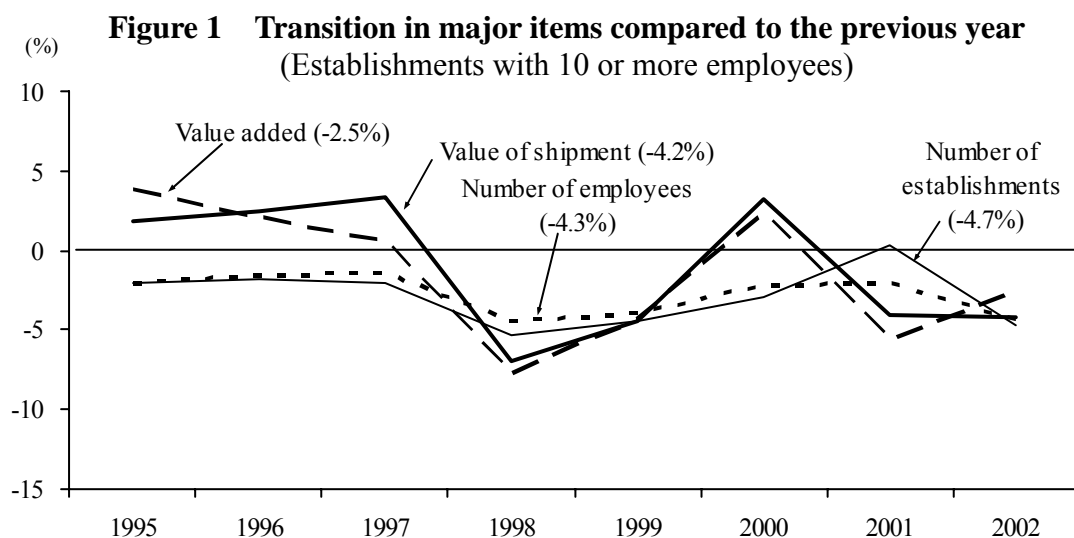


## General Situation

### 1. Trend of Establishments with 10 or more employees Engaged in Manufacturing Industry

- Decline in value of shipment and value added for two consecutive years,  
decline in the number of employees for eleven consecutive years -

The number of establishments with 10 or more employees engaged in manufacturing industry (hereinafter referred to as “number of establishments”) during 2002 was down 4.7% to 146,632 and the number of employees was down 4.3% to 7,463,435 from a year ago, resulting in a decline for the eleventh straight year since 1992 respectively. Meanwhile, the value of manufactured goods shipment (hereinafter referred to as “value of shipment”) was 260.2587 trillion yen, down 4.2% compared to the previous year and the value added was 92.6879 trillion yen, down 2.5% compared to the previous year, both leading to a decline for two consecutive years (Table 1, Figure 1).



Note: Year-on-year comparison with 2002 are shown in parentheses.

**Table 1 Transition in major items**  
(Establishments with 10 or more employees)

Item Year	Number of establishments		Number of employees		Value of shipment		Value added	
		Y/Y ( % )	(Persons)	Y/Y ( % )	(100 million yen)	Y/Y ( % )	(100 million yen)	Y/Y ( % )
1995	174,418	-2.1	9,048,325	-2.1	2,922,796	1.8	1,098,820	3.8
1996	171,201	-1.8	8,903,872	-1.6	2,995,775	2.5	1,121,407	2.1
1997	167,606	-2.1	8,781,972	-1.4	3,096,722	3.4	1,128,015	0.6
1998	166,905	-5.3	8,606,686	-4.5	2,921,176	-7.0	1,059,131	-7.7
1999	159,346	-4.5	8,258,337	-4.0	2,792,555	-4.4	1,013,726	-4.3
2000	154,723	-2.9	8,073,292	-2.2	2,882,798	3.2	1,037,118	2.3
2001	155,182	0.3	7,908,897	-2.0	2,764,170	-4.1	979,265	-5.6
2002	146,632	-4.7	7,463,435	-4.3	2,602,587	-4.2	926,879	-2.5

Note 1: Because of the adjustment of establishments in the 1998 survey, the year-on-year comparison is based on a time series.

Note 2: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

The numbers regarding establishments with 4 or more employees in the 2002 Report on Industrial Statistics were 290,848 (down 7.3% compared to the previous year) in the number of establishments, 8,323,589 (down 4.9% id.) in the number of employees, 269.3618 trillion yen (down 4.4% id.) in value of shipment and 97.4587 trillion yen (down 2.9% id.) in value added.

## 2. Situation by industry (Establishments with 10 or more employees)

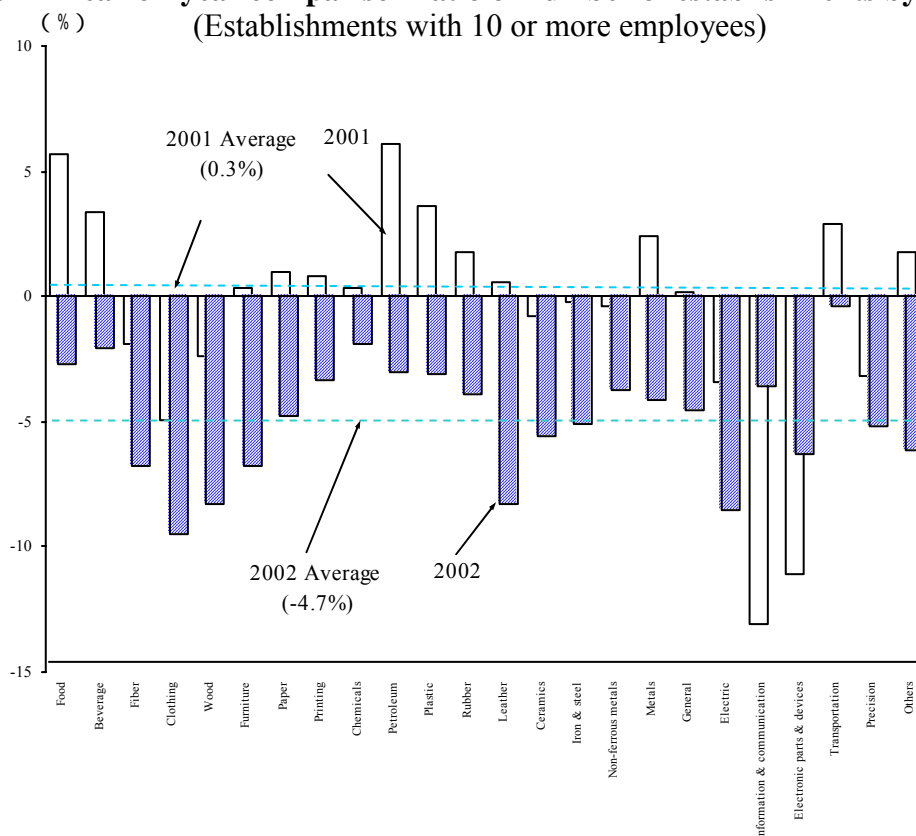
### (1) Number of establishments

-The number of establishments decreased by 4.7% compared to the previous year-

The number of establishments decreased by 4.7% from a year ago to 146,632 (Table 1, Figure 1).

- (i) The number of establishments by industry (Table 2, Figure 2) decreased in all industries including “apparel and other finished products” (down 9.5% compared to the previous year), “general machinery” (down 4.5% id.), “electrical machinery, equipment and supplies” (down 8.5% id.), “fabricated metal products” (down 4.1% id.), “food” (down 2.7% id.), “ceramic, stone and clay products” (down 5.6% id.), “lumber and wood products” (down 8.3% id.), “plastic products” (down 3.1% id.), “printing and allied industries” (down 3.3% id.) and “electronic parts and devices” (down 6.3% id.).

**Figure 2 Year-on-year comparison ratio of number of establishments by industry**  
(Establishments with 10 or more employees)



Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

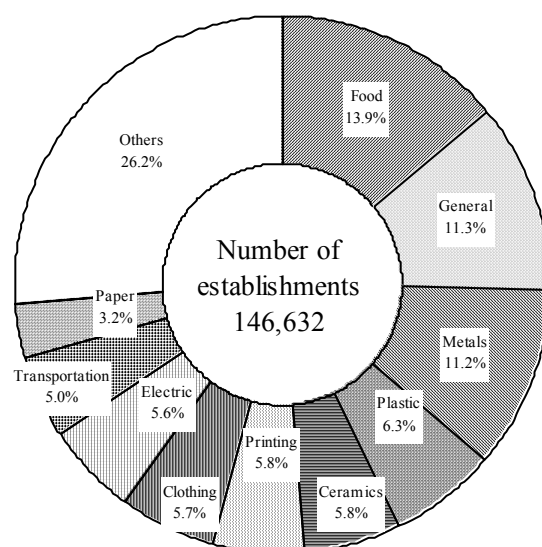
**Table 2 Statistical table of major items by industry**  
(Establishments with 10 or more employees)

Industry	Number of establishments		Number of employees		Value of shipment		Value added	
		Y/Y (%)	(Persons)	Y/Y (%)	(100 million yen)	Y/Y (%)	(100 million yen)	Y/Y (%)
Total (Manufacturing)	146,632	-4.7	7,463,435	-4.3	2,602,587	-4.2	926,879	-2.5
09 Food	20,405	-2.7	1,044,113	-1.0	221,881	-1.8	84,314	-2.0
10 Beverages, tobacco and feed	2,468	-2.1	94,619	-1.7	103,983	-2.5	32,551	-0.8
11 Textile mill products	3,557	-6.8	122,719	-8.2	22,084	-9.0	9,363	-9.2
12 Apparel and other finished products	8,431	-9.5	248,306	-10.4	22,798	-11.3	10,642	-11.3
13 Lumber and wood products	3,994	-8.3	99,913	-7.5	22,202	-8.6	8,224	-6.7
14 Furniture and fixtures	3,296	-6.8	101,417	-7.7	18,849	-10.6	7,968	-11.6
15 Pulp, paper and paper products	4,731	-4.8	202,458	-4.3	69,348	-5.6	25,441	-7.8
16 Printing and allied industries	8,533	-3.3	303,109	-3.3	67,715	-4.1	30,862	-2.6
17 Chemical and allied products	3,949	-1.9	347,052	-2.8	225,700	-2.1	109,518	-2.0
18 Petroleum and coal products	419	-3.0	21,169	-4.5	93,453	-0.3	8,325	79.4
19 Plastic products	9,247	-3.1	371,495	-1.8	91,534	-3.4	36,634	-3.3
20 Rubber products	1,942	-3.9	111,644	-3.0	27,933	0.4	13,192	1.6
21 Leather tanning, leather products and fur skins	1,040	-8.3	26,130	-8.6	4,399	-11.6	1,675	-14.6
22 Ceramic, stone and clay products	8,572	-5.6	280,937	-7.5	70,320	-8.8	34,513	-8.2
23 Iron and steel	2,927	-5.1	198,762	-6.4	107,749	-1.9	36,961	-4.2
24 Non-ferrous metals and products	1,760	-3.7	125,880	0.6	55,587	-3.1	14,239	-11.6
25 Fabricated metal products	16,430	-4.1	547,255	-3.3	124,296	-5.0	54,494	-4.1
26 General machinery	16,536	-4.5	835,239	-5.1	242,661	-9.5	93,258	-7.8
27 Electrical machinery, equipment and supplies	8,280	-8.5	568,189	-6.8	174,861	-6.6	60,912	-7.0
28 Information and communication electronics equipment	2,115	-3.6	226,772	-16.4	123,298	-23.1	29,722	-19.0
29 Electronic parts and devices	4,230	-6.3	483,062	-6.5	157,988	-8.3	52,757	-5.8
30 Transportation equipment	7,392	-0.4	823,833	1.2	477,029	6.4	140,669	14.5
31 Precision instruments and machinery	2,415	-5.2	141,632	-5.8	34,268	-10.9	14,731	-10.9
32 Miscellaneous manufacturing industries	3,963	-6.1	137,730	-5.4	42,650	-2.8	15,916	5.3

Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

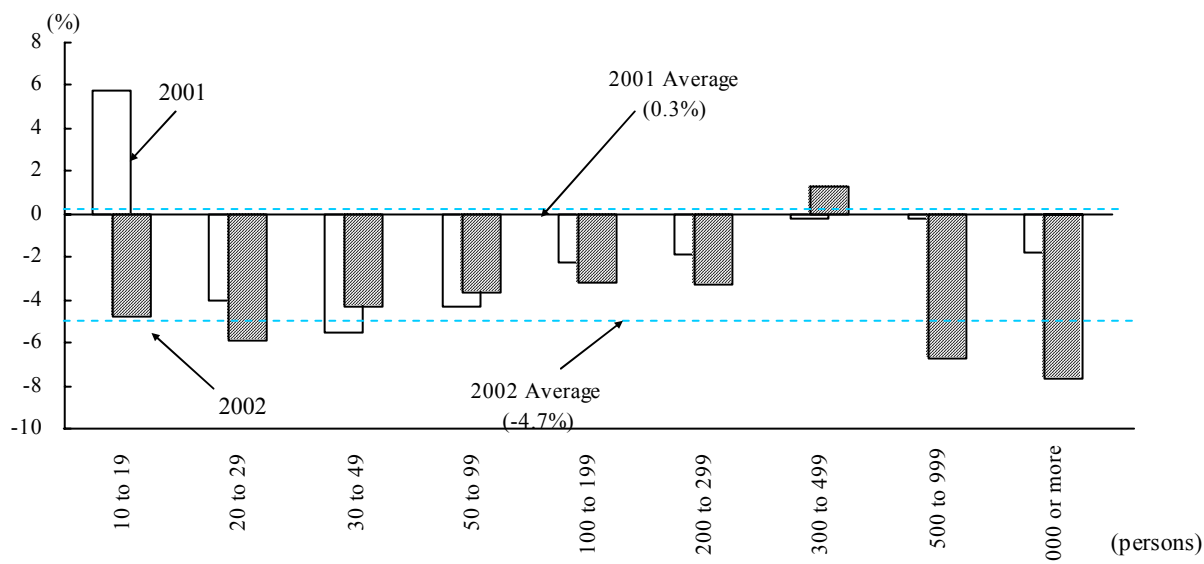
(ii) The composition ratio of number of establishments by industry (Table 2, Figure 3) is the highest in “food” (20,405 establishments, composition ratio 13.9%), followed by “general machinery” (16,536 establishments, 11.3% id.), “fabricated metal products” (16,430, 11.2% id.), “plastic products” (9,247 establishments, 6.3% id.), and “ceramic, stone and clay products” (8,572 establishments, 5.8% id.). These five industries comprise slightly lower than 50% of all industries. They are followed by “printing and allied industries” (8,533 establishments, 5.8% id.), “apparel and other finished products” (8,431 establishments, 5.7% id.), “electrical machinery, equipment and supplies” (8,280 establishments, 5.6% id.), “transportation equipment” (7,392 establishments, 5.0% id.) and “pulp, paper and paper products” (4,731 establishments, 3.2% id.).

**Figure 3 Composition ratio of number of establishments by industry**  
(Establishments with 10 or more employees)



- (iii) The number of establishments by size of employees (Figure 4) slightly increased in establishments with 300 to 499 persons (up 1.3% compared to the previous year). However, the number decreased in all other establishments with persons from 10 to 19 (down 4.8% id.), 20 to 29 (down 5.9% id.), 30 to 49 (down 4.3% id.) and 50 to 99 (down 3.7% id.).

**Figure 4 Year-on-year comparison ratio of number of establishments by size of employees** (Establishments with 10 or more employees)



Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

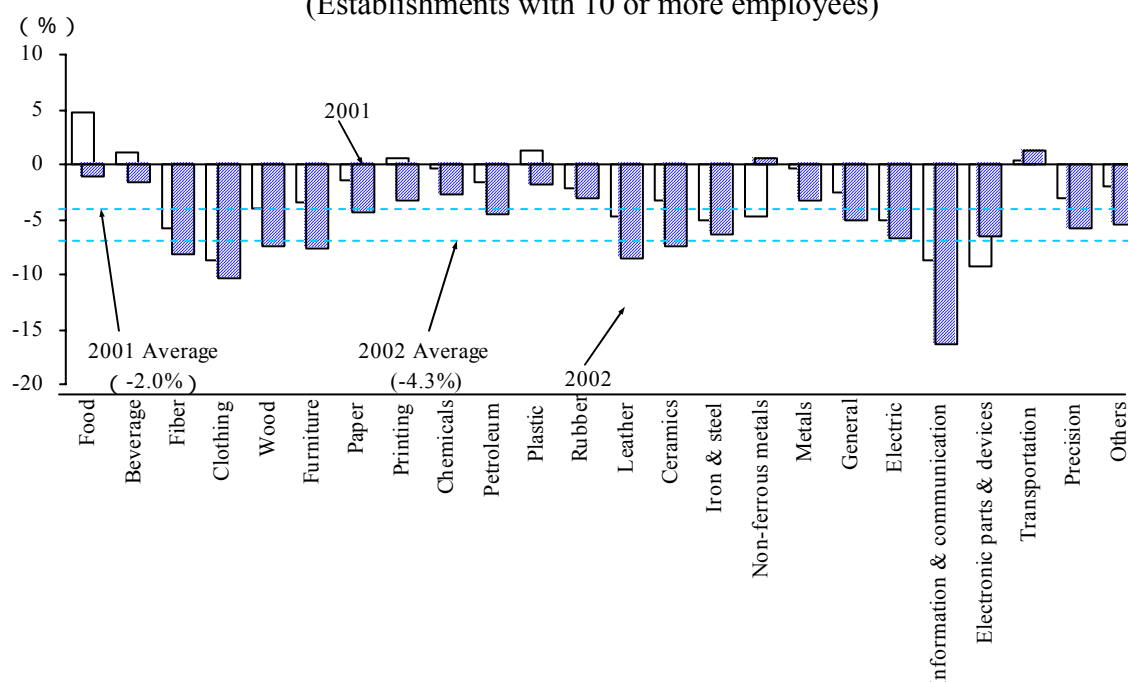
## (2) Number of employees

### - Continuous decrease in the number of employees -

The number of employees decreased by 4.3% compared to the previous year to 7,463,435, resulting in a decline for eleven consecutive years since 1992 (Table 1, Figure 1).

- (i) The number of employees by industry compared to the previous year (Table 2, Figure 5) declined in 22 industries of 24 industries. The number decreased in “general machinery” (down 5.1% compared to the previous year), “information and communication electronics equipment” (down 16.4% id.), “electrical machinery, equipment and supplies” (down 6.8% id.), “electronic parts and devices” (down 6.5% id.), “apparel and other finished products” (down 10.4% id.), “ceramic, stone and clay products” (down 7.5% id.), “fabricated metal products” (down 3.3% id.) and “iron and steel” (down 6.4% id.). It increased in “transportation equipment” (up 1.2% id.) and “non-ferrous metals and products” (up 0.6% id.).

