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Revision of the Input-Output Price Index of the Manufacturing Industry by Sector (IOPI) to the 2000 base

--- The Input-Output Price Index of the Manufacturing Industry by Sector (IOPI) focuses on the prices of products in the manufacturing industry. The IOPI consists of the Input Price Index and the Output Price Index, which covers prices of goods used for production and those made by production, respectively. See the explanation of The Input-Output Price Index of the Manufacturing Industry by Sector in the BOJ website for details.

I. Purpose and basic strategy of the revision

The Bank of Japan has revised the Input-Output Price Index of the Manufacturing Industry by Sector (IOPI) from the 1995 base to the 2000 base.

(1) The base year for weights and indexes are updated from the 1995 base to the 2000 base. For some indexes, the compilation procedures are also changed, reflecting the revision of its basic weight data source, the I-O Tables.

(2) In this revision, several efforts are made in order to maintain the statistical accuracy and to enhance the convenience for the users. For example, both the Input Price Index and the Output Price Index exclude consumption tax. In addition, the preliminary figures are released in the following month of the surveyed month.

II. Detailed contents of the revision

1. Changes in sector classification and commodity grouping

[Input Price Index]

	2000 Base(A)	1995 Base(B)	(A)-(B)
Major sector	14	14	0
(Sector)	(54)	(47)	+7
Aggregated major commodity group	18	18	0
Major commodity group	65	58	+7
Commodity group	322	326	-4

[Output Price Index]

	2000 Base(C)	1995 Base(D)	(C)-(D)
Major sector =Aggregated major commodity group	14	14	0
Major commodity group (=Sector)	54	47	+7
Commodity group	321	312	+9

Note: The indexes by *sector* are not compiled.

(1) Major sectors, aggregated major commodity groups

Both the Input Price Index and the Output Price Index are unchanged in content and number regarding *major sectors* (14) and *aggregated major commodity groups* (18 for the Input Price Index, 14 for the Output Price Index).

(2) Major commodity groups

In both the Input Price Index and the Output Price Index, the number of *major commodity groups* has been increased. This increase can be mostly explained by the additional setting of *major commodity groups* along with the revision of 2000 I-O Tables in which the

aggregated sector classification “electronic equipment and communication equipment” is divided into “electronic computing equipment and accessory equipment,” “communication equipment,” “semiconductor devices and integrated circuits” and the others.

(3) Commodity groups

In the Input Price Index, the number of *commodity groups* has been decreased, reflecting the abolishment of some sectors in the integration of *basic sector classification* and the addition of “reuse and recycling” sector in the 2000 I-O Tables (see reference for details).

In the Output Price Index, the number of *commodity groups* has been increased, reflecting the new selection of *commodities* such as “semiconductor making equipment” in the price data source, the 2000 base CGPI, and the division of *basic sector classification* in the *32 sector classification* “electrical machinery” in the 2000 I-O Tables.

2. Changes in weights

--- Major changes in *aggregated major commodity groups* for the *manufacturing industry sector* are as follows. See appendix 3 for the details, appendix 4 for the changes in *major sectors.*

[Input Price Index]

	Aggregated major commodity group	2000 base Weight	2000 base -1995 base
Increase In Weights	Transportation equipment	119.3	+29.6
	Electrical machinery	150.4	+12.1
	Mining	54.5	+10.9
Decrease In Weights	Iron and steel	84.5	-20.4
	Pulp, paper and wooden products	62.8	-11.8
	Textile products	15.3	-10.0

[Output Price Index]

Aggregated major commodity group	2000 base Weight	2000 base -1995 base
Transportation equipment	133.7	+16.8
Electrical machinery	189.2	+9.4
Petroleum and coal products	44.8	+8.5
Textile products	22.8	-13.6
Pulp, paper and wooden products	52.7	-10.8
Iron and Steel	49.4	-7.4

Note: Weights are expressed as one-thousandths of the *manufacturing industry sector* covered by the IOPI, rounded off the first decimal place.

(1) Input Price Index

The weights of “transportation equipment,” “electrical machinery” and “mining” have been increased while those of “iron and steel,” “pulp, paper and wooden products” and “textile products” have been decreased.

(2) Output Price Index

The weights of “transportation equipment,” “electrical machinery” and “petroleum and coal products” have been increased, while those of “textile products,” “pulp, paper and wooden products” and “iron and steel” have been decreased.

--- The weight increase of “transportation equipment” in both of the Input Price Index and the Output Price Index is attributable to the enlargement of the IOPI coverage (*commodity group* “internal combustion engines for motor vehicles and parts” in the Input Price Index and “internal combustion engines for motor vehicles and parts” and “aircrafts” in the Output Price Index are newly covered by the IOPI), accompanied by the selection of the new *commodities* in its price data source, the CGPI.

3. Changes in the compilation procedure regarding the consumption tax

In the 2000 base IOPI, both the Input Price Index and the Output Price Index are compiled excluding the consumption tax, while in the 1995 base IOPI, the index which excludes the consumption tax was compiled only for the Exports in the Output Price Index. This change of the IOPI is brought about by the use of data from CGPI, which has started to release the Domestic Corporate Goods Price Index excluding Consumption Tax in the 2000 base.

