Opinion Poll 'Enriching daily life (corrected)'" is based on the rate of responses chosen to the question "Which do you prefer for your future life, to focus on preparing for the future such as saving money and making investment or enriching daily life and having fun?" in the "Public Opinion Poll on Quality of Life." Quarterly data are created by correcting the results of the Public Opinion Poll to eliminate impact of modification to questionnaires and assuming that changes occur evenly during the period between each survey (conducted in May or June every year). Figures for the first and second quarter of 2007 are obtained by extending the data (for details, see the main text).
  4. The persons per household is based on "private households" of the Population Census. Quarterly figures are calculated, assuming changes occur at the same rate during the period between each survey (for five years). Figures for 2006 are based on the annual growth rate from 2005 to 2006 of the Labor Force Survey. Figures for the first and second quarter of 2007 are obtained by extending them.
- Sources: "National Accounts" (Cabinet Office), "Monthly Consumer Confidence Survey covering all of Japan" (Cabinet Office), "Public Opinion Poll on Quality of Life" (Cabinet Office), "Population Census" (Ministry of Internal Affairs and Communications), "Labor Force Survey" (Ministry of Internal Affairs and Communications)

We calculated regression estimate<sup>Note)</sup> with consumption of households as a dependent variable and the above-mentioned factors that affect it as explanatory variables, and analyzed factors of changes of consumption of households from the previous quarter by each explanatory variable to compare respective economic expansion stages.

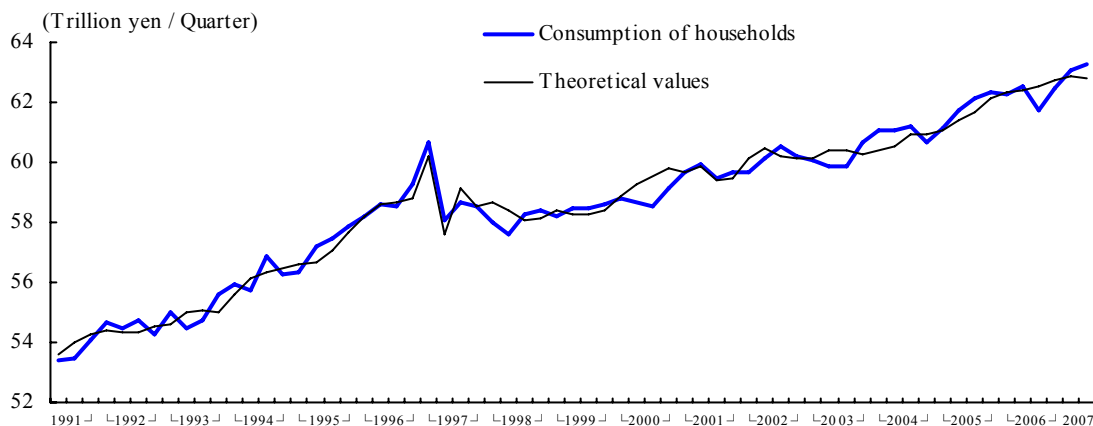
The results showed that in the economic expansion stage in the 12th cycle, the contribution ratio of the persons per household to the quarterly average growth (0.316%) was the largest at 0.128% points, followed by that of the Public Opinion Poll (0.117% points), number of employees (0.111% points), and per-capita compensation (0.096% points). Also in the economic expansion stage in the 14th cycle (up to the second quarter of 2007), the persons per household contributed most significantly to the quarterly average growth (0.281%), with the contribution ratio at 0.093% points. The contribution ratio of the number of employees was also large at 0.078% points.

Despite repeated ups and downs in compensation of employees, consumption of households has been on a moderate upward trend since the economic expansion stage in the 13th cycle. This is considered to be partly due to factors of long-term trends such as diminishing persons per household (an increase in the number of households), which has nothing to do with economic activities. Another reason may be that the increase in the number of employees, which has been larger than the growth of the total compensation of employees, has had a significant impact on consumption of households (a coefficient of the number of employees in the regression estimation formula (0.47) is larger than that of per-capita compensation (0.42)).

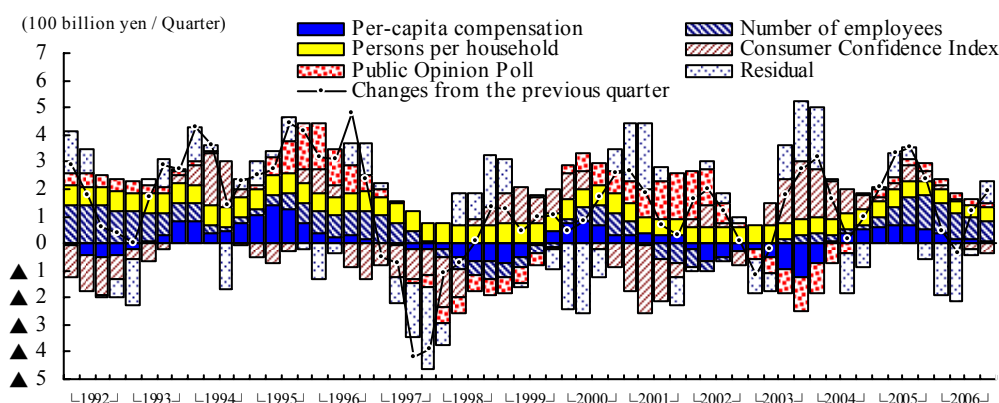
Note: We also conducted regression estimation with consumption of households by type (such as durable goods) as a dependent variable. For details, see the main text.

## Results of Regression Analysis with Consumption of households as a Dependent Variable

### ① Comparison between real values and theoretical values



## ② Changes from the previous quarter (4-quarter centered moving average)



## ③ Quarterly average growth and contribution ratio in economic expansion stages

(% points)

	Quarterly average growth of consumption of households (%)	Compensation of employees	Per-capita compensation	Number of employees	Persons per households	Consumer Confidence Index	Public Opinion Poll	Consumption tax dummy	Residual
Economic expansion stage 12th cycle	0.316	0.206	0.096	0.111	0.128	0.067	0.117	▲ 0.192	▲ 0.011
Economic expansion stage 13th cycle	0.218	0.090	0.050	0.040	0.121	0.100	0.037	0.000	▲ 0.130
Economic expansion stage 14th cycle	0.281	0.059	▲ 0.019	0.078	0.093	0.065	▲ 0.009	0.000	0.074
(Reference) 1991 III to 2007 II	0.218	0.098	0.021	0.077	0.113	▲ 0.009	0.045	▲ 0.000	0.018

Notes: 1. Regression estimation formula

$$\ln(C) = 0.42\ln(I/E) + 0.47\ln(E) - 0.44\ln(N) + 0.07\ln(M) + 0.27\ln(M2) + 0.03DT + 4.96$$

(t 16.09) (t 7.20) (t 4.34) (t 5.26) (t 39.92)

adj.R<sup>2</sup>: 0.975 D.W ratio : 1.453

We first conducted principal component analysis for three explanatory variables (E, I/E and N), and then conducted multiple regression analysis for the first principal component by deeming three explanatory variables as a quasi explanatory variable. For details of explanatory variables, dependent variables, and calculation of contribution ratios, see the main text.

C: Consumption of households, I/E: Per-capita compensation,

E: Number of employees, N: Persons per household, M: Consumer Confidence Index,

M2: Public Opinion Poll (points for “enriching daily life (corrected)”),

DT: 1997 Consumption tax dummy

2. The period for the regression estimation is 65 quarters from the second quarter of 1991 to the second quarter of 2007.

3. Chart ② shows values excluding 1997 Consumption tax dummy. Since values are shown as 4-quarter centering moving average, the values for the first two and the last two quarters cannot be obtained.

4. “Residual” is the difference between actual consumption of households and theoretical values.