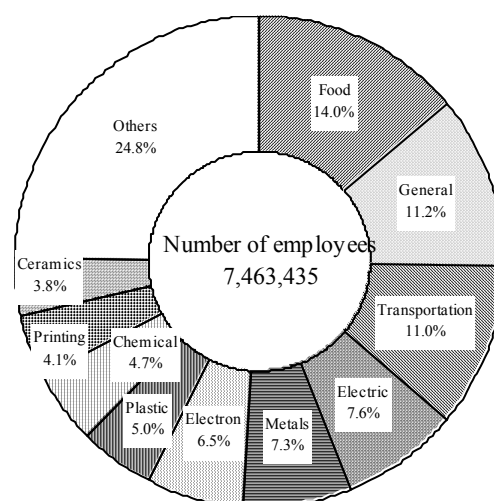
**Figure 5 Year-on-year comparison ratio of number of employees by industry**  
(Establishments with 10 or more employees)



Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

- (ii) In the composition ratio of the number of employees by industry (Table 2, Figure 6), “food” (1,044,113, composition ratio 14.0%) shows the highest number and followed by “general machinery” (835,239, 11.2% id.), “transportation equipment” (823,833, 11.0% id.), “electrical machinery, equipment and supplies” (568,189, 7.6% id.) and “fabricated metal products” (547,255, 7.3% id.). The number of employees in these five industries comprises about 50% of all industries. The industries following are “electronic parts and devices” (483,062, 6.5% id.), “plastic products” (371,495, 5.0% id.), “chemical and allied products” (347,052, 4.7% id.), “printing and allied industries” (303,109, 4.1% id.) and “ceramic, stone and clay products” (280,937, 3.8% id.).

**Figure 6 Composition Ratio of number of employees by industry**  
(Establishments with 10 or more employees)



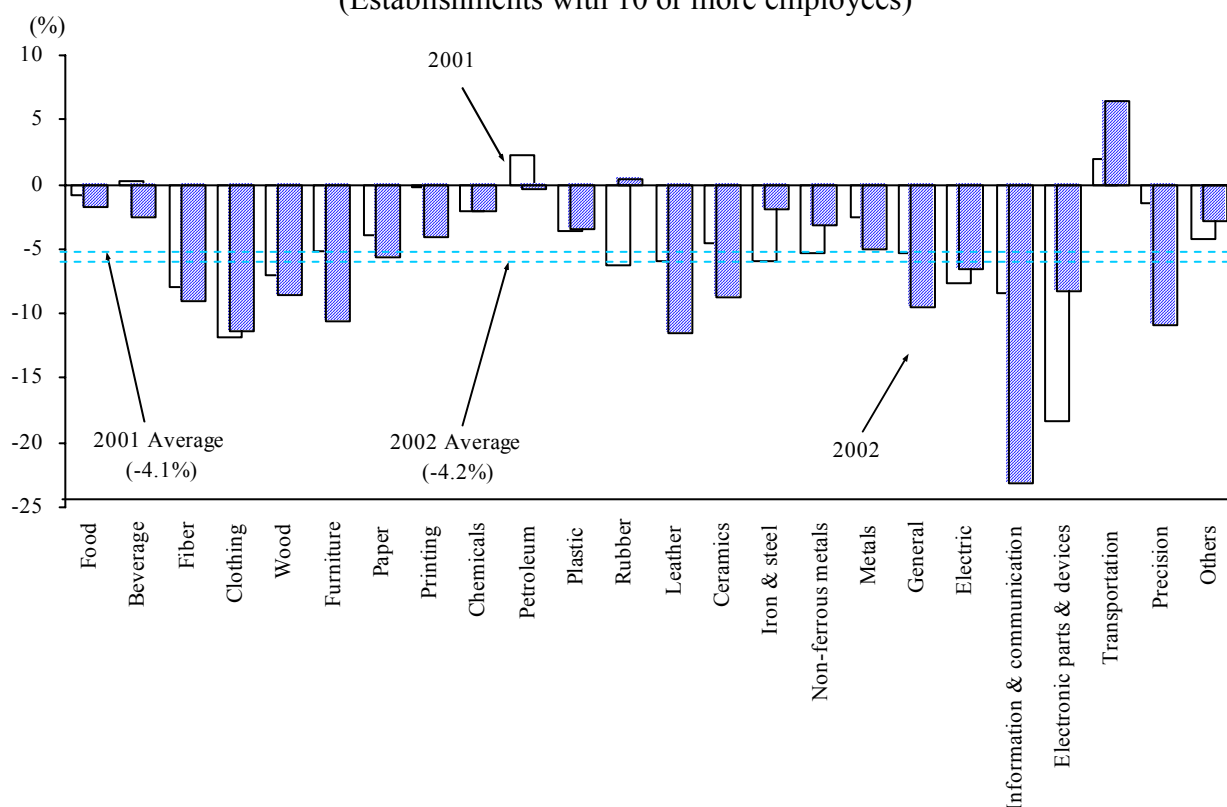
(3) Value of shipment

- Value of shipment showing a continuous decrease following the previous year -

The value of shipment was 260.2587 trillion yen, decreasing again by 4.2% compared to the previous year (Table 1, Figure 1).

- (i) The value of shipment by industry (Table 2, Figure 7) increased in “transportation equipment” (up 6.4% compared to the previous year) for three consecutive years and in “rubber products” (up 0.4% id.) for the first time in five years. Other than these industries, it declined in 22 industries. A decline for two consecutive years is seen in “information and communication electronics equipment” (down 23.1% id.), “general machinery” (down 9.5% id.), “electronic parts and devices” (down 8.3% id.), “electrical machinery, equipment and supplies” (down 6.6% id.) and “ceramic, stone and clay products” (down 8.8% id.) respectively. Besides these industries, the industries showing a decline are “fabricated metal products” (down 5.0% id.), “chemical and allied products” (2.1% id.), “precision instruments and machinery” (down 10.9% id.), “pulp, paper and paper products” (down 5.6% id.) and “food” (down 1.8% id.).

**Figure7 Year-on-year comparison ratio of number of employees by industry**  
(Establishments with 10 or more employees)



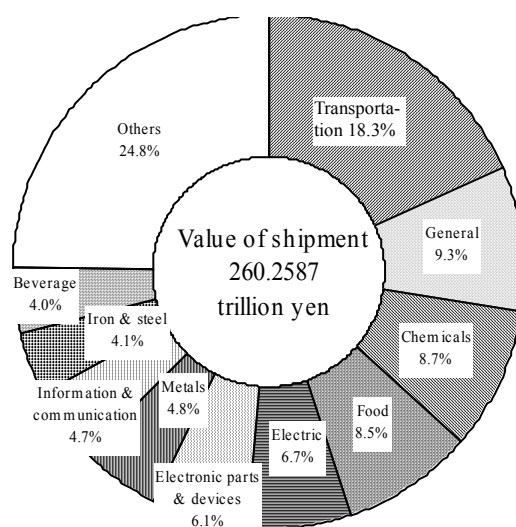
Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

Of the industries that indicated a decline in the value of shipment, “information and communication electronics equipment” showed a drastic decline due to a steep decline in consumer demand for personal computers while the demand from corporations has steadily increased. Shipment in “general machinery” has declined due to a slowdown of demand for equipment manufacturing semiconductors because of the stagnation in domestic and overseas demand for semiconductors. In addition to that, the decline is also attributable to a decrease in domestic demand for metal machine tools in other industries than automobile industry that has increased the demand and also a decrease in export to EU countries and the United States. “Electronic parts and devices” showed a decrease due to a decline in integrated circuits for mobile phones, personal computers and game consoles and a slowdown in active liquid crystal element because of completion of a round in a new demand for mobile phones while there has been an increase in digital cameras. In “electrical machinery, equipment and supplies”, there was a decline in shipment due to a decrease in housing starts and in separate type air conditioner because of a shift overseas in manufacturing, as well as more offshore production of refrigerator and washing machine. The decline in “ceramic, stone and clay products” is attributable to a decrease in production of cement and allied products and glass and allied products because of a decline in public works and housing starts. The decrease in “chemical and allied products” is due to a decline in domestic demand for photosensitive materials because of permeation of digital cameras and also due to a decline in export to Asian and EU countries. The decline is also attributable to a decrease in cosmetics, chemical fertilizer and paint and printing ink.

On the other hand, shipment in “transportation equipment” has increased because of an export growth of passenger cars to North America, as well as an domestic increase in compact cars combined with the effectiveness of launching new car models.

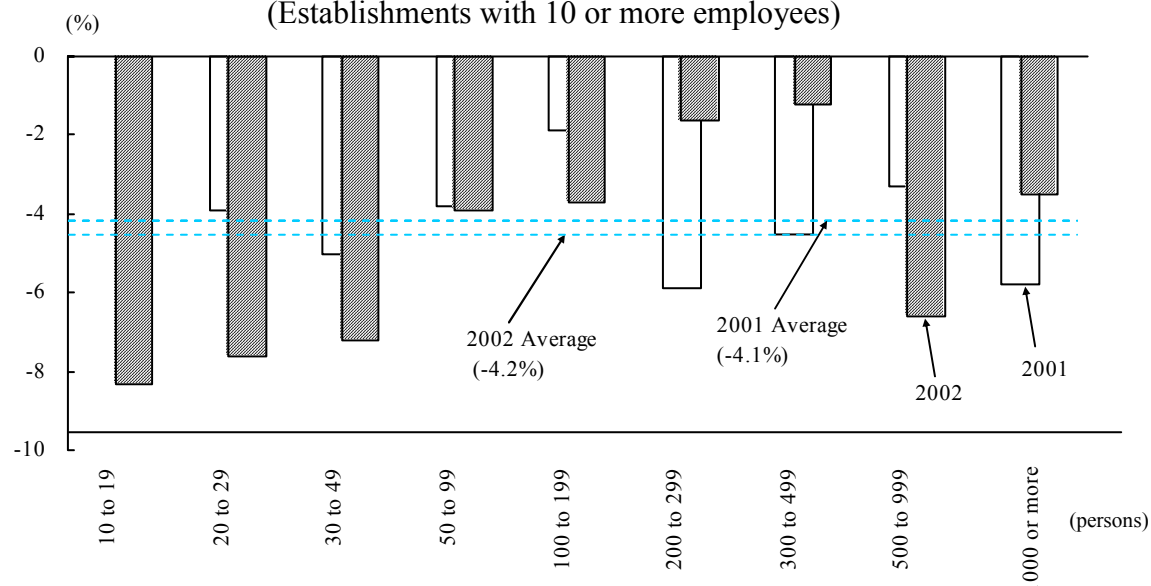
- (ii) The orders in the composition ratio of value of shipment by industry (Table 2, Figure 8) are “transportation equipment” (47.7029 trillion yen, composition ratio 18.3%), “general machinery” (24.2661 trillion yen, 9.3% id.), “chemical and allied products” (22.5700 trillion yen, 8.7% id.), “food” (22.1881 trillion yen, 8.5% id.), “electrical machinery, equipment and supplies” (17.4861 trillion yen, 6.7% id.), “electronic parts and devices” (15.7988 trillion yen, 6.1% id.), “fabricated metal products” (12.4296 trillion yen, 4.8% id.), “information and communication electronics equipment” (12.3298 trillion yen, 4.7% id.), “iron and steel” (10.7749 trillion yen, 4.1% id.) and “beverages, tobacco and feed” (10.3983 trillion yen, 4.0% id.).

**Figure 8 Composition ratio of value of shipment by industry**  
(Establishments with 10 or more employees)



- (iii) The value of shipment by size of employees (Figure 9) declined in all sizes including establishments with 1000 or more employees (down 3.5% compared to the previous year), 500 to 999 persons (down 6.6% id.), 100 to 199 persons (down 3.7% id.) and 50 to 99 persons (down 3.9% id.). The highest year-on-year ratio is seen in establishments with 49 or less persons.

**Figure 9 Year-on-year comparison ratio of value of shipment by size of employees**  
(Establishments with 10 or more employees)



Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

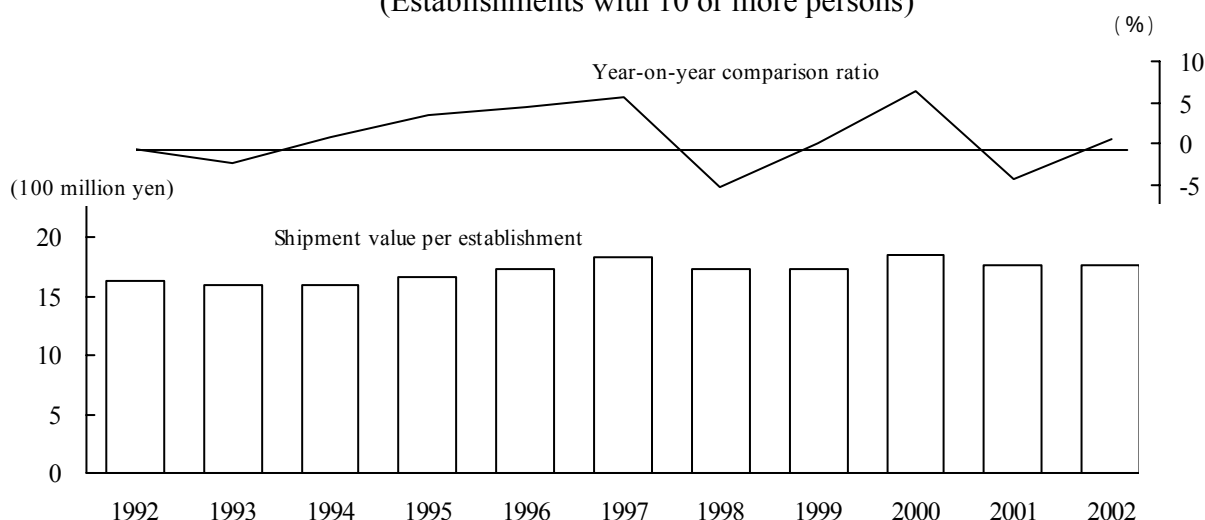
- (iv) The value of shipment per establishment remains at a high level of 1.77491 billion yen. Incidentally, the record value is 1.84753 billion yen in 2000 <sup>(Note)</sup> (Table 3, Figure 10).

The value of shipment per establishment by industry has increased in 8 industries including “transportation equipment” (up 6.8% compared to the previous year), “rubber products” (up 4.4% id.), “iron and steel” (up 3.3% id.). It declined in 16 industries including “information and communication electronics equipment” (down 20.2% id.), “precision instruments and machinery” (down 6.1% id.), “general machinery” (down 5.2% id.) and “furniture and fixtures” (down 4.1% id.).

Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the values before 2002 were recalculated.



**Figure 10: Transition in value of shipment per establishment**  
(Establishments with 10 or more persons)



Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the values before 2002 were recalculated.

**Table 3 Value of shipment per establishment by industry**  
(Establishments with 10 or more employees)

Industry	Item	2002	
		2001 (10 thousand yen)	2002 (10 thousand yen)
Total (Manufacturing)		176,598	177,491
09 Food		107,691	108,738
10 Beverages, tobacco and feed		423,198	421,327
11 Textile mill products		63,556	62,085
12 Apparel and other finished products		27,576	27,040
13 Lumber and wood products		55,737	55,589
14 Furniture and fixtures		59,646	57,188
15 Pulp, paper and paper products		147,731	146,581
16 Printing and allied industries		80,029	79,357
17 Chemical and allied products		572,303	571,538
18 Petroleum and coal products		2,169,776	2,230,376
19 Plastic products		99,236	98,988
20 Rubber products		137,767	143,839
21 Leather tanning, leather products and fur skins		43,896	42,299
22 Ceramic, stone and clay products		84,881	82,034
23 Iron and steel		356,256	368,120
24 Non-ferrous metals and products		313,688	315,833
25 Fabricated metal products		76,384	75,652
26 General machinery		154,858	146,747
27 Electrical machinery, equipment and supplies		206,707	211,185
28 Information and communication electronics equipment		730,979	582,969
29 Electronic parts and devices		381,482	373,495
30 Transportation equipment		604,152	645,332
31 Precision instruments and machinery		151,041	141,895
32 Miscellaneous manufacturing industries		103,940	107,622

Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

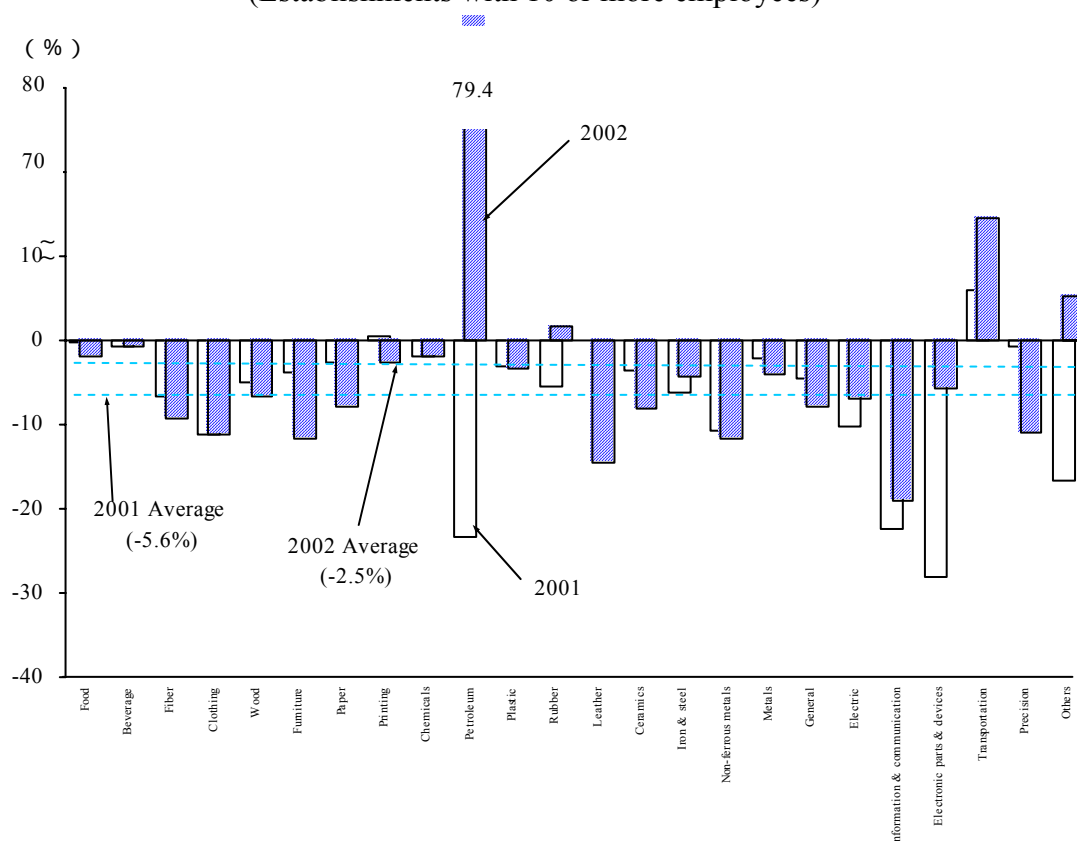
- (4) Value added  
- Value added declining for two consecutive years -

Value added declined following the previous year by 2.5% to 92.6879 trillion yen (Table 1, Figure 1) after it recorded below 100 trillion yen in 2001 for the first time in 13 years.

(i) When observing value added by industry (Table 2, Figure 11), there is a decline in 20 industries including “general machinery” (down 7.8% compared to the previous year), “information and communication electronics equipment” (down 19.0% id.), “electrical machinery, equipment and supplies” (down 7.0% id.), “electronic parts and devices” (down 5.8% id.), “ceramic, stone and clay products” (down 8.2% id.), “fabricated metal products” (down 4.1% id.), “chemical and allied products” (down 2.0% id.), “pulp, paper and paper products” (down 7.8% id.), “non-ferrous metals and products” (down 11.6% id.), “precision instruments and machinery” (down 10.9% id.) and “food” (down 2.0% id.). It increased in 4 industries including “transportation equipment” (up 14.5% id.) and “petroleum and coal products” (up 79.4% id.).

Among industries that have increased in the value added, the growth in “transportation equipment” is due to favorable growth in passenger cars for both domestic and overseas shipment.