--- Prior to the above changes, the different compilation procedure between the Input Price Index and the Output Price Index had caused fluctuations in the Output/Input Price Ratio Index, and these had been found whenever the rate of the consumption tax was changed. These fluctuations are no longer observed in the 2000 base IOPI[1].

4. Revision with the publication procedure

In the 2000 base IOPI, both the preliminary and final figures are released for each surveyed month in order to improve the convenience for the users. In principle, the preliminary

[1] In the 1995 base IOPI, this difference in the compilation procedure lowered the Output/Input Price Ratio Index of April 1997, when the tax rate was raised. The retrospective revision regarding consumption tax for the 2000 base linked index is not conducted for the figure of April 1997.

figures are released on the tenth working day of the following month and the final figures are released on the publication day of the month after that[2].

--- Monthly publications of the 2000 base IOPI have started with the preliminary figures of August 2005 and the final figures of July 2005. Index compilation for the 1995 base IOPI was finished with the June 2005 index. The 2000 base IOPI has been compiled from the January 2000 index, and the 2000 base linked index has been compiled from the January 1990 index.

III. Characteristics of the index

1. Development of the index

The indexes for the *manufacturing industry sector* have been increasing from the end of 2003 for both the Input Price Index and the Output Price Index. The Output/Input Price Ratio Index (The Output Price Index divided by the Input Price Index) has been declining, because the increase of the Input Price Index is faster than that of the Output Price Index (Appendix 5).

--- In *major sectors*, "electrical machinery" has been showing a downward trend, while materials-related products such as "petroleum and coal products," "chemical products," "iron and steel" and "non-ferrous metals" have been rising at a fast pace from the end of 2003, for both the Input Price Index and the Output Price Index (Appendix6).

--- The Output/Input Price Ratio Index in *major sectors* has been decreasing in most of *major sectors*, especially in "non-ferrous metals," "electrical machinery," "chemical products" and "petroleum and coal products." (Appendix6).

2. Comparison with the 1995 base IOPI

Concerning the index developments, the 2000 base IOPI is lower than the 1995 base IOPI

[2] In the 1995 base IOPI, figures were released on the eighth working day of the month, two months after the surveyed month.

(converted by the average of 2000 = 100) during the surveyed period for both the Input Price Index and the Output Price Index, and the discrepancies are increasing (Appendix 5). The following two factors are causing these discrepancies.

(1) The base year for weights and indexes are updated from 1995 to 2000.

(2) The data source of the IOPI price data is revised from the 1995 base to the 2000 base.

--- The 2000 base IOPI adopts the 2000 base Corporate Goods Price Index (CGPI) for entire sample period while the 1995 base IOPI adopted the 1995 base Wholesale Price Index until November 2002 and adopted the 2000 base CGPI after that, as the price data source.

(1) The effects of the update of the base year

As for the index which is compiled using fix-weighted Laspeyres index formula, the following characteristics are noted as problematic especially when the index is extended away from the base year.

(a) The weights do not reflect the latest share of the transaction value of commodities.

(b) The significance of each *commodity* index to the index of higher level of aggregation increases (decreases) whenever its index level is high (low).

Concerning the effect of the weight changes from the base year, it is found from the Paashe-Check that the discrepancy between the indexes of the *manufacturing industry sector* has recorded approximately -3.0% for both of the Input Price Index and the Output Price Index[3]. It is mainly because of the fact that the index level of *aggregated major*

[3] The Paashe-Check is defined as the difference between the Laspeyres index and the Paashe index divided by the Laspeyres index and is used to evaluate the discrepancy of two indexes. The bigger the discrepancy, the greater the estimated effect of the weight changes during the focused period (from 1995 to 2000 in this case). The Paashe-Check is widely used to ensure the reliability of the Laspeyres index but the discrepancy is also observed when no weight change occurs. This is because the Paashe index is calculated from harmonic mean while the Laspeyres index is calculated from arithmetic mean of the

commodity group “electrical machinery” in the 2000 base has been lower than that in the 1995 base.

(2) The effect of the revision of the CGPI

Within the revision from the 1995 base WPI to the 2000 base CGPI, the revision of the sample prices is conducted in addition to the regular revision practices of the base year such as the update of the base year for weights and indexes and the revision of the category classification of *commodities*[4].

This revision, especially the adoption of averaged prices and the change of quality adjustment methods, result in the relative decrease of the price index, reflecting the downward trend of actual contract prices and the rapid quality improvement of the machinery goods. The expansion of the discrepancy between the previous and the current IOPI during the period from January 2000 to November 2002 where the 1995 base WPI was adopted by the 1995 base IOPI, is presumed to be attributable to those revisions.

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commodities. The discrepancy becomes larger as the variance of the index levels increases.

[4] Specifically, the following measures are taken to improve the statistical accuracy (please refer to “the characteristics of the 2000 base CGPI” in the Bank of Japan Monthly Bulletin, January 2003 edition, for details).

(a) The increase of the sample prices by approximately 70%.

(b) The employment of the averaged prices for the commodities where it is difficult to collect the sample prices by the conventional surveying methods, to the extent possible without compromising the fixed quality condition.