Sources: “National Accounts” (Cabinet Office), “Monthly Consumer Confidence Survey covering all of Japan” (Cabinet Office), “Public Opinion Poll on Quality of Life” (Cabinet Office), “Population Census” (Ministry of Internal Affairs and Communications), “Labor Force Survey” (Ministry of Internal Affairs and Communications)

## (2) Outline of export and import trends

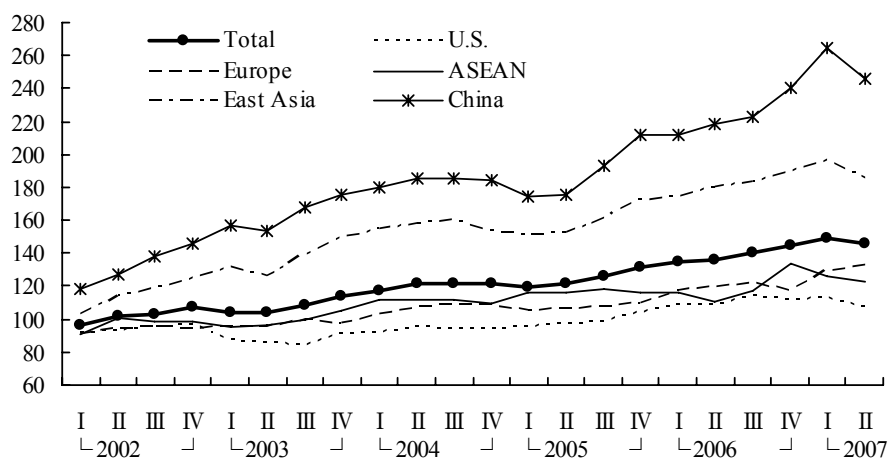
### ① Export and import trends for the quarter

Looking at the trends of exports and imports for the second quarter of 2007 (on a quantity basis), exports as a whole decreased by 1.7% compared to the previous quarter, due to a decrease in exports of goods (the mining and manufacturing industry) by 2.1% (id.), although there was an increase in received services (the tertiary industry) by 0.1% (id.). Imports as a whole increased by 1.8% (id.), due to an increase in service payments (the tertiary industry) by 7.9% (id.), while imports of goods (the mining and manufacturing industry) remained flat at 0.0% (id.).

By region, exports of goods decreased in East Asia, the United States, and ASEAN. Imports of goods increased in Europe and decreased in East Asia and the United States, etc.

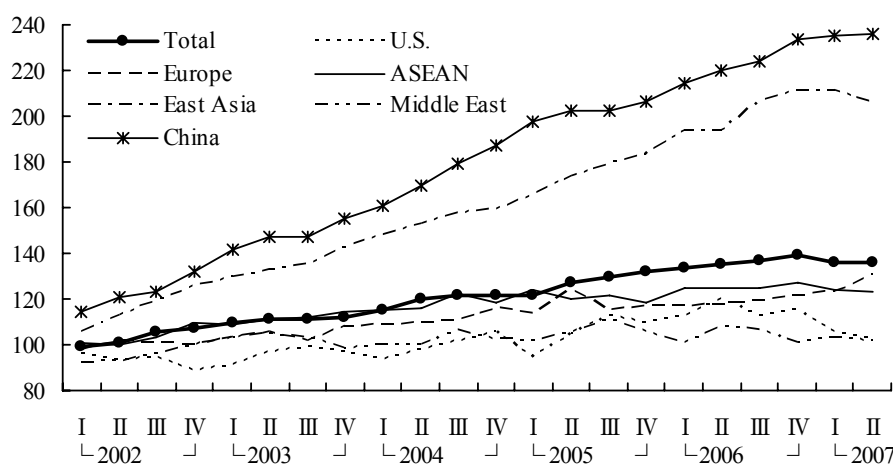
#### Changes in Exports by Region (Goods)

Index level (2000=100, Seasonally adjusted)



#### Changes in Imports by Region (Goods)

Index level (2000=100, Seasonally adjusted)



- Notes: 1. The export index by region is estimated by rearranging the trade statistics with the shipment index group, and the import index by region is estimated by rearranging the trade statistics with the total supply index group.  
2. The regional classification was amended according to the revision of the base year 2000. 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, 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" (Estimated values)

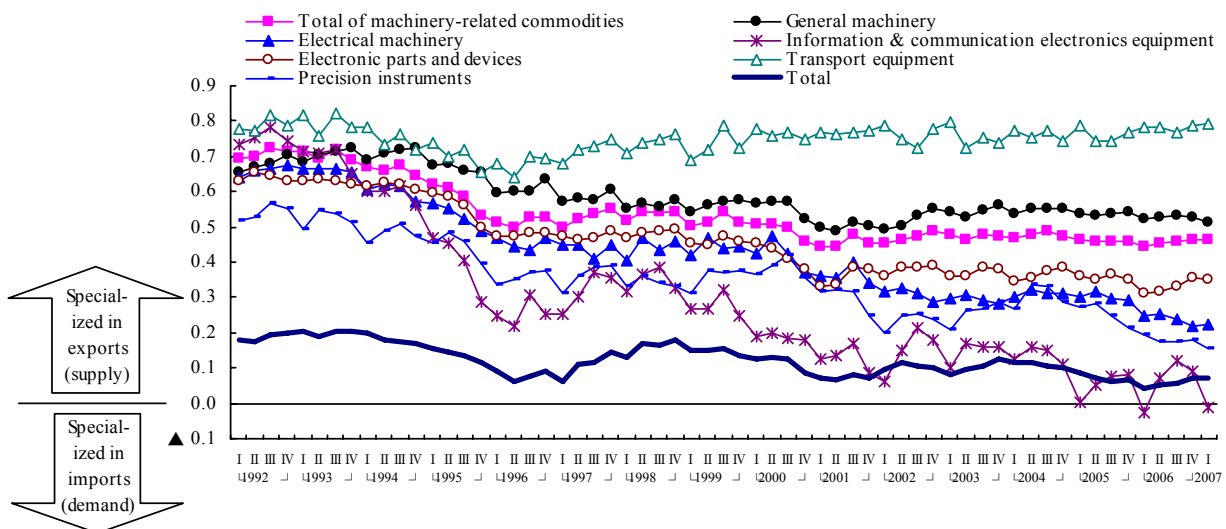
## ② International competitiveness of machinery-related items overviewed from the trade value

Next, we examined the trend of Japan's international competitiveness in terms of trade specialization coefficients. The coefficient of the total of machinery-related commodities declined from 1992 to 1996 and has remained almost flat ever since. Japan has generally maintained a favorable balance of trade, but by commodity, a decline is notable in comparative advantage (trade specialization coefficient) for the precision instruments, electrical machinery, and electronic parts and devices industries, as well as for the information and communication electronics equipment industry.

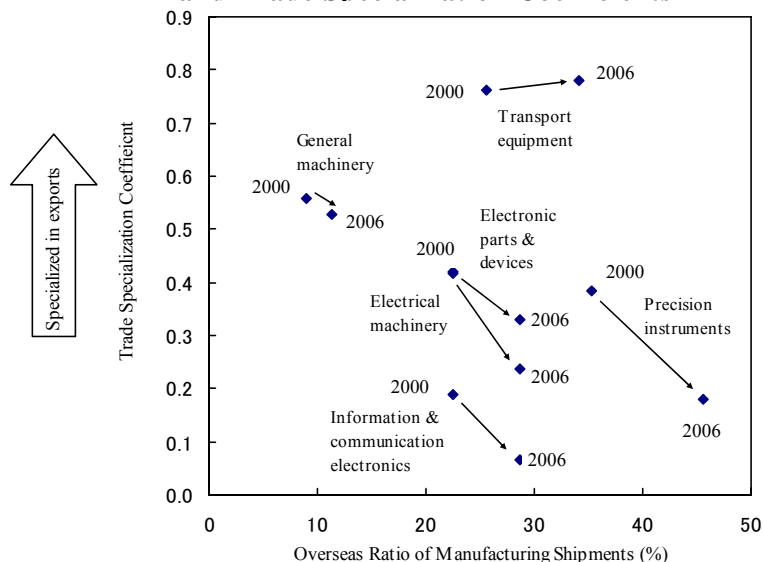
A major reason of this decline in comparative advantage for many of the machinery-related commodities is considered to be an impact of the expansion of local production overseas. In accordance with the progress of international division of labor, the overseas ratio in manufacturing shipments (the ratio of overseas shipments in the global shipments of Japanese manufacturing industry) has been rising for all commodities, but trade specialization coefficients declined sharply for commodities other than those of the transport equipment and general machinery industries. A decline in comparative advantage accompanied with the expansion of local production overseas may have been caused by rising import ratio due to an increase in re-import (sales for Japan from Japanese overseas subsidiaries) and the substitution effect on exports from Japan of increasing sales of locally-produced products (local sales and sales for third countries).

The ratio of Japan's import of machinery-related commodities has increased significantly for the precision instruments and electrical machinery industries, and the ratio has been rather low for the transport equipment and general machinery industries. Looking at the substitution effect on exports from Japan caused by the progress of local production overseas in terms of export ratio (ratio of overseas sales of domestic products against total overseas sales of locally-produced products and domestic products), the export ratio declined notably for the precision instruments and transport equipment industries. The export ratio has also been declining for other industries in recent years, compared to 2000.