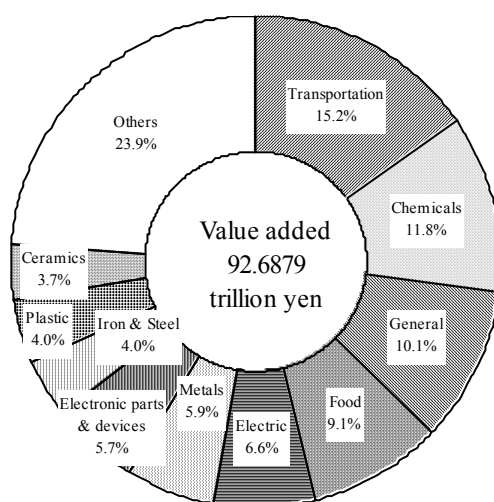
**Figure 11 Year-on-year comparison ratio of value added by industry**  
(Establishments with 10 or more employees)



Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

- (ii) In the composition ratio of value added by industry (Table 2, Figure 12), about 50% of the overall ratio consists of 5 industries which are “transportation equipment” (14.0669 trillion yen, composition ratio 15.2%), “chemical and allied products” (10.9518 trillion yen, 11.8% id.), “general machinery” (9.3258 trillion yen, 10.1% id.), “food” (8.4314 trillion yen, 9.1% id.) and “electrical machinery, equipment and supplies” (6.0912 trillion yen, 6.6% id.), and followed by “fabricated metal products” (5.4494 trillion yen, 5.9% id.), “electronic parts and devices” (5.2757 trillion yen, 5.7% id.), “iron and steel” (3.6961 trillion yen, 4.0% id.), “plastic products” (3.6634 trillion yen, 4.0% id.) and “ceramic, stone and clay products” (3.4513 trillion yen, 3.7% id.).

**Figure 12: Composition ratio of value added by industry**  
(Establishments with 10 or more employees)



- (iii) The value added per employee was up 2.0% compared to the previous year to 12.42 million yen in average in manufacturing (Table 4, Figure 13).

When observing value added per employee by industry, it has increased in 10 industries including “petroleum and coal products” (up 87.8% compared to the previous year), “transportation equipment” (up 13.1% id.), “miscellaneous manufacturing industries” (up 11.4% id.), “rubber products” (up 4.8% id.). On the other hand, it has decreased in 14 industries including “non-ferrous metals and products” (down 12.1% id.), “leather tanning, leather products and fur skins” (down 6.6% id.), “precision instruments and machinery” (down 5.5% id.), “furniture and fixtures” (down 4.1% id.) and “pulp, paper and paper products” (down 3.6% id.).

**Figure 13 Transition in value added per employee**  
(Establishments with 10 or more employees)



Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the values before 2002 were recalculated.

**Table 4 Value added per employee by industry**  
(Establishments with 10 or more employees)

Industry	Item	2001 (10 thousand yen)	2002	
			(10 thousand yen)	Y/Y (%)
Total (Manufacturing)		1,218	1,242	2.0
09 Food		816	808	-1.0
10 Beverages, tobacco and feed		3,410	3,440	0.9
11 Textile mill products		771	763	-1.0
12 Apparel and other finished products		433	429	-0.9
13 Lumber and wood products		816	823	0.9
14 Furniture and fixtures		820	786	-4.1
15 Pulp, paper and paper products		1,304	1,257	-3.6
16 Printing and allied industries		1,011	1,018	0.7
17 Chemical and allied products		3,130	3,156	0.8
18 Petroleum and coal products		2,094	3,932	87.8
19 Plastic products		1,002	986	-1.6
20 Rubber products		1,128	1,182	4.8
21 Leather tanning, leather products and fur skins		686	641	-6.6
22 Ceramic, stone and clay products		1,237	1,228	-0.7
23 Iron and steel		1,818	1,860	2.3
24 Non-ferrous metals and products		1,287	1,131	-12.1
25 Fabricated metal products		1,004	996	-0.8
26 General machinery		1,149	1,117	-2.8
27 Electrical machinery, equipment and supplies		1,074	1,072	-0.2
28 Information and communication electronics equipment		1,352	1,311	-3.0
29 Electronic parts and devices		1,083	1,092	0.8
30 Transportation equipment		1,509	1,707	13.1
31 Precision instruments and machinery		1,100	1,040	-5.5
32 Miscellaneous manufacturing industries		1,038	1,156	11.4

Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

- (5) Year-end inventory (Establishments with 30 or more employees)  
- 5<sup>th</sup> consecutive decline in year-end inventory -

The total value of year-end inventory of manufactured goods, semi-manufactured goods and work in progress was 18.0054 trillion yen, a decrease for the fourth consecutive year by 7.3% compared to the end of the previous year (Table 5).

**Table 5 Transition in the year-end inventory of manufactured goods, semi-manufactured goods and work in progress**  
(Establishments with 30 or more employees)

Item Year	Total (Total of manufactured goods, semi-manufactured goods and work in progress)					
	(100 million yen)	Ratio compared to the end of the previous year (%)	Year-end inventory value of manufactured goods		Year-end inventory value of semi-manufactured goods and work in progress	
			(100 million yen)	Ratio compared to the end of the previous year (%)	(100 million yen)	Ratio compared to the end of the previous year (%)
End of 1995	219,395	2.9	92,672	2.8	126,723	3.0
1996	223,602	1.9	93,236	0.6	130,367	2.9
1997	231,791	3.7	96,812	3.8	134,980	3.5
1998	229,951	-1.3	94,610	-3.0	135,342	-0.2
1999	212,432	-7.6	84,999	-10.2	127,433	-5.8
2000	206,619	-2.7	82,377	-3.1	124,242	-2.5
2001	196,443	-4.9	82,016	-0.4	114,427	-7.9
2002	180,054	-7.3	73,118	-8.9	106,936	-6.2

Note 1: Because of the adjustment of establishments in the 1998 survey, the year-on-year comparison is based on a time series.

Note 2: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

When observing these values by type of inventory,

- (i) The year-end inventory value of manufactured goods has declined for the fifth straight year by 8.9% compared to the previous year to 7.3118 trillion yen.

Comparing by industry, the value has decreased in all industries including “information and communication electronics equipment” (down 27.3% compared to the previous year), “electronic parts and devices” (down 20.6% id.), “precision instruments and machinery” (down 20.4% id.), “furniture and fixtures” (down 18.8% id.), “leather tanning, leather products and fur skins” (down 14.7% id.) and “textile mill products” (down 13.6% id.).

- (ii) The year-end inventory value of semi-manufactured goods and work in progress was down 6.2% compared to the previous year to 10.6936 trillion yen, which was a decline for five consecutive years.

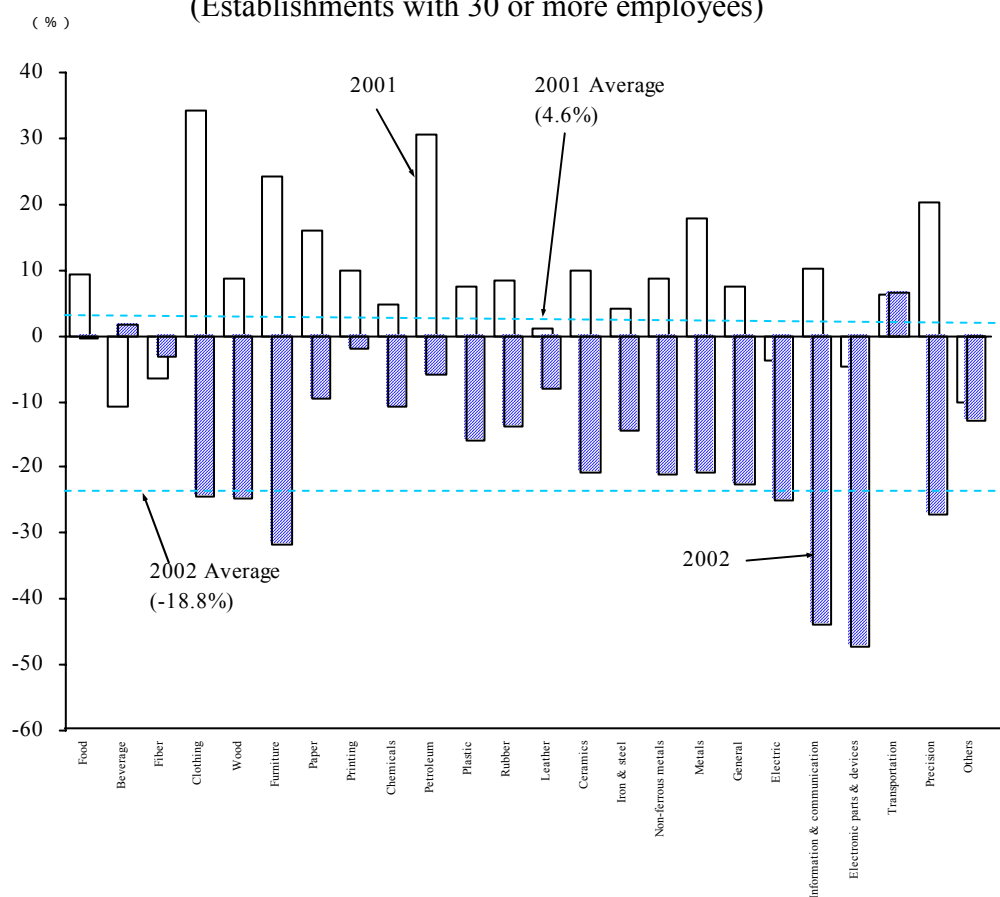
Comparing by industry, there is a decline in 19 industries such as “information and communication electronics equipment” (down 22.5% compared to the previous year), “furniture and fixtures” (down 15.1% id.), “apparel and other finished products” (down 13.7% id.), “electrical machinery, equipment and supplies” (down 11.9% id.) and “electronic parts and devices” (down 11.9% id.). There was an increase in 5 industries including “miscellaneous manufacturing industries” (up 20.8% id.), “non-ferrous metals and products” (up 6.2% id.), “food” (up 3.8% id.) and “beverages, tobacco and feed” (up 3.0% id.).

- (6) Total of newly invested tangible fixed assets (including change in construction temporary account) (Establishments with 30 or more employees)  
 - Total of newly invested tangible fixed assets declining for the first time in 3 years -

The total of new tangible fixed assets (including change in construction temporary account) declined by 18.8% compared to the previous year to 9.5080 trillion yen.

Although the total of new tangible fixed assets by industry shows an increase in “transportation equipment” (up 6.5% compared to the previous year) and “beverages, tobacco and feed” (up 1.8% id.), it declined in the other 22 industries including “electronic parts and devices” (down 47.1% id.), “general machinery” (down 22.7% id.), “information and communication electronics equipment” (down 44.0% id.), “electrical machinery, equipment and supplies” (down 25.1% id.) and “chemical and allied products” (down 10.8% id.).

**Figure 14 Year-on-year comparison ratio of the total of newly invested tangible fixed assets by industry**  
 (Establishments with 30 or more employees)



Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

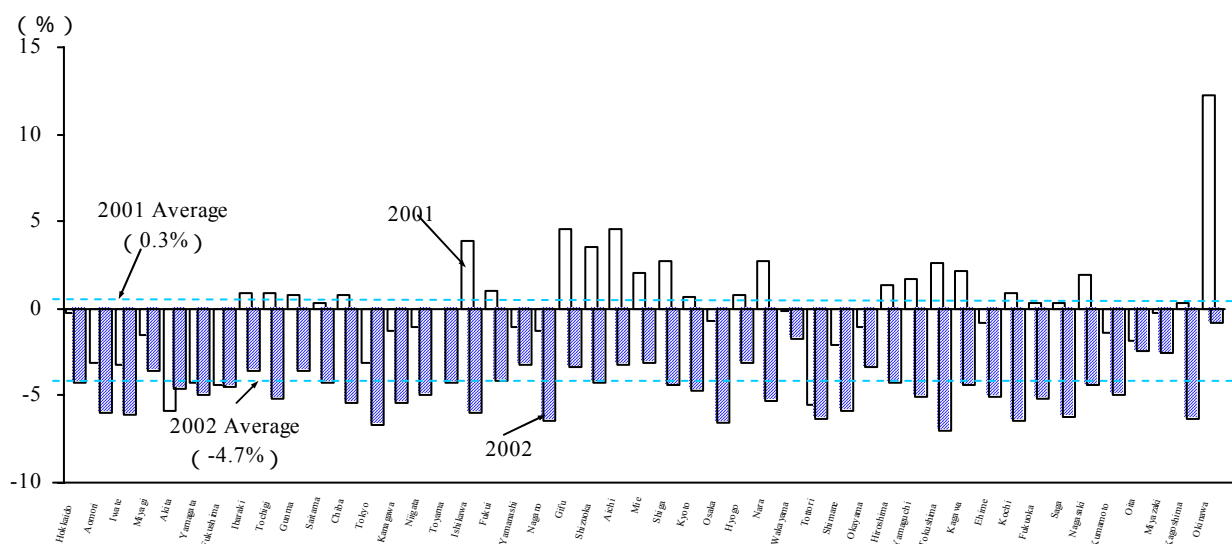
### 3. Situation by prefecture (Establishments with 10 or more employees)

- (1) Number of establishments  
- Decreased in all prefectures -

The number of establishments was down 4.7% compared to the previous year to 146,632 (Table 6).

- (i) Comparing by prefecture (Figure 15), the number of establishments has decreased in all prefectures including Tokushima (down 7.0% compared to the previous year), Kochi (down 6.4% id.), Osaka (down 6.6% id.), Tokyo (down 6.7% id.), Nagano (down 6.4% id.), Tottori (down 6.4% id.), Kagoshima (down 6.3% id.), Saga (down 6.2% id.), Iwate (down 6.1% id.) and Ishikawa (down 5.9% id.).

**Figure 15 Year-on-year comparison ratio of number of establishments by prefecture**  
(Establishments with 10 or more employees)



Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

- (ii) The prefecture with the highest number of establishments (Table 6) is Osaka (11,781, composition ratio 8.0%) and followed by Aichi (11,374, 7.8% id.), Tokyo (8,925, 6.1% id.), Saitama (8,033, 5.5% id.), Shizuoka (7,207, 4.9% id.), Kanagawa (6,189, 4.2% id.), Hyogo (6,035, 4.1% id.), Hokkaido (4,422, 3.0% id.) and Fukuoka (4,137, 2.8% id.).

**Table 6 Number of establishments by prefecture**  
(Establishments with 10 or more employees)

Item Prefectures	2002			Item Prefectures	2002		
		Y/Y (%)	Composition ratio (%)			Y/Y (%)	Composition ratio (%)
National total	146,632	-4.7	100.0	24 Mie	2,838	-3.1	1.9
1 Hokkaido	4,422	-4.3	3.0	25 Shiga	2,000	-4.4	1.4
2 Aomori	1,251	-6.0	0.9	26 Kyoto	2,957	-4.7	2.0
3 Iwate	1,813	-6.1	1.2	27 Osaka	11,781	-6.6	8.0
4 Miyagi	2,337	-3.6	1.6	28 Hyogo	6,035	-3.1	4.1
5 Akita	1,592	-4.6	1.1	29 Nara	1,372	-5.3	0.9
6 Yamagata	1,997	-5.0	1.4	30 Wakayama	1,237	-1.7	0.8
7 Fukushima	3,122	-4.5	2.1	31 Tottori	734	-6.4	0.5
8 Ibaraki	4,092	-3.5	2.8	32 Shimane	955	-5.8	0.7
9 Tochigi	3,100	-5.2	2.1	33 Okayama	2,675	-3.3	1.8
10 Gunma	3,718	-3.6	2.5	34 Hiroshima	3,591	-4.3	2.4
11 Saitama	8,033	-4.3	5.5	35 Yamaguchi	1,493	-5.0	1.0
12 Chiba	3,942	-5.4	2.7	36 Tokushima	1,009	-7.0	0.7
13 Tokyo	8,925	-6.7	6.1	37 Kagawa	1,417	-4.4	1.0
14 Kanagawa	6,189	-5.4	4.2	38 Ehime	1,730	-5.1	1.2
15 Niigata	4,020	-5.0	2.7	39 Kochi	730	-6.4	0.5
16 Toyama	2,079	-4.2	1.4	40 Fukuoka	4,137	-5.2	2.8
17 Ishikawa	1,870	-5.9	1.3	41 Saga	1,030	-6.2	0.7
18 Fukui	1,568	-4.2	1.1	42 Nagasaki	1,187	-4.4	0.8
19 Yamanashi	1,364	-3.2	0.9	43 Kumamoto	1,579	-4.9	1.1
20 Nagano	3,706	-6.4	2.5	44 Oita	1,156	-2.4	0.8
21 Gifu	4,079	-3.4	2.8	45 Miyazaki	1,121	-2.5	0.8
22 Shizuoka	7,207	-4.3	4.9	46 Kagoshima	1,459	-6.3	1.0
23 Aichi	11,374	-3.2	7.8	47 Okinawa	609	-0.8	0.4

Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

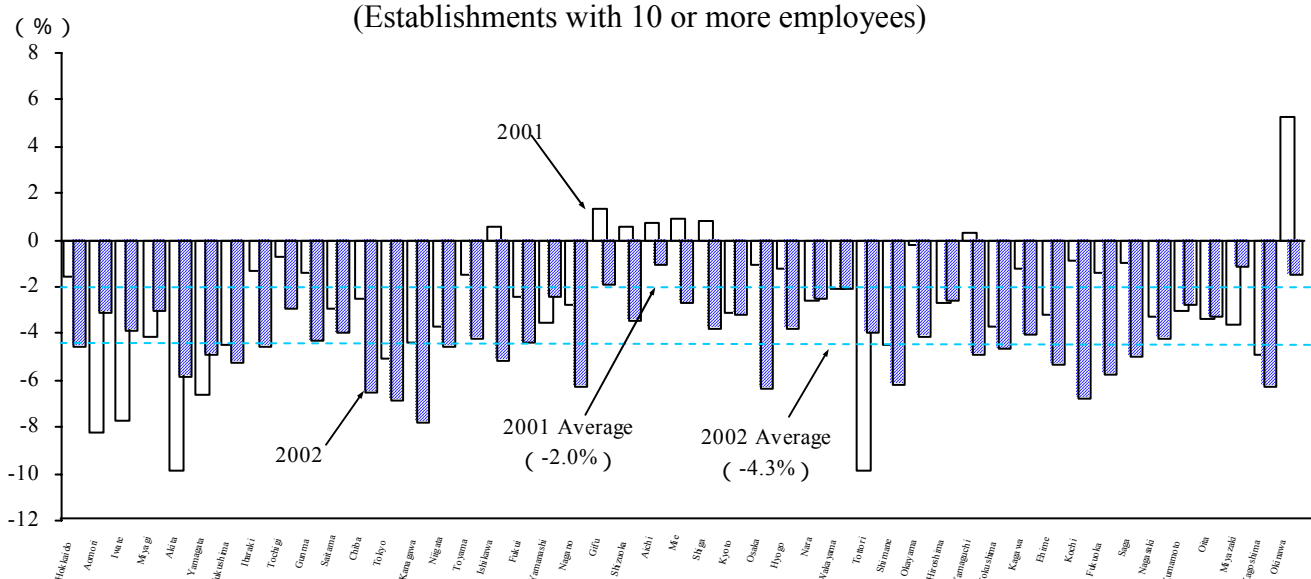


- (2) Number of employees  
- Decreased in all prefectures -

The number of employees was down 4.3% compared to the previous year to 7,463,435 (Table 7).