(c) The wider use of “hedonic regression” among the commodities such as those adopting the informational technologies, where fast technological innovation is observed.

(Reference)

The classification of scrap and by-products

In the 2000 I-O Tables, scrap and by-products are classified as the output from the newly established manufacturing sector, “reuse and recycling”, and as the input to the other sectors, as the result of classification revision (see Box below for details). In the IOPI, however, “reuse and recycling” is not categorized in the *manufacturing industry sector* because the output value of “reuse and recycling” includes the transaction value of the reuse and recycling services as well as the output value of scrap and by-products.

1. Input Price Index

“Reuse and recycling” is excluded from the sector classification because “reuse and recycling” covers the “reuse and recycling” services of scrap and by-products, which is not in the category of *manufacturing industry sector*, and there is no information for subtracting the output value of those services from that of “reuse and recycling.” In commodity grouping, on the other hand, *major commodity group* “reuse and recycling” is newly established in *aggregated major commodity group* “miscellaneous manufacturing products,” according to the 2000 I-O Tables, and scrap and by-products belong to this group.

--- *Major commodity group* and *commodity group* related to “reuse and recycling” are established for each *manufacturing industry sector / major sector* since commodities differ greatly depending on where they are directed to (for example, “reuse and recycling to "foods"” for the commodities directed to foods sector).

--- The commodities in *commodity group* established for each *manufacturing industry sector / major sector* are selected, referring to the input value of “Table on Scrap and By-Products” in the supplementary tables of the 2000 I-O Tables.

2. Output Price Index

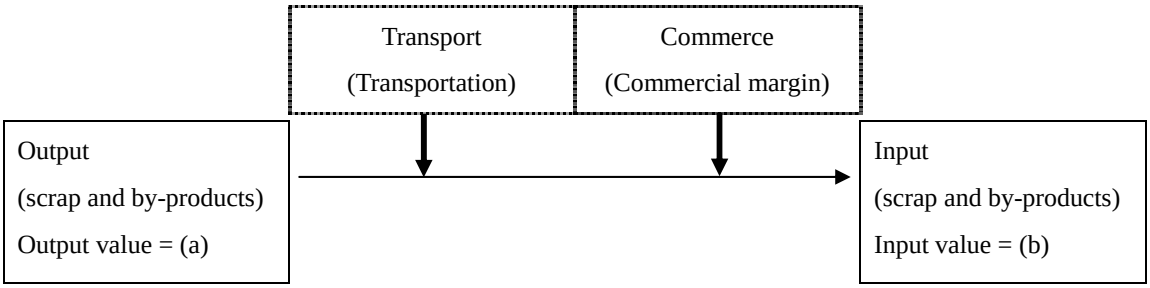
In the Output Price Index, where the products of each sector classification and its commodity grouping are the same, “reuse and recycling” is not established in the commodity grouping because of the same reason in the Input Price Index. As in the 1995 base IOPI, scraps and by-product which do not include reuse and recycling services are categorized as *commodity group*, belonging to each *major commodity group* that produces scraps and by-products.

--- The commodities in each *commodity group* are selected, referring to the output value of “Table on Scrap and By-Products” in the supplementary tables of the 2000 I-O Tables.

(Box)

Change in the compilation procedure of scrap and by-products in the I-O Tables

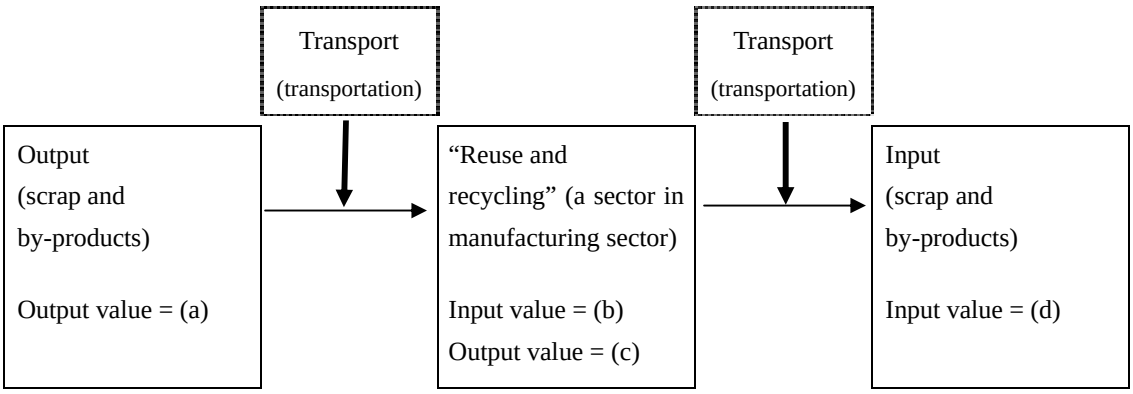
<I-O Tables before 2000>



--- In calculating the output value of scrap and by-products, (a) is subtracted. (b) at purchasers’ prices equals to (a) + transportation cost + commercial margin.

--- Transport cost and the cost for reuse and recycling of scrap and by-products are not included in the domestic production of the manufacturing industry in the I-O Tables before 2000. This is because in these I-O Tables, they are categorized as transportation services and commerce, respectively and not categorized as manufacturing sector.