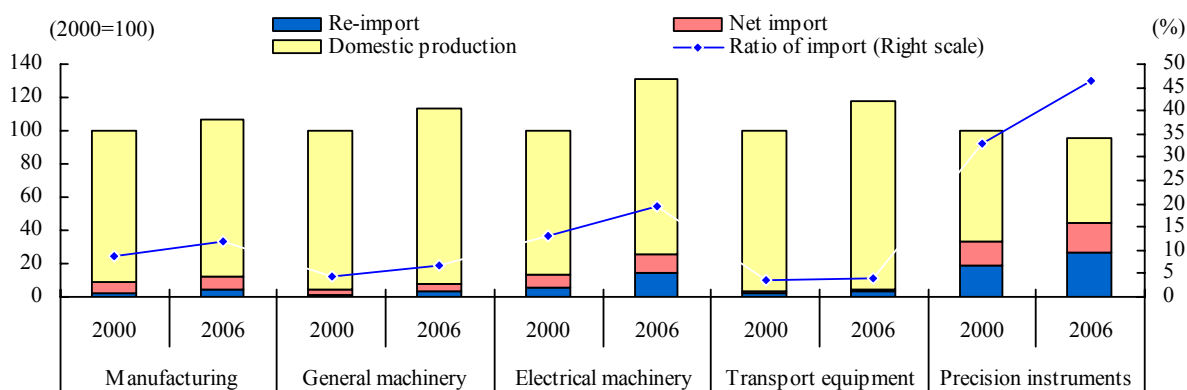
Changes in Japan's Trade Specialization Coefficients



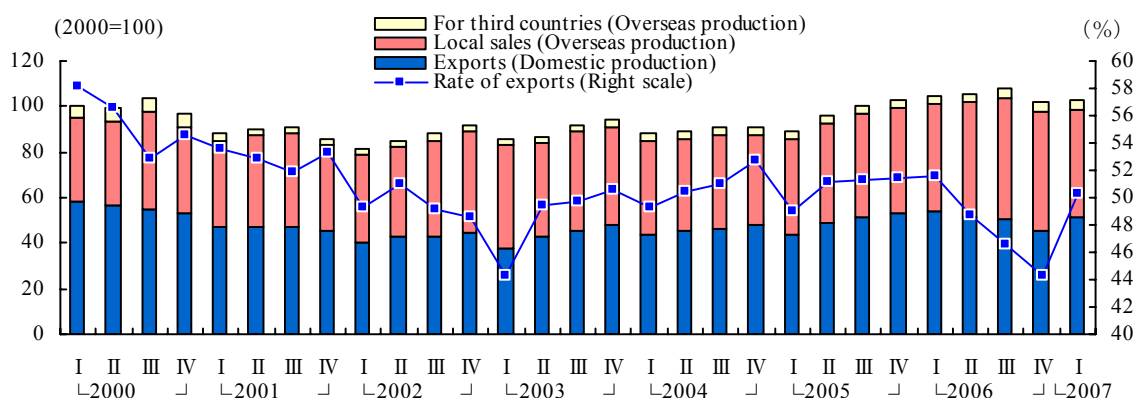
## Comparison between Overseas Ratio of Manufacturing Shipments and Trade Specialization Coefficients



## Comparison of Japan's Total Supply



## Influence of Substitution Effect on Exports from Japan due to Japanese Companies' Local Production Overseas (Precision Instruments Industry)



- Notes:
- Trade specialization coefficients are obtained by dividing net exports (amount obtained by subtracting imports from exports of target commodities) by the total amount of trade (total of exports and imports) and are between 1 and minus 1. Commodities with a trade specialization coefficient closer to 1 are dependent on exports, and those with a trade specialization coefficient closer to minus 1 are dependent on imports.
  - The overseas ratio of manufacturing shipments is the same for the electrical machinery, information and communication electronics equipment, and electronic parts and devices industries, all of which are integrated as one industry.
  - Trade specialization coefficients are on a dollar basis, and the overseas ratio of manufacturing shipments, total supply and substitution effect on exports from Japan are all on a quantity basis.

Sources: "Trade Statistics" (Ministry of Finance), "Global Shipment Index of the Manufacturing Industry" (Estimated values), "Table of Total Supply of Mining and Manufacturing (rearranged table)," "Breakdown List of Mining and Manufacturing Shipments (rearranged table)"

We divided machinery-related commodities into three patterns according to the levels of changes in trade specialization coefficients (comparison between 1992 and the last one year; hereinafter the same) and compared unit prices and quantities of export and import.

(i) A decline in trade specialization coefficients was notable for the information and communication electronics equipment, precision instruments, electrical machinery, and electronic parts and devices industries. A decline in comparative advantage is considered to have been caused by an increase in imports (import quantity in particular) including re-imports, because the import rates all showed a double-digit increase. The influence of the substitution effect on exports from Japan caused by the progress of local production overseas seems to have been significant for the information and communication electronics equipment industry (exports only showed a decline) and the precision instruments industry (the export rate decreased significantly).

In the information and communication electronics equipment, and precision instruments industries (export unit prices rose and import unit prices declined or leveled off) and the electronic parts and devices industry (both import and export unit prices rose, and the increase in export unit prices was especially large), international division of labor seems to have progressed, and labor-intensive low-value-added products are produced locally at overseas factories, while Japanese products have become more technology-intensive and high-value-added. However, in some cases in the information and communication electronics equipment, and precision instruments industries (export quantity decreased as export unit prices rose), it seems that unit price hikes due to quality improvement of Japanese products does not necessarily match with the needs of trade partners. Production of low-value-added products at overseas factories also seems to have progressed in the electrical machinery industry (import unit prices declined).

(ii) Trade specialization coefficients slightly declined for the general machinery industry. This decline is considered to have been caused by an increase in import quantity. The general machinery industry depends highly on domestic production that ensures advanced production capacity because detailed adjustment is required for various parts and software. Such circumstances may have worked to maintain the large scale of export quantity and the decline in trade specialization coefficients has remained in a narrow range.

(iii) Trade specialization coefficients have leveled off at a high level for the transport equipment industry. These high level trade specialization coefficients have been maintained due to the large overseas demand for large-size cars or expensive cars and high export unit prices compared with import unit prices (about 12 times of import unit prices in 2006).

## Changes in Japan's Trade Amount, Trade Unit Prices, and Trade Quantity, etc.

Changes in trade specialization coefficients	Commodity	Growth rate (%)		Import rate		Changes in export		Changes in import			Changes in export rate (% points)	
		Exports	Imports	1992 (%)	Changes (% points)	Unit prices	Quantity	Unit price		Quantity		
								Contribution ratio	Contribution ratio	Contribution ratio		
(i) Commodity with notable decline	Information & communication electronics equipment	▲ 13.6	432.4	12.4	34.1	↑	↓	→	▲ 2.7	↑	447.2	▲ 2.5 ※
	Precision instruments	68.5	300.4	23.0	18.5	↑	↓	↓	▲ 24.5	↑	430.6	▲ 8.1
	Electrical machinery	67.1	408.9	17.0	21.4	→	↑	↓	▲ 38.8	↑	731.7	▲ 2.5 ※
	Electronic parts and devices	143.5	446.0	18.0	15.0	↑	↑	↑	51.1	↑	261.2	▲ 2.5 ※
(ii) Commodity with slight decline	General machinery	104.0	231.2	16.1	7.7	→	↑	↓	▲ 46.4	↑	517.9	▲ 0.8
(iii) Commodity with no changes	Transport equipment	85.8	93.2	10.6	0.4	↑	↑	↓	▲ 78.1	↑	781.9	▲ 5.3

- Notes:
1. The import rate is the rate of imports against the total exports and imports of Japan.
  2. The export rate is the rate of overseas sales of products by domestic production (on quantity basis) against the total overseas sales of products by overseas production and domestic production. The same value is entered for three commodities with the ※ mark because they are categorized as electrical machinery. Changes in export rate show the comparison between 2000 and the last one year.
  3. The amount is on a dollar basis.
  4. Shaded items are those whose contribution ratios to growth rate of imports are large, comparing their unit prices and quantity respectively (the margin of errors between growth rate of imports and contribution ratio to the growth rate is large because the changes of unit prices and quantity are large due to the long span of the survey period).