- (i) Comparing by prefecture (Figure 16), the number of employees has decreased in all prefectures including Kanagawa (down 7.8% compared to the previous year), Tokyo (down 6.9% id.), Kochi (down 6.8% id.), Chiba (down 6.5% id.), Osaka (down 6.3% id.), Nagano (down 6.3% id.), Kagoshima (down 6.3% id.) and Shimane (down 6.2% id.).

**Figure 16 Year-on-year comparison ratio of number of employees by prefecture**  
(Establishments with 10 or more employees)



Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

- (ii) The prefecture with the most employees (Table 7) is Aichi (715,609, composition ratio 9.6%), followed by Osaka (472,336, 6.3% id.), Kanagawa (406,632, 5.4% id.), Shizuoka (397,634, 5.3% id.), Saitama (385,626, 5.2% id.), Tokyo (343,514, 4.6% id.), Hyogo (336,401, 4.5% id.), Ibaraki (245,999, 3.3% id.) and Chiba (208,729, 2.8% id.).

**Table 7 Number of employees by prefecture**  
(Establishments with 10 or more employees)

Item Prefectures	2002			Item Prefectures	2002		
	(persons)	Y/Y (%)	Composition ratio (%)		(persons)	Y/Y (%)	Composition ratio (%)
Nation total	7,463,435	-4.3	100.0	24 Mie	173,047	-2.7	2.3
1 Hokkaido	177,417	-4.6	2.4	25 Shiga	138,889	-3.8	1.9
2 Aomori	60,195	-3.1	0.8	26 Kyoto	139,741	-3.2	1.9
3 Iwate	91,736	-3.9	1.2	27 Osaka	472,336	-6.3	6.3
4 Miyagi	121,189	-3.0	1.6	28 Hyogo	336,401	-3.8	4.5
5 Akita	70,817	-5.8	0.9	29 Nara	63,660	-2.5	0.9
6 Yamagata	103,781	-4.9	1.4	30 Wakayama	46,880	-2.1	0.6
7 Fukushima	165,781	-5.3	2.2	31 Tottori	37,010	-4.0	0.5
8 Ibaraki	245,999	-4.6	3.3	32 Shimane	41,201	-6.2	0.6
9 Tochigi	185,423	-2.9	2.5	33 Okayama	142,279	-4.2	1.9
10 Gunma	197,863	-4.3	2.7	34 Hiroshima	190,826	-2.6	2.6
11 Saitama	385,626	-4.0	5.2	35 Yamaguchi	93,786	-4.9	1.3
12 Chiba	208,729	-6.5	2.8	36 Tokushima	46,172	-4.7	0.6
13 Tokyo	343,514	-6.9	4.6	37 Kagawa	62,682	-4.1	0.8
14 Kanagawa	406,632	-7.8	5.4	38 Ehime	80,474	-5.3	1.1
15 Niigata	184,040	-4.6	2.5	39 Kochi	25,198	-6.8	0.3
16 Toyama	114,793	-4.2	1.5	40 Fukuoka	207,347	-5.8	2.8
17 Ishikawa	83,647	-5.1	1.1	41 Saga	53,763	-5.0	0.7
18 Fukui	68,538	-4.4	0.9	42 Nagasaki	55,037	-4.2	0.7
19 Yamanashi	68,898	-2.5	0.9	43 Kumamoto	86,934	-2.8	1.2
20 Nagano	192,554	-6.3	2.6	44 Oita	60,475	-3.3	0.8
21 Gifu	174,478	-1.9	2.3	45 Miyazaki	55,387	-1.1	0.7
22 Shizuoka	397,634	-3.5	5.3	46 Kagoshima	69,761	-6.3	0.9
23 Aichi	715,609	-1.0	9.6	47 Okinawa	19,256	-1.5	0.3

Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

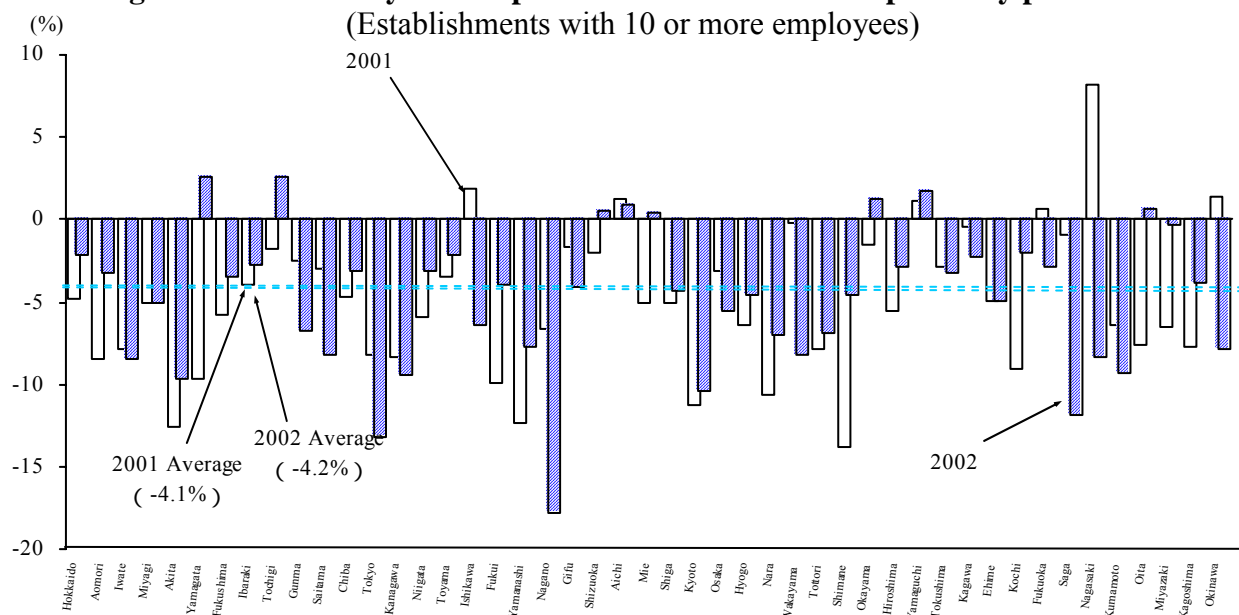
- (3) Value of shipment of manufactured goods  
- Decreased in 39 prefectures, increased in 8 prefectures -

The value of shipment decreased by 4.2% compared to the previous year to 260.2587 trillion yen (Table 8).

- (i) Comparing by prefecture (Figure 17), a decline was seen in 39 prefectures including Nagano (down 17.8% compared to the previous year), Tokyo (down 13.2% id.), Saga (down 11.8% id.), Kyoto (down 10.4% id.), Akita (down 9.6% id.), Kanagawa (down 9.4% id.), Kumamoto (down 9.3% id.), Iwate (down 8.5% id.), Nagasaki (down 8.4% id.) and Saitama (down 8.2% id.). An increase was seen in 8 prefectures including Yamagata (up 2.6% id.), Tochigi (up 2.6% id.), Yamaguchi (up 1.7% id.), Okayama (up 1.2% id.) and Aichi (up 0.9% id.).

Among the prefectures in which a decline was seen, it was due to a decrease in mobile phones and production relocation (to other domestic and overseas places) for Shimane. It was due to a decline in personal computers for Tokyo, soft drink for Saga, ICs and silicon transistors etc. for Kyoto and semiconductor integrated circuits for Kanagawa. Among the prefectures in which an increase was seen, it was due to a growth in personal computers in Yamagata, ICs for Okayama, and passenger cars in Yamaguchi and Aichi.

**Figure 17 Year-on-year comparison ratio of value of shipment by prefecture**  
(Establishments with 10 or more employees)



Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

- (ii) The prefecture with the highest value of shipment (Table 8) is Aichi (33.6751 trillion yen, composition ratio 12.9%), followed by Kanagawa (17.5782 trillion yen, 6.8% id.), Shizuoka (15.7431 trillion yen, 6.0% id.), Osaka (14.7527 trillion yen, 5.7% id.), Saitama (12.2393 trillion yen, 4.7% id.), Hyogo (12.0883 trillion yen, 4.6% id.), Tokyo (10.8264 trillion yen, 4.2% id.), Chiba (10.2965 trillion yen, 4.0% id.) and Ibaraki (9.7909 trillion yen, 3.8% id.).

**Table 8 Value of shipment by prefecture**  
(Establishments with 10 or more employees)

Item	2002 (100 million yen)	Y/Y (%)	Composition ratio (%)	Item	2002 (100 million yen)	Y/Y (%)	Composition ratio (%)
Prefectures				Prefectures			
Nation-level total amount	2,602,587	-4.2	100.0	24 Mie	75,112	0.4	2.9
1 Hokkaido	50,428	-2.1	1.9	25 Shiga	56,972	-4.4	2.2
2 Aomori	11,453	-3.2	0.4	26 Kyoto	44,207	-10.4	1.7
3 Iwate	19,911	-8.5	0.8	27 Osaka	147,527	-5.5	5.7
4 Miyagi	33,323	-5.0	1.3	28 Hyogo	120,883	-4.6	4.6
5 Akita	12,807	-9.6	0.5	29 Nara	18,983	-6.9	0.7
6 Yamagata	26,367	2.6	1.0	30 Wakayama	19,705	-8.2	0.8
7 Fukushima	50,311	-3.5	1.9	31 Tottori	9,954	-6.9	0.4
8 Ibaraki	97,909	-2.7	3.8	32 Shimane	9,579	-4.6	0.4
9 Tochigi	74,970	2.6	2.9	33 Okayama	61,633	1.2	2.4
10 Gunma	70,402	-6.8	2.7	34 Hiroshima	63,633	-2.8	2.4
11 Saitama	122,393	-8.2	4.7	35 Yamaguchi	48,844	1.7	1.9
12 Chiba	102,965	-3.1	4.0	36 Tokushima	13,373	-3.2	0.5
13 Tokyo	108,264	-13.2	4.2	37 Kagawa	19,797	-2.2	0.8
14 Kanagawa	175,782	-9.4	6.8	38 Ehime	30,175	-4.9	1.2
15 Niigata	40,093	-3.1	1.5	39 Kochi	5,062	-2.0	0.2
16 Toyama	31,261	-2.1	1.2	40 Fukuoka	67,762	-2.9	2.6
17 Ishikawa	22,052	-6.4	0.8	41 Saga	13,506	-11.8	0.5
18 Fukui	15,816	-3.9	0.6	42 Nagasaki	14,350	-8.4	0.6
19 Yamanashi	20,292	-7.8	0.8	43 Kumamoto	23,043	-9.3	0.9
20 Nagano	51,268	-17.8	2.0	44 Oita	27,909	0.7	1.1
21 Gifu	44,558	-4.1	1.7	45 Miyazaki	11,698	-0.4	0.4
22 Shizuoka	157,431	0.6	6.0	46 Kagoshima	16,737	-3.8	0.6
23 Aichi	336,751	0.9	12.9	47 Okinawa	5,336	-7.9	0.2

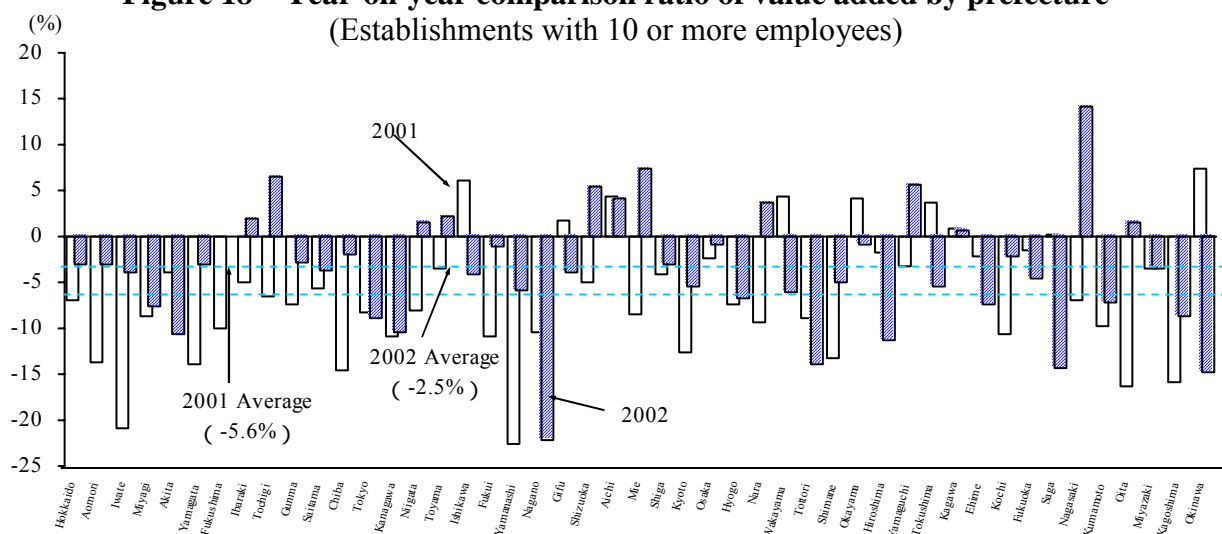
Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

- (4) Value added  
- Declined in 35 prefectures, increased in 12 prefectures -

The value added was down 2.5% compared to the previous year to 92.6879 trillion yen (Table 9).

- (i) Comparing by prefecture (Figure 18), the value added has decreased in 35 prefectures including Nagano (down 22.1% compared to the previous year), Okinawa (down 14.8% id.), Saga (down 14.3% id.), Tottori (down 14.0% id.) and Hiroshima (down 11.4% id.). It has increased in 12 prefectures including Nagasaki (up 14.2% id.), Mie (up 7.4% id.), Tochigi (up 6.6% id.), Yamaguchi (up 5.6%), Shizuoka (up 5.5% id.) and Aichi (up 4.2% id.).

**Figure 18 Year-on-year comparison ratio of value added by prefecture**  
(Establishments with 10 or more employees)



Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

- (ii) The prefectures with high value added (Table 9) are Aichi (10.7175 trillion yen, composition ratio 11.6%), Osaka (6.0332 trillion yen, 6.5% id.), Shizuoka (5.9256 trillion yen, 6.4% id.), Kanagawa (5.8323 trillion yen, 6.3% id.), Saitama (4.5530 trillion yen, 4.9% id.), Hyogo (4.4146 trillion yen, 4.8% id.), Tokyo (4.2314 trillion yen, 4.6% id.), Ibaraki (3.5267 trillion yen, 3.8% id.), Chiba (3.2216 trillion yen, 3.5% id.) and Tochigi (2.6815 trillion yen, 2.9% id.).

**Table 9 Value added by prefecture**  
(Establishments with 10 or more employees)

Item Prefectures	2002			Item Prefectures	2002		
	(100 million yen)	Y/Y (%)	Composition ratio (%)		(100 million yen)	Y/Y (%)	Composition ratio (%)
Nation total	926,879	-2.5	100.0	24 Mie	25,263	7.4	2.7
1 Hokkaido	16,613	-3.0	1.8	25 Shiga	23,297	-2.9	2.5
2 Aomori	3,410	-3.0	0.4	26 Kyoto	17,992	-5.5	1.9
3 Iwate	6,385	-4.0	0.7	27 Osaka	60,332	-1.0	6.5
4 Miyagi	10,648	-7.7	1.1	28 Hyogo	44,146	-6.8	4.8
5 Akita	4,885	-10.6	0.5	29 Nara	8,067	3.7	0.9
6 Yamagata	8,416	-3.0	0.9	30 Wakayama	7,612	-6.1	0.8
7 Fukushima	19,144	-0.1	2.1	31 Tottori	2,785	-14.0	0.3
8 Ibaraki	35,267	2.0	3.8	32 Shimane	3,238	-5.0	0.3
9 Tochigi	26,815	6.6	2.9	33 Okayama	19,984	-0.9	2.2
10 Gunma	24,639	-2.8	2.7	34 Hiroshima	22,360	-11.4	2.4
11 Saitama	45,530	-3.8	4.9	35 Yamaguchi	16,922	5.6	1.8
12 Chiba	32,216	-1.9	3.5	36 Tokushima	5,760	-5.5	0.6
13 Tokyo	42,314	-8.8	4.6	37 Kagawa	6,430	0.7	0.7
14 Kanagawa	58,323	-10.3	6.3	38 Ehime	9,470	-7.5	1.0
15 Niigata	16,905	1.5	1.8	39 Kochi	2,356	-2.1	0.3
16 Toyama	13,690	2.1	1.5	40 Fukuoka	23,511	-4.6	2.5
17 Ishikawa	8,404	-4.1	0.9	41 Saga	5,090	-14.3	0.5
18 Fukui	6,465	-1.0	0.7	42 Nagasaki	4,891	14.2	0.5
19 Yamanashi	7,151	-5.8	0.8	43 Kumamoto	8,224	-7.1	0.9
20 Nagano	17,864	-22.1	1.9	44 Oita	8,959	1.5	1.0
21 Gifu	17,326	-3.9	1.9	45 Miyazaki	4,245	-3.5	0.5
22 Shizuoka	59,256	5.5	6.4	46 Kagoshima	5,800	-8.7	0.6
23 Aichi	107,175	4.2	11.6	47 Okinawa	1,307	-14.8	0.1

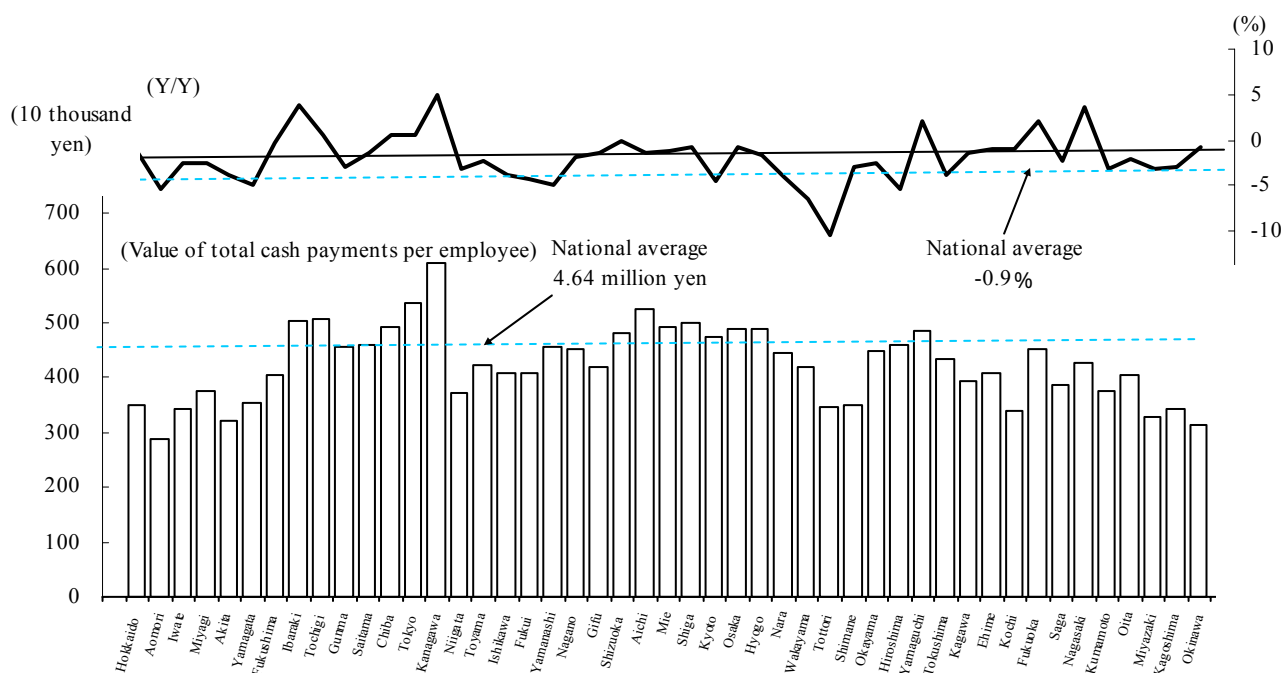
Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

## (5) Value of total cash payments per employee

The value of total cash payments per employee was down 0.9% compared to the previous year to 4.64 million yen (Figure 19).