<2000 I-O Tables>



--- In calculating the output value of scrap and by-products, (a) is subtracted. (c) is the output value from "reuse and recycling" sector (newly established manufacturing sector that reuse and recycle scrap and by-products) and its value equals to (b) plus cost of reuse and recycling. The domestic production of the manufacturing sector in the 2000 I-O Tables is, thus, greater than those in the previous I-O Tables by the amount of (c), at producers' prices.

--- (d) at purchasers' prices is (c) plus transportation cost, which equals to (b) in the I-O Tables before 2000 (at purchasers' prices).

(Appendix 1)

Changes in the number of commodity groups

1. Input price index

Aggregated major commodity group	2000base (A)	1995base (B)	Change (A)-(B)	Newly selected	Abolished	Combined	Divided
Manufacturing industry	322	326	-4	+9	-10	-7	+4
Agriculture, forestry and fishery	25	28	-3	+1	-4	0	0
Mining	10	11	-1	0	0	-1	0
Foods	37	41	-4	0	-2	-2	0
Textile products	14	15	-1	0	0	-1	0
Pulp, paper and wooden products	17	18	-1	0	-1	0	0
Chemical products	55	56	-1	+1	-1	-1	0
Petroleum and coal products	10	10	0	0	0	0	0
Ceramic, stone and clay products	16	16	0	0	0	0	0
Iron and steel	17	17	0	0	-1	0	+1
Non-ferrous metals	10	10	0	+1	-1	0	0
Metal products	10	10	0	0	0	0	0
General machinery	27	26	+1	+3	0	-2	0
Electrical machinery	31	28	+3	0	0	0	+3
Transportation equipment	6	5	+1	+1	0	0	0
Precision instruments	6	6	0	0	0	0	0
Miscellaneous manufacturing products	27	25	+2	+2	0	0	0
Electricity, gas and heat supply	2	2	0	0	0	0	0
Water supply and waste management services	2	2	0	0	0	0	0

2. Output price index

Aggregated major commodity group	2000base (A)	1995base (B)	Change (A)-(B)	Newly selected	Abolished	Combined	Divided
Manufacturing industry	321	312	+9	+10	-7	-3	+9
Foods	40	43	-3	0	-2	-1	0
Textile products	14	15	-1	0	0	-1	0
Pulp, paper and wooden products	19	18	+1	+1	0	0	0
Chemical products	58	57	+1	+2	-1	-1	+1
Petroleum and coal products	12	12	0	0	0	0	0
Ceramic, stone and clay products	18	18	0	0	0	0	0
Iron and steel	22	20	+2	0	0	0	+2
Non-ferrous metals	10	9	+1	+1	0	0	0
Metal products	12	12	0	0	0	0	0
General machinery	30	30	0	+2	-2	0	0
Electrical machinery	37	32	+5	0	0	0	+5
Transportation equipment	13	12	+1	+2	-2	0	+1
Precision instruments	7	7	0	0	0	0	0
Miscellaneous manufacturing products	29	27	+2	+2	0	0	0

(Appendix 2)

Changes in commodity groups

1. Input price index

1.1. Increase caused by the newly adopted commodity price data from the CGPI (+8)

(Note) The numbers in the table are the row code of basic sector classification in the I-O Tables.

Aggregated major commodity group / Commodity group (2000 base)
Agriculture, forestry and fishery
0311-041 Marine culture
Chemical products
2031-029 Other petrochemical aromatic products
Non-ferrous metals
2721-021 Optical fiber cables
General machinery
3029-041 Semiconductor making equipment
3111-099 Other office machines
3112-012 Amusement machinery
Transportation equipment
3541-021 Internal combustion engines for motor vehicles and parts
Miscellaneous manufacturing products
2211-019 Other plastic products

1.2. Decrease caused by the Abolished commodity price data from the CGPI (-7)

(Note) The numbers in the table are the row code of basic sector classification in the I-O Tables.

Aggregated major commodity group / Commodity group (1995 base)
Agriculture, forestry and fishery
0121-091 Sheep and lamb wool
0122-011 Sericulture
0213-011 Special forest products (inc. hunting)
0312-001 Inland water fisheries and culture
Foods
1111-014 Other meat (bone meat)
1112-031 Animal oils and fats
Chemical products
2051-011 Rayon, acetate

Changes in commodity groups (cont'd)

1.3. Decrease due to the change in classifications of the I-O Tables (-2)

(Note) The numbers in the table are the row code of basic sector classification in the I-O Tables.