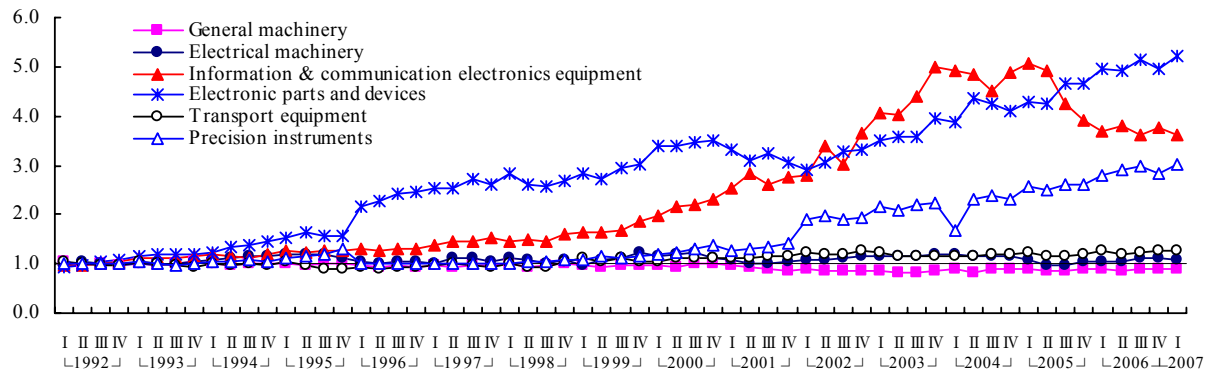
Sources: "Trade Statistics" (Ministry of Finance), "Global Shipment Index of the Manufacturing Industry" (Estimated values), "Breakdown List of Mining and Manufacturing Shipments (rearranged table)"

We divided import-export unit prices based on the Trade Statistics (indexation by deeming the average of 1992 as 100) by the Import-Export Price Index publicized by the Bank of Japan (deeming the average of 1992 as 100) respectively and obtained coefficients (referred to as high-value-added coefficients). For exports, the coefficients rose from 1992 to 2006 for the electronic parts and devices, information and communication electronics equipment, and precision instruments industries. This provides supportive evidence for our estimation that exports from Japan have shifted its core to more technology-intensive high-value-added products.

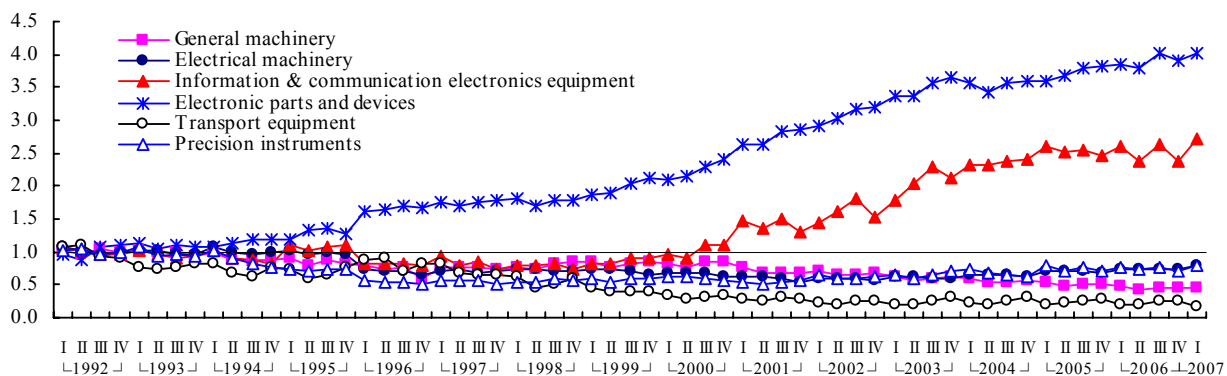
For imports, the coefficients rose from 1992 to 2006 for the electronic parts and devices, and information and communication electronics equipment industries. This may be because the progress in technology transfer from Japan has improved technology levels of overseas production bases. However, the rise in the coefficients for imports is rather small compared to that in the coefficients for exports, and the coefficients declined for all four commodities other than the above two. Therefore, it seems that production of lower-value-added products compared to domestic products has increased in overseas production bases. In recent years, the coefficients are declining notably for the transport equipment and general machinery industries. Commodities categorized into “8473: Parts and accessories of business equipment,” which account for nearly 20% (2006) of imports of the general machinery industry, showed a sharp decline in import unit prices (185.0 dollars/KG in 1992 to 50.4 dollars/KG in 2006). Such a tendency toward lower-value-added products in major parts may have worked to decrease the coefficients for the general machinery industry. The decline in the coefficients for the transport equipment industry seems to have been caused by the expansion of the share of commodities categorized into “8708: Parts and accessories of automobiles,” which are lower-value-added than completed products, among the overall imports of the transport equipment industry (10.0% in 1992 to 22.8% in 2006).

### Changes in High-Value-Added Coefficients

#### Exports



## Imports



- Notes:
1. High-value-added coefficient = Export (import) unit prices (indexation on year 1992 basis) / Export (Import) Price Index (Bank of Japan, on year 1992 basis)
  2. Export (import) unit prices are in term of yen/KG. Export (import) unit prices and the Price Index are on a yen basis. However, note that export (import) unit prices of the transport equipment industry are in terms of yen/unit and the degree of quality changes is different from that for other commodities.
  3. Export (import) unit prices are calculated only with commodities whose quantity can be obtained in terms of KG (unit for commodities in the transport equipment industry).

Sources: "Trade Statistics" (Ministry of Finance), "Corporate Goods Price Index" (Bank of Japan)

Trade specialization coefficients by major region show that international competitiveness of Japanese machinery-related commodities has deteriorated in relation to East Asia and the ASEAN countries, in particular.

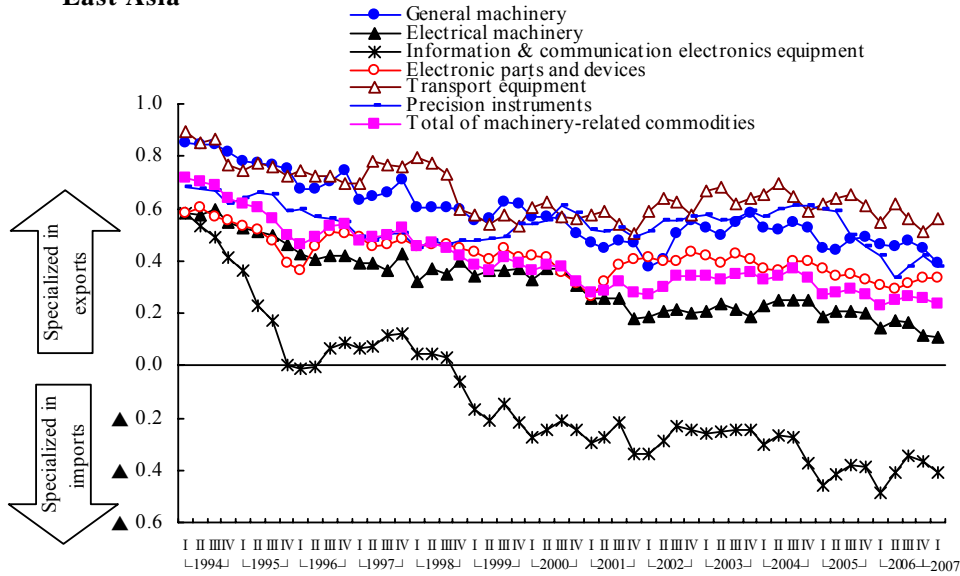
Japan's machinery-related commodities' comparative advantage against East Asia deteriorated until 2000 and has continued to be on a moderate declining trend. By commodity, comparative disadvantage proceeded in the information and communication electronics equipment industry mainly due to a significant increase in imports of the commodity category "8471: automatic data processors, etc." from China (including Hong Kong). Since the fourth quarter of 1998, this industry has been specialized in imports consistently. The transport equipment industry has shown deterioration in comparative advantage compared to the ASEAN, which is mentioned later. This is due to a sharp increase in imports of commodities categorized into "8708: Parts and accessories of automobiles" from China (including Hong Kong).

Japan's machinery-related commodities' comparative advantage against the ASEAN deteriorated until the first half of 1999 and has been leveling off after that. By commodity, the information and communication electronics equipment industry has been specialized in imports consistently since the first quarter of 1995. This is considered to be due to a declining trend in exports of commodities categorized into "8522: Parts of video equipment and tape recorders, etc." to Malaysia and Singapore. Regarding the electrical machinery industry, the coefficients have been on a declining trend mainly due to increases in imports of commodities categorized into "8544: Electrical insulating wires and cables, etc." from Vietnam and the Philippines, but exports and imports almost maintained a state of balance from 2002 to the first half of 2006. This implies that the relation of horizontal international specialization has been built for this industry.

