2000 Input-Output Tables for Japan

Joint Compilation

Ministry of Internal Affairs and Communications
Cabinet Office
Financial Services Agency
Ministry of Finance
Ministry of Education, Culture, Sports, Science and Technology
Ministry of Health, Labour and Welfare
Ministry of Agriculture, Forestry and Fisheries
Ministry of Economy, Trade and Industry
Ministry of Land, Infrastructure and Transport
Ministry of the Environment

June 2005

Ministry of Internal Affairs and Communications
Japan

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PREFACE

Input-Output Tables for Japan have been compiled every five years since 1955 jointly by ministries and agencies concerned.

The 10th publication of the 2000 Input-Output Table is the latest achievement accomplished as a joint effort project of ten office, ministries and agencies, namely, the Ministry of Internal Affairs and Communications (The name changed from the Ministry of Public Management, Home Affairs , Posts and Telecommunications as of September 10, 2004), the Cabinet Office, the Financial Services Agency, the Ministry of Finance, the Ministry of Education, Culture, Sports, Science and Technology, the Ministry of Health, Labour and Welfare, the Ministry of Agriculture, Forestry and Fisheries, the Ministry of Economy, Trade and Industry, the Ministry of Land, Infrastructure and Transport and the Ministry of the Environment.

The 2000 Input-Output Tables are commodity-by-commodity tables as were their predecessors and valued at producers' price and purchasers' price. They are recorded in 517 rows and 405 columns matrix form based on the most detailed classification. In this report, however, more aggregated tables classified according to 104 sectors are published together with the Input Coefficients Table and the Inverse Matrix Coefficients Table. Besides, the various supplementary tables such as the Table on Trade Margins, Domestic Freights, Imports, Scrap and By-Products, Value and Quantity, Employees, Employment Matrix, Fixed Capital Matrix, Make Table and Self-Transports are also published.

On behalf of the Department Head Committee in charge of the input-output compilation, I sincerely hope that this publication would serve its purpose in enhancing the studies of Japanese economy by statistical data and will be of effective assistance toward mutual understanding between Japan and the world at large.

June 2005

Shuichi Watanabe
Director-General
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CONTENTS

TABLES

INTRODUCTION

THE JAPANESE ECONOMY AND THE 2000 INPUT-OUTPUT TABLES

The economic status quo of a particular economy for a particular period of time (normally on a yearly duration basis) may be inferred from the input-output tables (I-O tables) by analyzing the inter-industrial good and service transactions as recorded under the matrix column. As an illustration, a straightforward overall picture of the 2000 I-O tables for Japan with 13 sectors is depicted in Table 1 and the economic structure as inferred from the aforesaid tables is shown in Chart 1.

The values of domestic production as well as the input components (for goods and services) of the individual sector may be inferred from the figures as appeared in the column sector of the I-O Tables. Moreover, the sales amount of domestic production as well as import of the respective good and service demanded may be inferred from the row sector of the tables.

To begin with, as deduced from the said tables, the Total supply of goods and services in 2000 is 1,013.05 trillion yen out of which the Domestic production amounted to 958.89 trillion yen (94.7% of the Total supply value) while the Imports valued at 54.16 trillion yen (5.3% of the Total supply value). As compared to 1995, the values of Total supply and Domestic production have increased by 3.3% and 2.3% respectively while the value of Imports has increased by 23.9% greatly.

Overall, the value of Domestic production has increased a little. Although output in IT related industries such sectors as Business services including Information services, Communication and broadcasting and Electrical machinery is exponded drastically, the output in several sectors is decreased. (e.g. in Construction sector affected by the low demand to the public and residential construction and in Textile products affected by the imports of low price products made in developing countries, and in Material products such as Iron and steel). On the other hand, as far as Imports is increased drastically due to the expansion of import goods which are produced outside Japan owing transferring the producing sites. Consequently, as compared to 1995, the ratio on the value of Imports as against the value of Total supply has increased by 0.8 point, i.e., from 4.5% in 1995 to 5.3% in 2000.

In so far as the value of input structure of Domestic production is concerned, intermediate inputs of goods such as raw materials and fuels and the related services accounted for 439.4 trillion yen which is equivalent to 45.8% in ratio as against the Domestic production. The breakdown ratios of intermediate input are 53.5% for goods and 46.5% for services. As compared to the ratio in 1995 (55.1% and 44.9% respectively), it can be observed that the service-oriented economy is much more developed.

As for the Gross value added, it amounted to 519.48 trillion yen, i.e., 54.2% in ratio as against the Domestic production. It is broken down into Compensation of employees (53.1%), Operating surplus (18.6%), Depreciation of fixed capital (18.0%). As compared to 1995, the ratio of the Compensation of employee and Operating surplus show a decreasing trend.

Furthermore, looking from the demand side, the total amount of goods and services demanded in 2000 is 1,013.05 trillion yen out of which the value of intermediate demand in production amounted to 439.4 trillion yen (43.4% of the Total demand value) and the value of Final demand totaled at 516.16 trillion yen (51.0% of the Total demand value), while the value of Exports totaled at 57.49 trillion yen (5.7% of the Total demand value).

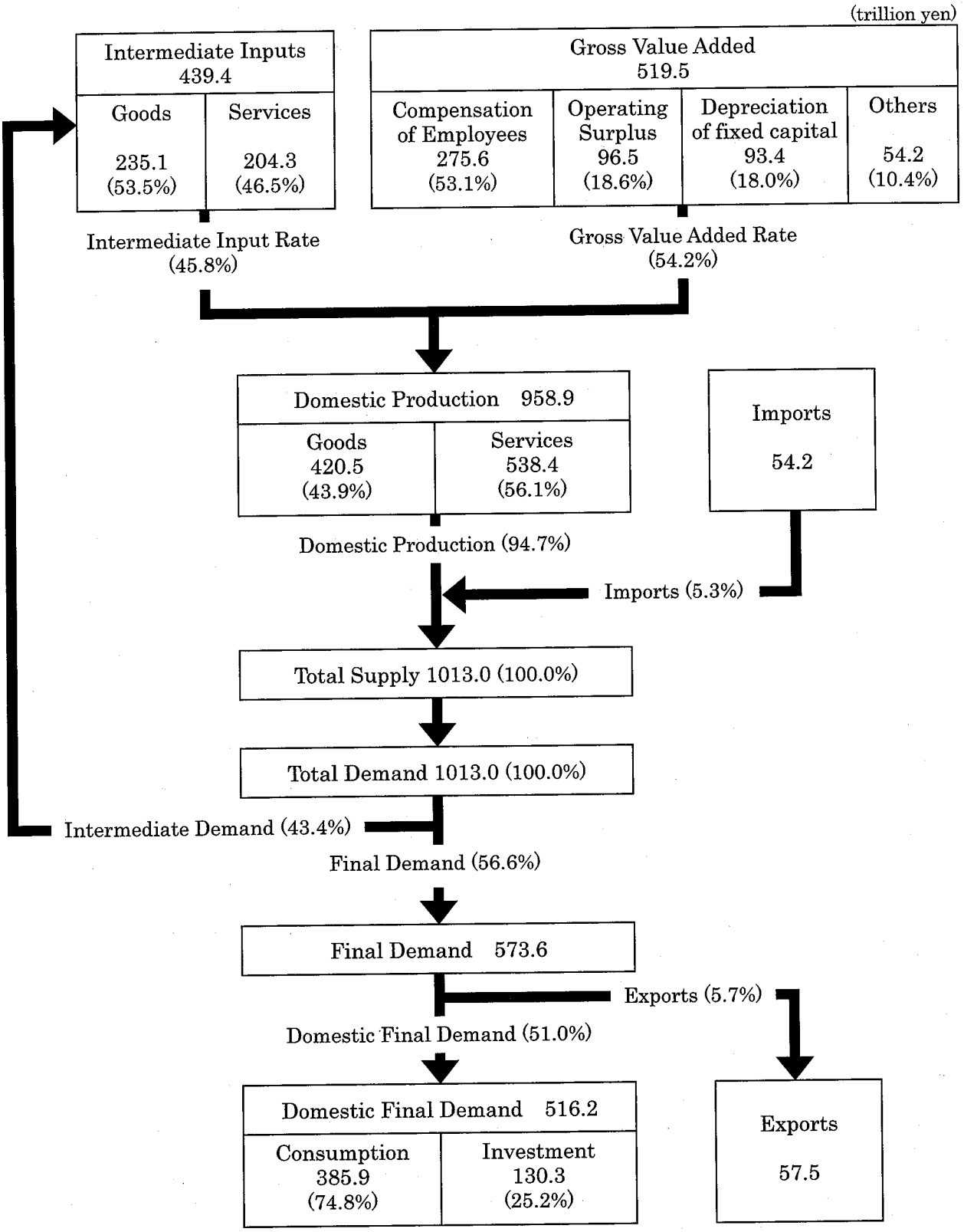
As compared to 1995, the values of Total demand, Intermediate demand and Final demand have increased by 3.3%, 1.7% and 2.8% respectively. The value of Exports has increased by 22.8 % due to the expansion of demand in foreign countries such as Asia and US. Consequently, as compared to 1995, the

ratio on the value of Exports as against the value of Total demand has increased by 0.9 point, i.e. from 4.8% in 1995 to 5.7% in 2000.

Notes:

1. The figures in the 1995 and 1990 tables are nominal values which are rearranged according to sector classifications in the 2000 table.
2. As there have conceptual and methodological differences for estimation among 1990, 1995 and 2000 tables, it is difficult to compare three tables in the strict sense.

Chart 1. Flow of Goods and Services According to the 2000 Input-Output Tables



Notes:

1: 'Goods' refers to sector 01 to 18 and 31 of the 32 sector classification, while 'Services' refers to sector 19 to 30 and 32.

2: 'Consumption' refers to sector 35, 36 and 37, while 'Investment' refers to sector 38, 39 and 40.

3: Component figures may not add up to the total, because of rounding.

		Intermediate demand											
		1	2	3	4	5	6	7	8	9	10	11	12
Intermediate Inputs	01 Agriculture, forestry and fishery	15585	5	84272	1521	0	90	0	1	21	0	21	13317
	02 Mining	2	35	73572	6739	20192	0	0	0	0	0	6	40
	03 Manufacturing	24627	931	1228672	215789	16803	31926	12629	1622	60937	4619	28966	282348
	04 Construction	809	91	12871	1990	12587	5482	1503	28433	4791	1739	5691	13804
	05 Electricity, gas and water supply	919	431	63383	5393	16233	12262	2258	2195	8883	3183	10367	54850
	06 Commerce	6659	233	162559	49429	3919	14131	1909	627	16449	957	4511	83464
	07 Finance and insurance	5025	660	40186	8644	7612	49277	28720	32983	29330	5035	1001	58349
	08 Real estate	61	123	8928	2691	2242	28616	6091	4078	7036	3762	466	26690
	09 Transport	6193	3794	82386	39884	7157	46409	7283	1465	50343	5042	11229	41989
	10 Communication and broadcasting	120	90	11184	9386	1428	25196	8293	982	3606	26722	5288	48510
	11 Public administration	0	0	0	0	0	0	0	0	0	0	0	0
	12 Services	2136	624	230602	63979	27543	63452	49975	17041	66840	36407	27588	192686
	13 Activities not elsewhere classified	811	204	16686	3078	1439	6269	2571	2702	1909	1016	179	7179
	Sub-total	62949	7221	2015303	408523	117156	283110	121233	92129	250145	88483	95313	823226
Gross Value Added	Consumption expenditure outside households	973	692	56080	12883	5406	23417	12545	2261	10128	13575	6041	46765
	Compensation of employees	12754	2488	531087	267955	47154	472568	124931	23661	148076	58598	165510	898396
	Operating surplus	46707	1560	168599	14004	35107	99802	90169	296311	25935	15438	0	167220
	Depreciation of fixed capital	14972	1238	166769	40591	50306	48018	34324	206675	30462	38096	94791	203001
	Indirect taxes	7137	686	149749	32552	17444	44886	14692	39536	16471	7283	604	68766
	(Less) Current subsidies	-1795	-99	-5975	-3402	-2530	-2323	-16400	-2046	-2148	-79	0	-15097
	Sub-total	80748	6566	1066309	364582	152888	686367	260262	566397	228924	132912	266946	1369050
Domestic production		143697	13787	3081612	773105	270044	969476	381495	658527	479069	221395	362259	2192276
(Ref.)	Net domestic product at factor cost	59461	4048	699686	281959	82262	572370	215100	319972	174011	74036	165510	1065615
	Gross domestic product	79776	5874	1010229	351699	147482	662950	247717	564137	218796	119336	260905	1322286

(unit : 100 million Yen)

		Final demand										
13	Sub-Total	a	b	c	d	e	f	Sub-total	g	h	k	l
0	114832	912	38747	0	1935	7737	720	50051	164883	-21186	143697	27953
10	100597	-4	-67	0	-47	-111	109	-120	100477	-86691	13787	-86806
3837	1913708	33376	615966	4592	397219	-6354	465864	1510663	3424371	-342759	3081612	1134528
0	89792	0	0	0	683313	0	0	683313	773105	0	773105	683313
667	181024	50	80829	7852	0	0	310	89040	270064	-20	270044	88970
841	345688	19205	458620	45	106602	1174	44917	630563	976250	-6774	969476	604584
9558	276382	3	104860	0	0	0	3955	108818	385200	-3705	381495	105110
493	91278	0	567048	178	0	0	30	567255	658533	-7	658527	567248
2081	305255	5430	147333	-419	7388	321	42608	202660	507915	-28846	479069	168385
1180	141987	2219	77931	0	0	0	522	80672	222659	-1264	221395	77189
7088	7088	0	7352	347820	0	0	0	355171	362259	0	362259	355171
3499	782372	130522	710919	496995	103711	0	15626	1457774	2240145	-47869	2192276	1279383
0	44045	0	364	0	0	0	206	569	44614	-2491	42123	-1922
29255	4394046	191712	2809902	857062	1300121	2767	574867	5736431	10130476	-541612	9588865	5003107
946	191712											
2716	2755891											
4384	965237											
4257	933500											
587	400393											
-22	-51915											
12868	5194819											
42123	9588865											
7100	3721129											
11922	5003107											

Column Codes are:

a : Consumption expenditure outside households
b : Consumption expenditure (private)
c : Consumption expenditure of general government
d : Gross domestic fixed capital formation
e : Increase in stocks
f : Exports
g : Total demand
h : (Less) Imports
k : Domestic production
l : Gross domestic expenditure

Notes:

1. Component figures may not add up the total because of rounding.
2. The values of intermediate transactions include consumption tax.
   Treatment of consumption tax in final demand and gross value added is as follows:
   * Gross domestic fixed capital formation and Increase in stocks include consumption tax concerned with buying, which is to be deducted essentially. Exports includes consumption tax on exports, which is concerned with domestic transactions through exporters.
   * Indirect taxes include consumption tax, but do not include custom duties, commodity taxes and consumption tax on import goods.
3. Gross domestic product, Net domestic product at factor cost and Gross domestic expenditure are calculated for the I-O table, and do not agree with the final figures of the System of National Accounts.
4. Relationship between 13 sector classification and 32 sector classification is shown in Table 3.

		Intermediate demand											
		1	2	3	4	5	6	7	8	9	10	11	12
Intermediate Inputs	01 Agriculture, forestry and fishery	16264	7	104394	2446	0	184	0	2	30	0	31	20698
	02 Mining	4	49	82533	9983	24015	0	0	0	0	0	11	54
	03 Manufacturing	33116	1197	1408896	278076	20127	40464	14936	2274	79088	5727	34286	368952
	04 Construction	809	91	12871	1990	12587	5482	1503	28433	4791	1739	5691	13804
	05 Electricity, gas and water supply	919	431	63383	5393	16233	12262	2258	2195	8883	3183	10367	54850
	06 Commerce	0	0	0	0	0	6774	0	0	0	0	0	0
	07 Finance and insurance	5025	660	40186	8644	7612	49277	28720	32983	29330	5035	1001	58349
	08 Real estate	61	123	8928	2691	2242	28616	6091	4078	7036	3762	466	26690
	09 Transport	3649	3739	34870	22761	3881	44748	6711	1363	48573	4851	10385	31003
	10 Communication and broadcasting	120	90	11184	9386	1428	25196	8293	982	3606	26722	5288	48510
	11 Public administration	0	0	0	0	0	0	0	0	0	0	0	0
	12 Services	2147	624	230887	63988	27553	63665	50077	17042	66844	36419	27602	192936
	13 Activities not elsewhere classified	834	210	17170	3164	1479	6441	2643	2778	1962	1044	184	7379
	Sub-total	62949	7221	2015303	408523	117156	283110	121233	92129	250145	88483	95313	823226
Gross Value Added	Consumption expenditure outside households	973	692	56080	12883	5406	23417	12545	2261	10128	13575	6041	46765
	Compensation of employees	12754	2488	531087	267955	47154	472568	124931	23661	148076	58598	165510	898396
	Operating surplus	46707	1560	168599	14004	35107	99802	90169	296311	25935	15438	0	167220
	Depreciation of fixed capital	14972	1238	166769	40591	50306	48018	34324	206675	30462	38096	94791	203001
	Indirect taxes	7137	686	149749	32552	17444	44886	14692	39536	16471	7283	604	68766
	(Less) Current subsidies	-1795	-99	-5975	-3402	-2530	-2323	-16400	-2046	-2148	-79	0	-15097
	Sub-total	80748	6566	1066309	364582	152888	686367	260262	566397	228924	132912	266946	1369050
Domestic production		143697	13787	3081612	773105	270044	969476	381495	658527	479069	221395	362259	2192276

(unit : 100 million Yen)

		Final demand											
13	Sub-Total	a	b	c	d	e	f	Sub-total	g	h	i	j	k
0	144057	1758	68918	0	1935	7832	878	81320	225377	-21186	-52101	-8393	143697
13	116661	-4	-65	0	47	11	138	33	116694	-86691	-3924	-12293	13787
4853	2291991	52977	1064083	4669	508245	-5077	515142	2140039	4432031	-342759	-899920	-107739	3081612
0	89792	0	0	0	683313	0	0	683313	773105	0	0	0	773105
667	181024	50	80829	7852	0	0	310	89040	270064	-20	0	0	270044
0	6774	0	4916	0	2913	0	2866	10695	17469	-6774	958781	0	969476
9558	276382	3	104860	0	0	0	3955	108818	385200	-3705	0	0	381495
493	91278	0	567048	178	0	0	30	567255	658533	-7	0	0	658527
1893	218426	4187	121302	-451	0	0	35160	160198	378624	-28846	0	129292	479069
1180	141987	2219	77931	0	0	0	522	80672	222659	-1264	0	0	221395
7088	7088	0	7352	347820	0	0	0	355171	362259	0	0	0	362259
3510	783296	130522	712359	496995	103762	0	15634	1459272	2242568	-47869	-2068	-354	2192276
0	45290	0	370	0	0	0	234	604	45894	-2491	-767	-512	42123
29255	4394046	191712	2809902	857062	1300121	2767	574867	5736431	10130476	-541612	0	0	9588865

946	191712
2716	2755891
4384	965237
4257	933500
587	400393
-22	-51915
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Column Codes are:

a : Consumption expenditure outside households
b : Consumption expenditure (private)
c : Consumption expenditure of general government
d : Gross domestic fixed capital formation
e : Increase in stocks
f : Exports
g : Total demand
h : (Less) Imports
i : (Less) Trade margin
j : (Less) Transportation fee
k : Domestic production

Notes:

1. Component figures may not add up the total because of rounding.
2. Treatment of consumption tax is the same as Table Valued at Producers' Price.

Table 3. Sector Classification

13 Sector Classification	32 Sector Classification
1 Agriculture, forestry and fishery	1 Agriculture, forestry and fishery
2 Mining	2 Mining
3 Manufacturing	3 Foods 4 Textile products 5 Pulp, paper and wooden products 6 Chemical products 7 Petroleum and coal products 8 Ceramic, stone and clay products 9 Iron and steel 10 Non-ferrous metals 11 Metal products 12 General machinery 13 Electrical machinery 14 Transportation equipment 15 Precision instruments 16 Msicellaneous manufacturing products 31 Office supplies
4 Construction	17 Construction
5 Electricity, gas and water supply	18 Electricity, gas and water supply 19 Water supply and waste management services
6 Commerce	20 Commerce
7 Finance and insurance	21 Finance and insurance
8 Real estate	22 Real estate
9 Transport	23 Transport
10 Communication and broadcasting	24 Communication and broadcasting
11 Public administration	25 Public administration
12 Services	26 Education and research 27 Medical service, health, social security and nursing care 28 Other public services 29 Business services 30 Personal services
13 Activities not elsewhere classified	32 Activities not elsewhere classified

EXPLANATORY NOTES

CHAPTER I

ORGANIZATIONAL STRUCTURE AND COMPILATION PROCESS

§ 1 Organizational Structure

1 A Joint Undertaking Organizational Structure

Since initial publication in 1955, Input-Output Tables for Japan have been compiled jointly by various pertinent authorities, including the Ministry of Internal Affairs and Communications.

The 2000 Input-Output Tables were compiled as part of a five-year project starting in 2000 involving ten Office, Ministries and Agencies: The Ministry of Internal Affairs and Communications; Cabinet Office; Financial Services Agency; Ministry of Finance; Ministry of Education, Culture, Sports, Science and Technology; Ministry of Health, Labour and Welfare; Ministry of Agriculture, Forestry and Fisheries; Ministry of Economy, Trade and Industry; Ministry of Land, Infrastructure and Transport; and Ministry of the Environment.

2 Organizational Structure and Tasks

To enable smooth compilation, the Department Head Committee and other committees entrusted with various relevant functions were established as indicated in Chart 1-1 and Table 1-1.

Table 1-2 gives the functional assignments to Office, Ministries and Agencies.

Chart 1-1 Work Implementation Structure

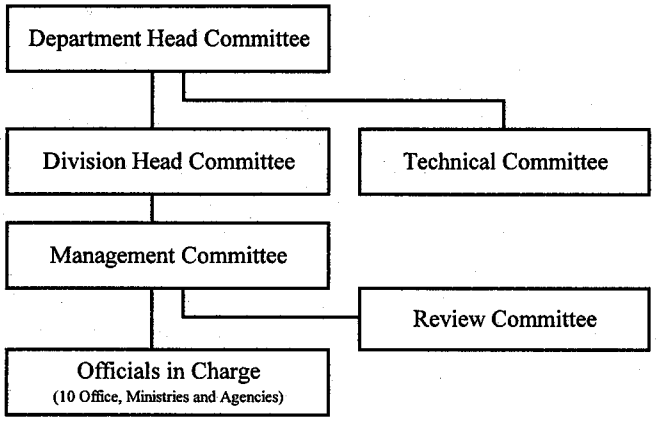


Table 1-1 Functions of Each Committee

Name	Function
Department Head Committee	Comprised of the relevant department heads of the Office, Ministries or Agencies entrusted with the responsibility for deciding basic matters pertaining to the construction of I-O Tables.
Division Head Committee	Comprised of the relevant division heads of the Office, Ministries or Agencies, which make decisions on important matters pertaining to the construction of I-O Tables.
Technical Committee	Comprised of a panel of specialists capable of advising the above-mentioned Department Head Committee on technical matters related to the I-O Tables.
Management Committee	Comprised of officials in charge of the relevant departments to handle common problems in relation to the I-O Tables and serve as coordinating agents for various departments.
Review Committees (Basic Outline Review Committee, Sector Classification Review Committee, Concept Review Committee, Definition Review Committee, Editorial Committee, etc.)	Comprised of the officials in charge of the relevant departments to deal with concrete matters pertaining to Basic Outline of compilation, concepts, definitions, and estimation methods for sector classifications, as well as the contents of the final report.

Table 1-2 Major Assignments of Operations

Name	Primary Operations
Ministry of Internal Affairs and Communications	(1) Planning, liaising, coordination, and publication (2) Computerized tabulation and analysis (3) Export and import sectors (4) Communications and broadcasting sectors
Cabinet Office	(1) Personal service and public service sectors (exclusive of those covered by other authorities) (2) Final demand sectors (exclusive of export and import sectors) (3) Gross value added sectors (exclusive of employee compensation)
Financial Services Agency	• Finance and insurance sectors
Ministry of Finance	• Salt, alcohol, tobacco, legal, financial and accounting service sectors
Ministry of Education, Culture, Sports, Science and Technology	• Education and research institute sectors
Ministry of Health, Labour and Welfare	(1) Medicine, water supplies (exclusive of those covered by other authorities), medical services, health, social security and environmental health services sectors (2) Worker dispatching services sectors (3) Compensation of employees sectors
Ministry of Agriculture, Forestry and Fisheries	• Agriculture, forestry, fishery and food industries sectors (exclusive of salt, alcoholic beverages and tobacco)
Ministry of Economy, Trade and Industry	(1) Mining and manufacturing industries (exclusive of those covered by other authorities), electricity, gas and heat supply, wholesale and retail trade, as well as business services sectors (exclusive of those covered by other authorities) (2) Office supplies
Ministry of Land, Infrastructure and Transport	(1) Construction, real estate and civil engineering sectors (2) Transport, ships and rolling stock sectors
Ministry of the Environment	• Waste treatment services

3 Operating budget

For the operating budgets for compiling Input-Output Tables, necessary expenses (excluding personnel labor costs) are earmarked in a lump sum to the Ministry of Internal Affairs and Communications, which in turn distributes the funds to the appropriate authorities in accordance with operational specifics.

§ 2 Overview of Compilation Project

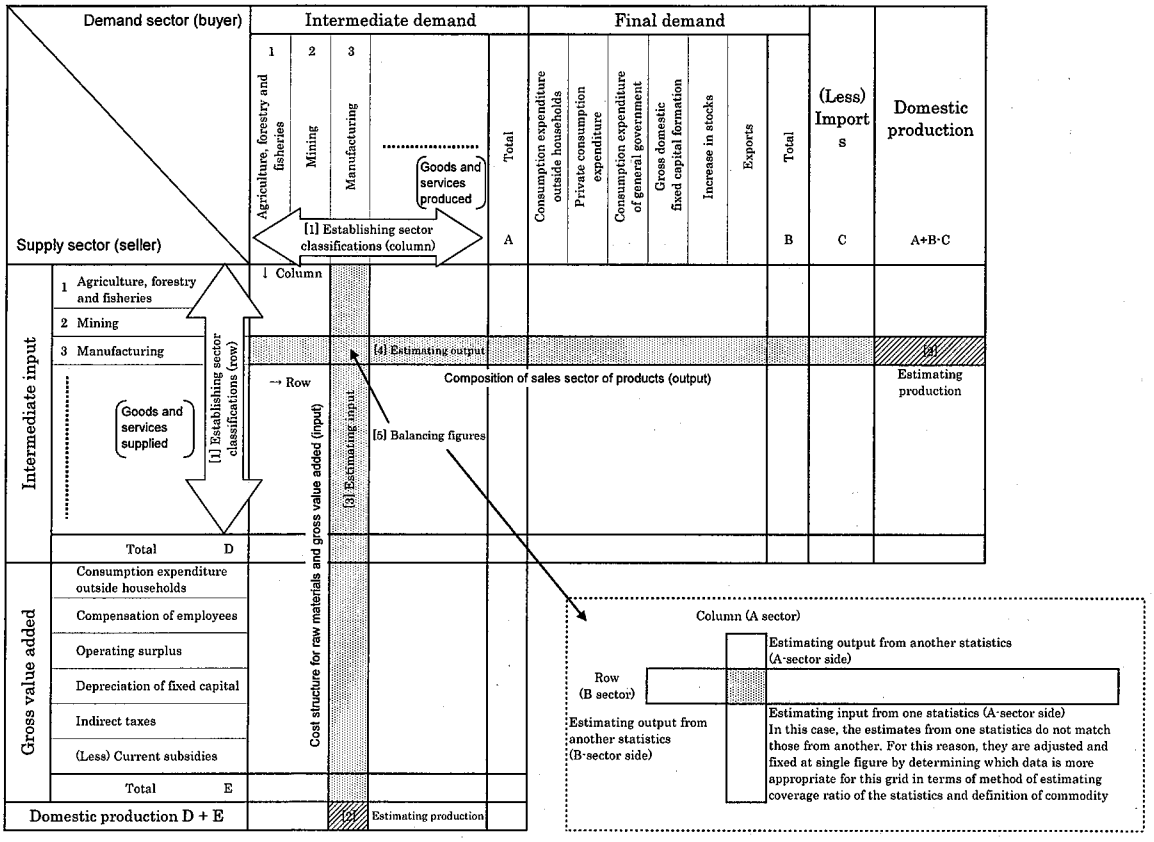
The compilation process first requires the establishment of basic guidelines and outline, followed (in sequence) by data accumulation, arrangement, estimation, reconciliation, and finally publication of results. The process involves a massive amount of data coupled with a vast range of content and extends over a five-year period as a joint effort involving the 10 authorities.