Combined commodity group (-7)

Aggregated major commodity group Commodity group (1995 base)	Aggregated major commodity group Commodity group (2000 base)
Mining	Mining
0711-011 Coking coal 0711-012 Steam coal, lignite and anthracite	0711-011 Coal mining
Foods	Foods
1113-051 Fish oil and meal* *excluding fish oil 1131-011 Feeds	1131-011 Feeds
1121-031 Ethyl alcohol for liquor manufacturing 1121-099 Other liquors	1121-099 Other liquors
Textile products	Textile products
1511-011 Raw silk 1511-021 Fiber yarns	1511-011 Fiber yarns
Chemical products	Chemical products
2011-011 Ammonia 2011-021 Chemical fertilizer	2011-011 Chemical fertilizer
General machinery	General machinery
3111-091 Electronic calculator 3111-092 Word processing machine 3111-099 Other office machines, n.e.c.	3111-099 Other office machines

Divided commodity group (+4)

Aggregated major commodity group Commodity group (1995 base)	Aggregated major commodity group Commodity group (2000 base)
Iron and steel	Iron and steel
2623-011 Cold-finished steel	2623-011 Cold-finished steel (ordinary steel) 2623-012 Cold-finished steel (special steel)
Electrical machinery	Electrical machinery
3212-011 Household electric appliance	3212-011 Household air-conditioners 3212-021 Household electric appliances (except air-conditioners)
3311-011 Electric computing equipment (main parts)	3311-011 Personal Computers 3311-021 Electronic computing equipment (except personal computers)
3321-021 Radio communication equipment	3321-021 Cellular phones 3321-031 Radio communication equipment (except cellular phones)

Newly-established commodity group (+1)

Aggregated major commodity group Commodity group (1995 base)	Aggregated major commodity group Commodity group (2000 base)
Other industrial products	Miscellaneous manufacturing products
-- --	3921-011 Reuse and recycling

Changes in commodity groups (cont'd)

2. Output price index

2.1. Increase caused by the newly adopted commodity price data from the CGPI (+7)

(Note) The numbers in the table are the row code of basic sector classification in the I-O Tables.

Aggregated major commodity group	Commodity group (2000 base)
Chemical products	2031-029 Other petrochemical aromatic products
Non-ferrous metals	2721-021 Optical fiber cables
General machinery	3029-041 Semiconductor making equipment
	3112-012 Amusement machinery
Transportation equipment	3541-021 Internal combustion engines for motor vehicles and parts
	3622-011 Aircrafts
Miscellaneous manufacturing products	2211-019 Other plastic products

2.2. Decrease caused by the Abolished commodity price data from the CGPI (-7)

(Note) The numbers in the table are the row code of basic sector classification in the I-O Tables.

Aggregated major commodity group	Commodity group (1995 base)
Foods	1111-015 By-products of slaughtering and meat processing
	1112-031 Animal oils and fats
Chemical products	2051-011 Rayon, acetate
General machinery	3111-091 Electronic calculator
	3111-092 Word processing machine
Transportation equipment	3611-011 Steel ships
	3611-021 Ships except steel ships

Changes in commodity groups (cont'd)

2.3. Decrease due to the change in classifications of the I-O Tables (+1)

(Note) The numbers in the table are the row code of basic sector classification in the I-O Tables.

Combined commodity group (-3)

Aggregated major commodity group Commodity group (1995 base)	Aggregated major commodity group Commodity group (2000 base)
Foods	Foods
1121-031 Ethyl alcohol for liquor manufacturing 1121-099 Other liquors	1121-099 Other liquors
Textile products	Textile products
1511-011 Raw silk 1511-021 Fiber yarns	1511-011 Fiber yarns
Chemical products	Chemical products
2011-011 Ammonia 2011-021 Chemical fertilizer	2011-011 Chemical fertilizer

Divided commodity group (+4)

Aggregated major commodity group Commodity group (1995 base)	Aggregated major commodity group Commodity group (2000 base)
Iron and steel	Iron and steel
2623-011 Cold-finished steel	2623-011 Cold-finished steel (ordinary steel) 2623-012 Cold-finished steel (special steel)
Electricity, gas and heat supply	Electricity, gas and heat supply
3212-011 Household electric appliance	3212-011 Household air-conditioners 3212-021 Household electric appliances (except air-conditioners)
3311-011 Electric computing equipment (main parts)	3311-011 Personal Computers 3311-021 Electronic computing equipment (except personal computers)
3321-021 Radio communication equipment	3321-021 Cellular phones 3321-031 Radio communication equipment (except cellular phones)

(Appendix 3)

Changes in weights of aggregated major commodity groups in the manufacturing industry sector

1.Input price index

	2000base (A)	1995 base (B)	(A)-(B)
Manufacturing industry	1,000.0	1,000.0	--
Agriculture, forestry and fishery	48.4	57.3	-8.9
Mining	54.5	43.6	+10.9
Foods	42.8	43.2	-0.4
Textile products	15.3	25.3	-10.0
Pulp, paper and wooden products	62.8	74.6	-11.8
Chemical products	105.5	106.7	-1.1
Petroleum and coal products	21.3	18.1	+3.2
Ceramic, stone and clay products	21.9	24.5	-2.6
Iron and steel	84.5	104.9	-20.4
Non-ferrous metals	46.9	52.2	-5.2
Metal products	34.8	40.3	-5.6
General machinery	47.4	44.3	+3.1
Electrical machinery	150.4	138.3	+12.1
Transportation equipment	119.3	89.7	+29.6
Precision instruments	5.5	6.0	-0.5
Miscellaneous manufacturing products	106.8	97.5	+9.3
Electricity, gas and heat supply	29.1	30.7	-1.7
Water supply and waste management services	2.7	2.7	-0.0