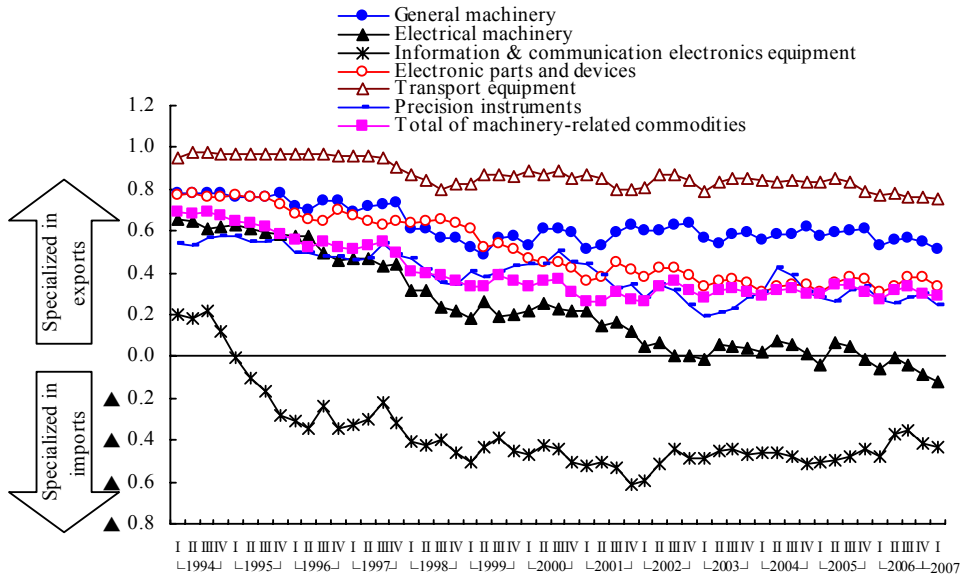
The progress of Japanese companies' overseas production has strengthened international specialization and mutual dependence between Japan and other foreign countries at an accelerating pace. Under such circumstances, technology levels of overseas production bases have been enhanced. In the meantime, Japan has maintained predominant technical capabilities that enable production of high-quality products such as those in the machinery-related industries and at the same time has had highly-advanced technologies in the fields of development and designing of new products and highly-efficient production processes. For the further development of Japan's machinery-related industries, it is indispensable to take advantage of these advanced technical capabilities to provide the world market with products that are attractive in terms of costs as well as quality. Such efforts will surely enable Japan to enhance and maintain its international competitiveness.

## Changes in Japan's Trade Specialization Coefficients with Major Regions

### East Asia



### ASEAN



Notes: 1. On a dollar basis

2. Regions are as follows:

East Asia: China, Hong Kong, Republic of Korea, and Taiwan

ASEAN: Vietnam, Thailand, Singapore, Malaysia, Brunei, Philippines, Indonesia, Cambodia, Laos, and Myanmar

Sources: "World Trade Atlas"

### **3. Trends by kind of industry**

#### **(1) Trend in the manufacturing industry**

##### **A. Iron and steel industry**

– **Although maintaining a high level, production decreased for the first time in six quarters and shipments decreased for the first time in seven quarters.** –

- ① Production decreased by 1.4% compared to the previous quarter, down for the first time in six quarters, due to decreases in hot roll steel and crude steel, etc. Shipments also decreased by 0.8% (id.), down for the first time in seven quarters, due to decreases in hot roll steel and cold finished steel, etc. Inventory decreased by 1.6% compared to the end of the previous quarter, down for the first time in three quarters, due to decreases in crude steel and hot roll steel, etc.
- ② Sub-classification by industry
  - 1) Production of **crude steel** decreased by 2.6% compared to the previous quarter, down for the first time in four quarters.
  - 2) Production of **hot roll steel** decreased by 1.4% (id.), down for the first time in six quarters.
  - 3) Production of **steel pipes and tubes** increased by 1.6% (id.), up for the first time in three quarters.
  - 4) Production of **cold finished steel** decreased by 1.7% (id.), down for the second consecutive quarter.
  - 5) Production of **metallic coated steel** decreased by 3.4% (id.), down for the first time in six quarters.
  - 6) Production of **steel castings and forgings** increased by 0.7% (id.), up for the first time in two quarters.

##### **B. Non-ferrous metals industry**

– **Production increased for the first time in two quarters and shipments increased for the first time in four quarters.** –

- ① Production increased by 2.8% compared to the previous quarter, up for the first time in two quarters, due to increases in electric wires and cables, refining of non-ferrous metals and non-ferrous metal castings. Shipments also increased by 1.0% (id.), up for the first time in four quarters, due to increases in electric wires and cables and non-ferrous metal castings, etc. Inventory increased by 1.4% compared to the end of the previous quarter, up for the first time in three quarters, due to increases in copper and copper-base alloys and aluminum rolling products, electric wires and cables, and refining of non-ferrous metals.
- ② Sub-classification by kind of industry
  - 1) Production of **refining of non-ferrous metals** increased by 6.1% compared to the previous quarter, up for the first time in four quarters, due to increases in electrolytic gold, etc. Shipments increased by 1.7% (id.), up for the second consecutive quarter. Inventory also increased by 1.2% compared to the end of the previous quarter, up for the first time in two quarters.
  - 2) Production of **copper and copper-base alloys and aluminum rolling products** decreased by 2.4% compared to the previous quarter, down for the second consecutive quarter, due to decreases in copper and copper-base alloys, etc. Shipments also decreased by 2.8%, down for the second consecutive quarter. Inventory increased by 4.0% compared to the end of

the previous quarter, up for the first time in three quarters.

- 3) Production of **electric wires and cables** increased by 9.0% compared to the previous quarter, up for the first time in four quarters, due to increases in optical fiber for communication wires and cables products, etc. Shipments also increased by 3.7% (id.), up for the first time in four quarters. Inventory increased by 2.2% compared to the end of the previous quarter, up for the first time in four quarters.
- 4) Both production of **non-ferrous metal castings** increased by 1.8% compared to the previous quarter, up for the first time in two quarters, due to increases in die castings, etc. Shipments also increased by 1.8% (id.), up for the first time in two quarters.

### **C. Fabricated metals industry**

**– Production decreased for the second consecutive quarter, while shipments increased for the first time in two quarters. –**

① Production decreased by 0.5% compared to the previous quarter, down for the second consecutive quarter, due to decreases in metal products of buildings and other metal products. Shipments increased by 1.2% (id.), up for the first time in two quarters, due to increases in fabricated structural metal products and equipment for heating and kitchens. Inventory increased by 0.6% compared to the end of the previous quarter, up for the second consecutive quarter, due to an increase in metal products of buildings.

② Sub-classification by kind of industry

- 1) Production of **fabricated structural metal products** increased by 12.3% compared to the previous quarter, up for the first time in two quarters, due to increases in bridges and steel towers. Shipments also increased by 17.4% (id.), up for the first time in four quarters.
- 2) Production of **metal products of buildings** decreased by 6.3% (id.), down for the second consecutive quarter, due to decreases in aluminum sashes for wooden houses and aluminium exteriors, etc. Shipments also decreased by 6.4% (id.), down for the second consecutive quarter. Inventory increased by 4.8% compared to the end of the previous quarter, up for the first time in four quarters.
- 3) Production of **equipment for heating and kitchens** increased by 1.7% compared to the previous quarter, up for the first time in five quarters, due to increases in instantaneous type gas water heaters and oil fired water heaters and space heaters. Shipments also increased by 0.7% (id.), up for the first time in four quarters. Inventory decreased by 2.8% compared to the end of the previous quarter, down for the first time in six quarters.
- 4) Production of **other metal products** decreased by 2.0% compared to the previous quarter, down for the second consecutive quarter, due to decreases in aluminum cans for beverages and cemented carbide tips, etc. Shipments decreased by 1.9% (id.), down for the first time in four quarters. Inventory also decreased by 0.1% compared to the end of the previous quarter, down for the second consecutive quarter.

### **D. General machinery industry**

**– Production increased for the first time in two quarters, due to increases in special industrial machinery, boilers and power units, and molds and dies, etc. –**

① In spite of decreases in agricultural machinery and conveying machinery, production increased by 1.3% compared to the previous quarter, up for the first time in two quarters, due

to increases in special industrial machinery, boilers and power units, molds and dies, engineering and construction machinery, parts of industrial machinery, and metal forming machinery, etc. Shipments increased by 1.5% (id.), up for the third consecutive quarter. Inventory decreased by 0.1% compared to the end of the previous quarter, down for the first time in three quarters. The inventory ratio increased by 1.8% compared to the previous quarter, up for the second consecutive quarter.