1 Overview of Compilation Procedure

Input-Output Tables can be compiled in various ways. For instance, in 1968, as a point of departure, the United Nations recommended the System of National Accounts (hereafter referred to as "68 SNA"). It recommends first preparing the table on commodity output by industry (V table) and the table on commodity input by industry (U table). Based on these tables and by taking into consideration the industry or commodity technology assumptions, the commodity-by-commodity table may be compiled indirectly.

On the other hand, Japan has constructed commodity-by-commodity tables directly since its first efforts in 1955, in accordance with the compilation procedure illustrated in Chart 1-2. Thereafter, the V table was constructed as a supplementary table, and the U table was constructed on the basis of these tables.

Chart 1-2 Overview of Input-Output Table Compilation Procedure



(Note) The following explanations concern [1]–[5] above.

[1] Establishing sector classifications

Various statistics based on different classifications are used as the basic data for the Input-Output Tables. It is therefore necessary to establish sector classifications in terms of their concept, definition, and scope in order to record Japan's industry activity in a well-integrated manner. The following work is performed in accordance with these sector classifications.

[2] Estimating domestic production

The domestic productions by sectors (goods or services) are estimated based on various censuses and the Current Production Statistics Surveys.

[3] Estimating input

The breakdown (detailed breakdown of raw materials and gross value added) of the domestic productions by column sectors (goods or services) is estimated based on the surveys of production costs and the Special Surveys. The Input Table is then compiled.

[4] Estimating output

The breakdown of customers by row sectors (goods or services) is estimated based on the surveys of product supply and demand. The Output Table is then compiled.

[5] Balancing input and output

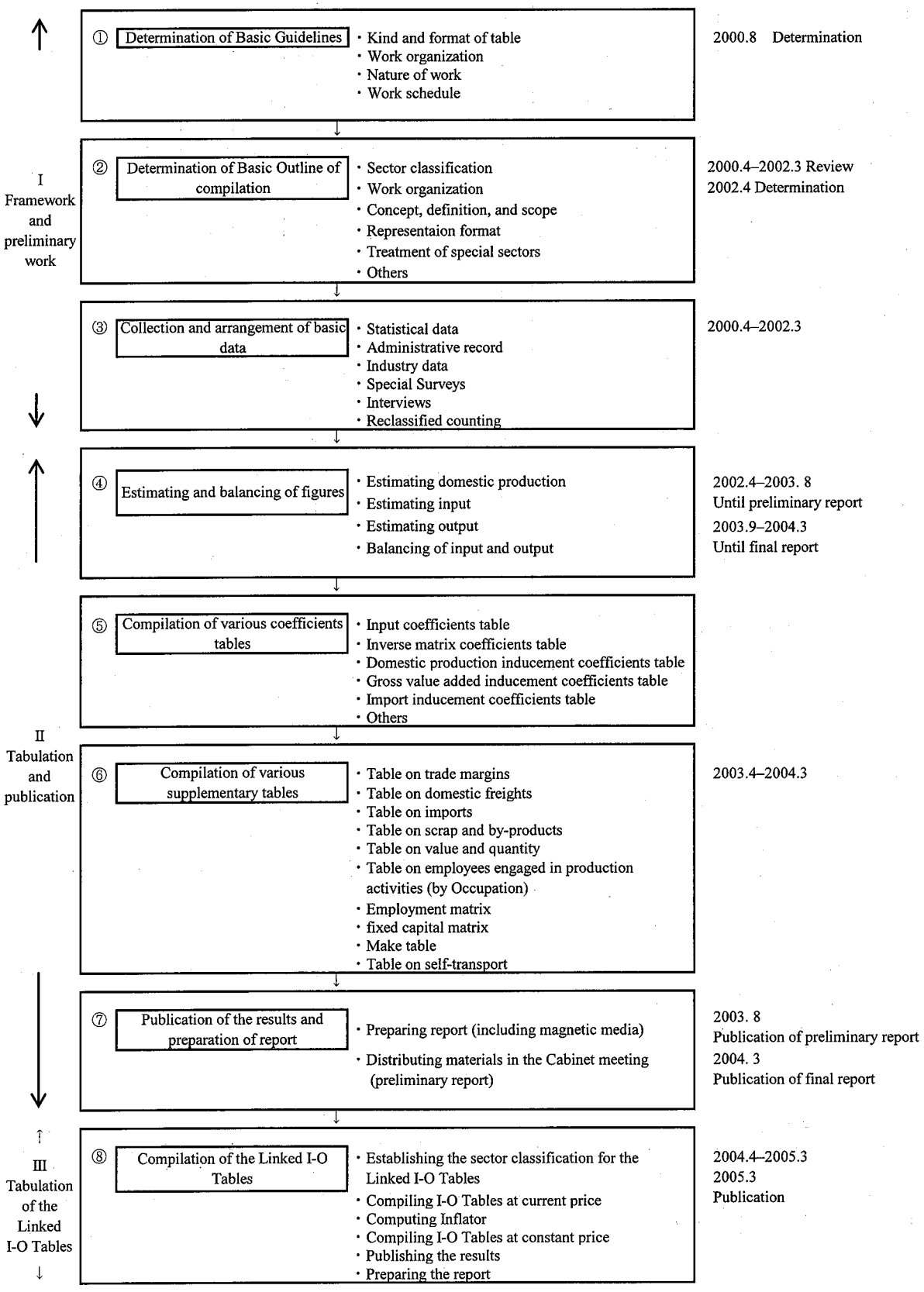
The figures given in the Input and Output Tables differ, as they are estimated from different statistical data. The figures for all sectors are reconciled, made consistent, and compiled.

2 Overview of Compilation Project

Input-Output Tables are compiled for years ending with either "0" or "5," as five-year projects starting in those years.

Compilation work can be divided, as indicated in Chart 1-3, into [1] "Framework and preliminary work" in the first and second years, [2] "Tabulation and publication work" in the third and fourth years, and [3] "Tabulation of the Linked Input-Output Tables" in the fifth year.

Chart 1-3 Compilation Workflow for Input-Output tables



§ 3 Compilation Process

The basic sector classification table in the 2000 Input-Output table is voluminous, with 517 row sectors and 405 column sectors. Compiling the table took considerable effort over an approximately four-year period in a joint effort that involved ten authorities. The specifics of the compilation process are described below.

1 Determination of Basic Guidelines

The first requirement for compiling Input-Output Tables for a new year is to establish Basic Guidelines on various issues, such as what types of Input-Output Tables should be formulated, in what work systems, and until when.

Input-Output Tables for Japan have been compiled jointly by the relevant authorities every five years since their first publication in 1955. For every compilation, a meeting comprised of the Department Heads of the relevant organizations (Department Head Committee) determines Basic Guidelines on the compilation of the Input-Output Tables. For the 2000 Input-Output Tables, the Basic Guidelines for 2000 Input-Output Tables were adopted in the Committee meeting held in August 2000.

According to the Basic Guidelines, the 2000 Input-Output Tables are to follow the conventional basic framework, but reviews and estimates are to adhere as closely as possible to the SNA recommended by the United Nations in 1993 (hereafter referred to as "93 SNA," please refer to the Note below) to make it possible to compare Input-Output Tables internationally. Japan's tables have been compiled jointly by ten authorities, including the Ministry of Internal Affairs and Communications. To reflect recent rapid changes in Japanese economic structures and to improve forecasting accuracy of the tables, efforts have focused on enhancing and improving the collection and coordination of basic forecasting data in service and other sectors.

(Note) The System of National Accounts adopted in the 15th Statistical Commission of the United Nations in 1968 went through a review process of more than ten years, and was revised in the 27th Statistical Commission of the United Nations in 1993, which the Economic and Social Council has recommended that each member country follow.

2 Determination of the Basic Outline of Compilation

The Input-Output Tables cover domestic economic activity, estimate various transactions concerning goods and services using various statistics and other materials in the light of input and output, and compile the results into tables. Since transactions are complex and multi-faceted, compilation of the Input-Output Tables first requires setting policies on determining the scope of the transactions, basic guiding principles, how to obtain data, and how to indicate results.

Following determination of the Basic Guidelines for new Input-Output tables, the next goal is to determine detailed designs for tables, including types, formats, and basic structures of these tables.

For the 2000 Input-Output tables, the Management Committee, in close consultation with the Technical Committee, has discussed the "Basic Outline for Compiling 2000 Input-Output Tables," which was finalized at the Department Head Committee in April 2002. The Guidelines specify the following points:

[1] The procedure for work performed over a period of five years
[2] Concepts, definitions, theoretical constructs, and the tables to be formulated
[3] Basic and aggregate sector classifications, together with corresponding codes and determination of the authorities responsible for such assignments
[4] Concepts, definitions, and scope for the respective sectors

In addition, in addition to reviewing sector classifications, concepts, definitions, and scope, the Basic Outline for 2000 responds to the 93 SNA, divides sectors, and creates new ones to properly reflect changing economic structures.

3 Collection and Arrangement of Basic Data

As shown in the 2000 Input-Output Tables, all goods and services produced in a year by all industries have been arranged into approximately 3,800 detailed items, which are then reclassified into 517 row sectors and 405 column sectors (basic classification). The values for domestic production and the Input-Output breakdowns are estimated for the respective sectors.

While these estimates comprise the primary activities related to the compilation of Input-Output Tables, a major prerequisite is the systematic collection and arrangement of as many accurate materials as possible to create a basis for such estimates. These materials determine the accuracy of the Input-Output Tables. As for the collection and arrangement of basic data for estimation, the types and scope of data to be collected and the problems involved in its use are reviewed following determination of the Basic Guidelines and in parallel with the review of the Basic Outline. Measures for areas where materials are insufficient have also been reviewed.

All available data (Table 1-3) has been collected for the compilation of the 2000 Input-Output Tables, including governmental statistics and records of permits and approvals, as well as data compiled by corporate sectors. In addition, "Special Surveys for Compilation of Input-Output Tables" (Table 1-4) and interviews with industrial sectors have been undertaken in cases where existing statistics are inadequate for estimates.

To acquire for these forecasts basic materials on the service industry, manufactured products, and imports/exports, which are common to respective authorities, statistical data from the Survey on Service Industries and the Census of Manufacturers and Foreign Trade Statistics have been reconfigured according to the classification of Input-Output Tables.

Table 1-3 Data Sources Used to Compile the 2000 Input-Output Tables

Organization	Title of Material
National Personnel Authority	Survey of Wages for National Public Service Personnel
Cabinet Office	Survey of Non-Profit Private Organizations
Ministry of Internal Affairs and Communications	Population Census Establishment and Enterprise Census Housing and Land Survey Labour Force Survey Family income and Expenditure Survey Survey of Research and Development Employment Status Survey National Survey of Family Income and Expenditure Survey on Service Industries Linked Indices of the 2000-Base Consumer Price Indices Consumer Price Index Business Report of Public Corporations Fact-finding Survey on Compensation of Local Government Employees Yearbook of Local Financial Statistics Yearbook of Local Public Enterprises Local Government Finance Index Chart Local Financial Conditions Annual Report on Local Public Service Personnel Mutual Aid Associations Summary of Fixed Asset and Other Prices Survey of the Communication Industry Revenues and Expenditures for Postal-Service Special Accounts Annual Statistical Report on Posts and Telecommunications White Paper on Telecommunications
Ministry of Justice	Justice Yearbook
Ministry of Finance	Financial Statements of Corporations by Industry Foreign Trade Statistics Tax Statistics Report of Securities Annual Report of National Public Service Mutual Aid Association Annual Report on Settled Accounts of Ministries and Agencies Report on Closing Accounts of Special Budget Report on Closing Accounts of Central Government Sponsored Institutions Handbook of Subsidies Situation of Incorporated Enterprises Based on Tax Statistics Statistics on National taxes Budget for FY 2000 Taxes and Stamp Revenue Statistics on Government Finance and Banking
Ministry of Education, Culture, Sports, Science and Technology	School Basic Survey Social Education Survey Survey of Lifelong Learning and Social Education Facilities Report on the Survey of Local Educational Expenditures
Ministry of Health, Labour and Welfare	Statistics of Production by Pharmaceutical Industry Survey of Medical Care Facilities Survey of Social Welfare Institutions

Organization	Title of Material
	Annual Report on Revenue and Expenditure for Hospital Management Annual Report of National Health Insurance Services Survey of Nursing Care Businesses Survey of Households Using Nursing Care Services Report on Nursing-Care Insurance Services Conditions of Major Public Medical Care Institutions Annual Report on Medical Services for Aged National Medical Care Expenditure Water Supply Statistics Monthly Labour Survey Basic Survey on Wage Structure Comprehensive Survey of Employment Conditions Wage Survey of Forestry Workers by Occupation Report on Worker Dispatching Undertaking Comprehensive Survey of Diversifying Employment Formats Wage Survey of Outdoor Workers by Occupation
Ministry of Agriculture, Forestry and Fisheries	Census of Agriculture and Forestry Survey on Milk and Dairy Products Crop Survey Fisheries Census Statistics of Prices and Wages in Rural Areas Survey on Production Costs of Agricultural Products Statistics on Marketing of Fishery Products Statistics on Movement in Fishery Structure Economic Survey of Forestry Households Statistics on Agricultural Income Food Balance Sheet Farm Household Economy Survey Economic Relation Tables on Agriculture and Food Industries Index Numbers of Agricultural, Forestry, and Fishery Production Statistical Table of General Agricultural Cooperatives Statistical Table of Specialized Agricultural Cooperatives Statistics on Federation of Agricultural Cooperation Associations Standard Values of Agricultural Fixed Assets Statistics on Production and Shipment of Vegetable Produce Statistics on Production and Shipment of Fruits and Nuts Survey on Production of Flower Plants Statistical Tables for Agricultural Mutual Relief Statistics on Meat Marketing Report on Livestock Statistics of Sericulture Survey on Cocoon Production Statistics on National Forest Operations Statistics on Forestry Income Produced Report on Supply and Demand for Timber Statistics on Fisheries and Marine Culture Production Report on Fishery Economy Oils and Fats Status in Japan Annual Statistics on Food Administration Status of Rice and Wheat Process Foods Statistical Tables for Livestock Mutual Relief Fertilizer Handbook Annual Report on the Production / Imports/Sales of Veterinary Medicines and Quasi-Drugs
Ministry of Economy, Trade and Industry	Census of Manufactures Current Survey of Production

Organization	Title of Material
	Current Survey of Textile Distribution Census of Commerce Current Survey of Coal Supply and Demand Current Production Survey on the Gas Utility Industry Current Survey of Non-Ferrous Metal Supply and Demand Current Survey of Petroleum Products Supply and Demand Current Survey of Commerce Current Survey of Paper Distribution Survey of Selected Service Industries Current Survey of Selected Service Industries Structural Survey of Energy Consumption in Commerce and Manufacturing Basic Survey of Japanese Business Structure and Activities Trends of the Japanese Mining Industry Current Survey of Iron and Steel Supply and Demand Survey on Management of Small and Medium Enterprises Basic Current Survey of Commerce and Industry Gas Industry Handbook Annual Statistics on the Gas Industry Statistical Yearbook of Resources Statistical Yearbook of Energy Production, Supply and Demand Report on Article 9 of Gravel Gathering Statistical Yearbook of Crushed Stone General Energy Statistics Electric Industry Handbook
Ministry of Land, Infrastructure and Transport	Survey of Building Construction Started Statistics on Construction Work General Construction Statistics Comprehensive Survey of Real Estate Industry Annual Statistics on Roads Survey of Buildings Destroyed Construction Business Statistics General Construction Statistics Coastal Statistics Survey on Port and Harbor Survey on Vessels and Seamen Survey on Shipbuilding and Engineering Survey on Current Rolling Stock Production Survey on Seamen's Labour Survey on Motor Vehicle Transport Coastal Vessel Transport Survey Survey on Air Transport Survey on Rolling Stock Transport Survey of Capital Expenditure Trends in Transportation Enterprises Survey of Automobile Overhaul Business Handbook on Land Transportation Satistics Annual Railroad Statistics Quarterly Statistics on Warehouse Services Final Report on Revenue and Expenditures of Special Account to Maintain Airports Collection of Business Reports of Travel Agencies
Ministry of the Environment	Survey of the Actual Status of Waste Disposal Business
Bank of Japan	International Balance-of-Payments Statistics Corporate goods price index Corporate Service price index Analysis of Main Enterprises' Business Management

Organization	Title of Material
	Economic and Financial Statistics
Nippon Telegraph and Telephone Corporation	Statement of Account of NTT (Nippon Telegraph and Telephone Corporation)
KDDI Corporation (Kokusai Denshin Denwa Co., Ltd.)	Statement of Account of KDDI Corporation (Kokusai Denshin Denwa Co., Ltd.)
NHK (Japan Broadcasting Corporation)	Statements of Account of NHK
Public Corporations	Business Reports from Public Corporations, Statements of Profits and Losses of Public Corporations
Other	
Tokyo Metropolitan Government	Tokyo Recycle Handbook
Six Major Cities	Annual Report on Central Wholesale Markets
Japan Sugar Refiners' Association	Sugar Statistical Yearbook
Japan Canners Association	The Canners Journal
Food Marketing Research and Information Center	Comprehensive Survey of Current State in Food Industries
Japan Meat Processors Association	Japan Meat Processing Information
Japan Plant Protection Association	Agricultural Handbook
Japan Chemical Industry Association	Handbook of Chemistry
Nippon Slag Association	Statistical Yearbook of Iron and Steel Slag
Computer Entertainment Software Association	CESA Game White Paper
Japan Personal Computer Software Association	Survey Report on Personal Computer Software Market Trends
Japan Chemical Daily Co., Ltd.	13901 Chemical Products
Nikkei Research Institute of Industry and Markets	Quarterly Nikkei Product Information
Dentsu Inc.	Dentsu Advertising Annual
Japan Heat Service Utilities Association	Heat Supply Business Handbook
Nikken Kogaku Co., Ltd.	Building Prices
Japan Expanded Polystyrene Recycling Association	JESPA Information 2001
Japan Paint Manufacturers Association	Survey of Paint Manufacturing Business
Japan Automobile Manufacturers Association Inc.	Automobile Yearbook
Japan Society of Industrial Machinery Manufacturers	Summary of Industrial Machinery Orders
Japan Robot Association	Survey on Production and Shipment of Manipulators and Robots
Japanese Bankers Association	Analysis of Financial Statements on Banks in Japan
Life Insurance Association of Japan	Insurance Yearbook
General Insurance Association of Japan	Insurance Yearbook
Shinkin Central Bank Research Institute	Review of Operation
Japan Consumer Credit Industry Association	Consumer Credit Statistics
Federation of Moneylenders Association of Japan	Loan Business White Paper
Insurance Institute	"Life Insurance Statistics" issue of "Insurance"
	"Non-Life Insurance Statistics" issue of "Insurance"
National Federation of Health Insurance Societies	Yearbook of National Federation of Health Insurance Societies
Japan Tobacco Inc.	Survey of Production Costs for Leaf Tobacco
Promotion and Mutual Aid Corporation for Private Schools of Japan	Financial Conditions of Private Schools
Central Social Insurance Medical Council	Survey on Economic Conditions in Health Care
Social Insurance Medical Fee Payment Fund	Fund Yearbook
All Japan Federation of National Health Insurance Organizations	Payment Status of Nursing-Care Benefits
Motion Picture Producers Association of Japan	Japan Film-Industry Statistics

Table 1-4 Special Surveys Conducted for Compilation of the 2000 Input-Output Tables

Organization/Special Survey	Implementation Period
<Ministry of Internal Affairs and Communications>	
Input Survey of Service Industries and Non-Profit Organizations	March–May 2001

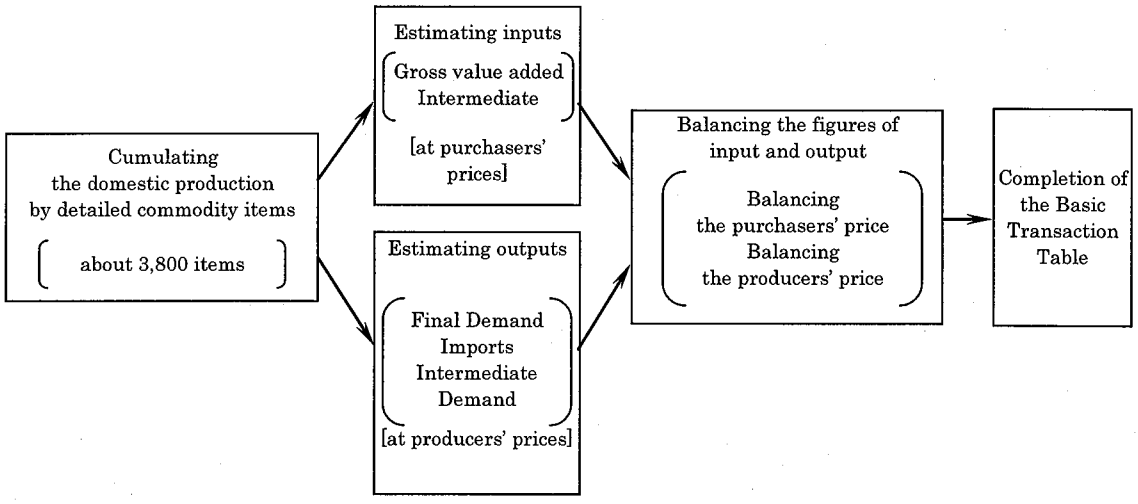
Organization/Special Survey	Implementation Period
Survey of Head Offices' Activities	July–August 2001
Input Survey of Communication and Broadcasting	July–September 2001
<Cabinet Office>	
Survey on Local Public Industries' Financial Expenditure	July–December 2001
<Ministry of Finance>	
Input Survey of Alcoholic Liquor Production Industries	October–November 2001
<Ministry of Health, Labour and Welfare>	
Basic Survey for Compilation of the 2000 Input-Output Tables	March–May 2001
(Input Survey of Hygienic Material Manufacturing)	
(Input Survey of Medical Product Manufacturing)	
(Input Survey of Medical Services)	
(Input Survey of Health and Sanitation)	
(Input Survey of Social Insurance)	
(Input Survey of Social Welfare)	
Survey on Labour Costs of Temporary and Day Workers	January–February 2001
Survey of Worker Dispatching Undertaking	September 2001
<Ministry of Agriculture, Forestry and Fisheries>	
Input Survey of Agricultural Service	January–April 2001
Input Survey of Log Production (Non-national forest)	As above
Input Survey of Marine Culture and Inland Water Culture	As above
Input Survey of the Food Industry	As above
Input Survey of Livestock Feed and Organic Fertilizers	As above
Input Survey of Agricultural Construction	As above
Input Survey of Forestry Construction Ordered by Government	As above
Input Survey of Seed and Seeding	June–August 2001
Input Survey on Growers of Flowers and Plants	As above
Input Survey of Forestry Products	As above
<Ministry of Economy, Trade and Industry>	
Input Survey of Mining and Manufacturing Industries	January–December 2001
Survey of Capital Goods Demand Structure	July 2001–March 2002
<Ministry of Land, Infrastructure and Transport>	
Survey on the Breakdown of Construction Ordered by Government (Preliminary Survey)	July–September 2001
Current Survey of the Real Estate Industry	March–May 2001
Survey on the Breakdown of Costs for Civil Engineering Work	February–July 2001
Survey on the Breakdown of Building Expenses	April–May 2002
Survey on the Breakdown of Construction Ordered by Government	September–December 2001
Survey on the Breakdown of Indirect Costs for Civil Engineering Work	October–December 2001
Survey on the Breakdown of Costs for Civil Engineering Work Ordered by Public Corporation	May–June 2002
Survey on Freight Income of Coastal Ships by Commodity	September–November 2000
Survey on Parking Area Utilization	January–February 2001
Input Survey on Packing and Crating	As above
Survey on Prefectural and Local Government Transportation Facilities	August–November 2001
Input Survey on Undertakings Concerned with Transportation	October–November 2001
(Input Survey of Automobile Mechanics Services)	
(Input Survey of Bus Services)	
(Input Survey of Taxi Services)	
(Input Survey of Road Freight Services)	
(Input Survey of Rental Automobile Services)	
(Input Survey of Warehousing Services)	
(Input Survey of Airplanes and Air Freight Services)	
(Input Survey of Freight Handling Services)	
(Input Survey of Transport-Related Services)	
(Input Survey of Salvaging Services)	
(Input Survey of Shipbuilding Industry)	
(Input Survey of Rolling Stock Manufacturing)	

4 Compilation and Balancing Figures

When various statistical and other basic data becomes available, the domestic production, the input, and the output by sector are estimated sequentially. This is the work that requires the most time and labor in the compilation of the Input-Output Tables. Regarding the 2000 Input-Output Tables, most of the basic data was collected and arranged by the end of fiscal 2001, and this estimation work was performed intensively in fiscal 2002.

Chart 1-4 shows the procedure for estimates and balancing figures. [1] Estimate the row and column for domestic production by sector, the figures for which are listed at the right and bottom of the Input-Output Tables, respectively. [2] Regarding said domestic production, estimate the breakdown of input including the gross value-added sectors, or the figures for each cell in the column direction, and the breakdown of output including the final demand sectors and imports, or the figures for each cell in the row direction. [3] As the figures in the compiled Input Table are based on purchasers' prices (due to the use of a special surveys or the like), they are converted to figures based on producers' prices. [4] The input and output based on producers' prices as calculated above are estimated using different data and methods, thereby creating some discrepancies between the two. Thus, the two figures are balanced and matched. [5] After producers' prices are balanced, purchasers' prices are balanced by distributing the trade margins and freights in each transaction value, and are compiled in a table. The table compiled as described above is the Basic Transaction Table, which is the core of the Input-Output Tables.

Chart 1-4 Estimation and Reconciliation Procedure



(1) Estimating the Domestic production

The value of the domestic production is crucial to controlling both rows and columns of the INPUT-OUTPUT Tables. To estimate Input-Output Tables, domestic production must be determined first, after which the breakdown figures for input and output are estimated. Errors may affect input and output for other sectors, compromising the accuracy of the entire table. For this reason, domestic production is referred to control totals (CT) and requires meticulous care in related estimates.