- (i) Comparing by prefecture, it has declined in 39 prefectures including Tottori (down 10.4% compared to the previous year), Wakayama (down 6.5% id.), Hiroshima and Aomori (both down 5.3% id.) and Yamagata and Yamanashi (both down 4.8% id.). It has increased in 8 prefectures including Kanagawa (up 5.0% id.), Ibaraki (up 3.8% id.), Nagasaki (up 3.6% id.), Fukuoka (up 2.1% id.) and Yamaguchi (up 2.0% id.).
- (ii) The prefectures with high value of total cash payments per employee are Kanagawa (6.11 million yen), Tokyo (5.36 million yen), Aichi (5.27 million yen), Tochigi (5.06 million yen), Ibaraki (5.04 million yen), Shiga (5 million yen), Mie (4.94 million yen), Chiba (4.93 million yen), Hyogo (4.91 million yen) and Osaka (4.9 million yen).

**Figure 19 Value of total cash payments per employee by prefecture**  
(Establishments with 10 or more employees)



Note: Because of the revision of the Japan Standard Industrial Classification in the 2002 survey, the year-on-year comparison is calculated by incorporating the classification of 2001 into that of 2002.

## <Topics>

### I. Situation of Business Starts, Continuation and Discontinuation of Establishments (Establishments with 10 or more employees)

#### 1. Ratio of business starts and discontinuation of establishments and situation of continuing establishments

Observing the results in the 2002 survey by establishment that started business, discontinued and continued, there were 135,594 establishments that continued their business in 2001 and 2002 and 92.5% of establishments with 10 or more employees in 2002 continued the business. There were 1604 establishments that newly started business and the ratio was 1.1% and the number of discontinued establishments were 6109, 4.0% of the total.

The ratio of continuing establishments by value of shipment was 97.1% in 2002, showing a higher number than the ratio by number of establishments. The ratio for new establishments was 1.5% and for discontinued establishments was 3.2%.

#### Situation of establishments with 10 or more employees

##### Number of establishments

	1999		2000		2001		2002	
	Number of establishments	Composition ratio (%)	Number of establishments	Composition ratio (%)	Number of establishments	Composition ratio (%)	Number of establishments	Composition ratio (%)
Total	159,346	100.0	154,723	100.0	155,182	100.0	146,632	100.0
Business starts (including transferring in and change of trade)	1,506	0.9	1,712	1.1	1,961	1.3	1,604	1.1
Increase in size	8,999	5.6	9,315	6.0	15,546	10.0	9,434	6.4
Continuation	148,841	93.4	143,696	92.9	137,675	88.7	135,594	92.5
Decrease in size	12,642	-	10,582	-	11,105	-	13,479	-
Discontinuation (including transferring out and change of trade)	5,422	3.2	5,068	3.2	5,943	3.8	6,109	4.0

##### Value of shipment

	1999		2000		2001		2002	
	100 million yen	Composition ratio (%)	100 million yen	Composition ratio (%)	100 million yen	Composition ratio (%)	100 million yen	Composition ratio (%)
Total	2,792,555	100.0	2,882,798	100.0	2,764,170	100.0	2,602,587	100.0
Business starts (including transferring in and change of trade)	20,978	0.8	16,037	0.6	27,189	1.0	37,940	1.5
Increase in size	30,458	1.1	33,561	1.2	41,790	1.5	37,596	1.4
Continuation	2,741,120	98.2	2,833,199	98.3	2,695,191	97.5	2,527,052	97.1
Decrease in size	38,903	-	32,413	-	39,812	-	32,001	-
Discontinuation (including transferring out and change of trade)	50,510	1.7	43,324	1.6	58,510	2.0	87,181	3.2

Note:

Calculation of composition ratio in business starts

Total number of establishments that started business, transferred in and changed a trade/Total number of establishments in the year concerned × 100

Calculation of composition ratio in discontinuation

Total number of establishments that discontinued business, transferred out and changed a trade/Total number of establishments in the previous year × 100

(As for the ratio of discontinuation, the number of total establishments before 2002 is calculated according to the 2002 classification because of the revision of the Japan Standard Industrial Classification in the year.)

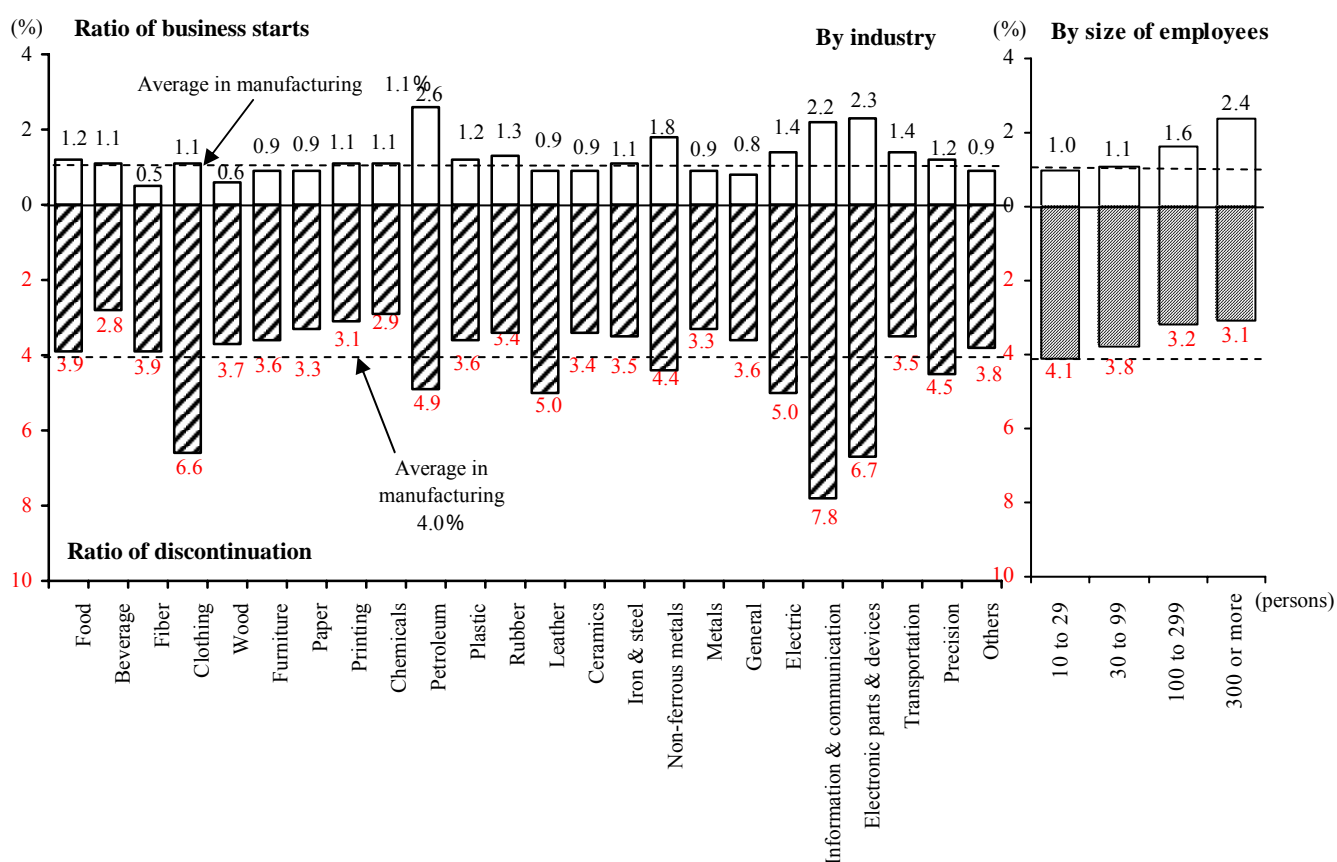
The ratio of new business starts in “total (manufacturing)” was 1.1%, down 0.2 points from the previous year.

The orders of industries with high ratio of new business starts are “petroleum and coal products” (ratio of new business starts 2.6%), “electronic parts and devices” (2.3% id.), “information and communication electronics equipment” (2.2% id.) and “non-ferrous metals and products” (1.8% id.). By size of employees, they are establishment with 300 or more persons (2.4% id.), 100 to 299 persons (1.6% id.), 30 to 99 persons (1.1% id.) and 10 to 29 persons (1.0% id.).

Observing the ratio of discontinued establishments, “total (manufacturing)” shows 4.0%, up 0.2 points from the previous year.

Industries with high ratio of discontinued establishments are “information and communication electronics equipment” (ratio of discontinuation 7.8%), “electronic parts and devices” (6.7% id.), “apparel and other finished products” (6.6% id.), “electrical machinery, equipment and supplies” (5.0% id.), “leather tanning, leather products and fur skins” (5.0% id.), showing a high ratio predominantly in electric-and-machinery related industries. By size of employees, the orders of the ratio are establishment with 300 or more persons (3.1% id.), 100 to 299 persons (3.2% id.), 30 to 99 persons (3.8% id.) and 10 to 29 persons (4.1% id.). The less the size is, the higher the rate of discontinued establishment is.

**Ratio of business starts and discontinuation by industrial major group and size of employees**

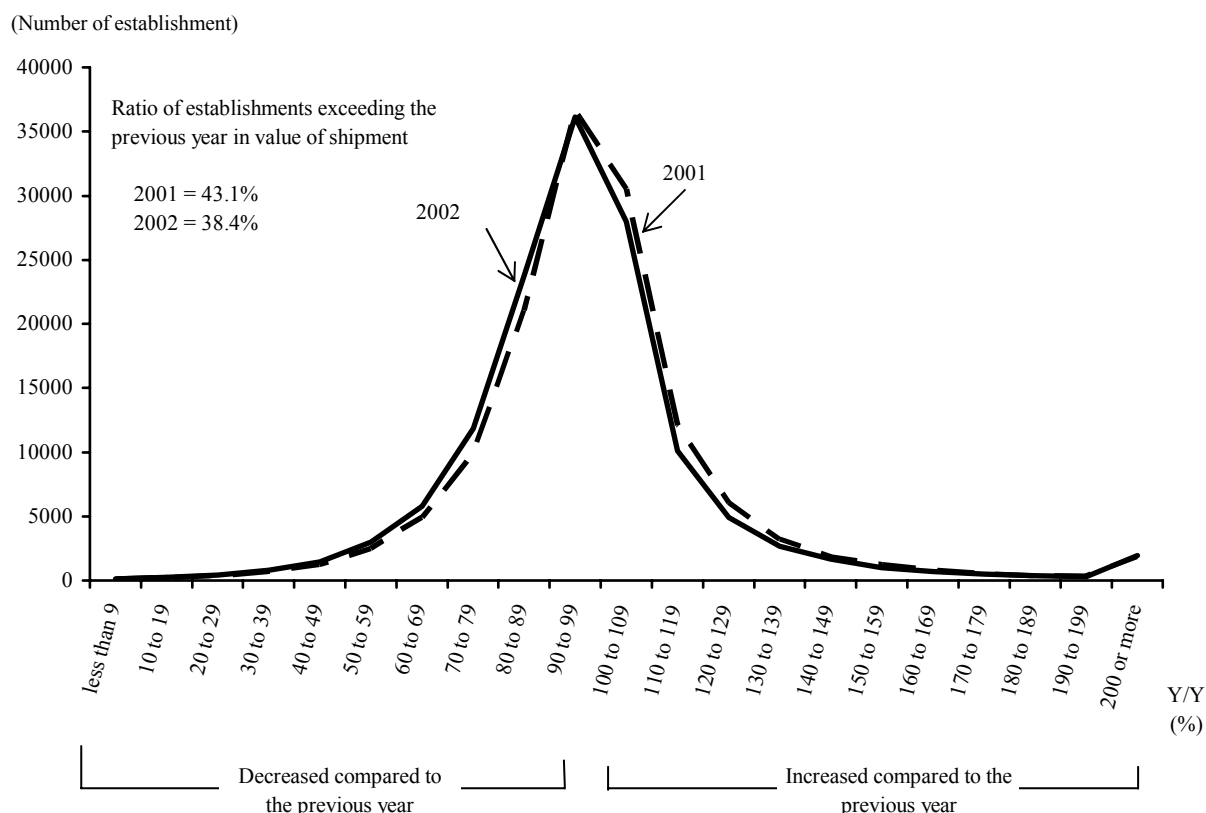




## 2. Year-on-year distribution in value of shipment for continuing establishments

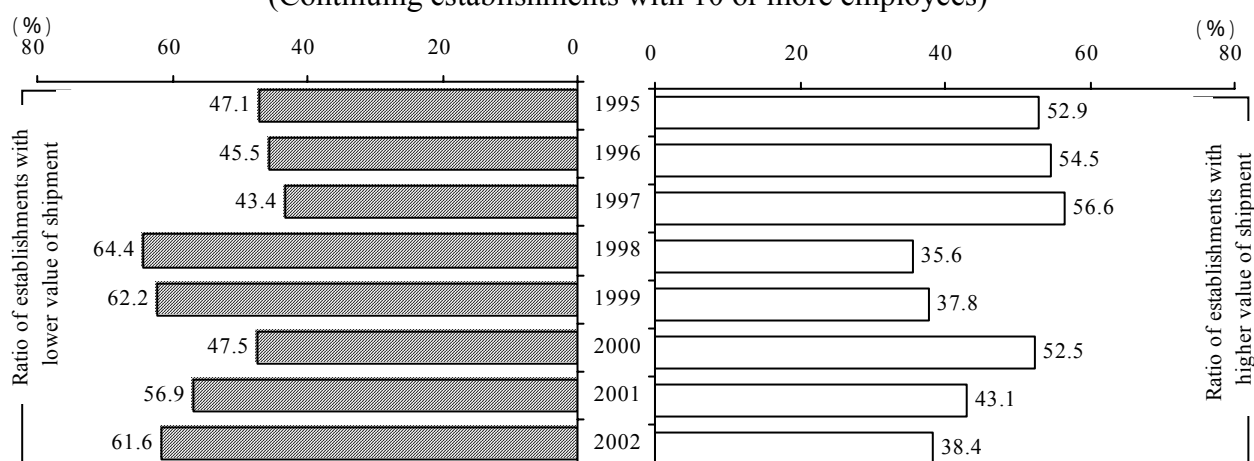
The distribution graph in value of shipment compared to the previous year for establishments (135,594) that continued business from 2001 to 2002 shows the slight shift to the left compared to 2001.

**Year-on-year distribution in value of shipment**  
(Continuing establishments with 10 or more employees)



The ratio of establishments with higher value of shipment than the previous year was down 4.7 points from 43.1% in 2001 to 38.4% in 2002. The ratio lowered in comparison with 2000 (52.5%) and 2001 (43.1%).

**Year-on-year comparison in value of shipment**  
(Continuing establishments with 10 or more employees)



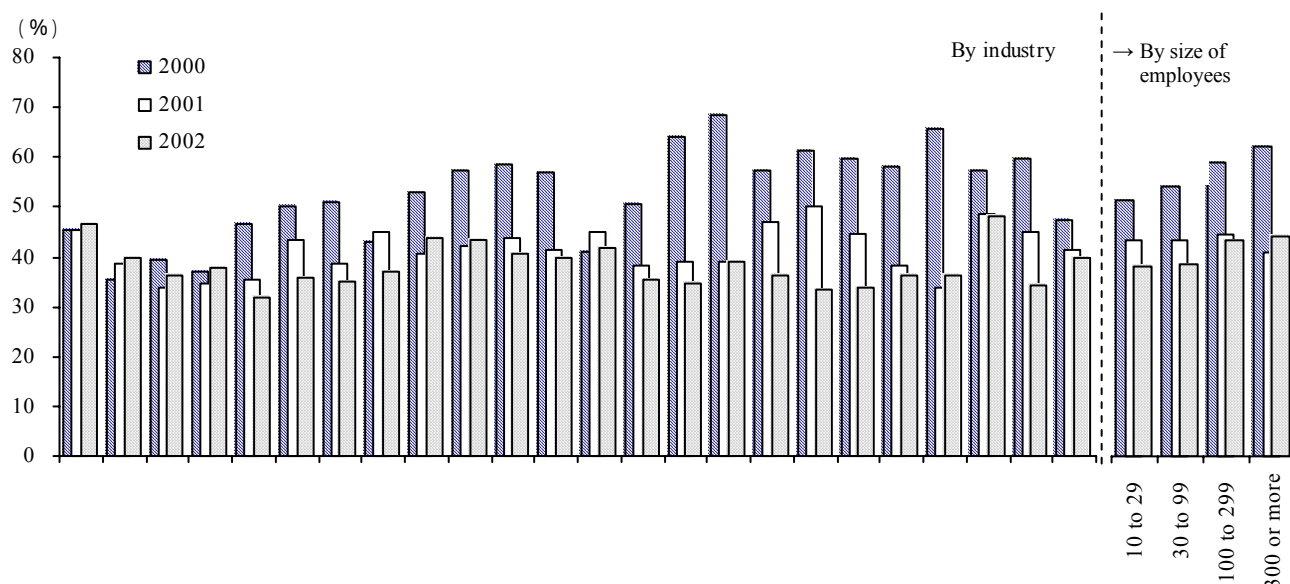
Note: The year-on-year ratios in value of shipment before 2002 are calculated according to the 2002 classification because of the revision of the Japan Standard Industrial Classification in the year. The numbers to be mentioned later are calculated all in the same way.

The ratio of establishments with higher value of shipment than the previous year by industry indicates a decline in 17 industries including “general machinery”, “fabricated metal products”, “precision instruments and machinery” and “electrical machinery, equipment and supplies” and an increase in 7 industries including “apparel and other finished products”, “chemical and allied products”, “textile mill products” and “electronic parts and devices”.

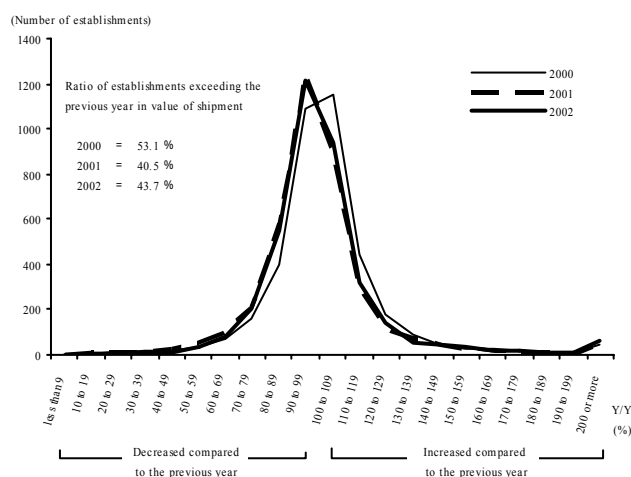
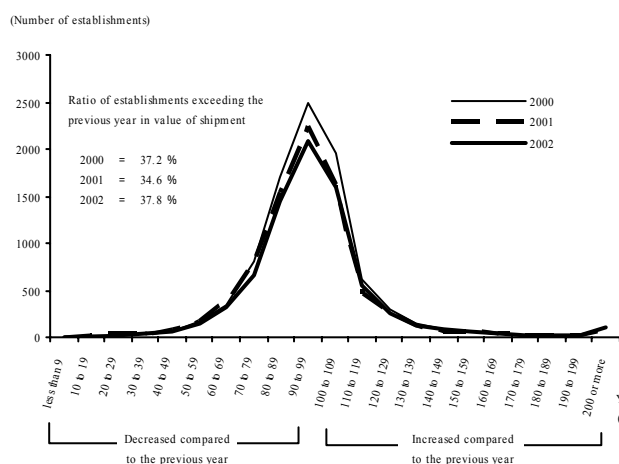
The industries which have establishments with higher year-on-year ratio in value of shipment are “transportation equipment”, “food”, “chemical and allied products” and “petroleum and coal products”.