② Sub-classification by kind of industry

- 1) In spite of decreases in printing machinery, etc., production of **special industrial machinery** increased by 6.3% compared to the previous quarter, up for the first time in two quarters, due to increases in semiconductor products machinery, etc.
- 2) In spite of a decrease in water tube boilers, production of **boilers and power units** increased by 10.0% (id.), up for the first time in two quarters, due to increases in steam turbines for general use, parts and accessories of boilers, and parts and accessories of steam turbines, etc.
- 3) Production of **molds and dies** increased by 20.6% (id.), up for the first time in five quarters, due to increases in stamping dies and molds for plastic.
- 4) In spite of a decrease in construction cranes, production of **engineering and construction machinery** increased by 5.2% (id.), up for the 21st consecutive quarter, due to increases in shovel type excavators, earth finishing machinery and bulldozers.
- 5) Production of **metal forming machinery** increased by 11.8% (id.), up for the first time in two quarters, due to increases in mechanical presses and rolls for the steel industry, although there was a decrease in hydraulic presses.
- 6) Production of **agricultural machinery** decreased by 15.7% (id.), down for the first time in two quarters, due to decreases in rice planting machines, combines, and wheel tractors, although there was an increase in agricultural dryers.
- 7) In spite of an increase in cranes, production of **conveying machinery** decreased by 11.5% (id.), down for the first time in four quarters, due to decreases in conveyors and mechanical parking, etc.

**E. Electric machinery industry**

– **Production increased for the first time in two quarters, due to increases in switching and controlling equipment, and semiconductor characteristic measuring equipment, etc.** –

- ① In spite of decreases in household electrical machinery, etc., production increased by 1.5% compared to the previous quarter, up for the first time in two quarters, due to increases in switching devices, wiring devices and luminaries, and electrical measuring instruments, etc. Shipments also increased by 1.5% (id.), up for the first time in two quarters, due to increases in switching devices, wiring devices and luminaries, and electrical measuring instruments, etc., although there were decreases in batteries, etc. Inventory decreased by 8.2% compared to the end of the previous quarter, down for the second consecutive quarter, due to decreases in household electrical machinery, batteries and electrical stationary machinery, although there was an increase in wiring devices and luminaries. The inventory ratio decreased by 2.5% compared to the previous quarter, down for the second consecutive quarter.

② Sub-classification by kind of industry

- 1) In spite of decreases in electro magnetic clutches, etc., production of **switching devices** increased by 6.3% compared to the previous quarter, up for the first time in two quarters, due to increases in programmable controllers and low voltage circuit breakers, as well as in switching and controlling equipment, supported by favorable demand for monitor and control equipment for domestic power companies.
- 2) Production of **wiring devices and luminaries** increased by 4.8% (id.), up for the first time in four quarters, due to increases in all goods, such as incandescent electric lamps, luminaries for general use, as well as fluorescent luminaries whose demand from domestic offices increased, and fluorescent lamps which were supported by increasing domestic demand for liquid crystal televisions.
- 3) In spite of a decrease in electric test and measuring equipment, production of **electrical measuring instruments** increased by 5.9% (id.), up for the second consecutive quarter, due to increases in process measuring and control instruments for industry, as well as in semiconductor characteristic measuring equipment, supported by an increase in logic IC testers for AV digital equipment and slim-type TV sets with favorable demand from semiconductor manufacturers both in Japan and foreign countries, such as South Korea, Taiwan, and European countries.
- 4) In spite of increases in microwave ovens, etc., stimulated by introduction of new models, production of **household electrical machinery** decreased by 5.0% (id.), down for the second consecutive quarter, as separate type air conditioners, washing machines, and refrigerators with freezers decreased due to shifting of production bases overseas.

#### **F. Information and communication electronics equipment industry**

##### **– Production increased for the first time in two quarters, due to increases in digital cameras and mid-range computers, etc. –**

- ① In spite of decreases in communication equipment and electronic computers, production increased by 2.8% compared to the previous quarter, up for the first time in two quarters, due to an increase in household electronic machinery. In spite of decreases in communication equipment and electronic computers, shipments also increased by 3.5% (id.), up for the first time in three quarters, due to an increase in household electronic machinery. Inventory decreased by 9.1% compared to the end of the previous quarter, down for the fourth consecutive quarter, due to decreases in video cameras, color televisions, and car stereos, etc., although liquid crystal televisions increased. The inventory ratio increased by 4.1% compared to the previous quarter, up for the first time in four quarters.
- ② Sub-classification by kind of industry
  - 1) In spite of decreases in video cameras, etc., production of **household electronic machinery** increased by 9.7% compared to the previous quarter, up for the first time in two quarters, due to increases in car navigation systems, etc., as well as in digital cameras supported by favorable demand for new models.
  - 2) Although there was an increase in fixed communication equipment, production of **communication equipment** decreased by 11.7% (id.), down for the first time in three quarters, due to decreases in personal handy phone systems, etc., as well as in cellular telephones, for which demand was sluggish before the release of new models, and in

electric switching systems with declining demand for base-station electric switching systems for mobile telecommunications carriers.

- 3) In spite of increases in mid-range computers, etc., production of **electronic computers** decreased by 2.0% (id.), down for the third consecutive quarter, as there were decreases in input-output units, as well as in personal computers due to sluggish demand for corporations and in general purpose computers due to a backlash from the previous quarter, when there were large-scale orders from mobile telecommunications carriers, etc.

#### **G. Electronic parts and devices industry**

– **Production increased for the first time in two quarters, due to increases in memories, CCDs, and connectors, etc.** –

- ① Production increased by 0.3% compared to the previous quarter, up for the first time in two quarters, due to an increase in integrated circuits, although there were decreases in electronic parts, semiconductor parts, and semiconductor devices. Shipments increased by 1.8% (id.), up for the eighth consecutive quarter, including a period of leveling-off, due to increases in integrated circuits and semiconductor devices, although there were decreases in electronic parts and semiconductor parts. In spite of a decrease in semiconductor devices, inventory increased by 4.5% compared to the end of the previous quarter, up for the seventh consecutive quarter, due to increases in integrated circuits and electronic parts. The inventory ratio also increased by 1.4% compared to the previous quarter, up for the sixth consecutive quarter.

- ② Sub-classification by kind of industry

- 1) In spite of decreases in logic Ics, etc., production of **integrated circuits** increased by 3.0% compared to the previous quarter, up for the first time in two quarters, due to increases in hybrid ICs, etc., as well as in metal oxide semiconductor ICs (memories) with increasing domestic demand for memory cards and cellular telephones, and in CCDs with favorable demand for cellular telephones and digital cameras both for domestic use and for exports to South Korea and Taiwan.
- 2) Although there were increases in connectors, etc., production of **electronic parts** decreased by 2.1% (id.), down for the second consecutive quarter, because fixed capacitors decreased with declining demand for cellular telephones for China and for personal computers for China and Taiwan, active matrix LCDs (large) decreased with declining demand for car navigation systems for domestic use and for personal computers for China, and electronic circuit boards also decreased with a decline in demand for personal computers for Asia, Europe and the United States.

#### **H. Transport equipment industry**

– **Both production and shipments increased for the first time in two quarters, due to increases in passenger cars, etc.** –

- ① Production increased by 0.5% compared to the previous quarter, up for the first time in two quarters, due to increases in passenger cars, industrial vehicles, and motorcycles, etc., although there were decreases in ships and ships engines, trucks, and train cars. Shipments increased by 0.3% (id.), up for the first time in two quarters. Inventory also increased by 3.1% compared to the end of the previous quarter, up for the first time in two quarters. The

inventory ratio increased by 3.6% compared to the previous quarter, up for the first time in two quarters.

② Sub-classification by kind of industry

- 1) Production of **passenger cars** increased by 2.2% compared to the previous quarter, up for the first time in two quarters. By goods, large passenger cars increased by 4.8% (id.), up for the first time in two quarters, due to an increase in production for exports to Europe, the Middle East, and the ASEAN countries, although decreases were observed in demand for domestic use and for exports to the United States. In contrast, small passenger cars decreased by 5.4% (id.), down for the fourth consecutive quarter, due to decreases in demand for domestic use as well as for exports to the United States and Europe. Midget passenger car showed a decrease of 3.8% (id.), down for the third consecutive quarter, due to a decrease in domestic demand.
- 2) Production of **trucks** decreased by 3.0% (id.), down for the third consecutive quarter. By goods, small trucks decreased by 8.8% (id.), down for the third consecutive quarter, due to a decrease in domestic demand, although exports to the ASEAN countries and the Middle East increased. In spite of an increase in domestic demand, large trucks also decreased by 2.4% (id.), down for the second consecutive quarter, due to decreases in exports to the United States and the Middle East. In contrast, production of midget trucks increased by 1.8%, up for the first time in three quarters, due to an increase in domestic demand.
- 3) Production of **motor vehicle parts** remained flat at 0.0% (id.), due to decreases in engine parts and suspension and brake parts, although there were increases in drive, transmission and control parts, and chassis and body parts, etc.
- 4) Production of **motorcycles** increased by 9.3% (id.), up for the first time in four quarters, due to increases both in motorcycles (more than 125ml) and motorcycles (less than 125ml).