All goods and services produced by each industry are arranged into approximately 3,800 detailed items (10 digits), which are in turn further classified and calculated into row (7 digits) or column (6 digits) sectors in basic sector classification. This results in an estimate for the domestic production of the respective detailed items (unit price multiplied by quantity). However, for the items for services, values are estimated directly based on the sales amount of the respective detailed items, because quantitative units are irrelevant in many service items. As the basic materials for estimates, the Census of Manufactures or the Current Survey of production are used for most manufactured/industrial products, production is estimated for respective detailed items by considering stock values, scraps/by-products, and processing charges. For other items, various statistical materials, including the Survey of mining trends in Japan, the Crop statistics, the Statistics on Fisheries and Marine Culture Production, the Establishment and enterprise census, and the Survey of Building Construction Started are used to estimate production for the respective detailed items. Also used are administrative records held by relevant authorities, as well as materials held by industrial organizations.

Moreover, production values for the producers of government services activity and private non-profit services to households are estimated by accumulating the cost of their activities.

(2) Input Estimates

Input estimation is performed to estimate the vertical breakdown of column sectors (6 digits), which shows how the domestic productions by sector are produced based on the cost composition and gross value-added composition.

Specifically, for most manufactured/industrial products, reclassification tabulation results in the Census of Manufactures are used to provide an overall picture of major raw material usage, fuel consumption, cash salaries, depreciation, and internal taxes on consumption, etc. Materials on production technologies and input surveys on mining, separately implemented, are then used to estimate detailed breakdowns of expenses.

For other sectors, estimates are made in a similar manner based on various materials. Major materials for estimates are existing statistical materials, including raw material statistics in the Current survey of production and the Agricultural and livestock production expense statistics. However, since such existing materials are by inadequate alone, relevant authorities implement special surveys, such as input surveys and expense breakdown surveys, as well as interviews with relevant industrial organizations, to estimate inputs.

(3) Output Estimates

Output estimation is performed to estimate the horizontal breakdown of row sectors (7 digits) showing to which production sectors or final demand sectors sectoral domestic productions are sold.

The basic estimation method is to establish total supply with domestic productions and imports, from which exports are deducted to estimate the gross domestic supply. Next, this gross domestic supply is distributed to the respective demand sectors using a wide range of supply and demand statistics, depending on product characteristics for detailed items, to produce the output estimates.

In addition, given the numerous data-related restrictions in breakdown estimates of output, input estimates are made first. As stated in the following section, the input figures also play the leading role in many cases involving the reconciliation of input and output figures.

(4) Consumption Tax

For consumption tax, basic estimates data are extremely limited. The respective transaction values in the Input-Output Tables are shown as gross values. Furthermore, indirect taxes have been included in computations of the value of consumption tax.

(5) Balancing the Figures of Input and Output Values

Since input and output values are estimated separately by different methods and data, differences are bound to occur, even through the respective computations in the corresponding transaction sector may be related. Hence, balancing the figures of these estimates of respective transactions is integrated.

Specifically, the personnel in charge of quantitative estimates for input meet their counterparts in charge of output at the relevant authorities to reconcile estimates, considering the accuracy of the basic data and methods of estimation, as well as other relevant factors.

This work entails reconciling the figures in "517 rows x 405 columns = 209,385" cells only for endogenous sectors, and even as many as 220,000 cells when combined with exogenous sectors, to determine unified figures.

In light of this observation, as indicated in Table 1-5, five extensive meetings (each lasting four days and attended by a total of some 1,000 related staff members from all pertinent authorities) were held to undertake the task of reconciliation for the 2000 Input-Output Tables. Further numerical reconciliation tasks were also performed by the Management Committee for the Input-Output Tables to determine figures in the Basic Transaction Table, the Input Table, and the Output Table.

Table 1-5 Conferences for Balancing of the 2000 Input-Output Tables

	Period (2003)	Number of days
1st R	February 2 (Mon)– February 6 (Thu)	4
2nd R	March 3 (Mon) – March 6 (Thu)	4
3rd R	April 7 (Mon) – April 10 (Thu)	4
4th R	May 6 (Tue) – May 9 (Fri)	4
5th R	May 29 (Thu) – May 30 (Fri)	2

5 Compilation of Various Coefficients Tables

For the Basic Transaction Tables, tables based on basic classifications as well as tables compiled from various aggregated sector classifications are compiled. These tables represent economic structures for the years covered, and can be used independently to elicit useful information. However, their use is limited to the scope of the respective tables. On the other hand, Input-Output Tables are used primarily for so-called Input-Output analyses, including measurements of policy effects through production and price spin-off effects, as well as demand forecasts. Following the compilation of the Basic Transaction Tables, various coefficients tables, such as the input coefficients tables and the inverse matrix coefficients tables (which are required for Input-Output analysis) are constructed and published.

The following tables have been compiled and published for the 2000 Input-Output Tables.

[1] Input Coefficients

[2] Inverse Matrix Coefficients

[3] Domestic Production Inducement Coefficients
[4] Imports Inducement Coefficients
[5] Gross Value Added Inducement Coefficients

6 Compilation of Various Supplementary Tables

The Basic Transaction Tables summarize all transaction processes related to goods and services in a single list comprised of 571 rows sectors and 405 column sectors. The tables are compiled in accordance with certain rules based not only on 68 SNA and 93 SNA, but also on the Input-Output table compilation theories accumulated to date. However, the information contained therein is limited to the presented materials. Response to various Input-Output analyses requires separate supplementary tables.

Various supplementary tables are compiled to compensate for shortcoming in the Basic Transaction Tables and to enable multiple uses of the Input-Output Tables. The following ten supplementary tables have been compiled for the 2000 Input-Output Tables:

[1] Table on Trade Margins
[2] Table on Domestic Freights
[3] Table on Imports
[4] Table on Scrap and By-products
[5] Table on Value and Quantity
[6] Table on Employees Engaged in Production Activities (by Occupation)
[7] Employment Matrix (Table on Employees Engaged in Production Activities [by Occupation])
[8] Fixed Capital Matrix (Table on Fixed Capital Formation)
[9] Table on Commodity Output by Industry (Make table)
[10] Table on Self-Transports

For overviews of structures and compilation methods for the supplementary tables, please refer to Chapter 4.

7 Publication of the Results and Preparation of Report

The final report is published upon completion of the Basic Transaction Tables, various coefficients tables, and supplementary tables.

For the 2000 Input-Output tables, before publication of the final report, Basic Transaction Tables based on the aggregated medium group classification (104 sectors) were compiled as a preliminary report, which was then delivered to the Cabinet, together with related materials, and published concurrently on August 29, 2003.

The final report was finalized after adjustments in the Management Committee for the Input-Output Tables and made available on the Internet for public viewing on March 1, 2004, followed by publication of the final report in book format.

Furthermore, as before, in response to user requests, data was also published and released on magnetic media, before publication of the final report, to allow fastest possible access to the data.

Statistical tables publicized for compilation of the 2000 Input-Output Tables are as indicated in Table 1-6.

8 Compilation of the Linked Input-Output Tables

Although there are no major differences in the basic frame of the Input-Output Tables compiled every five years, several changes have been made in sector setups, as well as concepts, definitions, and scope of respective sectors. A direct comparison of tables from different periods is therefore not possible.

To analyze economic structures or other aspects with historical comparisons of these Input-Output Tables, the sectors, concepts, definitions, and so on must be made consistent for past tables and the newly compiled tables. Comparable values must be projected for past tables or for newly compiled tables.

Thus, Linked Input-Output Tables have been compiled to enable comparisons of different points in time by reclassifying the past Input-Output Tables for consistency with the newest sector classifications.

The Linked Input-Output Tables produce two different kinds of tables in accordance with price evaluation methods. The first is "Linked Input-Output Tables at current price," in which tables for respective years are evaluated in terms of the prices for those years. The other is "Linked Input-Output tables at constant price," in which past transaction prices are reevaluated (inflated) to permit historical comparisons in accordance with those in newly compiled tables.

For the 2000 Input-Output Tables, 1990-1995-2000 Linked Input-Output Tables were published on March 30, 2005.

Table 1-6 List of Statistical Tables for Compilation of the 2000 Input-Output Tables

	Titles of Statistical Tables	Producers' price evaluation				Purchasers' price evaluation				Available on magnetic media
		Basic (517 x 405)	Minor 188	Medium 104	Major 32	Basic (517 x 405)	Minor 188	Medium 104	Major 32	
Basic Transaction Tables/Coefficient Tables	[1] Input Table	○	○			○	○			○
	[2] Output Table	○	○			○	○			○
	[3] Basic Transactions Table			○	○			○	○	○
	[4] Input Coefficients Table		○	○	○					
	[5] Inverse Matrix Coefficients Table $[I-(I-\hat{M})A]^{-1}$		○	○	○					○
	[6] Inverse Matrix Coefficients Table $(I-A^d)^{-1}$		○	○						○
	[7] Inverse Matrix Coefficients Table $(I-A)^{-1}$		○	○						○
	[8] Table on Domestic Production Induced by Individual Final Demand Items		○	○	○					
	[9] Table on Domestic Production Inducement Coefficients by Individual Final Demand Items		○	○	○					
	[10] Table on Domestic Production Inducement Distribution Ratios by Individual Final Demand Items		○	○	○					
	[11] Table on Gross Value Added Induced by Individual Final Demand Items		○	○	○					
	[12] Table on Gross Value Added Inducement Coefficients by Individual Final Demand Items		○	○	○					
	[13] Table on Gross Value Added Inducement Distribution Ratios by Individual Final Demand Items		○	○	○					
	[14] Table on Imports Induced by Individual Final Demand Items		○	○	○					
	[15] Table on Imports Inducement Coefficients by Individual Final Demand Items		○	○	○					
	[16] Table on Imports Inducement Distribution Ratios by Final Demand Items		○	○	○					
	[17] Imports Coefficients, Input Coefficients of Imported Goods and Services, Total Imports Coefficients and Total Value added Coefficients		○	○	○					
Supplementary Tables	[1] Table on Trade Margins	○	○	○						○
	[2] Table on Domestic Freights	○	○	○						○
	[3] Table on Imports	○	○	○						○
	[4] Table on Scrap and By-products	○								○
	[5] Table on Value and Quantity	○								○
	[6] Table on Employees Engaged in Production Activities (by Occupation)	○	○	○						○
	[7] Employment Matrix (Table on Employees Engaged in Production Activities [by Occupation])			○						○
	[8] Fixed Capital Matrix(Table on Fixed Capital Formation)			○ Basic × Medium						○
	[9] Table on Commodity Output by Industry (Make table)			○						○
	[10] Table on Self-Transports		○ Basic × Minor				○ Basic × Minor			○

(Note) 1 "○" indicates a statistical table produced to compile the 2000 Input-Output Tables.
2 "Basic," "Medium," and "Minor" in the above table indicate respective classification categories.

CHAPTER II

OVERVIEW OF THE 2000 INPUT-OUTPUT TABLES

§ 1 Basic Structure and Theory of Basic Transaction Table

In the 2nd publication of the Input-Output Tables in 1960 compiled jointly by the relevant ministries and agencies, the compliance with National Income Statistics, and the classification categories conforming to those for the Standard Industrial Classification for Japan as well as for the International Standard Industrial Classification (ISIC) were first adopted. Various methodologies for compiling Input-Output Tables have since been adopted. The 1975 Input-Output Tables were modified to comply with 68SNA.

The 1995 Input-Output Tables were compiled in accordance with the ISIC (third edition) and the "IMF Balance of Payments Manual" (fifth edition), and were partly revised to conform to 93SNA. There were no fundamental changes to the framework for compiling the 2000 Input-Output Tables, although further revisions to comply with 93SNA have been made.

In the following, we will explain the basic compilation theories on Input-Output Tables for Japan.

1 Recording Period and Geographical Coverage in the Input-Output Tables

(1) Period Covered

The Input-Output Tables for Japan cover production activities and transactions involving goods and services conducted for one year from January to December (calendar year). The Input-Output Tables have been compiled every five years (years ending with either a 0 or 5) since their first publication in 1955.

(2) Geographical Coverage

The Input-Output Tables cover production activities and transactions involving goods and services conducted in a specified region. The Input-Output Tables for Japan cover production activities and transactions conducted within the country. (Refer to item 6 in this section)

2 Sector Classification

(1) Concept of Sector Classification

The classification of endogenous sectors that include intermediate demand and intermediate inputs in their Input-Output Tables is known as "sector classification."

In some cases, sector classification may encompass such items as the final demand and the gross value added.

(2) Principles for Sector Classification

i) Classification based on production activity (in terms of units)

In principle, sectors are classified by activities for the production of goods and services (in terms of units). The term "establishment" used in such surveys as the "Establishment and Enterprise Census" and the "Census of Manufacturers" is defined as a unit. Therefore, an establishment that involves two or more production activities is classified by its main activity. However, in the classification of Input-Output Tables, an establishment that involves two or more production activities is essentially divided into the appropriate separate grouping based on its activity. This concept of classification by production activity is similar to that used in commodity classification.

For example, the activities of the retail manufacturing industry are recorded in their respective sectors after being divided into manufacturing and retail activities. The activities of a railway company that operates rail and bus transportation are recorded in their respective sectors after being divided into each type of business.

In this way, the Input-Output Tables for Japan are constructed based on sector classifications by production activity, and are thereby referred to as "commodity-by-commodity" tables (A tables).

Note: The following tables are based on sector classifications other than that of an A table.
[1] Table on commodity input by industry = U table
[2] Table on commodity output by industry = V table
[3] Table on industry by industry

ii) Definition of row and column sectors in "commodity-by-commodity tables"

The row sector that comprises the endogenous sectors in the Input-Output Tables represents goods and services produced for one year, classified primarily by commodity and purpose. The column sector represents the aforementioned goods and services classified primarily by industry and production facility.

iii) Relationship between row and column sectors

In principle, the row and column sectors have a one-to-one correspondence. However, the following two cases are divided by commodity under the row sector only, which strictly represents the output structure: (1) a petroleum refinery that produces different goods with different unit prices and usage in one production process and (2) the industrial machinery in an establishment that produces goods with different prices and functions by purchasing and consuming one raw material.

On the other hand, manufacturing activities, including plastic products with similar input structures, are summarized under the column sector despite the fact that they produce a wide variety of products with different unit prices and purposes using different production facilities. In short, the column sector represents classification by production activity, and the row sector represents classification by commodity.

As a result, the Basic Transaction Table displays a rectangular form with more row sectors than column sectors.

In addition to the above, the electric power that is produced through different production facilities and processes, such as thermal power stations and nuclear power stations, is divided under the column sector and summarized under the row sector.

(3) Criteria for Sector Classifications

In principle, the basic sector classification, which is the most detailed item classification of the endogenous sectors in the Input-Output Tables, is based on "production activity (in terms of units)." However, a transactor-based production activity classification was adopted in 1975 in order to conform to 68SNA.

In every publication of the Input-Output Tables, we increase, divide, or integrate sectors in the classification and change the concept and the scope of definition in order to adapt the Input-Output Tables to increases and decreases in domestic production and technical changes, based on time-series and international comparisons.

In the 2000 Input-Output Tables, we discussed revisions of sectors in the establishment of the basic sector classification based on the following criteria:

[1] Similarity of input structures and stability of input coefficients

[2] Similarity of output structures

[3] Size of domestic production and total demand

[4] Consistency with the Standard Industrial Classification for Japan (Rev. 10) and the International Standard Industrial Classification (Rev. 3)

[5] Compliance with 93SNA

[6] Similarity of unit prices based on detailed classification (10-digit code)

[7] Time-series comparability and international comparability

[8] Completeness of basic data for estimation

(4) Transactor-Based Production Activity Classification

i) Definition of transactor-based production activity classification

Normally, the Input-Output Tables record transaction activities involving goods and services that are sold at prices that cover their costs. They are mainly commodities provided through production activities of industries, but the following two goods and services provided by the government and public enterprises are recorded in the Input-Output Tables in addition to commodities by industrial production activity.

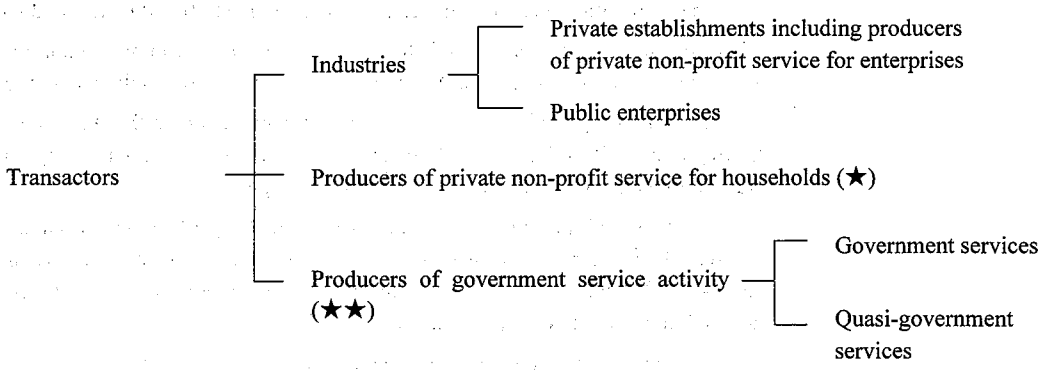
[1] Goods and services provided free of charge or regardless of their cost

[2] Goods and services that are not sold on the market

The transactor-based production activity classification is introduced to enable understanding of these relationships in the Input-Output Tables. It focuses on transactors that produce and supply goods and services. Moreover, the transactor is categorized according to whether it is an industry, a producer of private non-profit service for households or a producer of government service activity.

In this sense, the basic sector classification has the following two functions: (1) classification by production activity (in terms of units); (2) transactor-based production activity classification focusing on transactors that produce and supply goods and services.

In addition to the above, there is the case of educational institutions providing school-lunch services. However, some educational institutions have entrusted outside school meal centers to prepare lunchtime meals. In the Input-Output Tables, we classify lunch services by educational institution, not by the institution that actually provided the services, in order to avoid confusion.



Note: Transactors are marked with a star symbol (s) in the basic sector classification.
No Symbol: Industries
★: Producers of private non-profit service for households
★★: Producers of government service activity

ii) Industries

In principle, "industries" represents establishments that conduct production activities involving goods and services for market sales intended to earn profits. Most are private establishments.

However, the following transactors are categorized by industry despite the fact that their sales prices or charges are set regardless of their cost, or their goods and services are not sold in the market.

(A) Producers of private non-profit service for enterprises

A "producer of private non-profit service for enterprises" must satisfy the three requirements specified below. If such an organization does not provide its services, companies and organizations will have to provide these services themselves. Therefore, the services provided by these organizations are categorized by industry. For example, the Chamber of Commerce and Industry and the Federation of Economic Organizations fall under this category.

a. Non-profit service for private businesses and organizations

b. Private research institutions and a wide variety of organizations that provide services such as technical guidance, examinations, and research in order to increase the efficiency and profitability of companies and organizations. Among corporations that are established by special law, authorized corporations that do not receive subsidies from the government are included.

c. Affiliated business groups or organizations provide contributions and membership fees for operations, and such contributions and membership fees are categorized as payment for services.

(B) Public enterprises

In principle, "public enterprises" refers to a or b below.

a. Goods and services produced by the above institutions should in theory be equal to those produced by private establishments. The prices and fares are set in proportion to the quantity and quality of services, and people must be able to purchase goods and services of their own free will. In addition, we regard government-affiliated corporations owned and supervised by the government as public enterprises.

We use the following two requirements to determine whether supervision and ownership by the government exists:

(a) Institutions in which the government holds at least a 50% share or more. In addition to the above, in corporations such as joint-stock corporations and union organizations, the government holds a majority of the voting rights.

(b) Corporations for which the government determines their business policies and appoints their executive officers by special law. The term "determination of business

policy" used in this case is defined as follows: a competent minister performs general supervision of the corporation and has the authority to approve its budget and business program. In addition, the term "appointment of executive officers" specifically indicates the following: a competent minister has the authority to appoint the heads of the corporation, including the chairperson, administrative director, and CEO.

b. Part of the special account of the government (the business accounting of the local authorities) under the category in Section a. above belongs to "public enterprises."

Institutions that provide services to the government, including the Bureau of Engraving and Printing and the Mint Bureau, and postal services, which cover a wide range of customers in addition to the government, are included in this category.

However, social and public services, such as public gardens, health care, education, and culture, which are provided at much lower prices than their actual costs, are classified as "quasi-government services" of "producers of government service activity" and are not included in the public-enterprise category.

In addition to the above, the government has privatized three former government corporations as a centerpiece of administrative reform in order to minimize official restrictions. If the government owns shares in such corporations as an interim measure, it will make public its stockholding sequentially, taking into account market trends (The Third Report on Administrative Reform (July 30, 1982) Part 2, Chapter 5, No. 1).

In this case, the government does not intend to obtain ownership of the corporations. Therefore, the former three government corporations are treated as private establishments.

Note: (1) Japanese National Railways (the present Hokkaido Railway Company, East Japan Railway Company, Central Japan Railway Company, West Japan Railway Company, Shikoku Railway Company, and Kyushu Railway Company, as well as the Japan Freight Railway Company) (abbreviated name: JR), (2) Japan Monopoly Corporation (the present Japan Tobacco Inc.: JT), and (3) Nippon Telegraph and Telephone Public Corporation (the present Nippon Telegraph and Telephone Corporation: NTT), to which the "Law Concerning Enforcement of the Public Corporation and National Enterprise Labour Relations Law" (enforced as No. 83 of the extra edition on May 19, 1959) applies, are referred to as "the three former public corporations."

(C) Other activities defined as industries

a. Rents for houses and company houses paid by each transactor are subject to imputation as house rent for owner-occupied dwellings and for dwellings supplied by employers, assuming that rent is received from dwellers like in a house for rent. This rent is categorized as "industry" (imputed house rent sector).

It is thought that imputed rent impairs the accuracy of analysis by producing repercussion effects. Therefore, the category of house rent was divided into the following two categories in the 2000 I-O Tables: conventional "house rent" and house rent after imputation, i.e., "imputed house rent."

b. Production activities of agricultural and fishery households for personal consumption are treated as "industry," and in principle included in the estimates.

iii) Producers of private non-profit service for households

The term "producer of private non-profit service for households" refers to an organization that satisfies the two requirements specified below. Religious organizations, labor unions, academic societies, cultural institutions, and political organizations are all included in this category.

(A) Provides non-profit services to households, free of charge or at prices much lower than actual cost

(B) Free from supervision or funding from the government

The term "free from supervision by the government" refers to cases other than those that satisfy both of the following requirements:

a. The government holds at least a 50% share of the producer.

b. The government has the authority to decide on business policies and appoint executive officers of the corporation by special law.

iv) Producers of government service activity

In principle, the term "producers of government service activity" refers to the following:

(A) Government institutions and government-affiliated corporations that provide services free of charge or at prices much lower than actual cost in order to carry out their political responsibility or economic duty

(B) Non-profit organizations that provide services free of charge or at prices much lower than actual cost under government supervision and with government funding. In addition to the above, their business is clearly public because they provide services that embody the government policies and is identical to activities of the government itself. The activities of "producers of government service activity" in this case are roughly divided into the following two services:

a. Social services or collective services, such as administration and defense, provided exclusively by the government or government-affiliated corporations and paid by taxes and other revenues

b. Individual services, such as education and health care provided free of charge or at prices much lower than actual cost, for social and political purposes, although the producers may collect charges for services

The category "producers of government service activity" is divided into "government services" and "quasi-government services" for straightforward analysis purposes, based on the requirements specified below. The category "government services" is divided into "government services (central government)" and "government services (local governments)."

[Government services] refers to services directly provided by the government and government-affiliated corporations, and there are no categories that provide similar services in the industry sector.

[Quasi-government services] refers to services directly provided by the government and government-affiliated corporations, although there are sectors that provide similar services in the industry sector. However, prices or charges are set at much lower levels than actual costs for social and public services.

For example, social and public services such as public gardens, health care, education, and culture, for which prices and charges are set at a much lower level than actual cost, are included in this category.

(5) Types of Classifications and Classification Codes

i) Structure of classification

The "basic sector classification" is the most detailed classification in the Input-Output Tables. The classifications "minor aggregated sector," "medium aggregated sector," and "major aggregated sector" are established by aggregating the basic sector classification.

ii) Basic sector classification (6-digit classification, 7-digit classification) and detailed commodity classification (10-digit commodities)

"Basic sector classification" refers to the most detailed sector classification for publication by transactors, as well as the types and purposes of their goods and services and their production technologies. In the "basic sector classification," 6-digit figures and 7-digit figures are used for codes under the column and row sectors, respectively. In addition to the above, there is a detailed commodity classification (10-digit commodities) in the basic sector classification (see note). The detailed commodity classification is a basis for estimation of domestic productions by sector.

We estimate inputs and outputs as well as balance figures based on this "basic sector classification." In general, the more detailed sector classification we carry out for each production activity, the more accurate results we can obtain in the "basic sector classification." This methodology also helps stabilize the input coefficients in each sector.

Note: Detailed commodities (10-digit commodities)

Domestic productions are estimated based on basic statistics, including the Survey on Service Industries, Census of Manufactures, and a wide range of current statistical surveys; activities are thus classified as specifically as possible. We can estimate domestic production under the basic sector classification by tallying the value of production by row sector and by column sector according to activity.

A detailed commodity with a 10-digit code number in the tables of total domestic products is the minimum unit of classification when estimating production value. This detailed commodity is an

expense item for elements in the basic sector classification. We can refer to this detailed commodity classification as the smallest classification by activity in the Input-Output Tables.

Generally speaking, inputs and outputs can be estimated and balanced easily if a large number of detailed commodities can be obtained for the tables.

iii) Minor aggregated sector classification (4-digit classification)

This classification, which is the most detailed classification that provides input coefficients and inverse matrix coefficients, is established in line with the 4-digit classification of the Standard Industrial Classification for Japan and the International Standard Industrial Classification (ISIC).

iv) Classification of medium and major aggregated sectors

The medium aggregated sector classification is established to satisfy the ordinary needs of input-output analysis. The Basic Transaction Table based on the medium aggregated sector classification is published as a preliminary report.

The major aggregated sector classification is a table for simplified input-output analysis. In addition to the above, a 13-sector classification (model) is performed to explain the Input-Output Tables.

The codes for the classification of the medium and major aggregated sectors do not correspond to those of the basic sector classification.

v) Representation of the Basic Transaction Tables

The numbers of the row and column sectors in the endogenous sectors represent the Basic Transaction Table. For example, the Basic Transaction Table according to the basic sector classification in the 2000 Input-Output Tables has 517 row sectors and 405 column sectors, which is expressed as 517 x 405 Sector Table.

A table with the same number of row and column sectors, such as a 188 x 188 Sector Table, is expressed as 188 Sector Table using the common sector figures.

vi) Sector classification code

The codes used in the basic sector classification, or the endogenous sector codes, were completely revised in the compilation of the 1985 Input-Output Tables.

Sector classification codes are defined as follows (refer to Chart 2-1):

[1] The first 2 digits represent the type of business.