2.Output price index

	2000base (A)	1995 base (B)	(A)-(B)
Manufacturing industry	1,000.0	1,000.0	--
Foods	118.0	114.7	+3.3
Textile products	22.8	36.4	-13.6
Pulp, paper and wooden products	52.7	63.5	-10.8
Chemical products	90.7	90.0	+0.8
Petroleum and coal products	44.8	36.3	+8.5
Ceramic, stone and clay products	29.7	34.7	-5.0
Iron and steel	49.4	56.8	-7.4
Non-ferrous metals	21.0	21.2	-0.2
Metal products	38.3	44.7	-6.4
General machinery	87.0	82.9	+4.2
Electrical machinery	189.2	179.8	+9.4
Transportation equipment	133.7	116.9	+16.8
Precision instruments	14.0	13.6	+0.4
Miscellaneous manufacturing products	108.7	108.6	+0.1

Note: Weights are expressed as one-thousandths of the manufacturing industry sector, rounded off the first decimal place.

(Appendix 4)

Changes in weights of major sectors

1.Input price index

	2000base (A)	1995 base (B)	(A)-(B)
Manufacturing industry	1,000.0	1,000.0	--
Foods	111.4	119.4	-8.1
Textile products	19.1	31.7	-12.7
Pulp, paper and wooden products	51.3	65.8	-14.5
Chemical products	83.2	78.0	+5.1
Petroleum and coal products	46.5	31.0	+15.5
Ceramic, stone and clay products	21.3	26.7	-5.4
Iron and steel	52.5	62.0	-9.5
Non-ferrous metals	22.3	24.8	-2.5
Metal products	35.0	45.0	-10.0
General machinery	89.2	87.8	+1.5
Electrical machinery	179.7	169.8	+9.9
Transportation equipment	182.8	152.0	+30.8
Precision instruments	11.0	11.3	-0.3
Miscellaneous manufacturing products	94.8	94.7	+0.1

2.Output price index

	2000base (A)	1995 base (B)	(A)-(B)
Manufacturing industry	1,000.0	1,000.0	--
Foods	118.0	114.7	+3.3
Textile products	22.8	36.4	-13.6
Pulp, paper and wooden products	52.7	63.5	-10.8
Chemical products	90.7	90.0	+0.8
Petroleum and coal products	44.8	36.3	+8.5
Ceramic, stone and clay products	29.7	34.7	-5.0
Iron and steel	49.4	56.8	-7.4
Non-ferrous metals	21.0	21.2	-0.2
Metal products	38.3	44.7	-6.4
General machinery	87.0	82.9	+4.2
Electrical machinery	189.2	179.8	+9.4
Transportation equipment	133.7	116.9	+16.8
Precision instruments	14.0	13.6	+0.4
Miscellaneous manufacturing products	108.7	108.6	+0.1

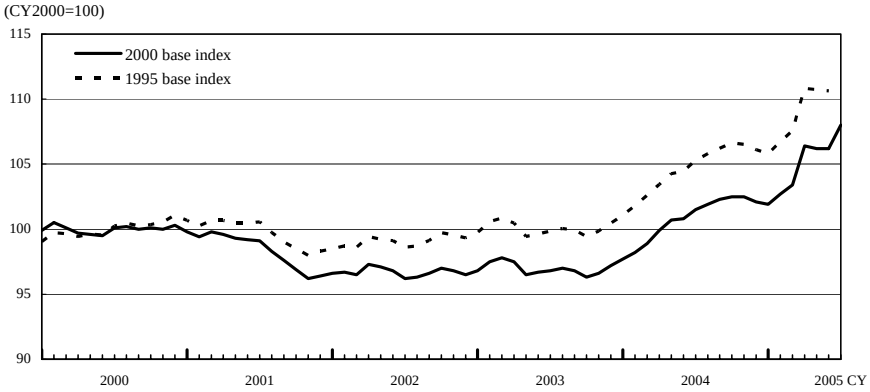
Notes: 1. Weights are expressed as one-thousandths of the manufacturing industry sector, rounded off the first decimal place.

2. As the category “major sector” is common to “major aggregated commodity group” in the output price index, the table of the output price index is the same as the table in Appendix 3.

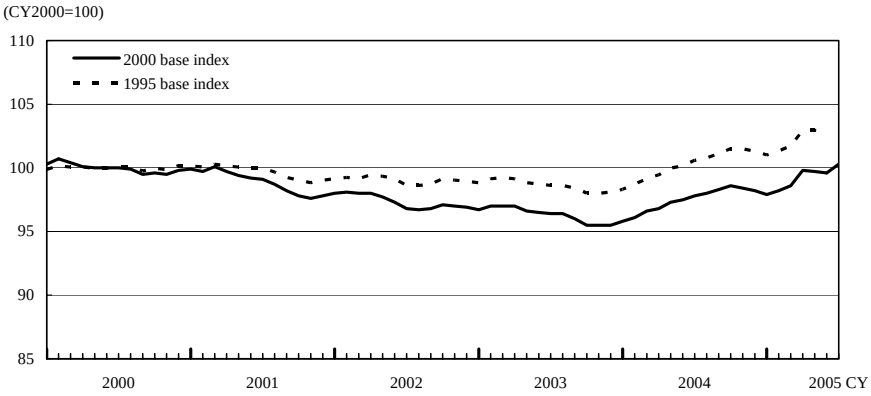
(Appendix 5)