③ Number of registrations and reports of new vehicles

Looking at domestic demand of automobiles by the number of new registrations and reports of new vehicles, the number of vehicles, as a whole, decreased by 1.199 million (a decrease of 8.2% compared to the same quarter of the previous year), down for the fifth consecutive quarter. Inside of this, passenger cars decreased by 0.97 million, a decrease of 6.8% (id.), down for the fifth consecutive quarter. Trucks decreased by 0.225 million, a decrease of 13.9% (id.), down for the fourth consecutive quarter. Buses also decreased by three thousand, a decrease of 6.8% (id.), down for the fifth consecutive quarter.

**I. Precision instruments industry**

– **Production decreased for the first time in two quarters, due to decreases in testing machines and precision measuring machines and instruments, etc.** –

- ① In spite of an increase in optical apparatus and parts, production decreased by 0.1% compared to the previous quarter, down for the first time in two quarters, due to decreases in watches and clocks, and measuring machines and instruments. Shipments increased by 1.5% (id.), up for the second consecutive quarter, due to increases in measuring machines and instruments, and optical apparatus and parts, although there was a decrease in watches and clocks. In spite of an increase in optical apparatus and parts, inventory decreased by 11.1% compared to the end of the previous quarter, down for the second consecutive quarter, due to decreases in

measuring machines and instruments, and watches and clocks. The inventory ratio decreased by 5.7% compared to the previous quarter, down for the second consecutive quarter.

② Sub-classification by kind of industry

- 1) Production of **watches and clocks** decreased by 3.2% compared to the previous quarter, down for the second consecutive quarter, due to a decrease in battery driven type watches (movements) with declining exports to China, although there was an increase in battery driven type clocks (complete).
- 2) In spite of an increase in gas-meters, production of **measuring machines and instruments** decreased by 0.2% (id.), down for the first time in five quarters, because testing machines decreased with declining demand for material testing machines, such as universal testing machines and hardness meters, for domestic steel, metal, and transport equipment manufacturers, precision measuring machines and instruments decreased with sluggish demand for cylinder gauges and digital scales, etc. both for domestic use and for exports to Europe, the United States, and Southeast Asia, and measuring instruments also decreased with a decline in demand for transit instruments and levels, etc. for exports to the United States.
- 3) In spite of a decrease in 35mm cameras, production of **optical apparatus and parts** increased by 9.0% (id.), up for the second consecutive quarter, due to an increase in interchangeable lenses for cameras affected by release of new models specialized for single-lens digital cameras.

**J. Ceramics, stone and clay products industry**

– **Production increased for the first time in three quarters, while shipments decreased for the second consecutive quarter.** –

- ① In spite of a decrease in cement and cement products, production increased by 0.4% compared to the previous quarter, up for the first time in three quarters, due to increases in ceramic wares and fine ceramics, other ceramics, stone and clay products, and glass and glass products. Shipments decreased by 1.4% (id.), down for the second consecutive quarter, due to decreases in other ceramics, stone and clay products, and ceramic wares and fine ceramics, as well as in glass and glass products. Inventory increased by 2.7% compared to the end of the previous quarter, up for the first time in two quarters, due to increases in other ceramics, stone and clay products, and ceramic wares and fine ceramics, as well as in glass and glass products. The inventory ratio decreased by 0.1% compared to the previous quarter, down for the first time in two quarters.

② Sub-classification by kind of industry

- 1) Production of **glass and glass products** increased by 0.5% compared to the previous quarter, up for the first time in two quarters, because sheet glass increased due to less composition replacement and reopening of some production facilities, and glass increased with an increase in glass fiber wool products supported by increasing demand for felt and board.
- 2) Production of **cement and cement products** decreased by 0.8% (id.), down for the first time in two quarters, due to a decrease in cement, although cement products increased due to an increase in private demand such as for commercial facilities, factories, and

warehouses.

- 3) In spite of a decrease in fine ceramic wares with declining demand, production of **ceramic wares and fine ceramics** increased by 2.0% (id.), up for the first time in four quarters, due to an increase in fine ceramics for structural use supported by an increase in exports to Europe, etc.
- 4) Production of **other ceramics, stone and clay products** increased by 1.8% (id.), up for the sixth consecutive quarter, due to increases in solidity carbonaceous electrodes, refractory bricks, and monolithic refractories, etc., although there were decreases in gypsum board, etc.

#### **K. Chemicals (excl. Drugs) industry**

– **Production increased due to increases in industrial organic chemicals and aromatic hydrocarbons (petroleum origin), and shipments increased due to increases in all industries, both up for the second consecutive quarter.** –

- ① Production increased by 0.4% compared to the previous quarter, up for the second consecutive quarter, due to increases in industrial organic chemicals, aromatic hydrocarbons (petroleum origin), and cosmetics, etc. Shipments increased by 2.2% (id.), up for the second consecutive quarter, due to increases in all industries, such as cyclic chemicals and synthetic dyes, plastic (materials), and cosmetics. Inventory decreased by 3.1% compared to the end of the previous quarter, down for the first time in two quarters, due to decreases in plastic (materials), cyclic chemicals and synthetic dyes, and synthetic rubbers, etc.
- ② Sub-classification by kind of industry
  - 1) Production of **industrial organic chemicals** increased by 3.4% compared to the previous quarter, up for the second consecutive quarter, because acetone, synthetic increased with favorable demand for bisphenol A, ethylene dichloride increased due to an increase in polyvinyl chloride and acrylonitrile increased with increasing demand both for exports and for domestic use.
  - 2) Production of **aromatic hydrocarbons (petroleum origin)** increased by 2.9% (id.), up for the first time in two quarters, as there were increases in para-xylene due to completion of periodical repair at some establishments, and in benzene, pure, due to increases in styrene monomer and phenol.
  - 3) Production of **cosmetics** increased by 0.4% (id.), up for the third consecutive quarter, due to increases in hair care products (shampoo and hair conditioners, etc.). In contrast, makeup products and skin cream products decreased.

#### **L. Petroleum and coal products industry**

– **Production increased for the second consecutive quarter, due to increases in kerosene and gasoline, etc.** –

- ① Production increased by 1.8% compared to the previous quarter, up for the second consecutive quarter, due to increases in kerosene, gasoline, and heavy fuel oil B and C, etc. Shipments also increased by 2.9% (id.), up for the first time in two quarters, due to increases in heavy fuel oil B and C, kerosene, and gasoline, etc. Inventory decreased by 5.7% compared to the end of the previous quarter, down for the first time in two quarters, due to decreases in gasoline, kerosene, and jet fuel, etc. The inventory ratio also decreased by 8.1% compared to

the previous quarter, down for the first time in two quarters.

② Trends in major goods

- 1) Production of **gasoline** increased by 1.2% compared to the previous quarter, up for the second consecutive quarter, due to favorable demand during Golden Week holidays. Shipments also increased by 0.2% (id.), up for the first time in two quarters. Inventory decreased by 5.5% compared to the end of the previous quarter, down for the first time in two quarters.
- 2) Production of **naphtha** increased by 0.7% compared to the previous quarter, up for the second consecutive quarter. Shipments decreased by 6.4% (id.), down for the first time in three quarters, due to periodical repair at petrochemical plants. Inventory increased by 0.6% compared to the end of the previous quarter, up for the first time in three quarters.
- 3) Production and shipments of **kerosene** increased by 13.7% and 12.9%, respectively, compared to the previous quarter, both up for the first time in four quarters. This was due to the termination of adjustment of inventory which had increased due to the warm winter. Inventory decreased by 11.1% compared to the end of the previous quarter, down for the first time in four quarters.
- 4) Production of **gas oil** decreased by 1.1% compared to the previous quarter, down for the first time in two quarters, because the production rate of gas oil decreased in accordance with the termination of inventory adjustment of kerosene. Shipments decreased by 3.0% (id.), down for the first time in two quarters, due to a decrease in demand for domestic use. Inventory increased by 7.9% compared to the end of the previous quarter, up for the second consecutive quarter.
- 5) Production of **heavy fuel oil B and C** increased by 10.9% compared to the previous quarter, up for the first time in four quarters. Shipments also increased by 16.1% (id.), up for the first time in four quarters, due to an increase in demand for heat power plants caused by stoppage of nuclear power plants. Inventory decreased by 12.1% compared to the end of the previous quarter, down for the first time in two quarters.
- 6) Production of **coal products (coke)** remained flat at 0.0% compared to the previous quarter. Shipments decreased by 8.0% (id.), down for the first time in four quarters, due to a decrease in demand for exports. Inventory increased by 7.3% compared to the end of the previous quarter, up for the first time in six quarters.