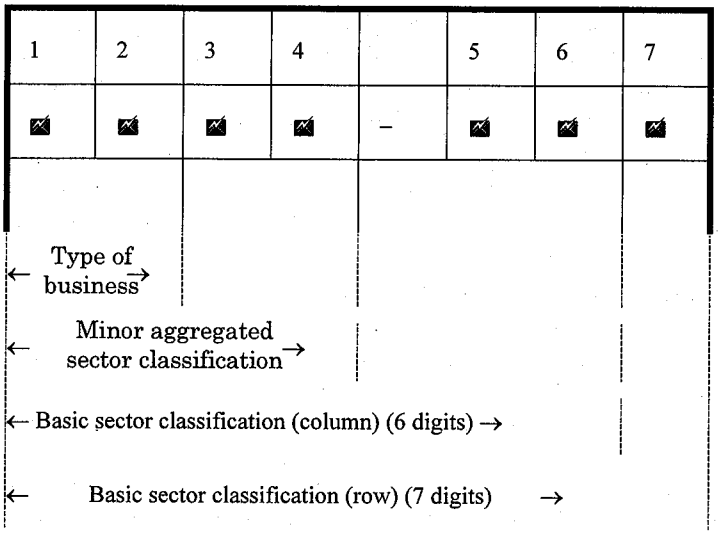
[2] The first 4 digits correspond to the minor aggregated sector classification.

[3] The 5th to 6th digits and the 7th digit represent codes for the column sector and row sector, respectively. In principle, codes are indicated as serial numbers.

[4] Generally, the 5th and 6th digits indicating 09 represent the code for other sectors.

[5] Generally, the 5th and 6th digits indicating 10 represent the code for the repair sector.

Chart 2-1 Codes for Basic Sector Classification and for Minor Aggregated Sector Classification



vii) Special codes

For users' convenience, the following special classification codes (refer to item 9 in this section) are used for such special treatments as the output and input of scrap and by-products, as well as for trade margins and domestic freight. The following codes are indicated after the last (the 6th or 7th) digit of the basic sector classification code (the codes are referred to as "2 attached" or "3 attached," for example).

<Special classification codes>

- Scrap input ····· 2
- Scrap output ····· 3
- By-product input ····· 4
- By-product output ····· 5
- Trade margin ····· 6
- Domestic freight ····· 7

(6) Exogenous Sector Classification

The items involving the final demand and gross value added in the exogenous sector are closely established in accordance with the System of National Accounts.

i) Final demand sectors

The items involving the domestic final demand in the Input-Output Tables, except for the consumption expenditure outside household, closely correspond to the gross domestic expenditure in the national accounts. The domestic final demand sectors, except for the elements of exports and imports, are established in accordance with the System of National Accounts, as can be seen in Table 2-1.

We classify exports and imports in order to enable smooth conversion of the national concept into the domestic concept, and to realign and improve the Input-Output Tables in line with the demand items of national accounts.

ii) Gross value added sectors

The gross value added sectors in the Input-Output Tables, except for "consumption expenditure outside household," closely correspond to the gross domestic products in the national accounts and are established in correspondence with the System of National Accounts, as can be seen in Table 2-2.

iii) Consumption expenditure outside households

Consumption expenditure outside households is also known as "business consumption." A breakdown of business consumption, such as lodging expenses and daily allowances, entertainment allowances, and welfare expenses, is entered as an item of consumption expenditure outside households in the final demand sector (column) by goods and services.

The total amount of lodging expenses and daily allowances, entertainment allowances, and welfare expenses for the production sector (column) is recorded as consumption expenditure outside households (row) in the gross value added sector. The respective totals of the row and column for consumption expenditure outside households correspond.

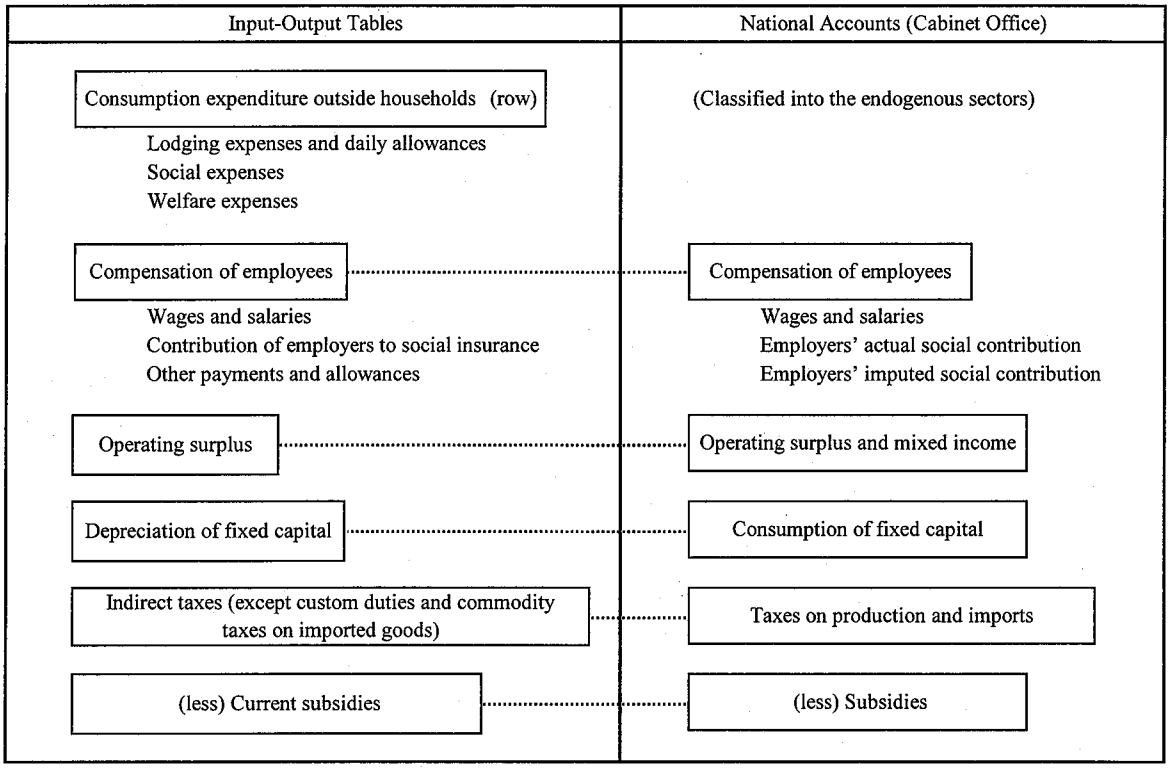
In the national accounts, consumption expenditure outside households is not included in the exogenous sector (the gross value added and final demand) as necessary operating expenses in the production activities of enterprises. However, this business consumption is included in the exogenous sector in the Input-Output Tables as a part of the operating surplus and a transfer in kind from the industry sector to the consumption expenditure outside households sector. This methodology helps to stabilize the input coefficients.

Table 2-1 Input-Output Tables and Correspondence to National Accounts (Final Demand Sector)

Input-Output Tables	National Accounts (Cabinet Office)
Consumption expenditure outside households (Column)	(Classified into the endogenous sectors)
Consumption expenditure(private)	Private final consumption expenditure
Consumption expenditure of households Consumption expenditure of private non-profit institutions serving households	Final consumption expenditure of households Consumption expenditure of private non-profit institutions
Consumption expenditure of general government	Final consumption expenditure of government
Collective consumption expenditure of central government Individual consumption expenditure of central government Collective consumption expenditure of local government Individual consumption expenditure of local government	Collective consumption expenditure of central government Individual consumption expenditure of central government Collective consumption expenditure of local government Individual consumption expenditure of local government
	Gross domestic fixed capital formation Gross domestic fixed capital formation
Gross domestic fixed capital formation (public)	public sectors
	General government Plant and equipment Dwellings
Gross domestic fixed capital formation (private)	Private sectors
	Plant and equipment Dwellings
Increase in stocks	Changes in inventories
Increase in producers' stocks of finished goods Increase in stocks of semi-finished goods and work-in-process Increase in dealer's stocks of goods Increase in stocks of raw materials and supplies	Private sectors Public corporations General government
Exports	Exports of goods and services
Exports (ordinary trade) Exports (special trade) Exports (direct purchase)	Goods Transport, travel, telecommunication, insurance, others (Recorded once again) Direct purchase
(less) Imports	Imports of goods and services
Imports (ordinary trade) Imports (special trade) Imports (direct purchase)	Goods Transport, travel, telecommunication, insurance, others (Recorded once again) Direct purchase
(less) Custom duties	[Included in "the tax on production and imported goods" of the value added]
(less) Commodity taxes on imported goods	[Included in "the tax on production and imported goods" of the value added]

Notes: 1. Encircled items in the I-O Tables correspond to the items involving final demand under the major aggregated sector classification.
2. Goods in the national accounts are based on the same concept as goods in the I-O Tables.
3. For breakdowns of the consumption expenditure of general government in the I-O Tables, the depreciation of social overhead capital is separately listed.

Table 2-2 Input-Output Tables and Correspondence to National Accounts(Gross Value Added Sector)



Notes: 1. "The value of payment in kind" and "differential rents of company houses" in "wages and salaries" are treated as "other payments and allowances" in the Input-Output Tables, while they are treated as "wages and salaries" in the national accounts kept by the Cabinet Office.
2. Encircled items in the Input-Output Tables are elements of the gross value added corresponding to the major aggregated sector classification.
3. For provision for depreciation of fixed capital in the Input-Output Tables, the depreciation of social overhead capital is separately listed.

3 Timing for Recording

In principle, production activities and transactions are recorded on an accrual basis in the Input-Output Tables, meaning that they are recorded at the time a transaction occurs. With the cash basis, on the other hand, production activities and transactions are recorded at the time earnings from and payments for production activities are actually paid. The equivalence of two aspects in the Input-Output Tables cannot be obtained on a cash basis (the respective totals of the gross added-value sector and the final demand sector (imports deducted) do not correspond) due to a time lag in the flow of accrual and distribution of earnings from production activities. However, the equivalence of two aspects in the Input-Output Tables can be obtained by recording on an accrual basis. The timing for recording transaction activities is as follows:

[1] Production activities for goods are recorded at the time they are produced, while those for services are recorded at the time they are performed during the year.

[2] Transactions for intermediate products are recorded as the intermediate transaction value at the time intermediate products are actually consumed in each column sector during the year.

[3] In the output to the final demand sectors, consumption expenditure, including consumption expenditure outside household, private consumption expenditure, and consumption expenditure of general government, are recorded at the time bargains are concluded, even in cases in which deliveries of applicable goods are delayed.

[4] Gross domestic fixed capital formation is recorded at the time of delivery, while various types of increases in stocks are recorded at the time legal proprietary rights to products are transferred to producers or distributors.

[5] Exports (ordinary trade) and imports (ordinary trade) are recorded at the time of customs clearance.

[6] Goods with a production period of one year or more (long-term products) are recorded as stocks under the domestic production until the ownership is transferred to the final users. For capital production for the own

account (production of goods for personal consumption), even in the case of the goods in progress, the progress levels are recorded as the "gross domestic fixed capital formation," as the final users retain the ownership. However, in the case of buildings-in-progress, progress levels in constructions shall be recorded as domestic production in the "gross domestic fixed capital formation" even if the ownership has not been transferred. This principle is applied to animal growths: animals providing services (animals for draft, breeding or races, wool, fruit-trees, mulberry, tea leaves, etc.) are recorded in the "gross domestic fixed capital formation" and the others are recorded in the "increase in stocks of semi-finished goods and work-in-progress."

[7] Services with a production period of one year or more are recorded as produced when the services are offered (completion of production), therefore no stocks are recorded.

4 Valuation in Monetary Terms

The Basic Transaction Table in the Input-Output Tables records the actual transactions involving goods and services conducted during the year. The valuation of each transaction is shown in monetary terms.

Goods have a specific unit of quantity. The valuation of each transaction based on the unit of quantity would allow us to perform a quantitative input-output analysis based on production technologies, free from seasonal fluctuations in prices and regional differences.

However, many services do not have specific units of quantity. The same is true of goods in the sector composed of detailed items, as not all items in one sector (row) have a uniform unit of quantity. In addition to the above, calculation based on a uniform unit of quantity is impossible in the column sector, in which a wide variety of raw materials is entered as inputs. Therefore, the "monetary term" is a common criterion for the valuation of the scale of each transaction activity in compilation of the Basic Transaction Table.

Furthermore, to supplement the Basic Transaction Table in monetary terms, a "table on the value and quantity of selected goods" is compiled as a supplementary table.

5 Basic Structure of Basic Transaction Tables

(1) Sector Classification and Basic Framework of the Tables

i) Types of tables by sector classification

The Basic Transaction Tables include the following types of tables, depending on whether the tables are classified on a commodity (activity) basis or on an industry (establishment) basis: A table, U table, V table, and I x I table.

Some foreign countries compile the Table on Commodity (row) by Industry (column)/U table (table on commodity input by industry) and the Table on Industry (row) by Commodity (column)/V table (table on commodity output by industry) based on the 68SNA. After compiling these two tables, these countries indirectly compile the Commodity (row) by Commodity (column) Table/A table (also referred to as the "C table"), based on either the industry technology assumption or the commodity technology assumption. On the other hand, Japan constructs the A table directly. (Since the first trial calculation of the Input-Output Tables in 1951, the A table has been compiled directly.)

(Note 1) Industry Technology Assumption: It is assumed that goods produced in one industry employ the same structure of manufacturing technology. In concrete terms, when the value added by commodity is estimated, the value-added ratio of Industry "A" is applied to all goods produced in Industry "A," and the value-added ratio of Industry "B" is applied to all goods produced in Industry "B." Next, we calculate the value added by industry and by commodity. Lastly, the value added by commodity is calculated by totaling all commodities.

(Note 2) Commodity Technology Assumption: It is assumed that the same goods, even if they are produced in different industries, employ the same structure of manufacturing technology. In concrete terms, when estimating the value added by commodity, we first calculate the production value by commodity regardless of which industry produced the goods. Next, the value-added ratio of Industry "A," of which the main product is Commodity "a," is applied to Commodity "a" and the value-added ratio of Industry "B," of which the main product is Commodity "b," is applied to Commodity "b."

ii) Definition of commodity-by-commodity table/A table

The Input-Output Tables for Japan are commodity-by-commodity tables (A tables) (see 2 (2) in this chapter). However, goods with greatly different uses and unit prices are divided into different row sectors, even if they are produced through one production activity. For example, the commodities of petroleum

refineries (row) are divided into gasoline, kerosene, diesel oil, crude oil, and so on, although petroleum processing is regarded as one activity (column). Therefore, the commodity-by-commodity table resembles a commodity (row)-by-activity (column) table.

Information on the preliminary estimation of the added value of manufacturing products and services by industry can only be obtained from the Census of Manufacturers and Survey on Service Industries. Therefore, we estimate the value added by commodity based on the industry technology assumption. Strictly speaking, the value added of goods and services in these sectors is not estimated on a commodity basis.

(2) Price Valuation and Types of Tables (Input-Output Table at Producers' Prices and Input-Output Table at Purchasers' Prices)

i) Price valuation methods

Each transaction is recorded in monetary terms in the Basic Transaction Tables. The treatment of prices is important, as the values for production and transactions change depending on the treatment of prices.

Not all goods of the same type or quantity are traded at the same price in the actual economy. The prices of commodities vary according to factors such as regional and seasonal fluctuations, as well as differences in the structure of supply and demand or transaction patterns. For example, the price of commodity "a" produced in Hokkaido may differ from that of commodity "a" produced in the Kanto district. The price of one commodity produced by one company may differ depending on whether it is in high demand or whether it is for large-scale or small-scale customers.

When each transaction is entered in the Basic Transaction Tables, a commodity may be valued either at the price derived from the actual cost incurred or at the single price, irrespective of customers or transaction patterns. The former is referred to as the "actual price," and the latter as the "uniform price."

Generally speaking, there are the following two valuation methods for prices.

(A) Based on producers' price or purchasers' price

(B) Based on actual price or uniform price

The following four price valuation methods can be obtained by combining these two concepts.

[1] Producers' price valuation based on actual prices

[2] Purchasers' price valuation based on actual prices

[3] Producers' price valuation based on uniform prices

[4] Purchasers' price valuation based on uniform prices

Japan adopts the following two methods of evaluation: [1] producers' price valuation based on actual prices, and [2] purchasers' price valuation based on actual prices. The Basic Transaction Table based on the former is referred to as the "Input-Output Table at producers' prices," and the latter as the "Input-Output Table at purchasers' prices." Japan does not use a valuation method based on uniform prices.

For recording of the value-added tax (consumption tax), the following two methods are used: a gross approach in which all value-added taxes are included, and a net approach in which deductible value-added taxes are not included. We adopt the gross approach in compiling the Input-Output Tables for Japan due to our limited statistical data.

ii) Input-Output Table at producers' prices and Input-Output Table at purchasers' prices

(A) Formats of the two tables and differences between them

The difference between the two prices can be ascribed to the fact that the purchasers' price is inclusive of such distributive costs as trade margins and domestic freight, while the producers' price is not (see Chart 2-2).

We compile both types of tables as the Basic Transaction Tables for Japan. In the Input-Output Table at producers' prices, each transaction is recorded at the producers' delivery price. Trade margins and domestic freight, incurred before purchasers buy products, are added at the intersection of the purchasers' sector (column), the commerce sector (row), and the transport sector (row).

In the Input-Output Table at the purchasers' prices, each transaction is recorded at prices including trade margins and domestic freight. As a result, only "cost trade margins," "passenger fares," and "cost transport margins" (see 9 (2) in this chapter) are recorded in the row sector for

commerce and transport. Trade margins and domestic freight are not recorded in the row sector for commerce and transport.

In tertiary industries, or the service sector in a broad sense, such as those of construction and electric power, in which trade margins and domestic freight are not applied, transactions valued at producers' prices are equal to those valued at purchasers' price.

However, in "8512-011 computer programming and other software services," and "8619-051 photographic studios," in which trade margins and domestic freight are applied in the 1995 and 2000 Input-Output Tables, transactions valued at producers' prices are not always equal to those valued at purchasers' price.

(B) Characteristics of use

Use of the Input-Output Table at producers' prices and the Input-Output Table at purchasers' prices has the following features.

It is easy to understand the composition of manufacturing costs in each column sector, as the Input-Output Table at purchasers' prices is recorded at prices that are nearly equal to prices of our recognition of actual transactions. In addition, the Input-Output Table at purchasers' prices is advantageous in comparison with other accounts in the national accounts, including the income expenditure account and the national balance sheet.

However, the amount of domestic freight and trade margins differs not only depending on the type of goods and services, but also, in many cases, depending on transaction patterns even if goods and services are identical. Thus, the amount of domestic freight and trade margins is unstable. To stabilize input coefficients (as technical coefficients) by making the input coefficients as close as possible to the physical quantities, it is recommended that the producers' price be used as a basis for calculation in the Basic Transaction Table.

iii) Basic price

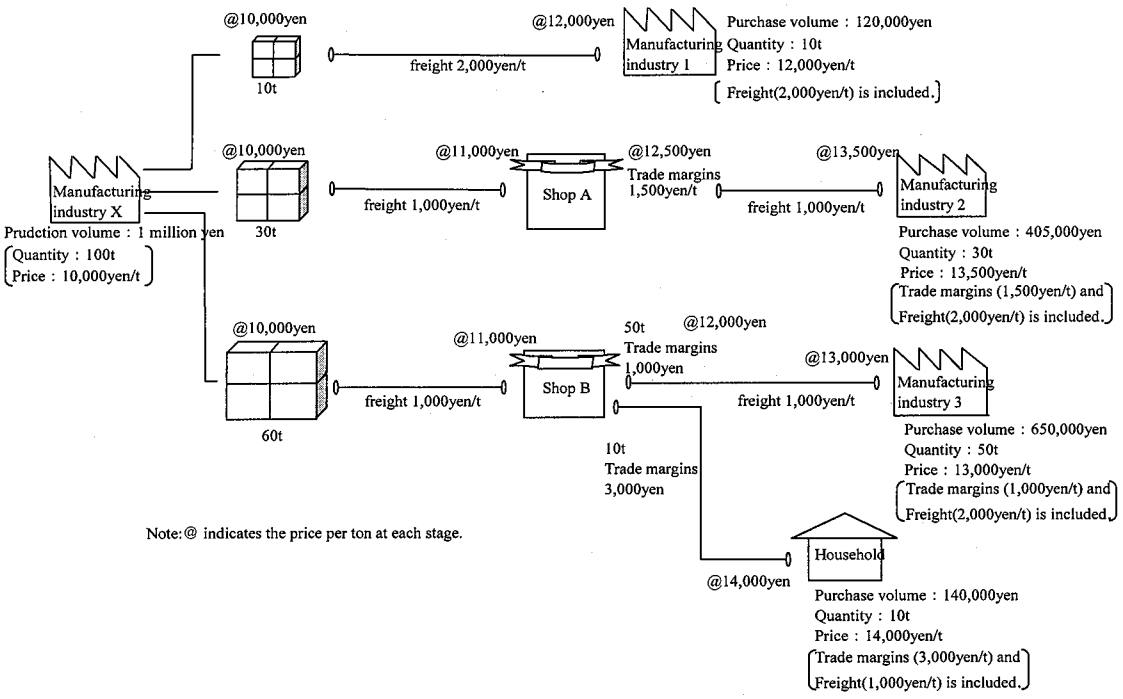
The basic price is the producers' price minus commodity taxes such as consumption, tobacco, liquor, and other indirect taxes, plus subsidies. The 68SNA recommended that the transaction value be calculated using the basic price.

This 68SNA recommendation is based on the following facts: when commodity taxes are included in the transaction value, the commodity tax rates are not necessarily stable and are subject to variations depending on whether it is household or business consumption. In addition, when the tax rates are different among the commodities classified into the same sector, the transaction values are affected by the composition of the commodity to be purchased. Thus, the input coefficients are also affected by these artificial factors.

In Japan, we discussed compiling a "commodity tax matrix" as a supplementary table for the 1970 Input-Output Tables. However, we could only perform trial calculations of the national commodity tax, due to insufficient data on local commodity tax. We have not discussed the treatment of basic price since then (see 5 (4) in this section and 2 (2) in Section 2 for more on the treatment of consumption tax).

Chart 2-2 Input-Output Table at Producers' Prices and Input-Output Table at Purchasers' Prices

[1] Flow of price setting—temporary example—



[2] Input-Output Table at Producers' Prices — Model —

(unit: 1,000 yen)

		Intermediate demand				Final demand			Total demand	Imports (Less)	Domestic production
		… Manufacturing Industry 1	Manufacturing Industry 2	Manufacturing Industry 3 … … …		Consumption	Investment	Exports			
Intermediate input	Commodity "X"	100	300	500	0	100	0	0	1000	0	1000
	Commerce	0	45	50	0	30	0	0	125	0	125
	Transport	20	60	100	0	10	0	0	190	0	190
Gross value added											
Domestic production		.....									

Note: This table is based on the figures in Chart 2-2 [1].

[3] Input-Output Table at Purchasers' Prices — Model —

(unit: 1,000 yen)

		Intermediate demand				Final demand			Total demand	Less			Domestic production
		… Manufacturing Industry1	Manufacturing Industry 2	Manufacturing Industry 3 … … …		Consumption	Investment	Exports		Imports	Trade margins	Freights	
Intermediate input	Commodity "X"	120	405	650	0	140	0	0	1315	0	-125	-190	1000
		[100 +20]	[300 +45 +60]	[500 +50 +100]		[100 +30 +10]							
	Commerce	0	0	0	0	0	0	0	0	0	125	0	125
	Transport	0	0	0	0	0	0	0	0	0	0	190	190
Gross value added													
Domestic production		.....											

Note: This table is based on the figures in Chart 2-2 [1].
The trade margins and freights are included in the row for the transaction value of Commodity "X."

(3) Treatment of Imports and Table Types

i) Competitive import type table and non-competitive import type table

There are two methods for treating imports in the Basic Transaction Tables. One is the "competitive import type table," in which imports and domestic products are treated as identical if they are the same type of goods. The other is the "non-competitive import type table," in which imports and domestic products are treated differently despite the fact that they are the same type of goods.

ii) Table type for Japan: The "competitive import type table," which is accurately described as a "mixed-type table of competitive and non-competitive imports"

In principle, the Basic Transaction Table for Japan is the "competitive import type table," in which the input and output of domestic products, as well as imports, are treated collectively. However, the above table can easily be converted into a non-competitive import type table, as the import value of each transaction is recorded as a breakdown item.

In the Input-Output Tables for Japan, key imported goods such as raw materials and soybeans are recorded separately under the row sector for imported goods, regardless of the scale of domestic production. Therefore, the Basic Transaction Tables for Japan is accurately described as a "mixed-type table of competitive and non-competitive imports".

Table 2-3 represents the "competitive import type table," the "non-competitive import type table," and the "mixed-type table of competitive and non-competitive imports."

Table 2-3 Competitive Import Type Table and Non-Competitive Import Type Table

[1] Perfectly Competitive Import Type Table (Model)

	A	B	C	D	Consumption	Investment	Exports	(Less) Imports	Domestic production
A	10	60	30	40	10	0	0	-100	50
B	20	10	50	10	20	15	10	-35	100
C	5	10	5	50	60	40	40	-50	160
D	5	5	20	15	70	30	30	-25	150
Gross value added	10	15	55	35					
Domestic production	50	100	160	150					

Note:The figure in each grid is the total of domestic products and imported goods, except for the figures in the gross value-added sector and the import sector.

[2] Mixed-Type Table of Competitive and Non-Competitive Imports (Model)

	A	B	C	D	Consumption	Investment	Exports	(Less) Imports	Domestic production
A	5	10	20	10	5	0	0	0	50
A (Imports)	5	50	10	30	5	0	0	-100	0
B	20	10	50	10	20	15	10	-35	100
C	5	10	5	50	60	40	40	-50	160
D	5	5	20	15	70	30	30	-25	150
Gross value added	10	15	55	35					
Domestic production	50	100	160	150					

Note:The Imports of Commodity "A" are recorded separately under the row sector, while the total of their domestic products and imported goods are recorded for Commodities "B," "C," and "D."

[3] Perfectly Non-Competitive Import Type Table (Basic Type) (Model)

		A	B	C	D	Consumption	Investment	Exports	(Less) Imports	Domestic production
Domestic	A	5	10	20	10	5	0	0	0	50
	B	10	10	30	10	20	10	10	0	100
	C	5	10	5	40	30	30	40	0	160
	D	5	5	15	15	55	25	30	0	150
Imports	A	5	50	10	30	5	0	0	-100	0
	B	10	0	20	0	0	5	0	-35	0
	C	0	0	0	10	30	10	0	-50	0
	D	0	0	5	0	15	5	0	-25	0
Gross value added		10	15	55	35					
Domestic production		50	100	160	150					

Note:In Japan, a supplementary table (table on imports) enables compilation of the perfectly non-competitive import type table as above for the Basic Transaction Tables.

[4] Non-Competitive Import Type Table (Simplified Type) (Model)

		A	B	C	D	Consumption	Investment	Exports	(Less) Imports	Domestic production
Domestic	A	5	10	20	10	5	0	0	0	50
	B	10	10	30	10	20	10	10	0	100
	C	5	10	5	40	30	30	40	0	160
	D	5	5	15	15	55	25	30	0	150
Imports		15	50	35	40	50	20	0	-210	0
Gross value added		10	15	55	35					
Domestic production		50	100	160	150					

Note:Only the sectoral total of imports is shown. No breakdown by item is included.