Indexes for the manufacturing industry sector

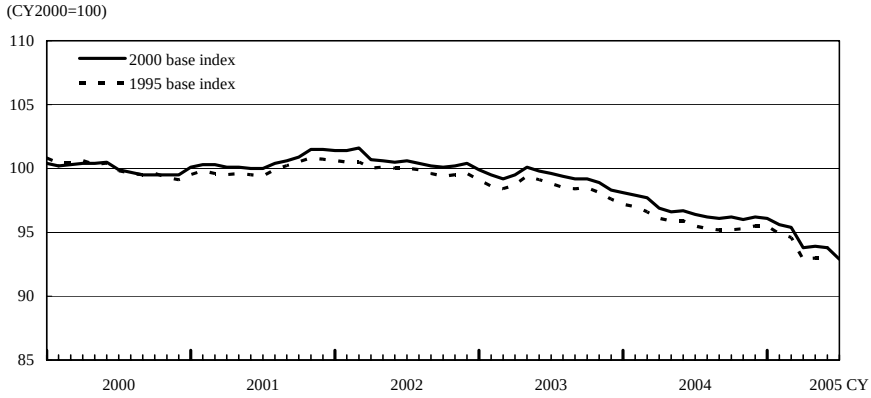
Input price index



Output price index



Output/Input price ratio index

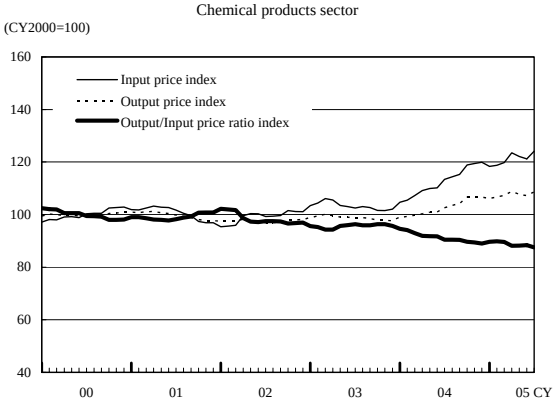


Note: The 1995 base indexes are converted by the average of 2000=100.

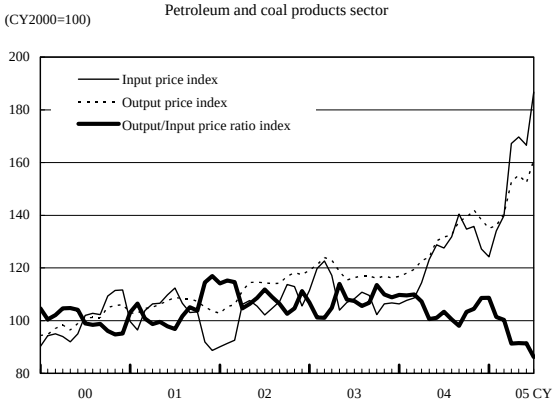
(Appendix 6)