**M. Plastic products industry**

– **Both production and shipments increased for the first time in two quarters.** –

- ① In spite of a decrease in consumption material-related production, production increased by 0.2% compared to the previous quarter, up for the first time in two quarters, due to increases in manufacturing material-related production and construction material-related production. Shipments also increased by 0.5% (id.), up for the first time in two quarters, due to increases in manufacturing material-related production and consumption material-related production, although there was a decrease in construction material-related production. In spite of an increase in construction material-related production, inventory decreased by 0.3% compared to the end of the previous quarter, down for the second consecutive quarter, due to decreases in consumption material-related production and manufacturing material-related production.

## ② Production by use

- 1) In **manufacturing material-related items**, plastic products for machine tools and parts increased by 1.7% compared to the previous quarter, up for the first time in two quarters, due to an increase in parts for telecommunications. Plastic containers blow-molding also increased by 1.2% (id.), up for the third consecutive quarter, due to an increase in PET bottles for drinks thanks to the temperature higher than usual.
- 2) In **consumption material-related items**, plastic foamed products decreased by 3.2% (id.), down for the second consecutive quarter, due to a decrease in board products. Plastic film and plastic sheets also decreased by 0.7% (id.), down for the first time in two quarters, due to decreases in film for wrapping and other flexible film.
- 3) In **construction material-related items**, plastic reinforced products increased by 1.7% (id.), up for the first time in two quarters, due to increases in digestion tanks. Plastic pipes increased by 0.8% (id.), up for the second consecutive quarter, and plastic material for building also increased by 0.3% (id.), up for the first time in two quarters.

## **N. Pulp, paper and paper products industry**

**– Production decreased for the first time in two quarters, and shipments decreased for the first time in three quarters. –**

- ① In spite of an increase in paperboard, production decreased by 1.1% compared to the previous quarter, down for the first time in two quarters, due to decreases in paper, pulp, and converted and processed paper. In spite of increases in paperboard and pulp, shipments decreased by 0.6% (id.), down for the first time in three quarters, due to decreases in paper and converted and processed paper. In spite of an increase in paperboard, inventory also decreased by 5.3% compared to the end of the previous quarter, down for the third consecutive quarter, due to decreases in paper, converted and processed paper, and pulp.

## ② Sub-classification by kind of industry

- 1) Production of **paper** decreased by 2.1% compared to the previous quarter, down for the first time in two quarters, due to decreases in newsprint paper in rolls, uncoated printing paper, coated printing paper, and communication paper. Shipments decreased by 1.1% (id.), down for the first time in three quarters, due to decreases in uncoated printing paper, newsprint paper in rolls, wrapping and packing paper, communication paper, and coated printing paper. Inventory also decreased by 6.8% compared to the end of the previous quarter, down for the third consecutive quarter.
- 2) Production of **paperboard** increased by 1.0% compared to the previous quarter, up for the first time in five quarters, due to increases in container board and paper boards for paper container. Shipments also increased by 0.6% (id.), up for the first time in two quarters, due to increases in paper boards for paper container and container board. Inventory increased by 2.6% compared to the end of the previous quarter, up for the second consecutive quarter.
- 3) Both production and shipments of **converted and processed paper (corrugated cardboard sheets)** decreased by 0.4% and 0.5%, respectively, compared to the previous quarter, both down for the second consecutive quarter.

## **O. Textiles industry**

**– Both production and shipments declined due to decreases in clothes and woven fabrics, etc.**

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- ① Production decreased by 0.6% compared to the previous quarter, down for the 41st consecutive quarter, due to decreases in woven fabrics, clothes, and spun yarn, etc. Shipments decreased by 1.2% (id.), down for the first time in two quarters. Inventory also decreased by 1.8% compared to the end of the previous quarter, down for the third consecutive quarter, due to decreases in other textile products, man-made fibers, and clothes, etc.
- ② Sub-classification by kind of industry
  - 1) Production of **man-made fibers** increased by 0.3% compared to the previous quarter, up for the first time in three quarters, due to an increase in synthetic fibers (staple), although there was a decrease in synthetic fibers (filament). Shipments increased by 3.3% (id.), up for the first time in three quarters, due to increases both in synthetic fibers (staple) and synthetic fibers (filament). Inventory decreased by 2.6% compared to the end of the previous quarter, down for the first time in two quarters, due to decreases both in synthetic fibers (filament) and synthetic fibers (staple).
  - 2) Production of **spun yarn** decreased by 2.5% compared to the previous quarter, down for the first time in two quarters, due to decreases in synthetic fiber yarn and woolen yarn, although there was an increase in cotton yarn. Shipments also decreased by 0.2% (id.), down for the first time in two quarters, due to decreases in synthetic fiber yarn and woolen yarn, although there was an increase in cotton yarn. In spite of an increase in synthetic fiber yarn, inventory decreased by 3.4% compared to the end of the previous quarter, down for the first time in three quarters, due to decreases in woolen yarn and cotton yarn.
  - 3) Production of **woven fabrics** decreased by 1.2% compared to the previous quarter, down for the first time in two quarters, due to decreases in cotton fabrics, silk and spun silk fabrics, etc., although there was an increase in synthetic fiber fabrics (staple). Shipments decreased by 1.9% (id.), down for the first time in two quarters, due to decreases in all goods, such as towel cloth and cotton fabrics, etc. In spite of increases in synthetic fiber fabrics (staple) and silk and spun silk fabrics, etc., inventory decreased by 0.5% compared to the end of the previous quarter, down for the third consecutive quarter, due to decreases in towel cloth and cotton fabrics.
  - 4) Production of **clothes** decreased by 1.1% compared to the previous quarter, down for the 33rd consecutive quarter, due to decreases in woven fabrics outer wears, and hosiery, etc., although there was an increase in knitted fabrics outer wear. Shipments decreased by 5.2% (id.), down for the first time in three quarters, due to decreases in woven fabrics outer wear and knitted fabrics outer wear, although there were increases in underwear and hosiery. In spite of an increase in knitted fabrics outer wear, inventory decreased by 1.0% compared to the end of the previous quarter, down for the second consecutive quarter, due to decreases in woven fabrics outer wear and underwear, etc.

## **(2) Trends in tertiary industries**

### **A. Commerce**

- ① The total sales amount for the wholesale industry was 116.8510 trillion yen. Total sales increased by 6.3% compared to the same quarter of the previous year, up for the 15th consecutive quarter. This was because the machinery and equipment wholesale industry increased due to favorable conditions of digital household appliances and electronic parts such as semiconductors, and active exports of automobiles to EU countries, etc., as well as the minerals and metals wholesale industry increased, although there were decreases in the agricultural, animal and poultry farm and aquatic products wholesale industry, etc.
- ② The total sales amount for large wholesalers was 29.5248 trillion yen. Total sales increased by 4.7% (id.), up for the 13th consecutive quarter.
- ③ The total sales amount for the retail industry was 33.1430 trillion yen. Total sales decreased by 0.3% (id.), down for the third consecutive quarter, because the motor vehicles retail industry decreased due to sluggish demand for passenger cars as a whole, the household appliances retail industry decreased due to stagnation in demand for DVDs and refrigerators, etc., and the dry goods, apparel and apparel accessories retail industry also suffered from a decrease, although the foods and beverages retail industry, fuel retail industry, and other retail industry showed increases.
- ④ The total sales amount for large retailers was 5.1305 trillion yen, increasing by 0.4% (id.), up for the second consecutive quarter.
- ⑤ The total sales amount and service sales amount for convenience stores was 1.8473 trillion yen, increasing by 0.4% (id.), up for the third consecutive quarter.

### **B. Selected service industries**

#### **•Business services**

- ① The contract amount for commodity leases (based on acceptance inspection) decreased by 3.7% compared to the same quarter of the previous year, down for the first time in two quarters, and the purchase amount for delivery items also decreased by 5.0% (id.).
- ② The total sales amount for the rental industry increased by 4.3% (id.), up for the fourth consecutive quarter.
- ③ The total sales amount for the information service industry increased by 3.8% (id.), up for the ninth consecutive quarter.
- ④ The total sales amount for advertising decreased by 1.1% (id.), down for the fourth consecutive quarter.
- ⑤ The total amount handled by the credit card services increased by 7.9% (id.). By type of business, sales credit business increased by 12.0% (id.), and consumer credit business decreased by 9.0% (id.).
- ⑥ The total amount of orders received in engineering services increased by 13.3% (id.), up for the first time in four quarters. The breakdown shows that domestic demand increased by 7.3% (id.), and foreign demand increased by 27.0% (id.).

#### **•Personal services**

- ① In the leisure and amusement services, amusement parks and theme parks, golf driving ranges, and golf courses increased, while there were decreases in movie theaters, pachinko parlors, bowling alleys, theaters, performances, companies promoting professional sports

and performances.

- ② In the culture and lifestyle services, cram schools, fitness clubs, funeral services, and culture centers increased, while foreign language conversation classes and wedding ceremony halls decreased.