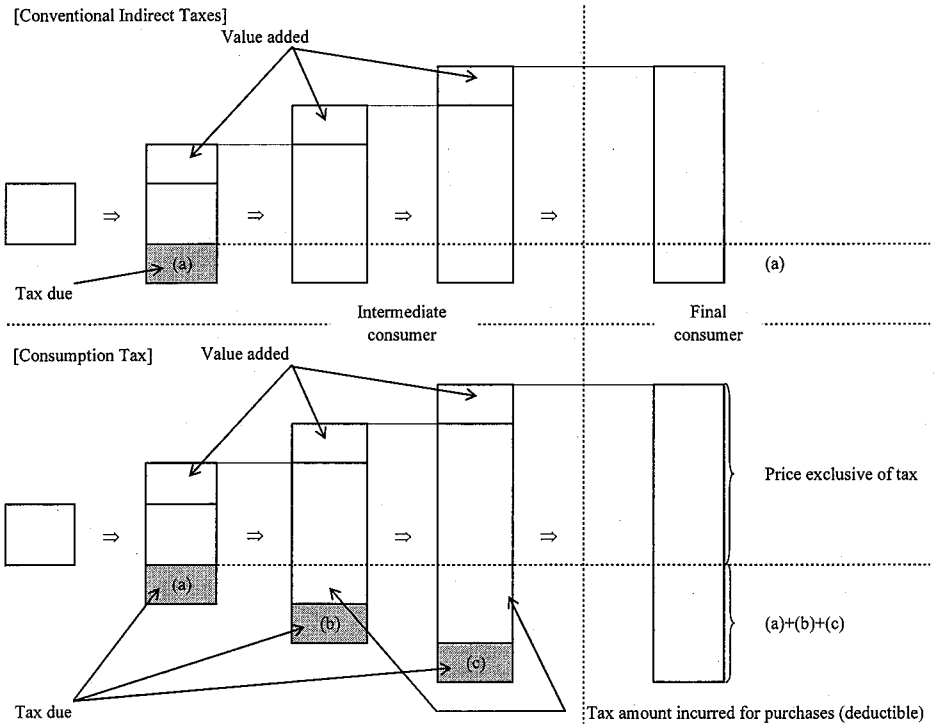
(4) Treatment of Consumption Tax (Value-Added Tax) and Table Types

i) Nature of consumption tax

The consumption tax described in Chart 2-4 differs from individual indirect taxes, such as the former commodity taxes, which are imposed on specific goods and services. In principle, consumption tax is a non-cumulative multistage indirect taxation imposed on each and every transaction of goods and services in Japan. In addition, the tax imposed on business purchases is deducted in order to prevent accumulation of the tax in the intermediate transaction stages.

As prices of commodities in the Input-Output Tables include the former indirect taxes regardless of intermediate or final demand, the tax amount is also indicated as an input cost. However, in principle, the consumption tax imposed on the transaction in the intermediate demand sector, or the tax for purchase, is deducted from the purchasers' side (input side). Consequently, the intermediate input side in the Input-Output Table is valued at the net price (the price exclusive of deductible tax amount). Generally speaking, an indication in line with the above is required.

Chart 2-4 Differences between Conventional Commodity Taxes and Consumption Tax



ii) Table format for consumption tax

The table format for consumption tax is shown in Chart 2-5.

(A) Gross value Input-Output Table

The Input-Output Table compiled based on the value of actual transactions, in which taxes are included, is referred to as the "gross value table" (table including taxes). In principle, tax in the endogenous sector is imposed on the production and sale of the material, while the tax imposed on

purchase (input) is deducted to prevent accumulation of the tax. However, the taxes in the endogenous sector are recorded as input value (see "[1] Example of Gross Value Input-Output Table" in Chart 2-5).

(B) Input-Output Table without value-added tax

Taxes, which alter the value of a transaction with no change in transaction volume, obviously have an impact on industrial activities. Consequently, taxes that affect the input coefficients of the transaction value must be excluded from the Input-Output Tables in which stable input coefficients are required. A table compiled after the entire tax amount has been excluded from the transaction value in the Input-Output Tables is referred to as an "Input-Output Table without value-added tax" (see "[2] Example of Input-Output Table without Value-Added Tax" in Chart 2-5).

(C) Net value Input-Output Table

The table compiled based on the following is referred to as the "net value Input-Output Table" (see "[3] Example of Net Value Input-Output Table" in Chart 2-5).

a. A table that includes the deductible tax amount of the tax for purchase in the exogenous sectors (the gross value added sectors and final demand sectors) after excluding the deductible tax amount from the endogenous sectors

b. A table that includes a nondeductible tax amount such as the tax for exempt enterprises' purchases in the input cost as an increase in the purchase price

Chart 2-5 Representation Format for Consumption Tax (Model)

[1] Example of Gross Value Input-Output Table

		Intermediate demand					Intermediate demand total	Final demand				Domestic production
		A	B	C	D	E		Consumption	Investment	Exports	Imports	
Intermediate input	A		840				840				-210	630
	B			945			945			100		1045
	C				1050		1050		105	200		1355
	D	105				105	210	840	315	400		1765
	E			105	105		210	420	105			735
Intermediate input total		105	840	1050	1155	105	3255	1260	525	700	-210	5530
Value added		500	200	300	600	600	2200					
Tax due		25	5	5	10	30	75					
Domestic production		630	1045	1355	1765	735	5530					

Notes: 1. The above table is compiled on the assumption that a tax rate of 5% is applied to all transactions except for those involving tax-exempt exports.
2. Not all figures in the grid follow the equation [net of tax (tax excluded) x 1.05 = gross (tax included)], due to nontaxable transactions, exempt enterprises, export exemptions, and simplified tax systems.

[2] Example of Input-Output Table without Value-Added Tax

		Intermediate demand					Intermediate demand total	Final demand				Domestic production
		A	B	C	D	E		Consumption	Investment	Exports	Imports	
Intermediate input	A		800				800				-200	600
	B			900			900			100		1000
	C				1000		1000		100	200		1300
	D	100				100	200	800	300	400		1700
	E			100	100		200	400	100			700
Intermediate input total		100	800	1000	1100	100	3100	1200	500	700	-200	5300
Value added		500	200	300	600	600	2200					
Domestic production		600	1000	1300	1700	700	5300					

Notes: There is another method whereby we record the payable taxes and the deductible tax amount (included in household consumption, etc.) in the table after excluding the deductible tax amount.

[3] Example of Net Value Input-Output Table

		Intermediate demand					Intermediate demand total	Final demand					Domestic production
		A	B	C	D	E		Balancing	Consumption	Investment	Exports	Imports	
Intermediate input	A		800				800	40				-210	630
	B			900			900	45			100		1045
	C				1000		1000	50		105	200		1355
	D	100				100	200	10	840	315	400		1765
	E			100	100		200	10	420	105			735
Intermediate input total		100	800	1000	1100	100	3100	155	1260	525	700	-210	5530
Deduction for purchase		5	40	50	55	5	155						
Value added		500	200	300	600	600	2200						
Tax due		25	5	5	10	30	75						
Domestic production		630	1045	1355	1765	735	5530						

Notes: 1. The above table is compiled on the assumption that a tax rate of 5% is applied to all transactions except for those involving tax-exempt exports.
2.The difference between domestic production, which is a total of row sectors, and a total of column sectors is the Tax due.
3. Such factors as investment allowances are not considered.

6 Domestic Production

(1) Control Totals (CT)

The domestic productions by sector, which is the first estimated figure in the Input-Output Tables, is calculated based on the output of the corresponding industry (the output of goods and the sales value of services). Regarding producers of government service activity and producers of private non-profit service for households, their production values are calculated by tallying the costs of their activities.

The domestic productions by sector are a very important figure that affects figures in the row and column sectors in the Input-Output Tables. The procedure for estimating the Input-Output Tables is as follows: after domestic productions are determined, the values of inputs and outputs are estimated as their breakdown. Therefore, any error made in this estimation, which has an impact on the inputs and outputs of other sectors, will reduce the accuracy of the entire table. For this reason, the domestic productions are also known as the Control Totals (CT).

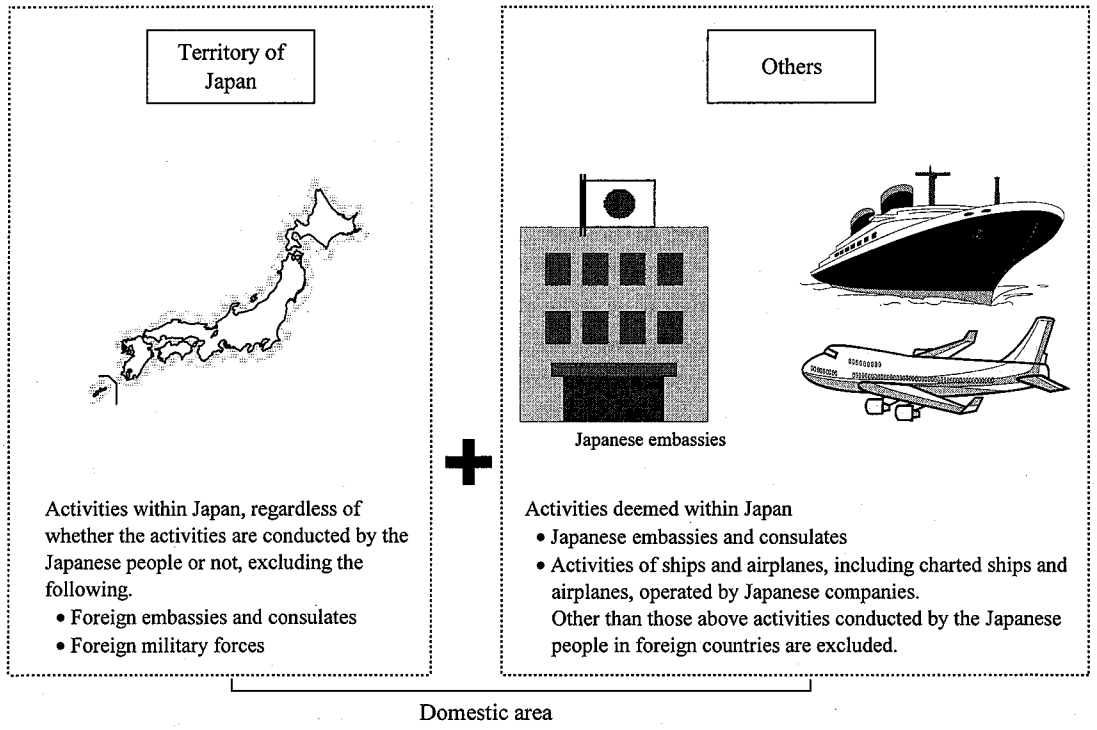
(2) Domestic Concept

The Input-Output Tables cover all transactions involving goods and services, including the production of intermediate goods within a certain period of time (normally a one-year period from January to December). The domestic concept defines the scope of the recording of the aforementioned production activities in the Input-Output Tables.

The "domestic area" is defined here as "the territory including the country's embassies and consulates as well as military forces in foreign territories, but excluding foreign embassies and consulates as well as military forces in the territory." The Input-Output Tables cover only production activities conducted within the domestic area of Japan.

For example, production activities conducted by foreign companies in Japan are included in the Input-Output Tables, while production activities conducted by Japanese companies in foreign countries are excluded. Activities conducted by foreign embassies and consulates in Japan as well as by U.S. military forces are not included, although activities conducted by Japanese embassies and consulates in foreign countries are recorded (see Chart 2-6).

Chart 2-6 Domestic Area in the Input-Output Tables



Note: There is a national concept in addition to a domestic concept. In the national concept, production is used to define the scope of production activities conducted by residents of the country.

The Gross National Product (GNP) is the total income that Japanese residents received in return for providing their capital and labor. Japanese residents include the following: (1) Japanese people who live in Japan,

(2) Japanese residents abroad who have lived abroad for less than one year, and (3) alien residents who have lived in Japan for one year or more. Therefore, compensation of employees, business income, and property income that Japanese residents receive from abroad is included in the GNP, but wages and dividends that Japanese companies pay to non-residents of Japan are not included in the GNP.

(3) Goods and Services by Non-Profit Activities

Normally, transactions involving goods and services are conducted at a price that will compensate for the cost of their production. However, there are goods and services that the producers of government service activity and private non-profit service for households provide free of charge or at prices that are much lower than their actual cost.

In the Input-Output Tables, which include goods and services by non-profit activities, the domestic productions of producers of government service activity and private non-profit service for households are calculated based on their production costs.

(4) Double Counting in Domestic Production

i) In the same basic sector classification

First, the domestic productions by detailed commodity item are estimated. A detailed commodity item (approximately 3,800 in total) is a detailed classification by commodity or activity (unit of production activity) based on key statistics. Next, the domestic productions by sector are estimated by accumulating the above on a sectoral basis of basic sector classification. For this reason, if one commodity item in a basic classification sector concerned is also used as a raw material for the production of another commodity item in the same sector, the domestic productions for the raw material will be counted twice. The more detailed the classification of commodity item by production process, the greater the extent of such duplication of the production value.

Example of Double Counting in Domestic Production

Basic sector classification: 3211-03 Video recording and duplicating equipment
(Detailed items) Parts of video equipment and the like: 347.5 billion yen Completed goods of video equipment: 1.1002 trillion yen Total: 1.4477 trillion yen

Note: When parts are assembled to produce finished goods, the amount for parts (3,475 billion yen) is included in the amount for finished goods (1.1002 trillion yen). Thus, this amount for parts is counted twice in the basic sector classification.

ii) Double counting by aggregating basic sector classifications

In estimation of the domestic production of automobiles, finished automobiles and such parts as auto bodies and engines are included in their respective basic sector classifications. The production value of automobiles as finished goods includes that of auto parts as raw materials, that is, involves duplicated recording in the basic sector classification.

As specified above, the production value in each sector will further overlap as sector classifications are aggregated. Nevertheless, the aggregation of basic sector classification does not change the production value in the entire industry, as the double counting of production value is accumulated at the intersection of the row and column sectors in the same industry.

(5) Treatment of Self-Consumption

When partly finished products in an integrated manufacturing process are produced and consumed entirely and exclusively within their own sector, the production value of said partly finished products is, in principle, not recorded. Even in the case of commodities such as pig iron and crude steel, both of which are consumed immediately in the subsequent stage of an integrated manufacturing process, their production values are separated and recorded by commodity when they have different input and output structures.

When estimating domestic production based on shipment statistics such as the Census of Manufactures by detailed commodity item, the value of in-house production and self-consumption cannot be estimated, as these products that are not shipped are excluded from the statistics. Consequently, the output of these products is not

included in the domestic production. In this way, the treatment of in-house production and self-consumption differs from case to case, depending on the statistics used.

Regarding in-house production and self-consumption goods in households, only the self-consumption value of farm and fishery households is recorded.

(6) Treatment of Manufacturing Commissioned to Other Establishments

The production value, the intermediate input required for production, and the value added of products in each sector are included in the Basic Transaction Table, regardless of whether the products in each sector are manufactured in-house or outsourced. However, in a sector in which the Census of Manufactures is used as basic data for the estimation of domestic production, only income from the processing of goods other than raw materials is included in the production value of the entrusted industry. The production values of non-manufacturing industries that consign production (such as the wholesale and retail trade, including trading companies and department stores) are as follows: sales amount minus purchase amount equals margins. Therefore, the cost of purchased materials required for consignment production is excluded from the intermediate input. As a result, in the production sector for raw materials, the sale of raw materials to such consignors as trading companies for consignment production cannot be transferred to any output sector if no reconciliation is conducted. In the sector for commissioned manufacturing, the production value is underestimated while the ratio of the value added is overestimated. The value of consignment production from the non-manufacturing industry increases based on the following formula: production value, including the cost of raw materials, is inflated by multiplying the income from the processing of goods by the reciprocal of the value-added ratio.

$$\text{Production value} = \text{Income by processing goods} \times \frac{\text{Product price}}{\text{Product price - Cost of raw materials}}$$

(7) Price Valuation of Domestic Production

Domestic productions in the "Input-Output Table at producers' prices" are valued at producers' prices based on actual prices. In addition, the input and output values are calculated based on these prices. Some concrete examples follow.

[1] Finished manufactured goods and the like are valued at producers' delivery prices, which refers to the factory shipment prices inclusive of cost and profit distribution among headquarters and sales offices. Producers' delivery prices also include indirect taxes such as consumption tax, which inflate the selling price, while current government subsidies that deflate the selling price are recorded as negative items.

[2] The activities of the retail manufacturing industry are recorded in their respective sectors after being divided into manufacturing and retail activities.

[3] In the treatment of secondhand goods, only transaction margins are listed as cost trade margins in the commerce sector of the domestic production (see 9 (2) in this section).

[4] Such industries as forestry, fisheries, and quarries, in which the areas of establishments are not specified, are valued at the price of the nearest market to the place of production. In addition, freight from the producer to the market is treated as cost transport margins (see item 9 in this section).

[5] In the valuation of land transactions, only brokerage commissions and improvement expenses are recorded in their respective sectors of the domestic production.

[6] In the 1995 and earlier Input-Output Tables, the input and output of scraps and by-products were generally handed by the "negative input method." Thus, no domestic production of scraps or by-products was recorded in that particular competing sector. However, the creation of the new "reuse and recycling" sector for the 2000 Input-Output Tables outputs the value of scraps and by-products as a lump sum to the reuse and recycling sector. Subsequently, this sum and the cost of collection and treatment are output from the relevant sector to each input sector. Scraps and by-products are thus included in the domestic production of the "reuse and recycling" sector.

[7] Indirect taxes imposed during the process of producing goods are included in the production value of the production sector that pays them. Taxes levied in the process of distribution are included in the production value of commerce. (Note that light-oil delivery tax is treated as the tax imposed in the production process, taking into account other petroleum products manufactured by the same production process.) Consumption tax is included in the valuation.

[8] Producers' prices for in-house production and self-consumption are valued at current market prices.

[9] Fluctuations in stocks of semi-finished goods and work in progress are valued at the average of the opening and closing price for that year.

[10] Services are valued at the price paid by those who receive the services. In services other than computer programming and other software services and photo studios, the producers' prices are equal to the purchasers' prices.

[11] The production valuation of such sectors as finance, insurance, and house rent is based on their imputed value (see item 9 in this section).

[12] In principle, the production of producers of government service activity and private non-profit services for households is valued at its total cost.

7 Recording Transactions in Intermediate and Final Demands

(1) Intermediate Demand Sectors

Basically, the figures shown in the grid in the endogenous sector of the Basic Transaction Tables represent the transaction values of goods and services conducted between sectors. However, the transaction value recorded in the endogenous sector is the value of consumption required for the year. Therefore, the transaction value (purchase value) for the year is not recorded directly.

(2) Transactions in Capital Goods

Transactions involving capital goods, that is, goods with a durability of one year or more and for which the unit price is 100,000 yen or more, purchased by any sector, are recorded in the gross domestic fixed capital formation of the final demand sector and are not treated as the transaction value of endogenous sectors. However, there are the following exceptions: elements used as a part of another piece of machinery (built into machinery), purchases by the construction sector as intermediate goods for construction activities (construction bypass), goods treated as cost items for civil engineering work (civil engineering bypass), machinery built into steel vessels (shipbuilding bypass), arms purchased by Self-Defense Forces, and the like.

The fixed capital matrix, which are compiled as supplementary tables, indicate the amount and type of capital goods purchased by their respective sectors.

The allowance for the depreciation of capital goods in each column sector (the depreciation caused by using the capital goods for the year) is recorded under "depreciation of fixed capital" in the gross value added sectors.

Notes:

Built into machinery:	Elements built into another piece of machinery; normally capital goods
Construction bypass:	Capital formation of such capital goods as elevators and boilers that bypass construction activities. In other words, builders purchase these capital goods as intermediate input.
Civil engineering bypass:	Such capital goods as bridges and floodgates that require civil engineering work for their construction, despite the fact that they are capital goods. Capital goods treated as items of the construction cost are applicable.
Shipbuilding bypass:	Such capital goods as boilers and telecommunication equipment installed in ships are applicable.

(3) Stocks

Products that were produced but were not sold to any sectors or were not used for self-consumption during the year covered (for example, fiscal 2000) are recorded in the "increase in stocks of producers' stocks of finished goods" in the final demand sector (refer to [1] in Chart 2-7). Stocks of semi-finished goods and work in progress concerning production activities during the reference year (the year-end balance minus the previous year-end balance) are recorded in the "increase in stocks of semi-finished goods and work in progress" (refer to [2] in Chart 2-7).

Raw materials that were purchased but were not used in the reference year are recorded in the "increase in stocks of raw materials and supplies". In such a case, the raw materials are recorded at the intersection of the row sector to which the goods made from the raw materials belong, not at the intersection of the industry (row) sector that purchased the raw materials (refer to [3] and [4] in Chart 2-7).

Commodities that were purchased by wholesale and retail trades but were not sold are recorded in the "increase in dealers' stocks of goods" (refer to [5] and [6] in Chart 2-7).

Stocks of imported goods are divided into the "increase in stocks of raw materials and supplies" and the "increase in dealers' stocks of goods".

As specified above, fluctuations in stocks are recorded at the intersection of the row sector to which stocks of applicable goods belong and the respective column sectors of the increase in stocks.

Chart 2-7 Example of Increase in Stocks

Example of the increase in stocks: a producer of wooden furniture purchased domestic and the stocks increased at each stage in the process of producing wooden furnifure.stocks in the process of producing wooden furniture.

			Intermediate demand	Final demand						
					Increase in stocks					
						Finished goods	Semi-finished goods	Dealers' stocks	Raw materials	
Intermediate input	Materials	Domestic						[5]	[3]	
		Imported				-	-	[6]	[4]	
	Wooden furniture					[1]	[2]			

Notes) 1. The increase in raw material stocks of the wooden furniture is recorded at the intersection of the sector of materials (row) and the increase in raw material stocks ([3], [4]).
2. The increase in goods of dealers' stocks of wholesalers is recorded at the intersection of the sector of materials (row) and the increase in dealers' stocks ([5], [6]).

8 Price Valuation of Exports and Imports

(1) Exported Goods by Ordinary Trade

In the Input-Output Table at producers' prices, the prices of exports in ordinary trade are valued at producers' ex-factory prices, in the same way as in the case of the prices of goods for domestic demand. On the other hand, in the Input-Output Table at purchasers' prices, they are valued at FOB (Free on Board) prices.

As Foreign Trade Statistics of Japan published by the Ministry of Finance value exports in ordinary trade at FOB prices, their prices are directly applicable in the Input-Output Table at purchasers' prices. However, domestic freight and trade margins for transporting goods from the factory to the ship must be deducted from the FOB prices in the Input-Output Table at producers' prices.

(2) Imported Goods by Ordinary Trade

The prices of imports in ordinary trade in the Input-Output Tables both at the producers' prices and at the purchasers' prices are valued at CIF prices (inclusive of freight and insurance: Cost, Insurance, and Freight).

Note that the sum of customs duties, commodity taxes on imported goods, and CIF prices is recorded as the transaction value of imports in each cell of the Basic Transaction Tables.

(3) Imports and Exports by Special Trade and Direct Purchase

The values of imports and exports by special trade and direct purchase, that is, imports and exports of services and the transaction value of goods that are not recorded by ordinary trade, are estimated based on the Balance of Payments Table.

9 Sectors Requiring Special Treatment

In the sectors of the Basic Transaction Tables, there are several specially treated sectors according to the SNA concept or for the analysis and compilation of the Input-Output Tables. This is explained below.

(1) Estimation Method for Activities in the Commerce and Transport Sectors

We compile the Basic Transaction Tables in order to record the current status of transactions between sectors. Most actual transactions are conducted through the commerce and transport sectors. If actual transactions are recorded in line with this flow of transactions, trade relations between sectors will be very difficult to understand.

For example, look at the following flow of commodity transactions that sector "B" purchased Commodity (value: 100) produced by sector "A" through commerce sector as shown in Chart 2-8.

[1] First, Commodity produced by sector "A" is sold to commerce through transport (freight: 10).

[2] The purchase price of commerce is 110.

[3] Next, Commodity is sold to sector "B" through transport (freight: 10) again after commerce adds margins (margins: 20).

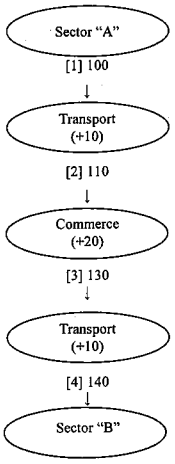
[4] The purchase price of sector "B" is 140.

It is very difficult to determine the relationship between A and B in Chart 2-8 (1), which records the above transaction process directly.

To avoid such a complicated indication, trade margins and domestic freight are collectively recorded by demand sector, as if direct transactions were conducted between sectors (for example, between sector "A" and sector "B") without going through the commerce and transportation sectors in the Input-Output Tables.

Concretely speaking, in the Input-Output Table at producers' prices, the total amount of trade margins and domestic freight added in the process of a transaction is recorded at the intersection of the sector on the purchasers' side (B), commerce, and transport.

Chart 2-8 Treatment of Sectors of Commerce and Transport



(1) Direct indication

	A	B	Commerce	Transport	Final demand	Domestic production
A			100			
B						
Commerce		130				
Transport		10	10			
Value added						
Domestic production						

Note: Strictly speaking, Commodity "A" with 130 units, transferred from the industry sector to sector "B," is different from commodity "A." The added value of 30 units is comprised of 20 units added by commercial activities and 10 units added by transport.

(2) Actual indication (Input-Output Table at producers' prices)

	A	B	Commerce	Transport	Final demand	Domestic production
A			100			
B						
Commerce		20				
Transport		20				
Value added						
Domestic production						

Note: In the I-O table at purchasers' prices, the value recorded at the intersection of column "B" and row "A" is 140 and the values recorded at the intersections of "B" and commerce as well as transport are both 0 except for the cost trade margins and the cost transport margins.

(2) Cost Trade Margins and Cost Transport Margins

Special commercial and transport activities that differ from the normal distribution costs specified in (1) above are treated as direct costs. These expenses are recorded at the intersection of the "commerce" and "transport" row sectors as "cost trade margins" and "cost transport margins," that is, the cost for production activities in respective column sectors in the Input-Output Tables both at producers' prices and at purchasers' prices.

i) Cost trade margins

(i) Imported goods are valued at CIF prices. However, services provided by the agents of foreign trading companies that are involved in the importing of goods are not included in CIF prices, but are treated as a commission paid to the agents as compensation for services. The aforementioned commission paid is recorded in imports (special trade) as import of commerce, but is treated as cost trade margins that the wholesale sectors input and is recorded as output in the wholesale trade sector (the column sector). Likewise, services provided by the agents of Japanese trading companies that are involved in the exporting of goods are treated as commission received by the agents.

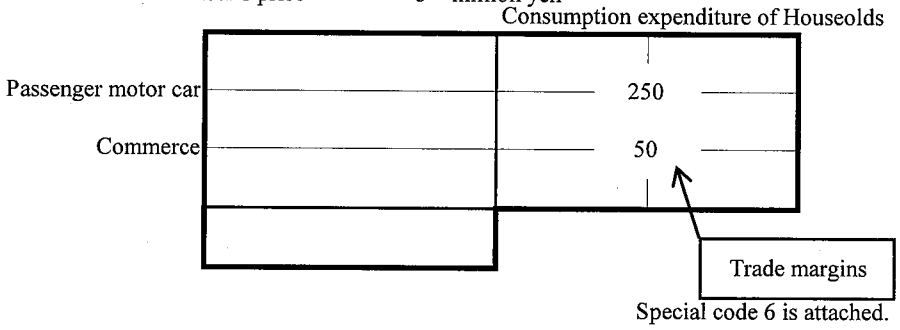
Note: Services provided by the agents of foreign trading companies are recorded as commission paid to the agents in "other trade-related services" in the Balance of Payments Table.

(ii) In transactions involving secondhand goods, only the transaction margins are recorded as cost trade margins in the Basic Transaction Tables.