2000 base Indexes for major sector

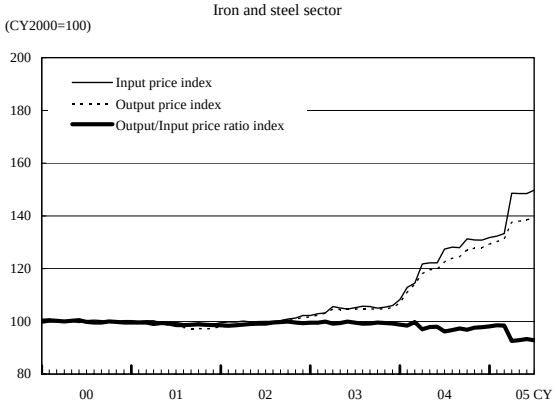
Chemical products sector



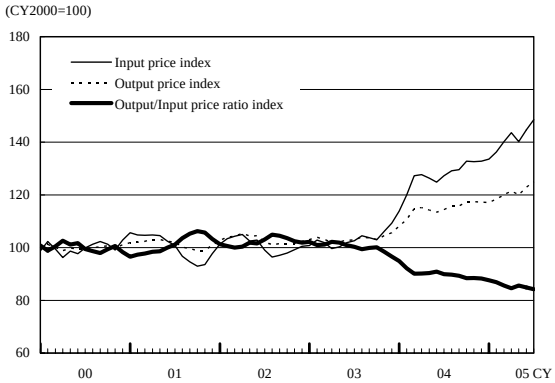
Petroleum and coal products sector



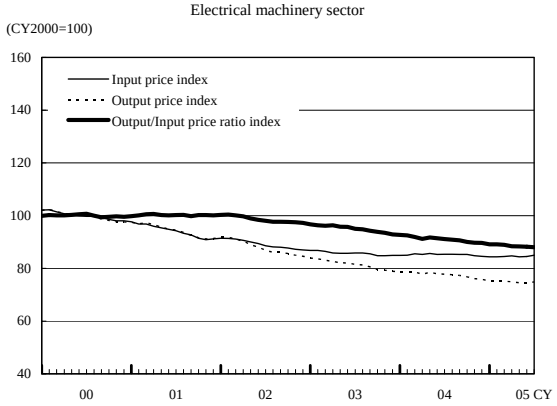
Iron and steel sector



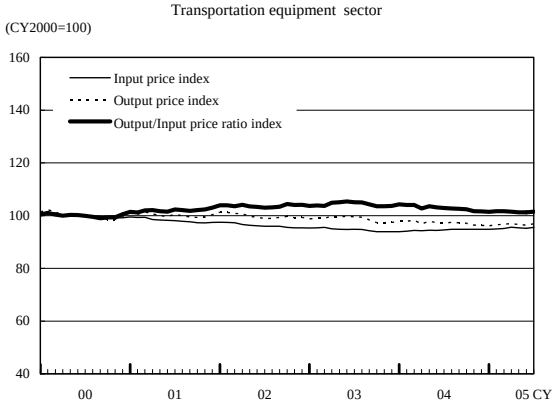
Non-ferrous metals sector



Electrical machinery sector



Transportation equipment sector



(Appendix 7)

Paasche check for the 1995 base IOPI

(Note) Figures in parentheses are the indexes and difference ratios of the 1990 base in the former revision.

Major commodity groups	Input price index			Output price index		
	Paasche Index P (Note 1)	Laspeyres Index L (Note 2)	Difference (%) $\frac{P-L}{L}\times 100$	Paasche Index P (Note 1)	Laspeyres Index L (Note 2)	Difference (%) $\frac{P-L}{L}\times 100$
Manufacturing industry	94.7 (88.1)	97.4 (90.6)	-2.8 (-2.8)	94.0 (92.3)	96.8 (94.4)	-2.9 (-2.2)
Agriculture, forestry and fishery	86.7 (84.3)	87.7 (87.1)	-1.1 (-3.2)	--	--	--
Mining	133.6 (63.6)	137.1 (66.3)	-2.6 (-4.1)	--	--	--
Foods	100.3 (91.2)	100.5 (95.2)	-0.2 (-4.2)	104.1 (101.7)	104.3 (102.5)	-0.2 (-0.8)
Textile products	94.6 (86.5)	96.2 (85.2)	-1.7 (+1.5)	98.9 (96.8)	99.5 (96.7)	-0.6 (+0.1)
Pulp, paper and wooden products	95.2 (97.7)	95.8 (97.7)	-0.6 (+0.0)	96.7 (101.7)	97.2 (101.5)	-0.5 (+0.2)
Chemical products	100.9 (93.8)	103.1 (94.5)	-2.1 (-0.7)	98.9 (92.7)	100.0 (93.5)	-1.1 (-0.9)
Petroleum and coal products	135.1 (76.8)	133.6 (78.5)	+1.1 (-2.2)	125.9 (87.4)	129.5 (87.9)	-2.8 (-0.6)
Ceramic, stone and clay products	91.2 (96.4)	94.1 (96.3)	-3.1 (+0.1)	95.2 (99.0)	96.8 (99.6)	-1.7 (-0.6)
Iron and steel	93.3 (88.2)	94.0 (89.4)	-0.7 (-1.3)	93.3 (87.2)	93.9 (88.0)	-0.6 (-0.9)
Non-ferrous metals	98.2 (77.3)	98.8 (78.4)	-0.6 (-1.4)	95.4 (81.1)	95.8 (82.4)	-0.4 (-1.6)
Metal products	94.1 (95.1)	95.5 (97.1)	-1.5 (-2.1)	96.1 (95.8)	97.1 (97.3)	-1.0 (-1.5)
General machinery	99.2 (100.3)	99.2 (100.3)	+0.0 (+0.0)	97.8 (98.4)	98.2 (98.9)	-0.4 (-0.5)
Electrical machinery	77.8 (78.1)	82.5 (85.1)	-5.7 (-8.2)	76.5 (77.5)	82.1 (82.7)	-6.8 (-6.3)
Transportation equipment	95.5 (95.2)	95.9 (95.2)	-0.4 (+0.0)	96.6 (94.9)	96.1 (94.9)	+0.5 (+0.0)
Precision instruments	98.5 (96.1)	98.8 (96.2)	-0.3 (-0.1)	97.9 (95.8)	97.3 (95.7)	+0.6 (+0.1)
Miscellaneous manufacturing products	97.3 (99.3)	98.6 (99.8)	-1.3 (-0.5)	98.9 (101.1)	99.9 (101.9)	-1.0 (-0.8)
Electricity, gas and heat supply	94.9 (97.7)	95.0 (97.8)	-0.1 (-0.1)	--	--	--
Water supply and waste management services	113.8 (108.8)	114.0 (108.6)	-0.2 (+0.2)	--	--	--

Notes: 1. Paasche indexes are calculated by using the 2000 calendar year average indexes of commodities in the 1995 base index and the weights for the 2000 base index.

2. Laspeyres indexes are the 2000 calendar year average indexes of the 1995 base index.