By size of employees, the year-on-year ratio in value of shipment increased in establishments with 300 or more persons. In other sizes, however, the less the size of employees is, the smaller the ratio of establishments with higher year-on-year value of shipment is.

### Ratio of establishments with higher year-on-year value of shipment by industry and size of employees (Continuing establishments with 10 or more employees)

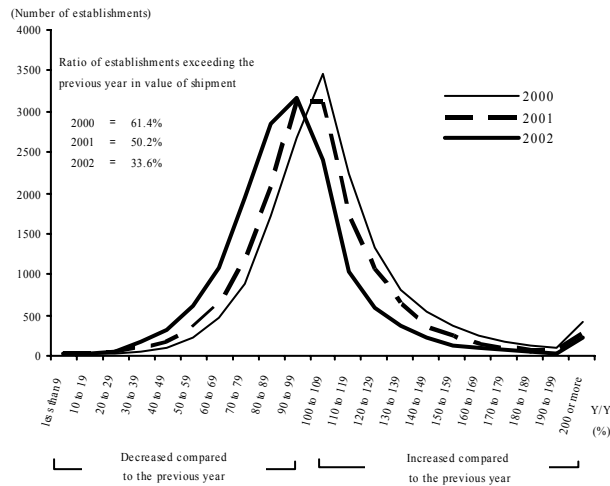


### Distribution for industries with higher year-on-year ratio in value of shipment (excerpts) “Apparel and other finished products” “Chemical and allied products”

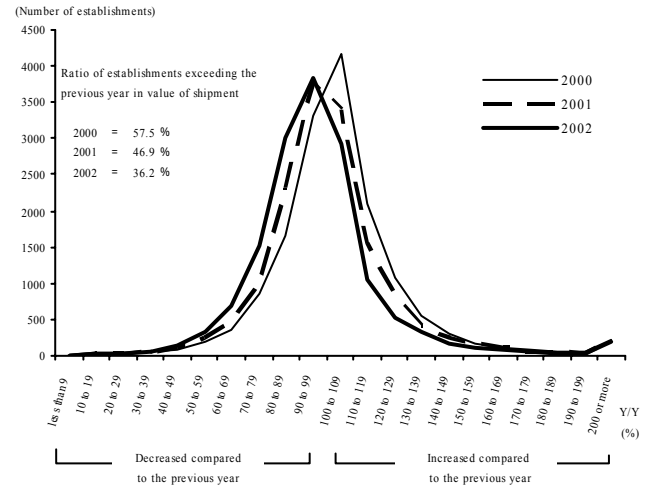


## Distribution for industries with lower year-on-year ratio in value of shipment (excerpts)

“General machinery”

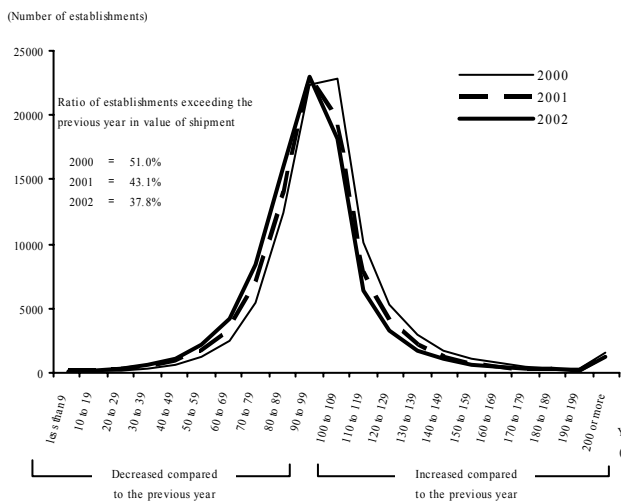


“Fabricated metal products”

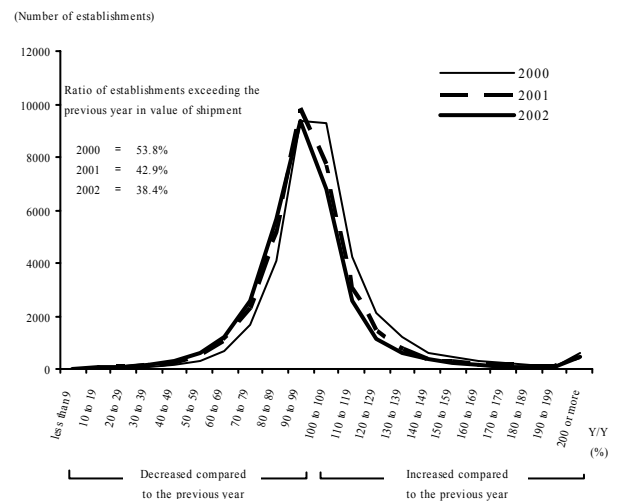


## Year-on-year distribution in value of shipment by size of employees

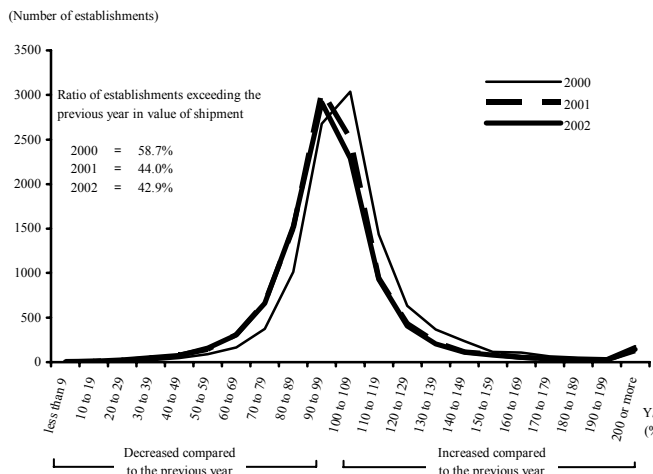
10 to 29 persons



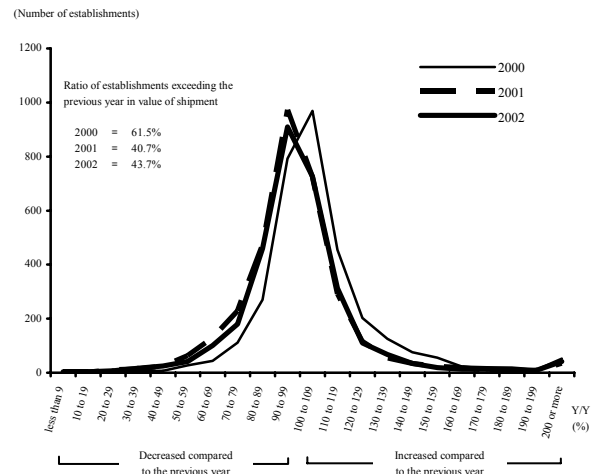
30 to 99 persons



100 to 299 persons



300 or more persons



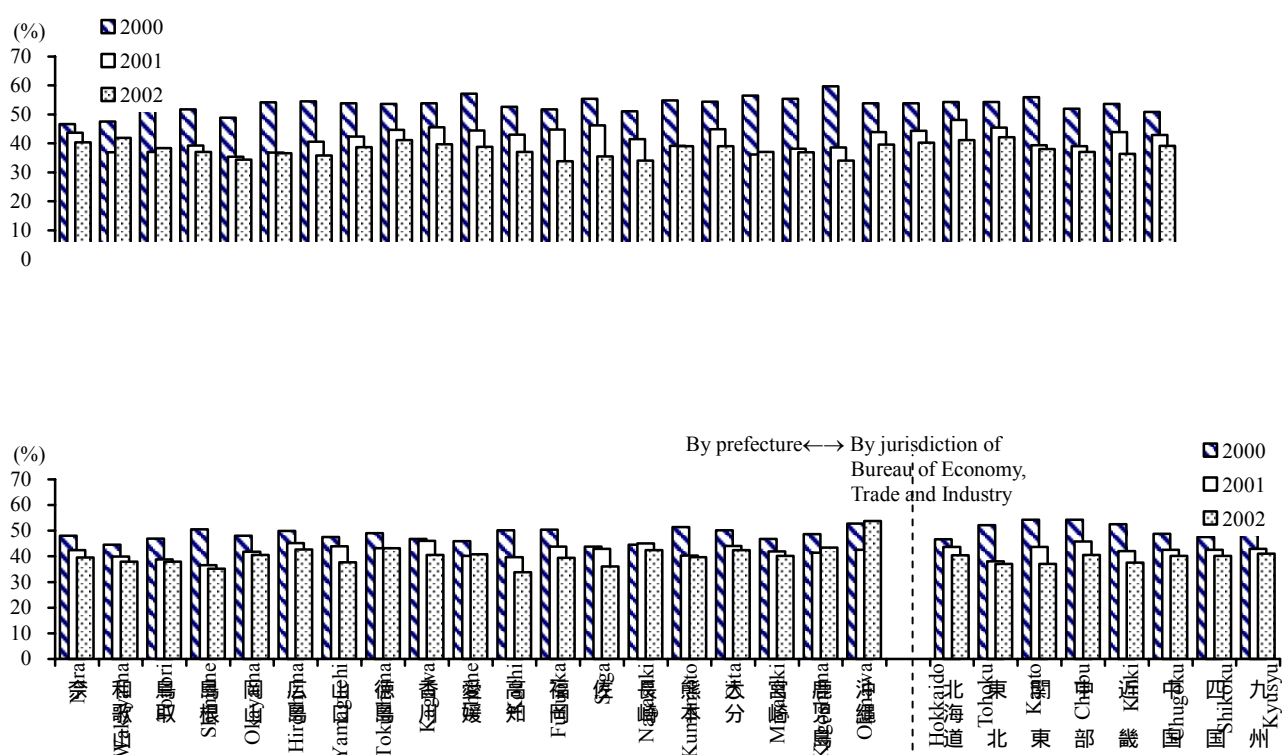
Comparing by prefecture, the ratio of establishments with higher value of shipment than the previous year was up in 7 prefectures including Okinawa, Aomori, Kagoshima and Iwate. In 40 prefectures, however, including Tokyo, Kanagawa, Osaka, Niigata, Aichi, Saga and Gunma, the ratio lowered.

Prefectures with high ratio of establishments with higher year-on-year value of shipment are Okinawa, Kagoshima, Tokushima, Hiroshima, Aomori, Nagasaki, Oita and Mie.

By area (jurisdiction of Bureau of Economy, Trade and Industry), the ratio of establishments with higher year-on-year value of shipment lowered in all areas. A large range of reduction was seen in regions of Kanto, Chubu and Kinki.

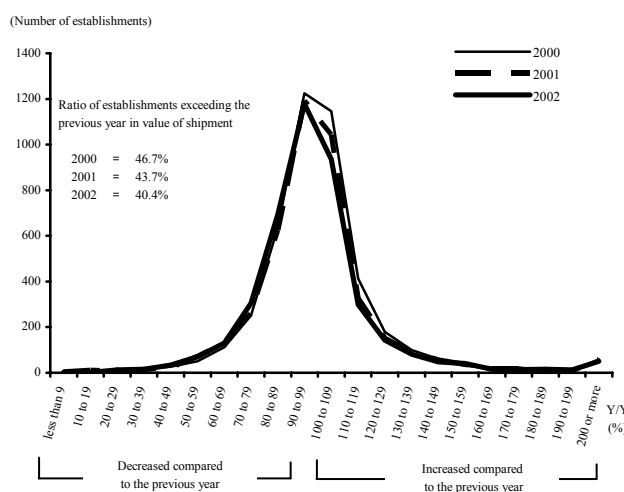
Meanwhile, the regions in which establishments with higher year-on-year value of shipment are located are Kyushu, Chubu, Hokkaido, Chugoku and Shikoku.

**Ratio of establishments with higher year-on-year value of shipment  
by prefecture and region**  
(Continuing establishments with 10 or more employees)

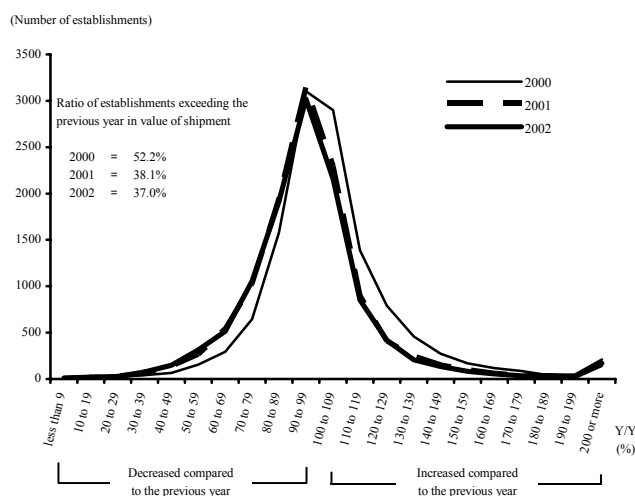


## Distribution of year-on-year value of shipment by region (Jurisdiction of Bureau of Economy, Trade and Industry)

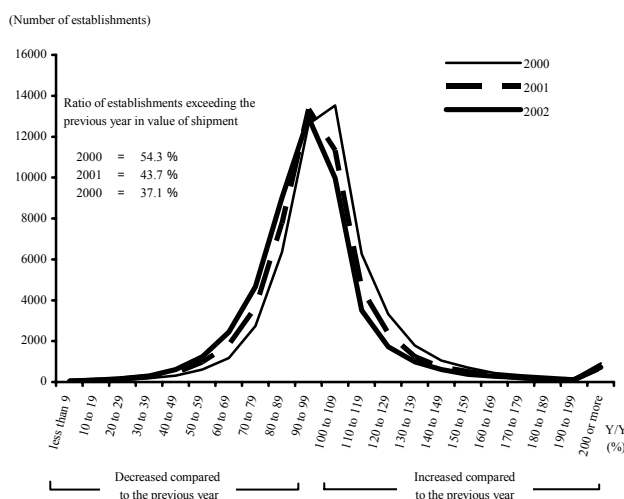
### Hokkaido



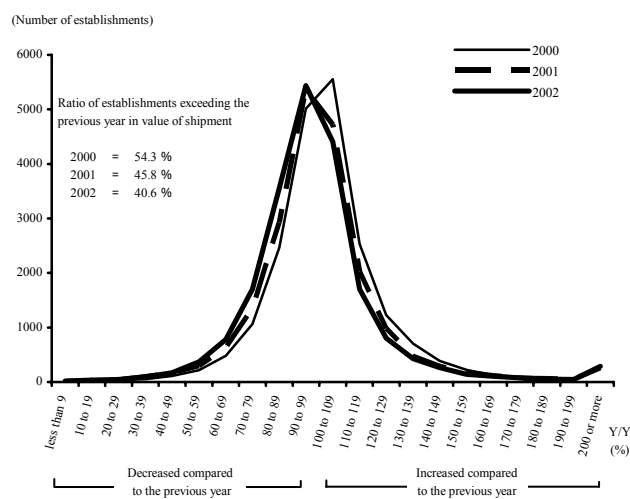
### Tohoku



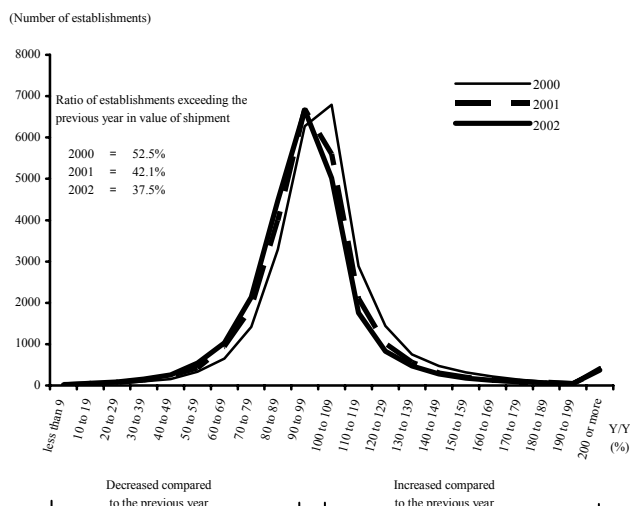
### Kanto



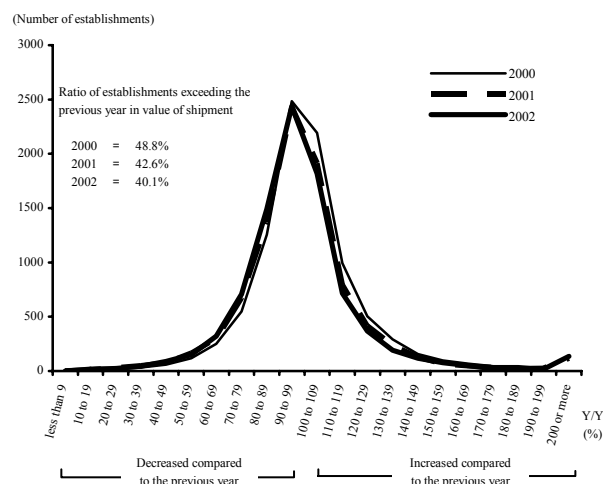
### Chubu



### Kinki

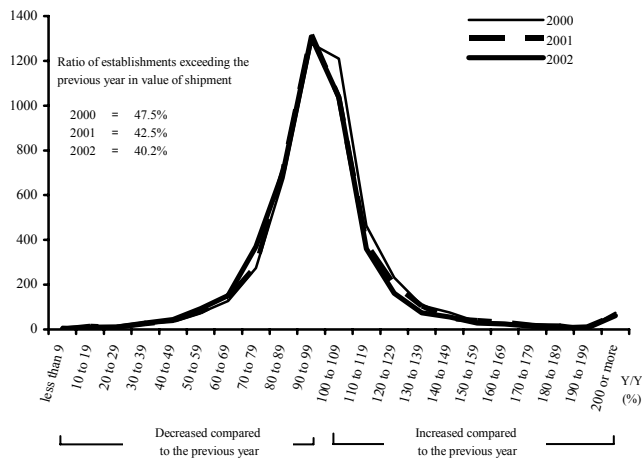


### Chugoku



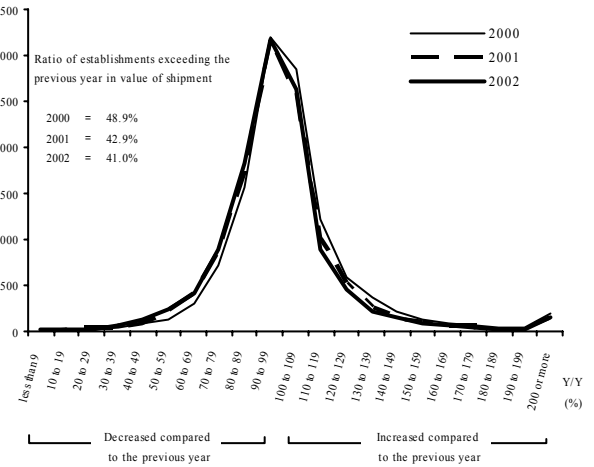
## Shikoku

(Number of establishments)



## Kyushu

(Number of establishments)



Prefectures of each Bureau of Economy, Trade and Industry are as follows:

Jurisdiction of Bureau of Economy, Trade and Industry	Prefecture
Hokkaido	Hokkaido
Tohoku	Aomori, Iwate, Miyagi, Akita, Yamagata, Fukushima
Kanto	Ibaraki, Tochigi, Gunma, Saitama, Chiba, Tokyo, Kanagawa Niigata, Yamanashi, Nagano, Shizuoka
Chubu	Toyama, Ishikawa, Gifu, Aichi, Mie
Kinki	Fukui, Shiga, Kyoto, Osaka, Hyogo, Nara, Wakayama
Chugoku	Tottori, Shimane, Okayama, Hiroshima, Yamaguchi
Shikoku	Tokushima, Kagawa, Ehime, Kochi
Kyushu	Fukuoka, Saga, Nagasaki, Kumamoto, Oita, Miyazaki, Kagoshima, Okinawa

## **II. Transition in Degree of Industry Concentration of the Japanese Manufacturing (Establishments with 4 or more employees)**

Since the reconstruction period after World War II, the Japanese manufacturing has significantly changed structures and grown through the rapid growth period, two oil crises and the boom and bust of the bubble economy. During these periods, the Japanese manufacturing companies had concentrated their facilities on to populous cities and the peripheral areas, expanded into areas where municipal governments attracted plants and firms by developing infrastructure such as airports and expressway networks as a local feature and relocated production bases overseas aimed at reducing labor cost. In this way, the Japanese manufacturing has changed its characteristics of regional developments on each stage of the economic growth periods.