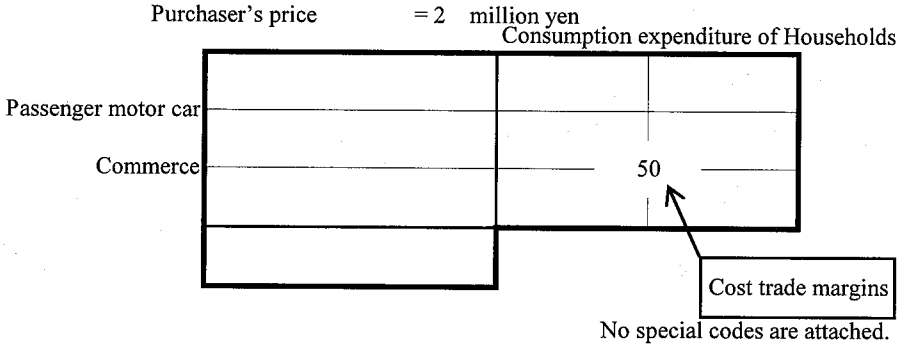
In concrete terms, the transaction margins of used cars in households and used buses and trucks under the category of fixed capital formation are referred to as the "cost trade margins." Secondhand goods themselves are not subject to recording in the Input-Output Tables, as they are not produced in the current year. However, the commercial activities that accompany the transactions in secondhand goods are conducted in the current year. Therefore, only the transaction margins should be recorded (refer to Chart 2-9).

Chart 2-9 Example of Purchasing of a New Car or Used Car in a Household

[1] New car: Price of passenger motor car = 2.5 million yen
Trade margins = 0.5 million yen
Purchaser's price = 3 million yen



[2] Used car: Price of passenger motor car = 1.5 million yen
Trade margins = 0.5 million yen
Purchaser's price = 2 million yen



ii) Cost transport margins

(i) Costs for transportation activity that is part of the production process (that is, transportation activity that forms a part of costs for production activities)

a. Costs for transporting such commodities as timber and perishable food from the places of production to the collection points or the wholesale markets where producers' prices for such commodities are determined

b. Costs for transporting raw materials and semi-finished products such as iron and steel, as well as ships, within a large-scale factory for their manufacture

c. Costs for transporting such production equipment as construction machinery and scaffolding

(ii) Costs for transporting goods to be moved, trip cargo, mail, secondhand goods, coffins, waste, and construction waste soil

Waste and construction waste soil, which account for a large portion of the cargo transported by truck, are treated not as scrap but as goods without value, and are thus not recorded as transactions in the I-O Tables. Therefore, costs for transporting waste and construction waste soil are recorded as cost transport margins at the intersection of the waste-generating sector and the transport sector. That is, the disposal of waste and construction waste soil (payment to the carrier) in one industry is regarded as a part of the production costs of the industry.

Transporting goods to be moved and trip cargo is not regarded as a transaction between sectors that generates freight, since they are for purposes of moving from one residence to another or for moving belongings (as in the case of travelers). Such transportation costs are regarded as cost transport margins.

Costs for transporting secondhand goods are treated similarly to cost trade margins.

Note that home delivery services are treated either as distribution costs for domestic freight or as cost transport margins, depending on the type of transaction of the cargo. If home delivery is used as a means of transportation that accompanies a transaction between industry sectors, the costs are

regarded as domestic freight. If travelers themselves use home delivery in order to send souvenirs bought on a journey to their home or to friends, the costs are regarded as the cost transport margins of households. In business activities, if a company uses home delivery in order to send documents and electromagnetic tapes between the headquarters and the branch offices, the costs are regarded as the cost transport margins of the company.

(3) Scrap and By-Products

When certain goods are produced, production technologies inevitably produce goods other than those intended. If such goods are produced as products in different sectors, they are referred to as "by-products"; if not, they are referred to as "scraps."

Because the Input-Output Tables are formulated according to activity-based classifications, at least one product must generally be assigned to each sector. In this regard, scraps and by-products require special handling.

Of the following four methods, this handling in the 1995 and earlier Input-Output Tables was generally based on the "negative input method" and partly on the "lump" and "transfer" methods.

[1] Lump method

[2] Transfer method

[3] Negative input method (Stone's method)

[4] Separation method

However, from the 2000 Input-Output Tables, based on anticipated growth in recycling activities, the "reuse and recycling" sector, including the cost of such activities, was first established. Since generated scraps and by-products are included in costs, this new sector required handling different from the conventional negative input method.

Explained below are representations by these four methods and the representation of the "reuse and recycling" sector in the 2000 Input-Output Tables, with an example of the "petrochemical sector producing 100 units of synthetic resin as its main product and 10 units of LPG as a by-product, and selling the petrochemical product to the resin sector and LPG to households, respectively." (refer to Chart 2-10)

i) Lump method

Under this method, the main product (synthetic resin) and by-product (LPG) are treated as a single entity, not differentiated. Domestic production in the petrochemical sector is as follows: resin (100) + LPG (10) = 110. The LPG (10) sold to the household sector is recorded as a sale for the petrochemical sector.

Since this treatment assumes that LPG production in the petrochemical sector does not affect the LPG sector, it may be acceptable if the amounts of by-products are negligible.

In the basic transaction tables for Japan, the lump method applies, for example, to "stable manure" in the "livestock" sector and "cultivation of fruit trees" in the "fruit" sector.

ii) Transfer method

LPG (10), the by-product in the petrochemical sector, is provisionally output (transferred) to the LPG sector and output through the LPG sector to household consumption.

LPG produced by the petrochemical sector is included in domestic production, both for the petrochemical sector and for the LPG sector.

In the basic transaction tables for Japan, the transfer method is used for "advertising" in newspaper, magazine, and broadcasting.

For the purposes of analysis, demand for resin by this method does not affect LPG, but demand for LPG induces petrochemical production.

iii) Negative input method (Stone's method)

Under this method, the production of the petrochemical sector is deemed as that of synthetic resin (100). LPG (10) produced as a by-product is treated as minus input (i.e., sold by) from the LPG sector. Viewed from the LPG sector (row), the minus is attributed to the petrochemical sector, the generating sector of by-product (column), while the plus is recorded in the household consumption sector, the consumption sector (column). Thus, the production of LPG as the by-product balances out to zero.

Under this method, LPG produced in the petrochemical sector is not recorded in either the row or column of domestic production. This method is also referred to as "Stone Method" after the originator of the method.

For the purposes of analysis, demand for resin under this method increases the supply of LPG, reducing production in the LPG sector. However, LPG demand—not LPG produced as by-product in the petrochemical sector, but LPG produced as a primary product in the LPG sector—is calculated for repercussion effects, not directly affecting petrochemical production.

This method may reflect actual economic conditions if LPG as a by-product is more competitive than LPG produced by specialty enterprises. However, it may cause problems involving inadequate balance of supply and demand unless production in the LPG sector is negative if there is significant demand for resin and low demand for LPG.

Furthermore, in the iron scrap and non-ferrous metal scrap sectors, from which no LPG is produced, problems may arise with the import coefficient (ratio of import to domestic demand) exceeding "1," or with meaningless computation results.

iv) Separation method

Under this method, production activities in the petrochemical sector are divided into those for the primary product (synthetic resin) and the by-product (LPG), and the results are recorded in their respective sectors.

Production of synthetic resin and that of LPG are, essentially, inseparable. Even if provisionally separated, their production structures should maintain certain ratios; but different demand ratios for synthetic resin and LPG may suggest seemingly different production structures.

v) Presentation method applied to the 2000 Input-Output Tables (presentation method for the "reuse and recycling" sector)

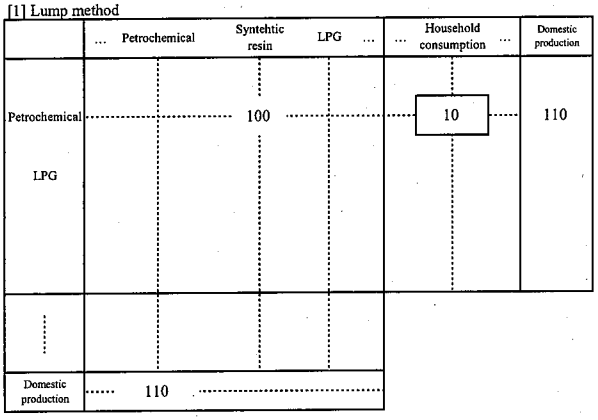
Under this method, minus input is first applied to LPG produced as by-products from the petrochemical sector, then production is input, in a lump sum, to the newly established "reuse and recycling" sector. The amount to which the cost of collection and treatment is added is eventually output from that sector to household consumption, the final demand sector.

Under the minus input method, imports and exports of scraps and by-products are recorded directly in their respective competing sectors; but under this method, they are recorded as a lump sum to "reuse and recycling," thereby stabilizing the import coefficient.

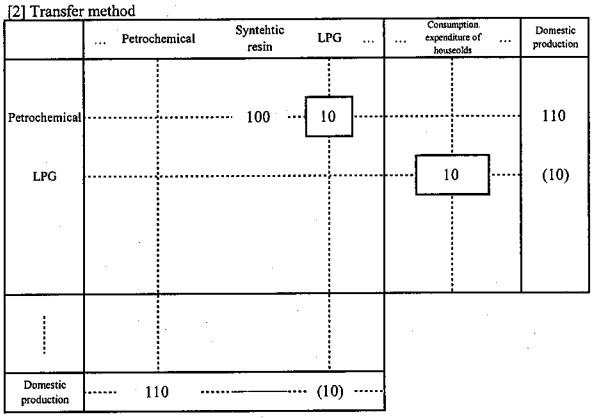
However, since all scraps and by-products are input under this method in a lump sum to the "reuse and recycling" sector and output from there to demand sectors, it becomes impossible to maintain the basic principle of the Input-Output Tables: that "one product should be treated in one sector." The breakdowns are therefore indicated in the attached "Table on Scraps and By-products." Based on this table, scraps and by-products can be reclassified by the conventional minus input method for relevant analysis objectives, while the concept of "reuse and recycling" is treated only as the cost of collection and processing.

Chart 2-10 Representation Formats for Scrap and By-Products

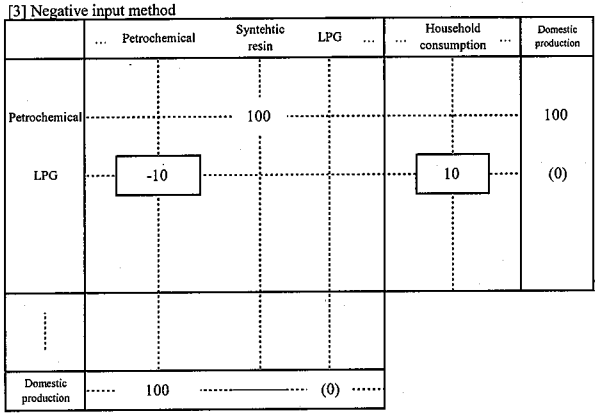
[1] Lump method



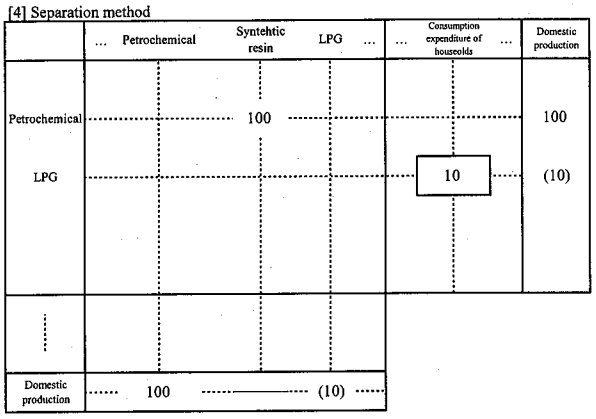
[2] Transfer method



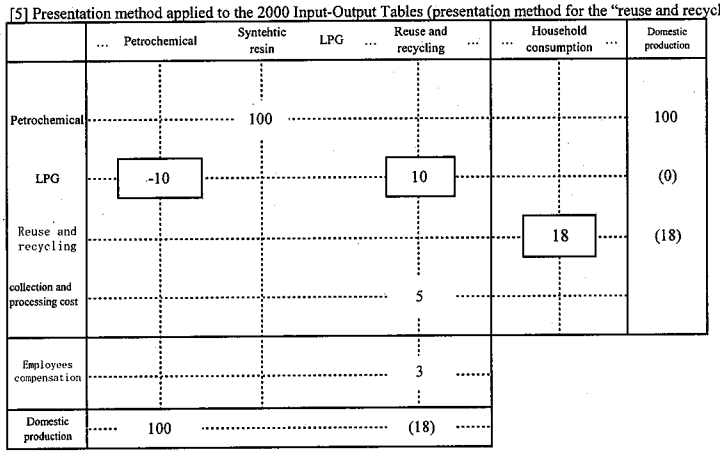
[3] Negative input method



[4] Separation method



[5] Presentation method applied to the 2000 Input-Output Tables (presentation method for the "reuse and recycling" sector)



(4) Imputation

In cases in which transactions are not apparently conducted but utilities are actually produced and there are people who receive these utilities, "imputation" is conducted. "Imputation" is for valuing utilities at the market price and calculating such value as domestic production for the sectors producing the utilities.
The output sectors, which receive the utilities, are listed below.

i) Strictly financial sectors

The activities of the financial sector are roughly divided into the following:

[1] Reception and management of deposits and savings, as well as loan business
..... The financial (imputed interests) sector

[2] Issue and underwriting of financial securities, trust services, and credit guarantee
..... The financial (commission) sector

Of the above two, "imputation" is conducted in the former financial (imputed interests) sector. The domestic productions of the financial (imputed interests) sector are calculated as follows:

Imputed interest = Interest received on loans - Interest paid on deposits and savings

Each industry sector, or the intermediate demand sectors in the Input-Output Tables, receives the imputed interest that is distributed in proportion to the lendings outstanding.

Financial institutions provide such services as the provision of longer-term loans by changing the liquidity of deposits to borrowers, loan routes for companies, and the concentration of funds on companies. Principally, it is thought that borrowers (those with demand for funds) benefit from the imputed interest. In the case of housing loans, however, those who obtained such loans in order to purchase their houses are included in the "house rent" sector (endogenous sector), as all houses owned by households are calculated based on the imputed rent. Therefore, the imputed interests in proportion to the lendings outstanding for housing loans to households are recorded in the "house rent" (imputed rent) sector.

Note that the imputed interests are recorded only in the endogenous sectors, and such loans as car and educational loans are not recorded as output in households, although such loans represent the lendings outstanding to households. This is to ensure consistency with 68 SNA.

ii) Life and casualty insurance

We will treat the sector for life and casualty insurance as producing imputed insurance services calculated based on the following:

(Premiums received + Earnings from asset management) -
(Loss paid + Increase in reserves)

All imputed services for life insurance are recorded as consumption expenditure of households, while those for casualty insurance are recorded in the endogenous sectors in addition to consumption expenditure of households.

iii) Depreciation of fixed capital for the government buildings

Regarding governmental buildings in the government services and education sectors that are not depreciated, their imputed depreciation is recorded in the "depreciation of fixed capital."

Therefore, the domestic productions of these sectors are as follows:

Total expenses + Depreciation of fixed capital (imputed depreciation)

iv) House rent for owner-occupied dwellings and dwellings supplied by employers

Although the tenants of owner-occupied and company houses do not actually pay rent, these houses are regarded in the national accounts as rental dwellings for which tenants pay rent.

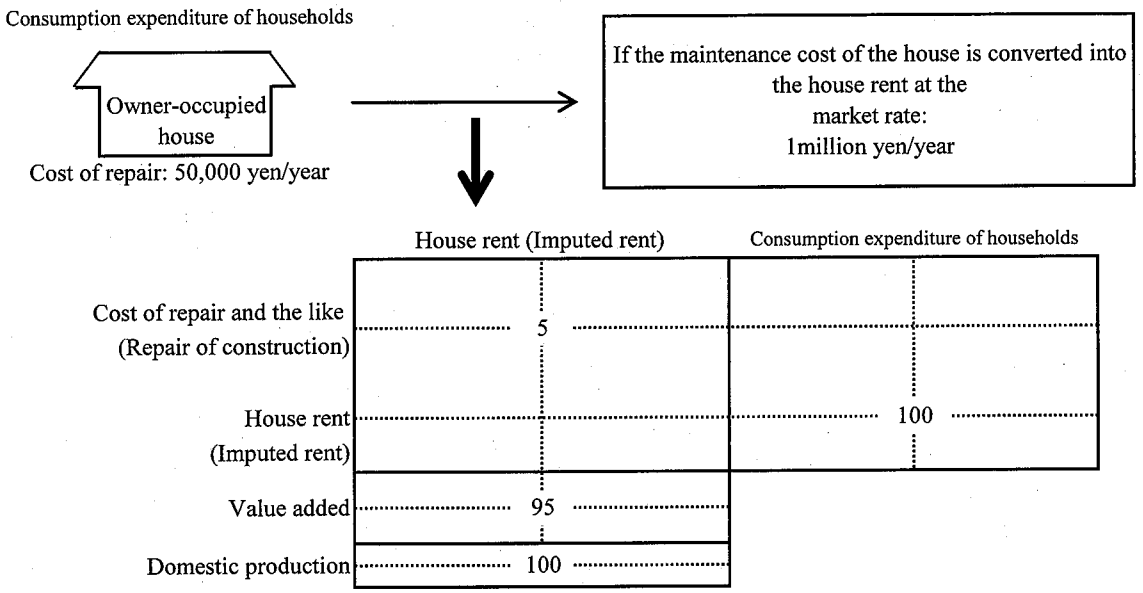
The imputed house rent and the house rent are represented in Chart 2-11.

The rent for owner-occupied and companies' houses is imputed as the production value of the house rent sector after being estimated at the gross rent at the market rate and the full value is recorded in the household budget. However, there is an exception in production of the residential repair cost which applies nursing insurance. The breakdown of the input is recorded in the value added, except for the maintenance cost of the house.

(5) Dummy Sectors

Among the respective sectors within the endogenous sector of the I-O Tables based on production activities, some sectors are not considered independent industrial sectors. "Dummy sectors" are established to accommodate the aforementioned activities in order to facilitate compilation of the Basic Transaction Tables.

Chart 2-11 Representation Format for Imputed Rent and House Rent



In the dummy sectors, the identification code "P" is attached at the end of the basic sector classification code.

Note that consumption expenditure outside households are not treated as an independent item in the national accounts but are included in the endogenous sector, and that the sectors for activities not classified elsewhere do not exist as industries, and as such are dummy sectors in a certain sense.

In the 2000 Input-Output Tables, the following dummy sectors have been established:

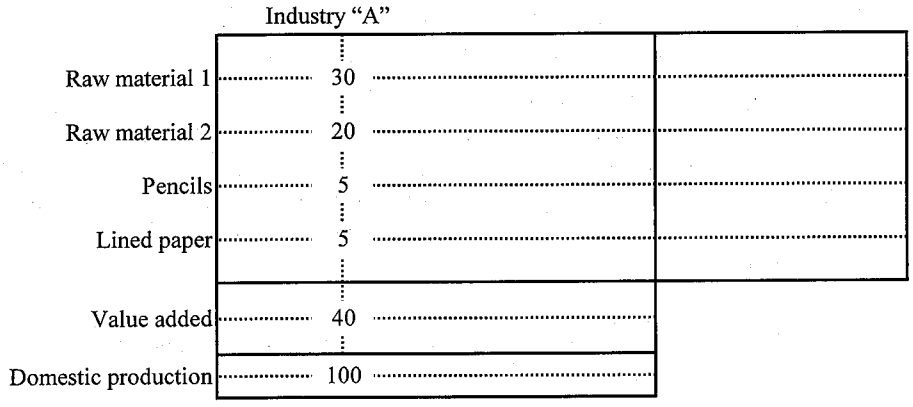
i) Office supplies

Office supplies commonly used in each sector, including pencils, erasers, and lined paper, are collectively treated as consumable supplies in business accounting. Therefore, each sector that produces the above products transfers them to the office supplies sector. Each demand sector receives them in a lump as input from the office supplies sector (refer to Chart 2-12).

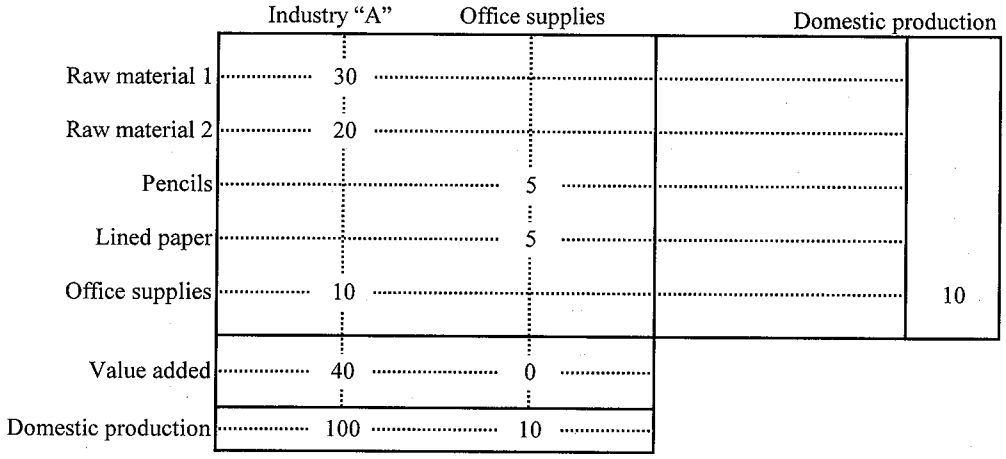
Special treatment of the office supplies sector as a dummy sector allows us to regard the sector as performing independent production activities. Note that the domestic production in the Input-Output Tables will increase by the value of office supplies, although there will be no changes to the gross value added.

Chart 2-12 Representation Formats for Office Supplies

[1] When the office supplies sector is not established



[2] When the office supplies sector is established



otes: 1. Pencils and lined paper are transferred to the sector of office supplies. The demand sector (Industry "A") purchases the composite commodity of office supplies.
2. There is no value added in the office supplies sector.
3. The domestic production in the Input-Output Tables will increase by the value of office supplies in the dummy sector.

ii) Self-activities sectors

(i) Definition of the self-activities sectors

In some cases, companies cover the activities in one industrial field in-house. For example, companies cover such activities as transport, packing, in-house education, in-house research and development, advertising, and data-processing services themselves, or in-house.

As the Input-Output Tables are classified by production activities, strictly speaking, the aforementioned self-activities should be recorded in the respective sectors for transport, education, research, and data processing. However, these activities are absorbed as part of the activities of the respective sectors. Therefore, it is almost impossible for us to gain an understanding of the entire input structure by separating them.

Until the 1985 Input-Output Tables, we had separated the self-activities of companies from their original activities in order to compare the former with the latter and to analyze the repercussion effects on production. Thus, we had recorded self-activities independently in the dummy sector. However, we discussed whether representations of self-activities were required at the time of compilation of the 1990 Input-Output Tables. At that time, the self-activities sectors other than the self-transport by private cars sector were abolished.

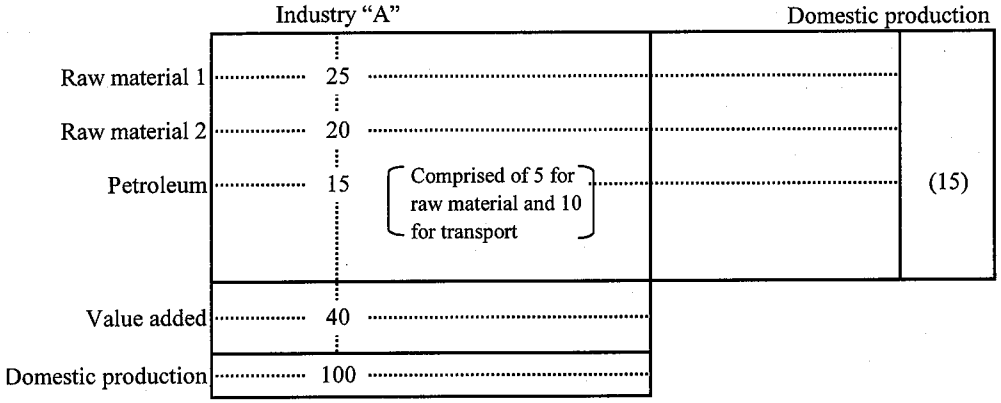
(ii) Representation formats of self-transport sectors

Each demand sector purchases commodities referred to as "self-activities," which consist of aggregated goods and services, after the goods and services required for self-activities are produced in the self-activities sectors (dummy sectors). Only endogenous expenses are estimated as input costs.

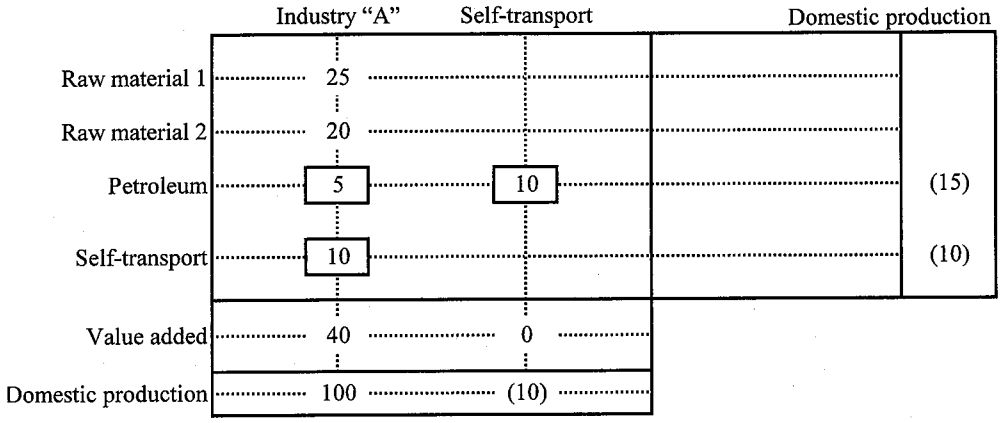
The following chart (Chart 2-13) represents cases in which the self-activities sectors are not established and the self-activities sectors are established. Special treatment of the self-activities sectors as dummy sectors allows the sectors to be regarded as independent production activities. Note that the domestic production in the Input-Output Tables will increase by the value of self-activities.

Chart 2-13 Representation Formats of Self-Transport Sector

[1] When the self-transport sector is not established



[2] When the self-transport sector is established as a dummy sector



Note: If Industry "A" spends 10 units of petroleum for self-transport, another 10 units of the self-transport sector will be recorded in the total domestic products in addition to the 10 units of petroleum invested.

iii) Scrap iron, non-ferrous metal scrap, and used paper

In principle, scrap and by-products are treated as minus input, and are input the same amount to the "reuse and recycling" sector. The amount to which the cost of collection and treatment is add is output from that sector to each input sector. In this case, by-products can be recorded in the sectors (row) in which the products are primarily produced. In the case of scrap iron, non-ferrous metal scrap, and used paper, however, there is no sector in which these are the main products. Therefore, their output and input cannot be recorded. We will establish the row sectors for scrap iron, non-ferrous metal scrap, and used paper as dummy sectors.

Other scrap should be recorded in the sectors for similar raw materials. For example, the scrap of glass bottles should be recorded in the sector for other glass products.

(6) Usership and Ownership

i) Concepts of usership and ownership

There are two methods for treating the current expenses of production facilities in the goods rental and leasing sectors: "Usership" and "Ownership."

With "Usership," the cost of using production facilities is recorded in the sector that uses them, regardless of who owns them and who directly pays the cost. As for rented production facilities, we record the rental expense composed of the cost of maintenance and depreciation, as well as the net rental (the amount after deduction of the cost of maintenance and depreciation from the gross rental), in the sector that uses the production facilities as the cost or the operating surplus (the portion of the net rental). Therefore, the goods rental and leasing sectors are not viable.

On the other hand, with "ownership," the cost of using production facilities is recorded in the sector that owns the production facilities, in line with actual conditions. Thus, the goods rental and leasing sectors are established. With "ownership," the gross income generated by the rental and leasing of goods is the domestic production in the goods rental and leasing sectors. Payment for rented goods is recorded in each production sector as intermediate input from the goods rental and leasing sectors.

ii) Advantages and disadvantages of analysis

We have compiled the I-O Tables for Japan based on "usership," in that the sectors in the I-O Tables are established based on production activities and the value added by sector is calculated in the manner described above. This method involves the advantages of enabling unified treatment of production and capital for production, and increasing the stability of input coefficients.

However, most production facilities are installed through rental or leasing services. Goods rental and leasing accounts for an important share of all industries. Therefore, we must establish the goods rental and leasing sectors to record their domestic production value and value added.

iii) Treatment in the I-O Tables for Japan

Until compilation of the 1985 tables, the following goods rental and leasing sectors had been estimated based on "ownership": "Electronic computing equipment rental and leasing," "Office machines rental and leasing (except electronic computing equipment)", and "Car rental and leasing," as well as "Real estate rental service." On the other hand, the industries included in "General goods rental and leasing" and "Industrial equipment and machinery rental and leasing" in the Standard Industrial Classification for Japan had been estimated based on "usership."

However, as previously noted, with a growing share of the goods rental and leasing sectors after the 1990 tables, we had to establish the sectors as independent of each other. It becomes more difficult to estimate the sectors based on "usership" due to the basic statistics currently used. Therefore, we have decided to treat all industries in the goods rental and leasing sectors based on "ownership."

The differences in the representation formats of "usership" and "ownership" are shown in Chart 2-14. Financial leases are treated as activities of goods rental and leasing, and leased properties are recorded based on "ownership."

Chart 2-14 Representation Formats of Usership and Ownership

Example: When Industry "A" rents industrial machinery at the rental expense of 100 from the company of goods rental and leasing.

[1] Usership (recorded as if Industry "A" owns the machinery)

	Industry "A"	
Repair of machine	(15)	
Operating surplus	(65)	
Depreciation of fixed capital	(20)	
Domestic production	(100)	

Note: The cost of the rental services is added to the cost for the original activities of Industry "A."

[2] Ownership (The company of goods rental and leasing is recorded as the owner of the machines.)

	Industry "A"	Goods rental and leasing	
Repair of machine		15	
Goods rental and leasing	100		
Compensation for employees		50	
Operating surplus		15	
Depreciation of fixed capital		20	
Domestic production		100	

Note: Represented in the same way as in normal purchase of services

(7) Activities of Government and Private Non-Profit Institutions serving Households

Government activities are divided primarily into three categories by transactor (see item 2 in this section): (1) public enterprises in industry; (2) producers of private non-profit services for households; and (3) producers of government service activities. These activities are specially treated in the I-O Tables, as the basic principle of their activities differs from that of private companies (refer to Chart 2-15).

i) The operating surpluses of the producers of government service activity and the producers of private non-profit service for households are not recorded, as their domestic productions are calculated based on their total expenses.

ii) The charges that enterprises or households paid for the services of corresponding sectors are recorded in the sectors of the payers (or the enterprises or households that paid the charges). The remainder is then recorded in the the "collective consumption expenditure of central government", the "individual consumption expenditure of central government", the "collective consumption expenditure of local government", the "individual consumption expenditure of local government," or the "consumption expenditure of private non-profit institutions serving households" in the corresponding sectors.

Chart 2-15 Representation Format of Activity of Producers of Private Non-Profit Services for Households

Example: A private university conducts an activity of 100, 60 of which are income from tuition.

	Private university	Consumption expenditures of Households	Consumption expenditures of private non-profit institutions serving households	Domestic production
Good 1	10			
Good 2	10			
Private university		60	40	100
Compensation of employees	80			
Operating surplus	0			
Domestic production	100			

(8) Activities Not Elsewhere Classified

i) Definition of "activities not elsewhere classified"

The sectors for "activities not elsewhere classified" are established to record in a lump all transaction activities that belong to no sector. The sectors of activities not elsewhere classified play a role as the

aggregator of residual errors in estimation of the row and column sectors.

ii) Balancing equivalence of two aspects and activities not elsewhere classified in the Input-Output Tables

The residual errors in estimation of the row and column sectors include those in the endogenous and exogenous sectors. In the Input-Output Tables for Japan, the sectors of activities not elsewhere classified are regarded as endogenous sectors. The discrepancy in the respective totals of "activities not elsewhere classified" in the row and column sectors, that is, the final overall error, is balanced at the intersection of the row sector of operating surplus and the column sector of activities not elsewhere classified.

§ 2 Characteristics of the 2000 Input-Output Tables

1 Basic Framework of the 2000 Input-Output Tables

(1) Duration, Scope, and Timing of Recording

Production activities and transactions of goods and services for Japan in the year 2000.

The accrual basis was used to determine the points in time at which productions and transactions occurred.

(2) Evaluation Methods

Transaction magnitudes are evaluated at their monetary values.

i) Domestic productions are valued at "actual prices."

ii) Imports in ordinary trades are valued at CIF prices (Note); exports in ordinary trades are valued at FOB prices (Note).

(Note)
- CIF price (inclusive of freight and insurance: Cost, Insurance and Freight)
- FOB price (inclusive of expenses up to loading on board: Free On Board)

(3) Basic Structure of Basic Transaction Tables

i) As before, Basic Transaction Tables are Commodity (row)-by-Commodity (column) (Note) tables, compiled directly from primary statistical data such as the Census of Manufactures and Survey on Service Industries.

(Note) "Commodity" here refers to goods and services. It can also refer to the activities that produce commodities

ii) In addition to Input-Output Tables at producers' prices, Input-Output Tables at purchasers' prices in which the respective transaction values include trade margins and domestic freights have been compiled.

iii) Consumption taxes are valued in accordance with the so-called "gross method," in which consumption taxes are attached to all transactions.

The amounts of consumption taxes payable are included in the "indirect taxes" of the gross value-added sectors.

iv) The "competitive and non-competitive mixed import type" has been adopted for imports. Under this method, the transaction amounts of imports are indicated separately.

v) The "Reuse and recycling" sector is newly established in the 2000 Input-Output tables. Therefore, scrap and by-products are treated as minus input, and are input the same amount to the "reuse and recycling" sector. The amount to which the cost of collection and treatment is add is output from that sector to each input sector.

(4) Sector Classification

i) Basic Classification and Aggregate Classification

(A) The basic sector classifications are comprised of 517 row sectors and 405 column sectors.

(B) Aggregate sector classifications are comprised of the Minor Aggregated Classification (188 sectors), Medium Aggregated Classification (104 sectors), and Major Aggregated Classification (32 sectors) (please refer to Chapter 5). In addition, 13 sector tables have also been established as a template for the Input-Output Tables.

ii) Final Demand Sector and Gross Value Added Sector

(A) As before, for the final demand sector and the gross value added sector, "Consumption expenditures outside households" is established.

(B) Indirect taxes imposed on the gross value added sector exclude tariffs and commodity taxes on imported goods, both of which are subsumed under the export sectors. Consumption taxes imposed on domestic transaction stages (deductible taxes) involving indirect exports (exports through exporters) are recorded in the reconciliation sections of the final demand sectors.

(5) Special Treatment

i) Imputation

Imputations are conducted for the following:

[1] Imputed interests in financial sector

[2] Imputed insurance services for life and non-life insurances

[3] Capital consumption reserves concerning social overhead capitals

[4] House rents of owner-occupied dwellings and company housing units

ii) Establishment of dummy sectors

The following dummy sectors have been established to account for commodity characteristics and to improve the convenience of compiling and utilizing tables.

[1] Office supplies

[2] scrap iron, non-ferrous metal scraps, and used paper

[3] Self-transport (passenger and freight)

iii) Handling of goods rental and leasing

For the goods rental and leasing industry, estimates are produced by the "ownership" approach. Financial leases are treated as goods rental leasing rather than financial transactions.

"Real estate rental and leasing" and "Worker dispatching services" are also estimated by the "ownership" approach.

(6) Compilation of Supporting Tables

The following supporting tables have been compiled, as before, for the 2000 Input-Output Tables.

[1] Table on Trade Margins

[2] Table on Domestic Freights

[3] Table on Imports

[4] Table on Scrap and By-Products

[5] Table on Value and Quantity

[6] Table on Employees Engaged in Production Activities (by occupation)

[7] Employment Matrix (Table on Employees Engaged in Production Activities [by occupation])

[8] Fixed Capital Matrix (Table on Fixed Capital Formation)

[9] Table on Commodity Output by Industry (Make table)

[10] Table on Self-Transports

2 Characteristics of the 2000 Input-Output Tables

(1) Major Modifications

Major modifications are as indicated below.

i) Creation of a new "Nursing care" sector

In line with the introduction of the Nursing Care Insurance System in April 2000, new "Nursing care (In-home)" and "Nursing care (In-facility)" sectors were introduced for the 2000 Input-Output Tables.

These sectors cover services provided through the nursing care insurance system first introduced in April 2000. Since annual values are required for the input-output analysis for the year 2000, values from January through March 2000 were calculated for annual estimates. These sectors exclude "purchases of welfare tools and equipment" and "housing renovation services," which are placed under in-home services. "Purchases of welfare tools and equipment" is included in the corresponding sector of each article, while "housing renovation services" falls within the "House rent (imputed house rent)" sector through the "Repair of construction" sector.

ii) Creation of the new "Reuse and recycling" sector

The new "Reuse and recycling" sector was created for the 2000 Input-Output Tables in recognition of intensifying focus on these activities.

The cost of goods such as used paper, scrap iron, and non-ferrous metal scraps previously treated as scraps are estimated as part of the output. Plastic waste such as polyethylene terephthalate (PET) bottles and plastic trays is also included for the first time, due to a recent increase in quantity. The output, or production, of recyclable resources recovery and processing is estimated as the sum of material inputs of scraps and by-products and the costs of collecting and reprocessing.

iii) Compliance with 93 SNA

The revised draft of the System of National Accounts (SNA) adopted at the 15th United Nations Statistical Commission in 1968 was approved as the 93 SNA at the 27th Statistical Commission in 1993. The United Nations Economic and Social Council recommended that member states consider using this revised SNA.

The revision encompasses many new features. In Japan, the 1995 Input-Output Tables adopted the concepts of the 93 SNA, with certain modifications.

To further incorporate the concepts of the 93 SNA, the following conceptual modifications were implemented for the 2000 Input-Output Tables:

(A) Incorporation of computer software as fixed capital formation

To date, except for software used by households, computer software has been treated as intermediate consumption. In the 2000 Input-Output Tables, software that can be regarded as fixed capital formation (which must have more than one year of life and a purchase price of more than 100,000 yen) is output to the fixed capital formation column.

(B) Recording of depreciation of fixed capital social overhead capital

Depreciation of certain social overhead capital such as roads and dams, not previously reckoned, was calculated for the first time as capital consumption. These costs are output to the column of general government consumption expenditures.

(C) Response to dual concept of consumption

From the 1995 Input-Output Tables, transfer expenditures (such as medical expenditures paid by the government or social insurance, and school textbooks as social transfers in kind) are treated as government expenditures for individual goods and services. Transfer expenditures on nursing care, new in the 2000 Input-Output Tables, is also handled the same manner.

Nursing care insurance benefits are output to the column of "Individual consumption expenditure of central government" from the rows of "Nursing care (In-home)" and "Nursing care (In-facility)." As mentioned above, expenditures for welfare tools and equipment are output to the column for "Individual consumption expenditure of central government" from the rows for each commodity, and expenditures for housing renovations involving nursing care services are also output to the same column from "House rent (imputed house rent)" through "Repair of Construction."

In principle, the whole of "House rent (imputed house rent)" should be output to the column of household consumption expenditure. However, the principle of "dual concept of consumption" takes precedence here.

(2) Modifications in Sector Classification, etc.

Sector classifications are based on the 1995 Japan Standard Industrial Classification based on the 10th revised edition in 1993, and modified to accurately reflect changing economic structures.

Major modifications based on the basic sector classifications for the 2000 Input-Output Tables are as follows (please refer to the Industrial Sector Classification Comparison Table for 1995-2000 and Reference 4).

i) "Sericulture," the domestic production of which has recently been in decline, is aggregated into "Other livestock."

ii) "Ethyl alcohol for liquor manufacturing," the domestic production of which is minimal, is aggregated into "Other liquors."

iii) "Raw silk," the domestic production of which has recently been in decline, is aggregated into "Fiber yarns."

iv) "Ammonia," the domestic production of which has recently been in decline, is aggregated into "Chemical fertilizer."

v) "Household air conditioners" has been separated from "Household electric appliances" and indicated by itself, since domestic production has been increasing, and the input structures are different.

vi) The new "Cellular phones" sector was separated from "Radio communication equipment" and indicated by itself, since the former has increased domestic production.

vii) A new "Reuse and recycling" sector was created, covering activities such as collecting and processing of waste, etc. produced in social and economic activities (limited to valuable goods retaining residual values).

viii) With intensifying diversification and sophistication of services provided in the telecommunications industry, "Domestic telecommunication (except mobile communication)" and "International telecommunication" are now aggregated and divided into "Fixed telecommunication" and "Other telecommunication."

ix) Revisions of the "transactor-based production activity classification" make it appropriate to regard "Health and hygiene (private, non-profit)" as an industry. Due to its small-scale in terms of domestic production, it has been aggregated into "Health and hygiene (profit-making)."

x) Due to the introduction of the Nursing Care Insurance System, the new "Nursing care (In-home)" and "Nursing care (In-facility)" have been created.

xi) For house rents, imputed house rents for owner-occupied dwellings, etc. are regarded separately and indicated apart from "House rent."

Table 2-3 shows a comparison of the numbers of sector classifications in the 2000 Input-Output Tables with those in the 1995 and the 1990 Input-Output Tables.

Table 2-3 Development of the Number of Sector Classifications

		1990 Tables	1995 Tables	2000 Tables
(1) Basic sector classification	(row)	527	519	517
	(column)	411	403	405
(2) Minor Aggregated Classification		187	186	188
(3) Medium Aggregated Classification		91	93	104
(4) Major Aggregated Classification		32	32	32

(3) Points to be Noted for Utilization

The figures for the 1990 and 1995 Input-Output Tables listed here (Explanatory Notes) are reference figures obtained through reclassified estimates; in other words, nominal values.

Although no major differences have been made to the basic framework of the Input-Output Tables compiled every five years, several changes have been made in sector setups, as well as concepts, definitions, and scopes of respective sectors. This makes it difficult to compare the newest tables with earlier tables. This point should be duly noted. In order to analyze changing economic structures, etc. with historical comparisons of these Input-Output Tables, it is necessary to unify the sectors, concepts, definitions, etc. between the past tables and the newly compiled tables by reconfiguring past tables or newly created tables to compile Linked Input-Output Tables. For the 2000 Input-Output Tables, 1990-1995-2000 Linked Input-Output Tables were published on March 0, 2005.

While several features of the 2000 Input-Output Tables are listed in (1) and (2) of this section, additional points to be noted are indicated as follows:

[1] Increase in domestic production with the creation of the new "Reuse and recycling" sector

In the 1995 and in previous Input-Output Tables, the input and output of "scraps and by-products" were, in principle, offset by the "negative input method." Therefore, these tables do not show the output of scraps or by-products. But for the 2000 Input-Output Tables, due to the creation of the new "Reuse and recycling" sector, all scraps and by-products are output to the newly created sector, and further output through the sector to respective input sectors. The output, or production, of recyclable resources recovery and processing is estimated as the sum of material inputs of scraps and by-products and the costs of collecting and reprocessing.

[2] Depreciation of fixed capital Accounting for Social fixed capital depreciation, and Consumption Expenditure of government

The 2000 Input-Output Tables incorporated social fixed capital depreciation of roads and dams for the first time. This incorporation increasingly affects the figures for domestic production as well as Depreciation of fixed capital in gross value added and consumption expenditure of government in final demand, both of which include social fixed capital depreciation.

However, since certain areas of social fixed capital depreciation had already been incorporated in the 1995 Input-Output Tables, it is impossible to compare figures for "Social fixed capital depreciation" newly incorporated in the 2000 Input-Output tables while excluding those prior to the 1995 Input-Output tables. Users should keep this point in mind.

[3] Transactions in Cellular Phones and Changes in Consumption Expenditure Outside Households (row and column)

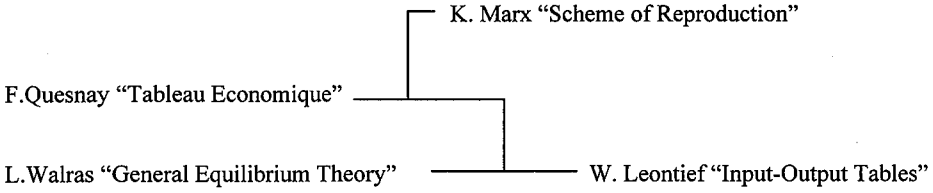
The new "Cellular phone" sector has been set apart for the 2000 Input-Output Tables from the "Radio communication equipment" sector. The mode of operation of mobile telecommunications carriers makes the price system complex, resulting in a huge gap between the producers' price and purchasers' price.

In the 2000 Input-Output Tables, this gap is treated as a direct expense of the "Mobile telecommunications" sector to be allocated as part of the "Consumption expenditure outside households (row)." The equivalent is set aside as purchases of the "Consumption expenditure outside households (column)" from the "Cellular phone" sector.

§3 The history of Input-Output Tables for Japan

1 The history of Input-Output Tables

The Input-Output Tables is developed by Dr. W. Leontief(1906~1999), the winner of Nobel Memorial Prize in Economic Science. He was born in Sankt-Petersburg in Russia, and invited to the Harvard University in the United States. In 1931, he started to make Input-Output Tables about the US economy. He announced the plan in the magazine, "Review Economics and Statistics" in 1936. It is said that the Input-Output Tables was an attempt of adjusting "General Equilibrium Theory" of L. Walras (1834~1910) to real national economy, and an attempt of making "Tableau Economique" of F. Quesnay (1694~1774) for the US economy.



This technique of Leontief's Input-Output Analysis was admitted by U.S. Department of Labor, Bureau of Labor Statistics. After 1941, the technique was developed with the support of Bureau of Labor Statistics. When the economic forecast for the post World-War-II was made by the Planning Committee of U.S. War Production Board, the Input-Output Analysis showed higher degree of accuracy than other analysis techniques. Then, the utility and importance of the Input-Output Analysis came to be admitted widely. Since then, the theory of the Input-Output Analysis has been researched by U.S. government offices including the army, navy and air forces of the United States, and many countries has come to compile the Input-Output Tables and utilized the Input-Output analysis for the national economy of each country in the world without the distinction between socialism and liberalism.

2 The history of Input-Output Tables for Japan

The first compilation of the Input-Output Tables for Japan dates back to 1955 for the reference year. When the Economic Planning Agency (current Cabinet Office) and the Ministry of International Trade and Industry (current Ministry of Economy, Trade and Industry) and others complied provisional tables respectively. There after, the Input-Output Tables came to be compiled as a joint work by the related ministries and agencies every five years.

A. 1951 Input-Output Tables

The 1951 Input-Output Tables was compiled abridged tables for the year 1951 by the Economic Planning Agency (EPA)

and the Ministry of International Trade and Industry (MITI) respectively, and published in 1955. At the same time, the Ministry of Agriculture and Forestry (current the Ministry of Agriculture, Forestry and Fisheries) compiled the abridged tables focused on the sector of agriculture and forestry.

The tables compiled by the EPA and by the MITI covered all industries respectively, and the consisted of 9 sections. The Input-Output Tables compiled by the consisted of 182 sections. But both tables were compiled in accordance with different classifications, concepts, definitions, and different methods of estimation. As a result, inevitable differences in figures between both tables were found.

The differences might be unavoidable, because both tables ware compiled with different purposes. But, it was not desirable to have to have two different kinds of information for the same economy for the same reference year. Therefore, the Statistics Council of the Administrative Management Agency (current Ministry of Internal Affairs and Communications) was reported as of 30 June 1955 that the related ministries should compile the integrated and unified Input-Output tables.

B. 1955 Input-Output Tables

After the publication of 1951 Input-Output tables, the Ministry of International Trade and Industry compiled 1954 abridged extension tables and 1955 preliminary tables. The Economic Planning Agency also compiled 1953 Input-Output tables and 1955 abridged tables. As the Input-Output tables shifted from the experimentation phase to the stage of practical use, it came to be requested strongly to compile the Input-Output Tables with high accuracy. In response to the report of the Statistics Council and the requests on accuracy, the related ministries submitted the integrated budgetary appropriation for the compilation of 1955 tables. And, the meeting of the related ministries was taken place on March 1957, and the meeting decided to compile the next Input-Output tables as a joint work.

Therefore, the working group was organized by 6 ministries and agencies, i.e., the Administrative Management Agency、the Economic Planning Agency, the Ministry of Agriculture and Forestry, the Ministry of International Trade and Industry and the Statistics Bureau in change of tabulation. The meeting discussed the setting, concept, and definition of sector classification, the method of evaluation of production, and the availability of the basic date, etc. Based on the result, it had been come to start full-dress collaboration work since April 1958.

The joint work continued from 1958 F.Y to 1959 F.Y., and it was decided that the reference year was to be 1955 year.

The reasons were as follows.

- In 1958, almost all the data available were for the year 1955.
- Economic situations in 1955 were comparatively normal.
- The bench-mark year of national income statistics and other economic indexes were expected to be 1955.

As a result of work over a period 2 fiscal years, the preliminary tables were published in June 1960, and the final tables were published in June 1961 respectively.

C. 1960 Input-Output Tables

The 1960 Input-Output Tables was the first publication which was compiled by a joint work of the related ministries. In those days, however, they did not necessarily recognize that compilation would continue in the following phases. But, the 1960 Input-Output Tables had problems to be improved in respect of the consistency with national income statistics, which was the main account of the SNA, and sector classification. In addition, there were remarkable change in industrial structure according to technical innovation, and they needed materials for reviewing the Input-Output Tables as of the doubling national income plan. Therefore, the compilation of the Input-Output Tables for new reference year came to be requested strongly.

As the background of such situations, the budgetary appropriation for compiling 1960 Input-Output Tables was admitted. At the same time, the present system of the Input-Output Tables was established as being compiled by the joint work of the related ministries every five years.

The work was executed as continuous project for 2 fiscal years, 1962 to 1963. Then, the role of the Statistics Bureau of the Prime Minister's office, which had been in change of data processing by computer, was succeeded by The Ministry of International Trade and Industry. And, the Ministry of Transport (current the Statistics Bureau of the Ministry of Land, Infrastructure and Transport) and the Ministry of Labour (current the Ministry of Health, Labour and Welfare) participated newly in joint work in addition to the ministries participated in compiling the 1955 Input-Output Tables. Thus, the 1960 Input-Output Tables was complied by joint work of seven ministries and agencies. Under the cooperation of the experts and ministries concerned, detailed reviews were done for desirable Input-Output Tables to be useful as basic statistics standard tables that were able to be used over a long period of time.

As a result, the frame of Input-Output Tables, which had consistency with SNA, came to be compiled. And, the sector

classifications, concepts and definitions were basically improved in respect of comparability of long term time series and international comparability.. As a rule, the sector classification was adopted on the basis of the Standard Industrial Classification for Japan and the International Standard Industrial Classification of all Economic Activities.

D. 1965 Input-Output Tables

The 1965 Input-Output Tables did not change greatly compared with the 1960 Input-Output Tables established as the standard of SNA. The basic frame did not change so as not to spoil the time series analysis, the basic frame did not change. But, it changed only to improve remaining issues, and establishment, division, and integration of sectors were undertaken according to appearance of new industries and growing industries.

The publication of result tables was made in July 1965. As methods of use were upgrade, the basic transaction tables, consisting of 456 row sectors×339 column sectors based on basic sector classification, were published for the first time.

And, after the publication of 1965 Input-Output tables, the 1960-1965 extension tables were compiled for the first time for time-series comparison with the 1960 Input-Output tables.

E. 1970 Input-Output Tables

The 1970 Input-Output Tables were basically compiled by using the frame of 1960 Input-Output Tables in the same way as the 1965 Input-Output Tables. But, International Standard Industrial Classification of all Economic Activities has revised in 1968, and 68SNA was presented. Therefore, the 1970 Input-Output Tables were improved in handling of sector classification. As a supplementary table, Fixed Assets Matrix was newly compiled.

F. 1975 Input-Output Tables

The characteristics of 1975 Input-Output Tables was that endogenous sectors were divided into 3 groups, ①industry, ② producers of government services, ③producers of the private nonprofit services to household. Particularly, as for producers of government services including a part of government services, which were not classified as production activities, were coded to the endogenous sectors, and "the producers of government services" were divided into "public" services and "non-public" services.

And, it was expanded from the system of 7 ministries to the system of 11 ministries till then. In other words, for the compilation of 1975 Input-Output Tables, the Ministry of Finance (current Department of the Treasury), the Ministry of Education (current the Ministry of Education, Culture, Sports, Science and Technology), the Ministry of Health (current the Ministry of Health, Labour and Welfare) and The Ministry of Posts and Telecommunications (current the Ministry of Internal Affairs and Communications) participated newly in a joint work.

G. 1980 Input-Output Tables

Compared with the 1975 Input-Output Tables, the 1980 Input-Output Tables had no substantial changes except the concept of producers of government services corresponding to division, integration of the sectors according to the increase and decrease in the amount of production, and the arrangement of "non-public" of producers of government services corresponding to 68 SNA.

And, the Administrative Management Agency took over the works of data processing by computer from the Ministry of International Trade and Industry.

And, the result was published in the form of magnetic tape in advance of the publication in the form of hardcopy, when the figures were fixed.

H. 1985 Input-Output Tables

After 1980, Japanese Industries structure had changed fairly rapidly. And, the Standard Industrial Classification for Japan was revised in January 1984 and enforced in April 1985. Therefore, the sector classification, mainly the manufacturing sector, was substantially revised, taking into consideration the compilation and use of tables.

The sector codes of basic classification were systematically arranged, and the endogenous sectors were revised all over on domestic sector.

I. 1990 Input-Output Tables

The method of estimation of service sector was improved on the 1990 Input-Output Tables. For example, based on the 1985 Input-Output Tables, service sector was divided and new sector was established on the 1990 Input-Output Tables, and basic

materials concerning the service industry to estimate was enhanced. As for "Rental and Leasing of Goods and Services", the estimation by the former user principle was renewed to the estimation by the owner principle, and the self-activity sector was renewed.

J. 1995 Input-Output Tables

The basic framework of the 1995 Input-Output Tables followed the former ones, but the sector classifications such as was set up corresponding to the outline of the recommendations of 93 SNA and to the revision of Standard Industrial Classification for Japan (1993, Oct.), and service sector was expanded, and the basic materials for estimation was also enhanced.

The method of accounting indirect taxes was changed to that of accounting inclusive consumption tax.

K.2000 Input-Output Tables

The basic framework of the 2000 Input-Output Tables followed the former ones, and corresponded to the outline of the recommendations of 93 SNA. To reflect economic social structure of Japan in recent years, new sector classifications, such as "Reuse and recycling" and "Nursing care", were set up.

Mechanical balance-adjustment "Lagrange's method of indeterminate Multipliers" was used for aggregation of preliminary figures. Though, this method had the problem in processing techniques, it contributed to the early release of preliminary reports.