### **1. Transition in degree of industry concentration of the manufacturing - From the long-term perspective -**

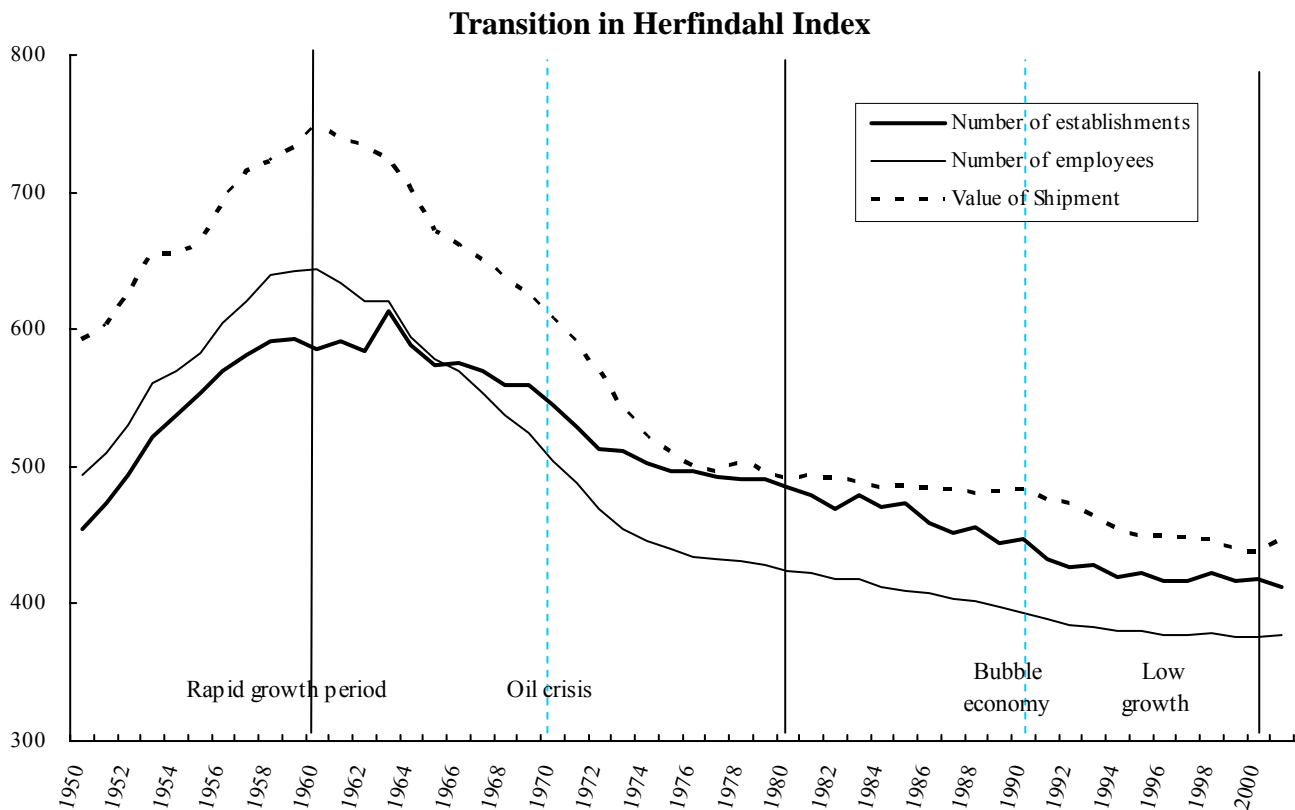
Looking at annual industry concentration in the number of establishments, employees and value of shipment by prefecture through Herfindahl Index (hereinafter referred to as “HI”) aimed at analyzing a long-term fluctuation in the concentration, the index value in all items is on the rise in the early part of the rapid growth period (1950’s), showing a high industry concentration on to specific regions. This explains the concentration of establishments to large cities and their peripheral areas, which hold much working force and are also located near consuming regions.

During the late part of the rapid growth period (1960’s), the HI turns around and shows a declining trend. This indicates that many establishments relocated from cities and their peripheral areas to local regions where manufacturers built new plants and factories after active movements attracting industries to industrial parks by municipal governments because of social problems including environmental hazards occurred by concentration of population and industries to specific areas.

In 1970’s, the Japanese manufacturing underwent two oil crises. In terms of industry concentration and decentralization, however, it shows the same trend in 1960’s. It is presumably due to the improvement of infrastructure including airports and expressway networks.

While the early part of 1980’s was a stable period of growth and led the late part to the bubble economy, the degree of concentration shows a mild declining trend. During this period, there was no change in industry concentration because there had been a perspective broadly seen that the domestic economic growth would hit a bottom with an end to the rapid growth period. In the late 1980’s, the economy had shifted to the bubble economy and investment overseas was active. The shift in relocation of production bases overseas from the late 1980’s through 1990’s may have contributed to lowering of industry concentration in a way of reduction in production capability of production areas.

With the bubble economy collapsed in 1990’s, there has been a continued low growth period for consequent 10 years at the macro level and the degree of concentration seen in HI has been slowly declining.



Note 1:

In this section, degree of industry concentration to prefectures is analyzed by Herfindahl Index. The index is calculated by totaling of squared national shares (%) of all prefectures. The higher the index value means more concentration of manufacturing activities on specific prefectures. If such concentration is not seen i.e. all prefectures have the same value in the index, the value will be about 213 which is the minimum of the index. On the contrary, if the manufacturing activities are concentrated on a single prefecture and the value of all other prefectures is zero, the value will be 10000, the maximum. For example, the value of ten prefectures is the same and that of other prefectures is zero (i.e. the activities are equally concentrated on the top ten prefectures), the index will be 1000. Likewise, if there is an equal concentration on the top five prefectures, the index will be 2000. Therefore, it may be said that the index value of close to 1000 means that there is a considerably high industry concentration.

$$\text{Herfindahl Index (HI)} = \sum (X_i/X \cdot 100)^2$$

Note 2:

Because of analysis in long time series in this section, former classifications such as “publishing, printing and allied products” and “electrical machinery, equipment and supplies” were used.

## 2. Characteristics by industry and the trend

Comparing the transition in the degree of concentration in the number of establishments by industry, the index value of “electrical machinery, equipment and supplies”, “precision instruments and machinery”, “fabricated metal products” and “publishing, printing and allied products” in 1950’s and 1960’s exceeds 1000, leading to concentration of those industries on specific regions.

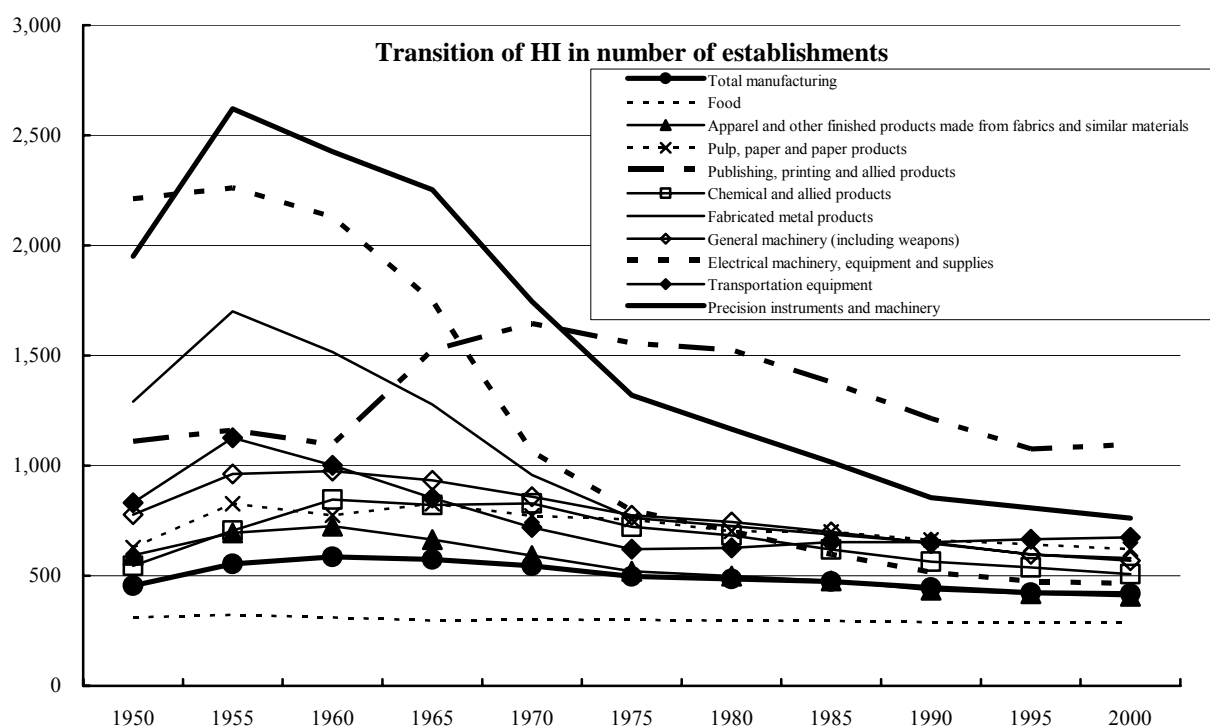
In particular, the index value of “precision instruments and machinery” was over 2500 in its peak year of 1955, showing a remarkably high degree of concentration. While the degree lowered with the decentralization which advanced in the rapid growth period, the index value



was still over 1000 in 1980's. It was nearly 800 even in a recent year of 2000, which indicates the industry has the high degree following “publishing, printing and allied products”.

On the other hand, the index value of “electrical machinery, equipment and supplies” surpassed 2000 in its peak year of 1955 showing that it is an industry with a extremely high degree of concentration. However, because of the rapid decentralization during the period of high growth and a continued decline of concentration consequently, the value was below 500 in 2000 and it is an industry with relatively low degree of concentration at present.

The index value of “fabricated metal products” was over 1500 in its peak year of 1955. While the decentralization advanced afterwards, the value remains at the level of about 600 in 2000.



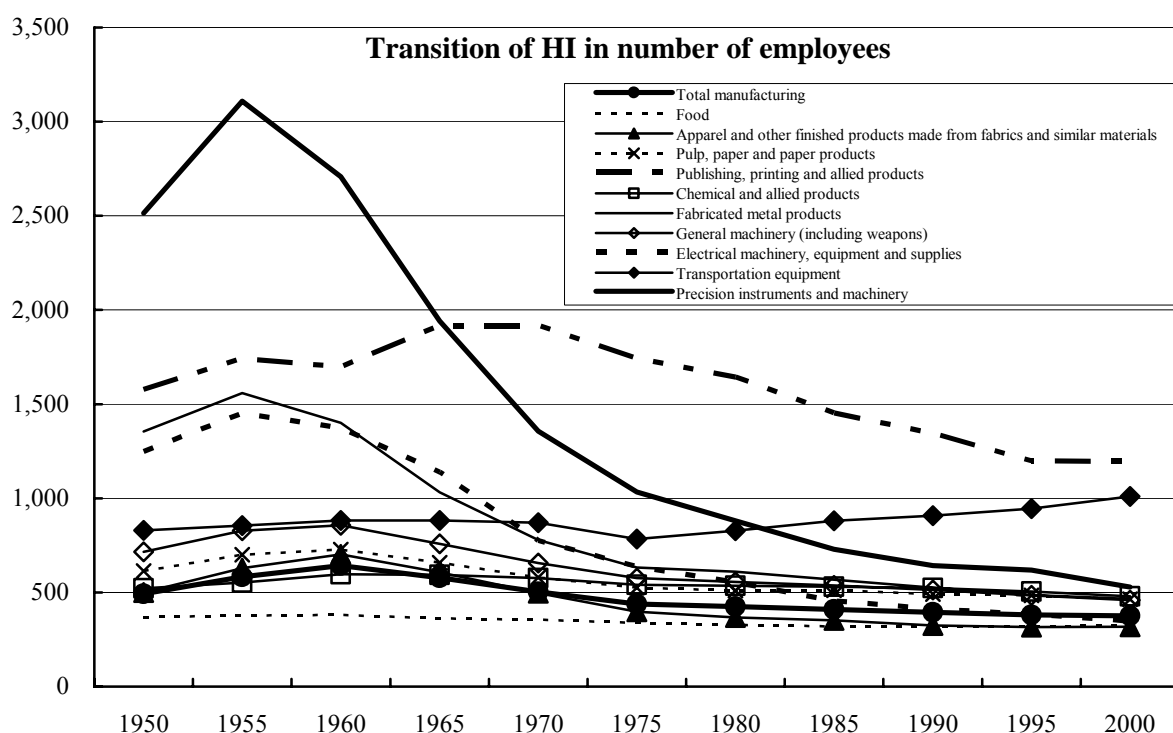
There is a completely different trend of transition seen in “publishing, printing and allied products”. Although the index value had remained at the level of over 1000 in 1950's, it increased in 1960's exceeding 1500 in 1970's. Afterwards, the value was over 1000 in 2000 despite the decentralization at a mild pace. “Publishing, printing and allied products” is the only industry that has surpassed 1000 in the index value during these periods. The reason for such trend is presumably that this industry is typically urban-type and its establishments concentrate on large cities. Incidentally, the share of “publishing, printing and allied products” in 2000 in Tokyo was 28.6%.

Amid decentralization in most of industries, the degree of concentration of “transportation equipment” has been on the rise since 1975.

On the other hand, as for industries with low degree of concentration, the index value of “food” has consistently remained at around 300. The reason for this is likely that the industry is coherent to consuming regions and has few factors for establishments' concentrating on

specific prefectures.

Observing degree of concentration by number of employees, the index value of “precision instruments and machinery”, “publishing, printing and allied products”, “fabricated metal products” and “electrical machinery, equipment and supplies” exceeded 1000 in 1950’s and 1960’s as the index value of the number of establishments in these industries. The share of “precision instruments and machinery”, which was enormously high in the degree of concentration, was 53.2% in Tokyo in 1955. Incidentally, the share of the industry in 2000 in Tokyo was 12.0%. In “publishing, printing and allied products”, the degree of concentration is the highest of all industries as that of the number of establishments even in 2000. The index value of “transportation equipment” indicates a mild concentration trend, exceeding 1000 in 2000, despite the advancement of decentralization in other industries after marking the peak in the rapid growth period.

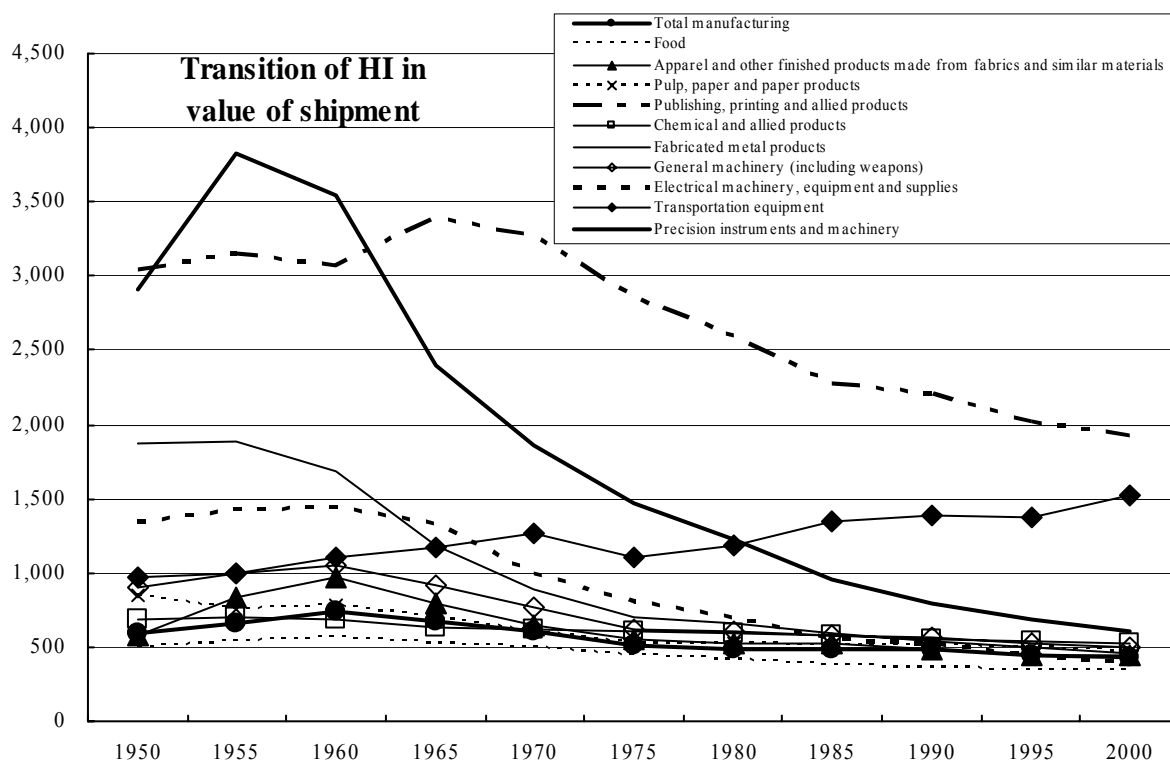


Looking at the degree of concentration in value of shipment, a high index value is indicated in “publishing, printing and allied products” constantly through all periods. It is a typical urban-type industry and produces much in large cities where information concentrates. Therefore, the index value was close to 2000 even in 2000. The number in “precision instruments and machinery” shows a rapid decentralization to local regions.

The index value in 1950’s was high at over 3500 because the shipment of surgical instruments, cameras and watches, which had much share in shipment which concentrated in Tokyo during this period. As the demand for devices including measurement equipment, finders and testers used in manufacturing fields became higher with the high growth in the economy, the share in value of shipment also increased. The production of these products did not concentrate on specific areas as much as surgical instruments, cameras and watches. Therefore, the degree of concentration seemingly lowered rapidly. As for “transportation equipment”, the degree is likely to be on the rise because many establishments providing related parts are located

around establishments with final assembly lines. The concentration degree in value of shipment is higher than that in the number of establishments, which is due to relatively higher value of shipment per establishment with final assembly lines.

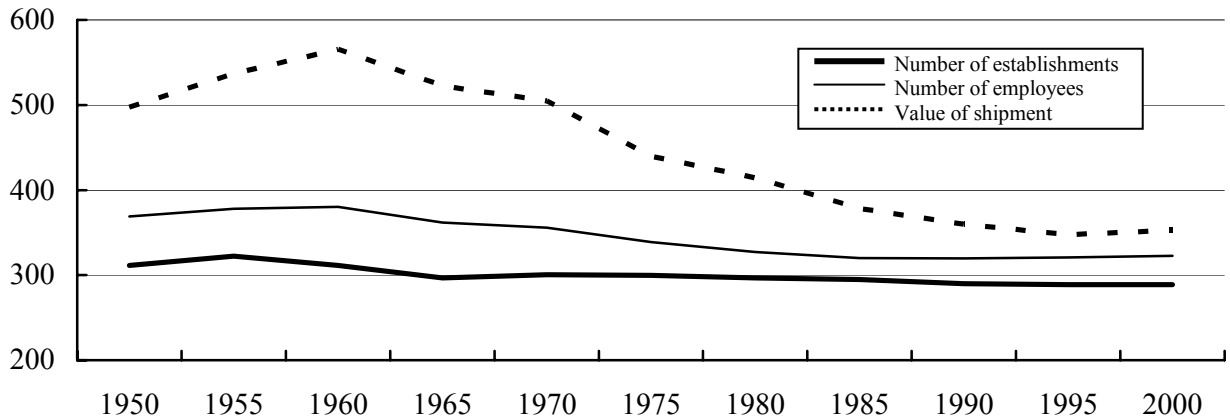
The conclusion for the past 50 years is that while the trend has been shifted from concentration on large cities to decentralization in all industries, only “transportation equipment” has slowly increased in the degree of concentration.



### 3. Transition in degree of concentration by industry

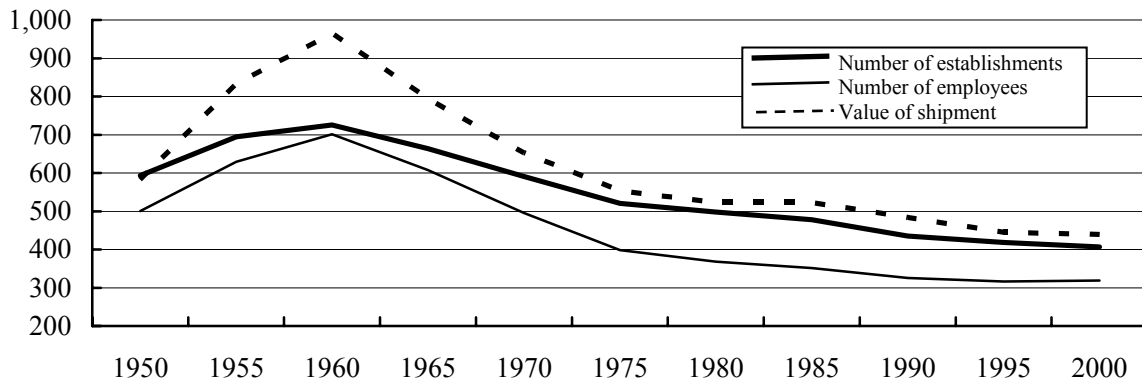
Observing the transition in degree of concentration in major industries every five year through HI, it is found that “food” is a coherent industry to living and regions. In the value of shipment, the degree of concentration in this industry was on the rise in 1950’s but there is no outstanding concentration trend in the number of establishments and employees, showing a wide distribution nationwide.

### Transition of HI in “food”



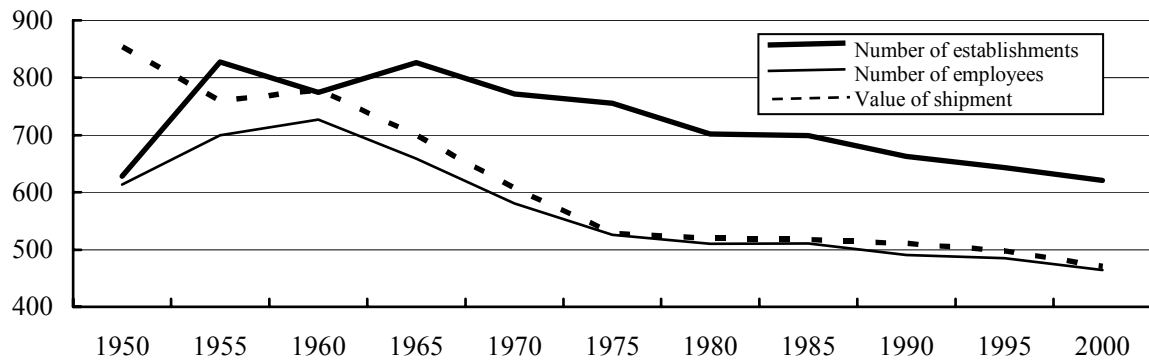
The degree of concentration of value of shipment in “apparel and other finished products made from fabrics and similar materials” was on the rise in 1950’s as well as that of the number of establishments and employees. After that period, the degree has been slowly declining.

### Transition of HI in “apparel and other finished products made from fabrics and similar materials”

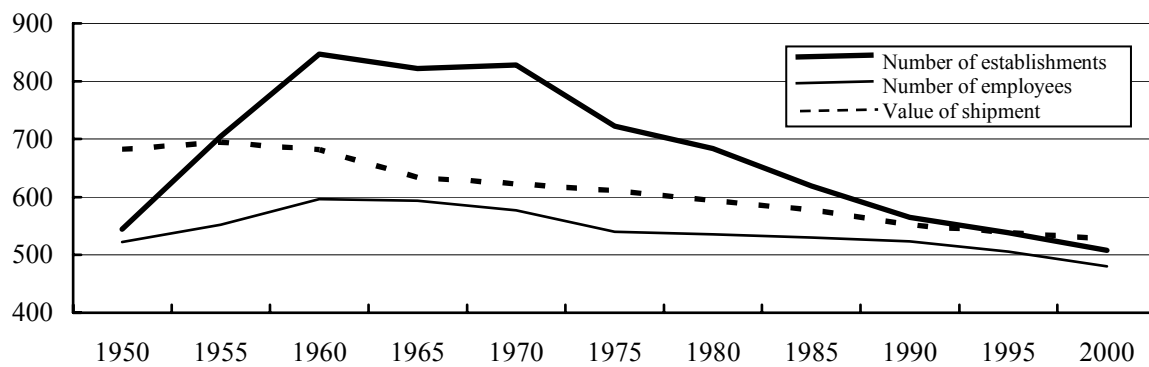


The concentration in establishments of “pulp, paper and paper products” and “chemical and allied products” was often seen in 1950’s because of many locations in industrial areas. Regarding “petroleum and coal products” and “iron and steel”, there are no steep angle in the graphs since 1950’s because they have much older history than the former two industries.

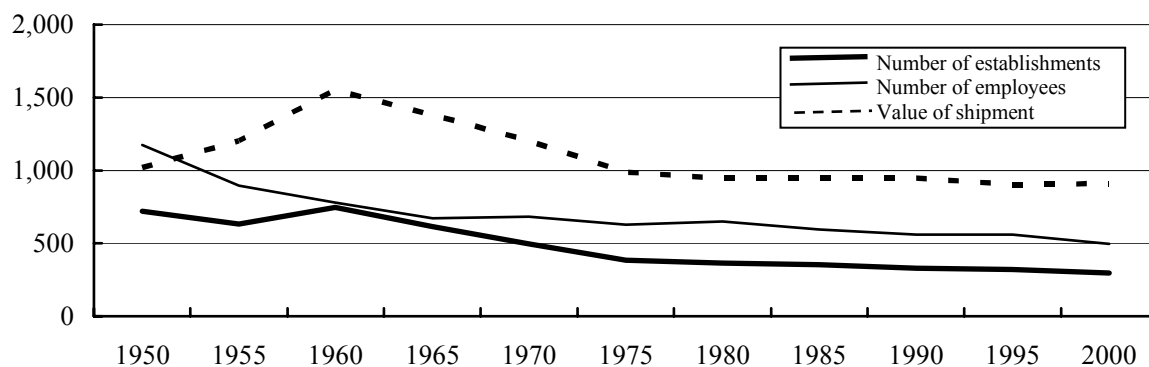
### Transition of HI in “pulp, paper and paper product”



### Transition of HI in “chemical and allied products”

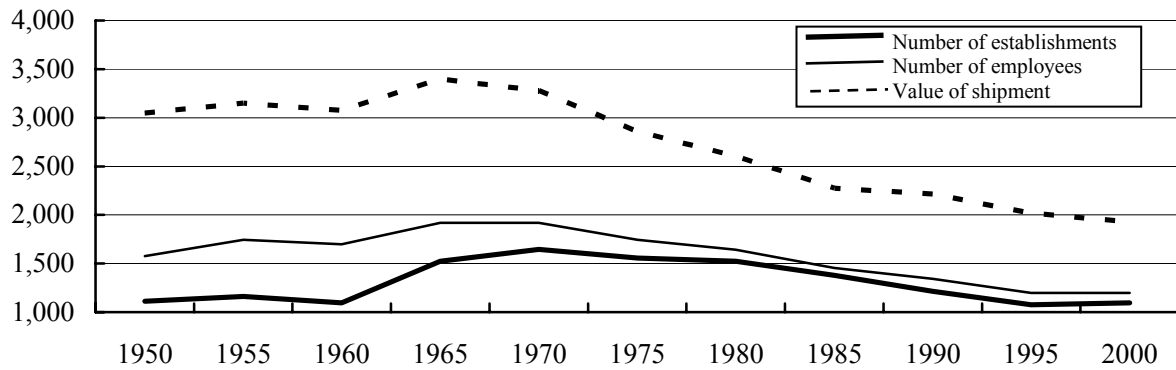


### Transition of HI in “petroleum and coal products”



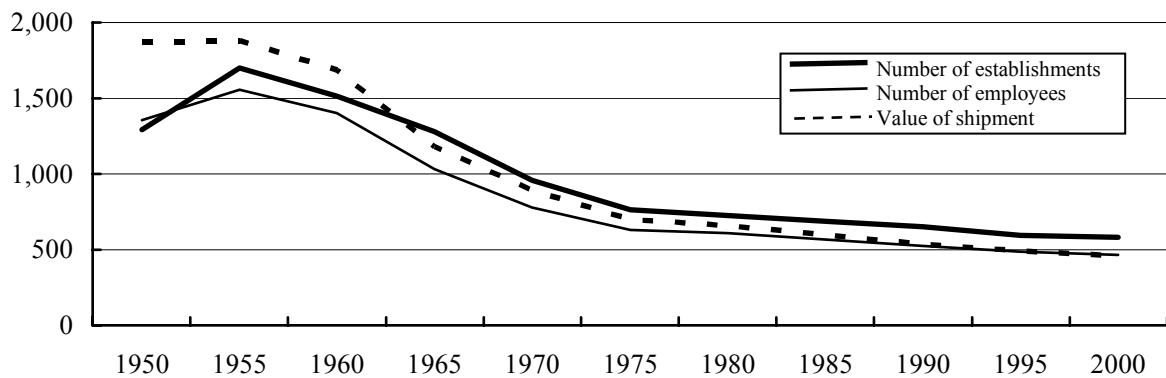
The HI of “publishing, printing and allied products” has a characteristic of higher value than other industries due to more concentration to demanding areas which are large cities. This trend is seen particularly in value of shipment. The concentration of the number of establishments and employees likely shows that medium- and small-sized establishments are located around demanding areas.

### Transition of HI in “publishing, printing and allied products”

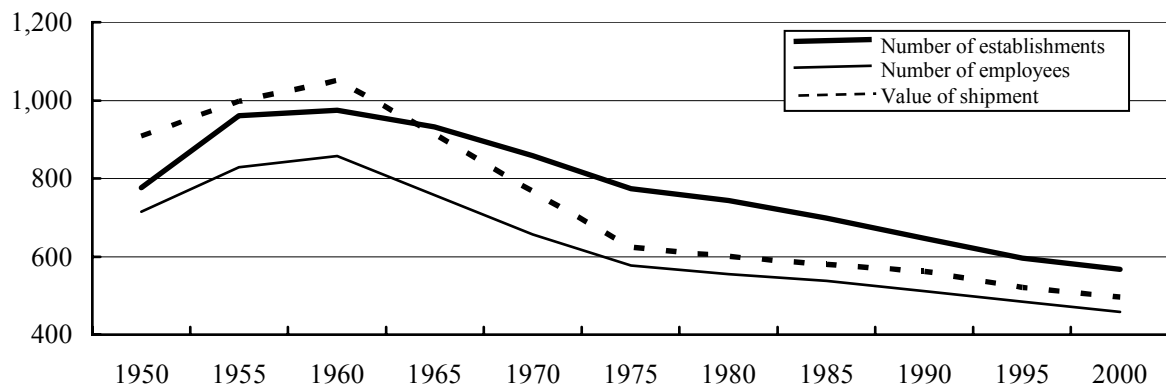


The degree of concentration in both “fabricated metal products” and “general machinery” rose in 1950’s and has slowly declined afterwards. This presumably means that establishments of these industries concentrated on Tokyo and Osaka in 1950’s but dispersed to their peripheral areas including Saitama, Kanagawa and Hyogo as the economy grew.

### Transition of HI in “fabricated metal products”



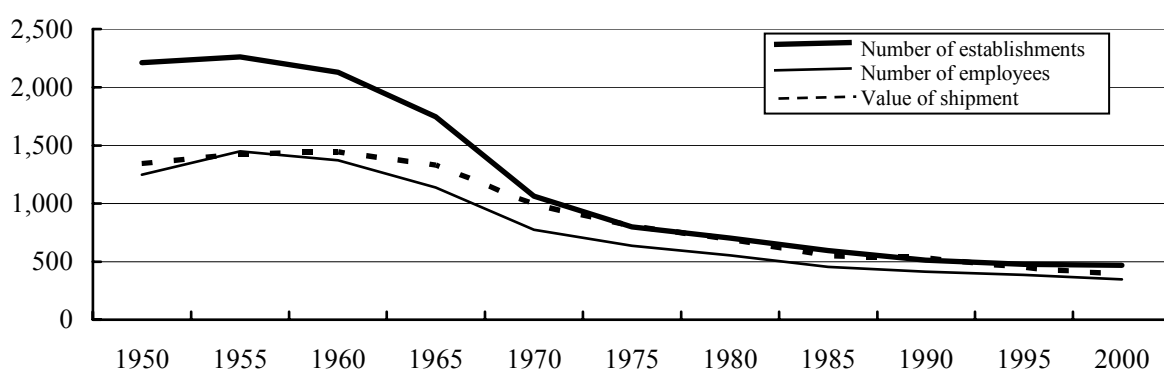
### Transition of HI in “general machinery”



Note: Including weapons

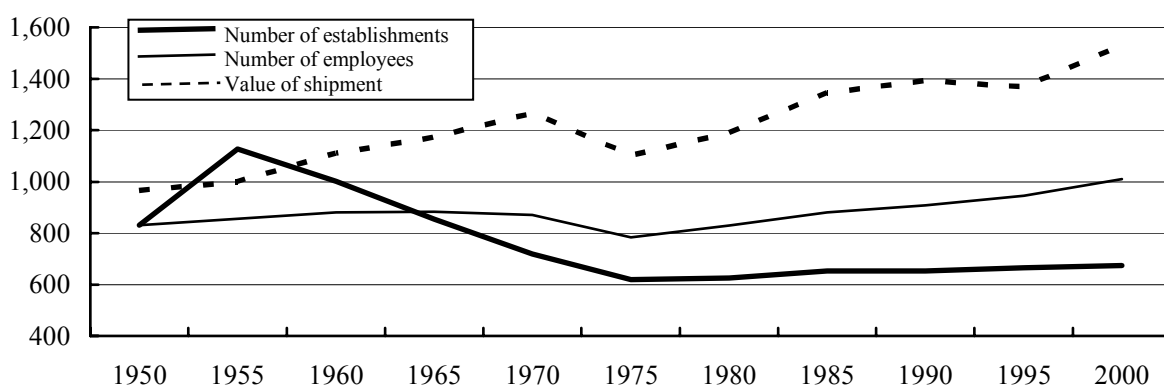
The establishment location in “electrical machinery, equipment and supplies” and “transportation equipment” resembles in a point that a large corporation and its subcontracting companies are located in the same area. However, the calculation of degree of concentration shows a significant difference between these two industries. The degree of industry concentration in “electrical machinery, equipment and supplies” had been extremely high during the rapid growth period and maintaining a high level in the establishment concentration until 1960’s. However, the graph indicates that establishments rapidly dispersed nationwide through relocation of plants and factories.

**Transition of HI in “electrical machinery, equipment and supplies”**



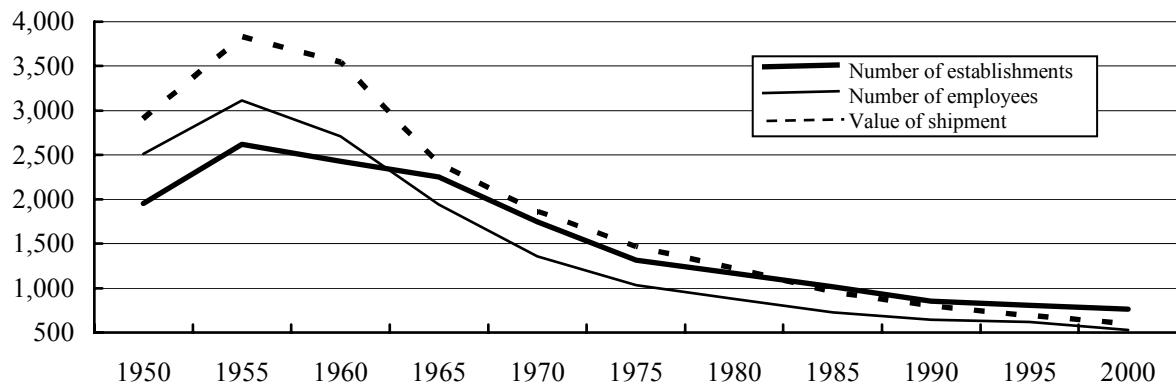
On the other hand, the production bases of “transportation equipment” cannot be easily moved to other places and the fluctuation of the index value therefore is not so significant. However, after restructuring of corporations and establishments since 1990’s, the degree of concentration has been on the rise. As for the concentration in value of shipment, it shows higher increase than that of the number of establishments and employees because the shipment often converges into final assembly line areas.

**Transition of HI in “transportation equipment”**



The production base of “precision instruments and machinery” is often narrowed to specific areas by product as local industries. Therefore, the index value had been considerably high in 1950’s and 1960’s. Since the late part of the rapid growth period, though, the trend indicates that the production bases dispersed around the country entailed by production rationalization.

### Transition of HI in “precision instruments and machinery”



As a result of the overview of transition of degree of industry concentration by industry at the macro level through HI, it is found that only the degree of “transportation equipment” has been on the rise in recent years and the degree of industry concentration in other industries has declined with varying degrees.