According to the reorganization of ministries and agencies in January 2001, the 2000 Input-Output Tables was accomplished as a joint work of ten office, ministries, and agencies including the Ministry of Internal Affairs and Communications (The name changed from the Ministry of Internal Affairs and Communications as of September 10, 2004) instead of the former joint work of 11 ministries and agencies.

Table 2-4 Supplementary tables yet compiled

	'55	'60	'65	'70	'75	'80	'85	'90	'95	'00
1 Table on Trade Margins and Table on Domestic Freights		○	○	○	○	○	○	○	○	○
2 Table on Imports		○	○	○	○	○	○	○	○	○
3 Table on Scrap and By-products		○	○	○	○	○	○	○	○	○
4 Table on Value and Quantity	○	○	○	○	○	○	○	○	○	○
5 Fixed Capital Matrix				○	○	○	○	○	○	○
6 Table on Employees Engaged in Production Activities(by Occupation)		○	○	○	○	○	○	○	○	○
7 Employment Matrix				○	○	○	○	○	○	○
8 Table on Commodity Output by Industry (Make table)						○	○	○	○	○
9 Table on Self-Transports						○	○	○	○	○

§4 Flow of the Input-Output Tables for Japan

	1951	1955	1960	1965	1970	1975
Number of sectors (Basic sector classification)	Row9×Column9 (Economic Planing Agency) Row182×Column182 (Ministry of International Trade and Industry) Row62×Column62 (Ministry of Agriculture, Forestry and Fisheries)	Row310×Column278	Row453×Column339	Row467×Column339	Row541×Column405	Row554×Column405
Transactions within own sector	All are included in principle.	All are included in principle, except for those values of parts and semi-finished goods that are consumed within sector.	Same as 1955.	Same as 1955.	Same as 1955.	Same as 1955.
Scrap and By-products	Those are in principle dealt with by Transfer method. For MITI table, scrap is classified under the scrap sector.	Transfer method	Those are in principle dealt with by Stone's method.	Same as 1960.	Same as 1960.	Same as 1960.
Valuation	Actual producers' prices.	Uniform producers' prices.	Actual producers' prices(tables valued at actual purchasers' prices are also compiled.).	Same as 1960.	Same as 1960.	Same as 1960.
Imports	Competing and non-competing inclusive (mixed method)	Mixed method. Simplified non-competing type tables are also estimated.	Competing. Non-competing imports are also compiled.	Same as 1960.	Same as 1960.	Mixed method(A partial non-competing tables are also compiled.).
Consumption expenditure outside households	Treated as an endogenous sector.	Same as 1951.	Treated as an exogenous sector.	Same as 1960.	Same as 1960.	Same as 1960.
Public school, hospital services and others	The output is treated as government consumption expenditure. Treated as industrial sector.	The output is treated as households consumption expenditure. Treated as industrial sector.	The output is treated as government consumption expenditure. Treated as industrial sector.	Same as 1960.	Same as 1960.	The portion borne by the households is treated as household consumption expenditure, while the balance is treated as government consumption expenditure.
Public administration and defense	Treated as government consumption expenditure.	Same as 1951.	Endogenous sector for public administration and defense is set up, but only value added items are estimated. The output is treated as government consumption expenditure.	Same as 1960.	Same as 1960.	Same as 1960, however, for these sectors are treated intermediate consumption expenditure.
Imputed services of financial institutions	All are charged to the households for convenience purpose.	Same as 1951.	Charged to the depositors who receive the service either in the industrial or household sector.	Same as 1960, but are oviated at intersections between financial sectors.	Charged to the current depositors which first receive the services, and the blance charged to the industrial or household sector. But the services are again oviated between financial sectors.	Same as 1970, but are not shown in the final demand sectors. Charged to intersections between finalcial sectors.
Re-exports and re-imports	Included in exports and imports sectors.	Same as 1951.	Excluded from the exports and imports sectors.	Imports and exports are inclueded to re-exports and re-imports sectors.	Re-exports and re-imports of vessels are excluded with the balance treated as unidentified items.	Same as 1970.
Custom duties	Inclusive of indirect taxes is treated in the household sector.	Same as 1951.	The "(less) Custom duties" sector is set up in final demand and treated minus input at each import items. Import items are broken down in detail and comopiled respectively.	Same as 1960.	Same as 1960.	Same as 1960.

	1980	1985	1990	1995	2000
Number of sectors (Basic sector classification)	Row541×Column406	Row529×Column408	Row527×Column411	Row519×Column403	Row517×Column405
Transactions within own sector	Same as 1955, but production for farm and fishery households is computed irrespective of self-product or selling.	Same as 1980.	Same as 1980.	Same as 1980.	Same as 1980.
Scrap and By-products	Same as 1960.	Same as 1960.	Same as 1960.	Same as 1960.	Those are output to the newly created "Reuse and recycling"sector, and further output through the sector to respective input sectors.
Valuation	Same as 1960.	Same as 1960.	Same as 1960.	Same as 1960.	Same as 1960.
Imports	Same as 1975.	Same as 1975.	Same as 1975.	Same as 1975.	Same as 1975.
Consumption expenditure outside households	Same as 1960.	Same as 1960.	Same as 1960.	Same as 1960.	Same as 1960.
Public school, hospital services and others	Same as 1975.	Same as 1975.	Same as 1975.	Same as 1975. Medical service is treated as the industrial sector.	Same as 1995.
Public administration and defense	Same as 1975.	Same as 1975.	Same as 1975.	Same as 1975. The final government consumption expenditure divides into individual and collective expenditure respectively.	Same as 1995. Social overhead capital consumption incorporates.
Imputed services of financial institutions	Same as 1975. Lending and imputed interest are treated in intermediate consumption of industrial sectors.	Same as 1975.	Same as 1975. Housing loan are treated in intersection between housing charges and fiancial sector.	Same as 1990. nonbank financing of household estimates and records in Activities not elsewhere classified.	Same as 1995.
Re-exports and re-imports	Same as 1970.	Same as 1970.	Same as 1970.	The value of imports and exports of vessels are exclueded. With the exception of the value of vessels, the re-exports and re-imports value are deducted from the exports value and imports value respectively.	Same as 1995.
Custom duties	Same as 1960.	Same as 1960.	Same as 1960.	Same as 1960.	Same as 1960.

CHAPTER Ⅲ

COEFFICIENTS FOR INPUT-OUTPUT ANALYSIS AND COMPUTATION METHODS

§ 1 Input Coefficients

1 Calculating Input Coefficients

"Input coefficients" can be obtained by dividing the input of raw materials and fuels utilized to produce products in the respective industries by domestic production of these industries. They correspond to basic unit prices. A list of input coefficients indicated for each industry is referred to as an "input coefficient table."

(Note) The Input-Output Tables are basically "commodity-by-commodity" tables. The "sectors" comprising the endogenous sectors at the top and side of the table represent types of goods and services produced by the industries, producers of government services, and producers of private non-profit services for households. For the sake of convenience, they are referred to as "industries" or "industrial sectors."

To simplify, if the national economy is deemed to be comprised only of Industry 1 and Industry 2, the Basic Transaction Table may be as indicated in Chart 3-1.

Chart 3-1 Basic Transaction Table (Model 1)

	Industry 1	Industry 2	Final demand	Total domestic products
Industry 1	x_{11}	x_{12}	F_1	X_1
Industry 2	x_{21}	x_{22}	F_2	X_2
Gross value added	V_1	V_2		
Total domestic products	X_1	X_2		

Where

Supply-demand balance equation (balancing of total supply and total demand)

$$\begin{cases} x_{11}+x_{12}+F_1=X_1 \\ x_{21}+x_{22}+F_2=X_2 \end{cases}$$

Income-expense balance equation

$$\begin{cases} x_{11}+x_{21}+V_1=X_1 \\ x_{12}+x_{22}+V_2=X_2 \end{cases}$$

When "a_{11}" is defined as the figure produced by dividing "X_{11}," representing the input of Industry 1 from Industry 1 by "X_1," representing the domestic production, " a_{11}" represents the input required to produce one unit of production of Industry 1 from Industry 1.

$$a_{11}=\frac{x_{11}}{X_1} \quad \text{.....[1]}$$

Similarly, the expression "$a_{21}=\frac{x_{21}}{X_1}$" represents the amount of raw materials, etc. that the Industry 1 input from Industry 2 to produce one unit of the product.

Similar to intermediate inputs, "$v_1=\frac{V_1}{X_1}$" can be defined by dividing the value added produced in Industry 1 by domestic production.

In this case, "V_1," the value added, signifies inputs of the primary factors of production, such as labor and capital, and "v_1" can be regarded as an input unit of such production factors.

Applying the above procedure to Industry 2 (the second column for Chart 3-1) produces the following input coefficient table (Chart 3-2)

Chart 3-2 Input Coefficient Table (Model)

	Industry 1	Industry 2
Industry 1	a_{11}	a_{12}
Industry 2	a_{21}	a_{22}
Gross value added	v_1	v_2
Total domestic products	1.0	1.0

Note

$$a_{ij} = \frac{x_{ij}}{X_j}$$

$$v_j = \frac{V_j}{X_j}$$

Indicating the scale of raw materials, etc. required to generate one unit of production in each industry, the input coefficient table can be referred to as the basic production unit table. The sum of input coefficients including the value added portion in each industry is defined as 1.0. This series of calculations is made for Basic Transaction Tables for 13 sectors in the 2000 Input-Output Tables, and indicated in Table 1-(2) in Document 2 of Chapter 10.

For instance, looking at the top of the table along the agricultural, forestry, and fisheries, when the agricultural, forestry, and fisheries industry generates one unit of production, intermediate inputs of 0.108455 units were produced by the agricultural, forestry, and fisheries sector, and, 0.171384 units of intermediate inputs were similarly produced by the manufacturing sector. Thus, a total of 0.438065 units of intermediate inputs were required. The table also indicates that 0.561935 units of gross value added were produced as the result of the production.

(Note) Ideally, "Unit" here should be a physical unit, such as a weight or number of items, etc. In the Input-Output Tables, figures are represented in monetary amount to maintain consistency for various products. The input coefficients calculated from these figures are the input coefficients based on monetary values at the prices of the relevant year.

Suppose production of 100-yen of Product A requires 50 yen of Product B. If the prices of all products can be expressed through "amount-by-unit price," this situation may be equivalent to a hypothetical situation in which 50 of "Product B that can be purchased at one yen" was input to produce 100 of "Product A that can be purchased at one yen." Production volumes of all industries are valued at the unit of quantity equivalent to one yen (or one dollar or one million yen or other consistent monetary units), to allow comparison of industry production units. This system is called Input-Output Tables at the "yen value unit." Valuation by the "yen value unit" for the base year represents the nominal value itself. If the "yen value unit" in the base year is applied to the year to be compared, "real evaluation" based on the valuation at yen value in the table for the base timetable can be obtained.

2 Definition of Input Coefficients

(1) Measurement of Effects of Input Coefficients on Production

Next, the meanings of input coefficients are considered with Chart 3-1 and Chart 3-2 mentioned above.

Suppose demand for Industry 1 has increased by one unit. Industry 1 will require raw materials, etc. to generate one unit of production. Industry 1 will thus generate intermediate demands of "a_{11}" and "a_{21}" units of raw materials to Industry 1 and Industry 2, respectively, in accordance with the input coefficients, which is the primary production repercussion. Receiving the demands, Industry 1 and Industry 2 will further generate the secondary production repercussions, in accordance with the respective input coefficients to produce "a_{11}" and "a_{12}" units. This series of production repercussions continues infinitely, until domestic production levels for the respective sectors can ultimately be calculated as the summation of all production repercussions.

In this manner, input coefficients are crucial to measuring how much production can be ultimately induced at each sector when certain levels of final demand are generated in an industrial sector.

However, it is all but impossible and unfeasible to trace and calculate each process of production repercussion occurrences. The following inverse matrix coefficients are prepared to simplify such production repercussion calculations. As a preparatory step, it is necessary to explain the process of production repercussions.

(2) Mathematical Computation of Effects on Production

In Chart 3-1 above, the mathematical formula of the balance for every row is described by the following equations:

$$\left.\begin{aligned} x_{11} + x_{12} + F_1 &= X_1 \\ x_{21} + x_{22} + F_2 &= X_2 \end{aligned}\right\} \quad \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots [2]$$

As in the case of equation [1], "a_{21}," "a_{12}," and "a_{22}" are calculated and substituted into equation [2], resulting in the following modifications:

$$\left.\begin{aligned} a_{11}X_1 + a_{12}X_2 + F_1 &= X_1 \\ a_{21}X_1 + a_{22}X_2 + F_2 &= X_2 \end{aligned}\right\} \quad \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots [3]$$

As indicated in equation [3], certain relationship exists between final demand and domestic production. The relationship is defined by "input coefficients."

Equation [3] can be expressed in a matrix, as follows:

$$\begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix} \begin{bmatrix} X_1 \\ X_2 \end{bmatrix} + \begin{bmatrix} F_1 \\ F_2 \end{bmatrix} = \begin{bmatrix} X_1 \\ X_2 \end{bmatrix}$$

$$A = \begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix}$$

This is referred to as the input coefficient matrix.

Assigning specific figures to the final demands represented by "F_1" and "F_2" in the simultaneous equations of [3] and solving them makes it possible to obtain domestic production that meets final demand. This calculation produces the domestic production levels in Industry 1 and Industry 2 resulting from production repercussion effects.

Demand increases in a certain industrial sector will require inputs of raw materials and fuels, etc. from other industries for production activities, and thereby affecting not just industry production but those of the other industries, which will further generate additional demands in the original sector as repercussion effects. Equation [3] indicates a mechanism for calculating the cumulative effects of these repercussions. This is the fundamental approach and constitutes the basis of input-output analyses based on input coefficients.

However, note that this approach is based on the premise of stable input coefficients, as indicated below. Constant fluctuations in input coefficients will make it impossible to determine consistent relationships between final demand and domestic production.

3 Stability of Input Coefficients

(1) Consistency of Production Technology Levels

In the Input-Output Tables, input ratios of raw materials and fuels, etc. required to produce goods and services represented by the input coefficients are assumed not to fluctuate significantly between the year to be analyzed and that in which the table is compiled.

Input coefficients, in short, reflect production technologies adopted in a certain year. Changes in production technologies may naturally change the input coefficients.

Although drastic changes are generally not supposed to occur in production technologies in short timeframes, in countries such as Japan, extremely rapid technological advancements may make it necessary to acquire information on changes in input coefficients and make proper adjustments by some method.

(2) Consistency of Production Scale

Each industrial sector is comprised of various enterprises and establishments with different production scales. Even if the same products are produced, different production scales will inevitably lead to different input coefficients due to the different technologies and economy-of-scale levels.

However, the Input-Output Tables are compiled while reflecting the economic structures in the compilation years. In input-output analyses, production scales of enterprises and establishments, allocated to respective industrial sectors, are assumed not to undergo significant changes between the years to be analyzed and those in which tables are compiled.

(3) Change Factors of Input Coefficients

It is assumed that there are few changes in input coefficients between the year to be analyzed and the compilation year. However, in addition to the (1) and (2) above, the following factors may change over time:

[1] Changing Relative Prices

Since individual transactions in the Basic Transaction Tables are valued at prices in the year when the tables are compiled, changing the relative prices of goods and services will change the input coefficients, even if the technological structures remain constant.

Historical comparisons would require Linked Input-Output Tables based on fixed price valuations, in which effects of fluctuating relative prices are eliminated.

[2] Changing Product Mixes

If products with different input structures and unit prices are placed in the same sector (which is referred to as a "product mix"), changes in product structures within the sector will change the input coefficients of the entire sector, even if there is no change in input structure or unit price of each product.

§ 2 Inverse Matrix Coefficients

1 Definition and Computation of Inverse Matrix Coefficients

One of the important analyses in input-output analyses is to analyze the direct and indirect effects of certain final demands that occurred in an industrial sector on other industrial sectors. As stated before, input coefficients in the respective industrial sector may play crucial roles.

Suppose the national economy is comprised only of Industry 1 and Industry 2. As stated in section 1, when the final demand is given, solving the following simultaneous equations will give the domestic production levels of Industry 1 and Industry 2.

$$\left.\begin{aligned} a_{11}X_1 + a_{12}X_2 + F_1 &= X_1 \\ a_{21}X_1 + a_{22}X_2 + F_2 &= X_2 \end{aligned}\right\} \quad \cdots\cdots [3]$$

Indeed, if the entire structure were composed only of these two sectors, calculations would be quite simple. In reality, even the Medium Consolidated Sector Classification has as many as 104 sectors, which makes solving simultaneous equations for all of them impractical and makes it almost impossible to conduct proper analyses.

If calculations can be made in advance, as to what kind of production repercussions on various sectors may be expected if one unit of final demand is produced for a certain sector, and how much domestic production will be finally expected in each sector, analyses could be significantly expedited. "Inverse matrix coefficient tables" are compiled in response to this need.

In the matrix indication for equation [3] above,

$$\begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix} \begin{bmatrix} X_1 \\ X_2 \end{bmatrix} + \begin{bmatrix} F_1 \\ F_2 \end{bmatrix} = \begin{bmatrix} X_1 \\ X_2 \end{bmatrix} \quad \cdots\cdots (3)'$$

when the input coefficient matrix is defined as

$$\begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix} = A$$

the final demand column vector is defined as

$$\begin{bmatrix} F_1 \\ F_2 \end{bmatrix} = F$$

and the domestic production column vector is defined as

$$\begin{bmatrix} X_1 \\ X_2 \end{bmatrix} = X,$$

$$AX + F = X \quad \cdots\cdots [3]"$$

can be obtained. The solution for X is

$$X - AX = X$$
$$(I - A)X = F$$
$$\therefore X = (I - A)^{-1} F$$

where "I" is a Identity matrix, $(I - A)^{-1}$ is the inverse matrix of $(I - A)$, as follows:

$$(I - A)^{-1} = \begin{bmatrix} 1 - a_{11} & -a_{12} \\ -a_{21} & 1 - a_{22} \end{bmatrix}^{-1}$$

The factors of this matrix are referred to as "inverse matrix coefficients," a listing of which is the "Inverse Matrix Coefficient Table." This table indicates how much production will be ultimately induced in what industry by a demand increase of one unit in a certain industry. Once the inverse matrix coefficients are calculated, the simultaneous equations in

[3] do not need to be solved independently. When the final demand in a sector is given, the domestic production at each sector, corresponding to the final demand, can be immediately calculated.

(Note) For the equation of [3], to be able to give a non-negative solution for a certain F (non-negative), the necessary and sufficient condition will be that all principal minors in the matrix $(I - A)$ in the matrices need to be positive (Hawkins-Simon's condition). For all the principal minors in matrix $(I - A)$ to be positive, the sufficient condition will be

$$\sum_{i=1}^{n} a_{ij} \quad < \quad 1 \qquad (j = 1,2,\cdots\cdots, \quad n)$$

Here the sum of input coefficients should always be less than 1 (Solow's condition).That is necessary condition.

For the 13-sector Basic Transaction Tables for the 2000 Input-Output Tables, calculations for the inverse matrices of the type of $[I - (I - \hat{M})A]^{-1}$ (please refer to the following explanations) are indicated in Table 1-(3) in Document 2 of Chapter 10.

Sectors at the top of the inverse matrix coefficient table are those in which one unit of the final demand has been generated; sectors at the side indicate those in which production can somehow be induced by generation. For instance, in examining the agriculture, forestry, and fisheries from the top of the table down, one unit of final demand in the agriculture, forestry, and fisheries industry can ultimately generate 1.112588 units of production inducement in the agriculture, forestry, and fisheries industry itself; and production inducements in the mining, manufacturing, and construction industries will be 0.001179 units, 0.297785 units, and 0.010592 units, respectively, resulting in a total of 1.739004 units of production inducements, which can be interpreted as corresponding to the vertical sum.

Input coefficients introduced in § 1 indicate the amount of raw materials and other factors directly required to produce one unit of certain goods or services. The inverse matrix coefficients indicate the magnitude of the ultimate direct and indirect production repercussions on various industrial sectors when there is one unit of final demand for a certain sector.

(Note) In this way, when inverse matrix coefficients are observed in relation to production repercussions, for instance, when one unit of final demand is generated in agriculture, forestry, and fisheries, production in the industry must increase (direct effect) to satisfy demand.

Due to agriculture, forestry, and fisheries to increase production, other sectors must increase production, the effects of which further increase production in agriculture, forestry, and fisheries (indirect effects). As a result, the production increase in the agriculture, forestry, and fisheries industry usually exceeds one unit. The diagonal elements in the inverse matrix coefficients indicating the production increase in the self-activity sector commonly exceed 1.

A column vector with the inverse matrix defined as B, the diagonal element as b_{ii}, and the column vector as (u_i), in which the i-th element is 1 and the other elements are 0, can be describe as follows:

$$Bu_i = \begin{bmatrix} b_{11} & \cdots & b_{1i} & \cdots & b_{1n} \\ \vdots & \ddots & \vdots & \iddots & \vdots \\ b_{i1} & \cdots & b_{ii} & \cdots & b_{in} \\ \vdots & \iddots & & \ddots & \vdots \\ b_{n1} & \cdots & b_{ni} & \cdots & b_{nn} \end{bmatrix} \begin{bmatrix} 0 \\ \vdots \\ 1 \\ \vdots \\ 0 \end{bmatrix} = \begin{bmatrix} b_{1i} \\ \vdots \\ b_{ii} \\ \vdots \\ b_{ni} \end{bmatrix}$$

It can be concluded from the above that the i-th column vector of the inverse matrix B indicates the production increase units at each sector when one unit of final demand is generated in the sectors. (For the reasons mentioned, $b_{ii} \geq 1$)

The vertical sum of aggregated i-th column in the inverse matrix B corresponds to the production inducement coefficient of the i-th sector (please refer to § 3).

2 Types of Inverse Matrix Coefficients (handling of imports)

In analyses of production repercussions with Input-Output Tables, a major issue is import handling. § 1 above the mentioned the so-called Type $(I - A)^{-1}$ model, which is a simplified model excluding imports. Basically various goods are imported and consumed in parallel with domestic products in industries and households.

Chart 3-3 shows the model for Basic Transaction Tables, clearly indicating imports. For row items, both intermediate demand (X_{ij}) and final demand (F_i) are supplies including imports, and columns and rows (production) offset each other because imports are indicated negative values.

Chart 3-3 Basic Transaction Table (Model 2)

	Industry 1	Industry 2	Final demand	Import	Domestic production
Industry 1	x_{11}	x_{12}	F_1	$-M_1$	X_1
Industry 2	x_{21}	x_{22}	F_2	$-M_2$	X_2
Gross value added	V_1	V_2			
Domestic production	X_1	X_2			

Input coefficients include imports. This implies that all repercussions derived from final demand do not necessarily induce domestic production; some effects may induce imports.

In other words, for accurate determination of domestic production inducements, import inducements must be deducted. It is thus necessary to provide a calculation method for inverse matrix coefficients that accounts for import inputs.

The inverse matrix coefficients in the "$[I-(I-\hat{M})A]^{-1}$ Type" are commonly utilized in Japan. Several inverse matrix coefficient calculation methods are also used, as follows:

(1) $(I-A)^{-1}$ Type

This type is presented as a simplified model excluding imports in "1" above. In this model, imports are handled exogenously.

In the basic model (two rows and two columns), the supply-demand balance equation can be presented as follows:

$$\left.\begin{aligned} a_{11}X_1+a_{12}X_2+F_1-M_1=X_1 \\ a_{21}X_1+a_{22}X_2+F_2-M_2=X_2 \end{aligned}\right\} \cdots\cdots\cdots [4]$$

The matrix denotation is as indicated below.

$AX+F-M=X$ ..... [4]'

This is a "Competitive import type" model in which intermediate demand (AX) and final demand (F) include a certain volume of imports.

The solution for X is:

$X-AX=F-M$

$(I-A)X=F-M$

$\therefore X=(I-A)^{-1}(F-M)$

In this model, both final demand and imports can be determined exogenously. Imports, however, can be induced by domestic production, except in certain special circumstances. In other words, it is to regard them as endogenously determined. Thus, this model is used infrequently.

(2) $[I-(I-\hat{M})A]^{-1}$ Type

This model divides final demand (F) into domestic final demand (Y) and export (E), giving the following equation:

$F=Y+E$

This is substituted into [4]' above. The supply-demand balance equation can be expressed as follows:

$AX+Y+E=X$ .....[5]

In the tables, mere transit transactions are not supposed to be incorporated into exports. Thus, it can be assumed that exports do not include imports. Import coefficients by row can be defined as follows:

$$m_i=\frac{M_i}{\sum_j a_{ij}X_j+Y_i}$$

In other words, "m_i" represents the ratio of imports in product "i" within total domestic demands, or ratios of dependence on imports; while (1-m_i) represents self-sufficiency ratios.

When [5] is represented for "i" row,

$$\sum_j a_{ij}X_j+Y_i+E_i-M_i=X_i \quad \cdots\cdots\cdots [6]$$

From the definition of import coefficients,

$$M_i = m_i(\sum_j a_{ij} X_j + Y_i) \quad \text{.....[7]}$$

[7] is substituted into [6], and the equation is as follows:

$$X_i - (1-m_i)\sum_j a_{ij} X_j = (1-m_i)Y_i + E_i \quad \text{.....[8]}$$

The diagonal matrix ($\hat{M}$) can be assumed to have an import coefficient (m_i) as the diagonal element and zero as the non-diagonal element.

$$\hat{M} = \begin{bmatrix} m_1 & & 0 \\ & \ddots & \\ 0 & & m_n \end{bmatrix}$$

From [8] above, the following equation can be obtained:

$$[I-(I-\hat{M})A]\ X = (I-\hat{M})Y + E \quad \text{.....[9]}$$

From [9], the following equation can be obtained:

$$X = [I-(I-\hat{M})A]^{-1}[(I-\hat{M})Y + E] \quad \text{.....[10]}$$

Giving domestic final demand (Y) and export (E) produces domestic production (X).

Here, $(I-\hat{M})A$ indicates the input ratio of domestic products when the import input ratio is assumed to be constant in all sectors, whether they are for intermediate demand or final demand. $(I-\hat{M})Y$ indicates domestic final demand for domestic products under the same assumption. In other words, this is the "competitive import type" model when import ratios for individual items (for rows) (or import coefficients) are assumed to be identical in all output sectors.

Inverse matrix coefficient tables based on this model are commonly used in Japan. Table 1-(3) in Document 2 of Chapter 10 compiles the 13-sector Basic Transaction Tables for the 2000 Input-Output Tables, based on this approach.

(3) $(I - A^d)^{-1}$ Type

The inverse matrix coefficients based on this model is the "non-competitive import type," which can be used to analyse when the input ratios of imports differ from sector to sector.

Chart 3-4 shows simplified non-competitive Import Basic Transaction Table.

Chart 3-4 Basic Transaction Table (Model 3)

		Industry 1	Industry 2	Final demand	Import	Domestic production
Domestic	Industry 1	x_{11}^d	x_{12}^d	F_1^d	—	X_1
	Industry 2	x_{21}^d	x_{22}^d	F_2^d	—	X_2
Import	Industry 1	x_{11}^m	x_{12}^m	F_1^m	$-M_1$	—
	Industry 2	x_{21}^m	x_{22}^m	F_2^m	$-M_2$	—
Gross value added		V_1	V_2			
Domestic production		X_1	X_2			

Naturally, the following equations can be defined:

$$x_{ij} = x_{ij}^d + x_{ij}^m$$
$$F_i = F_i^d + F_i^m$$

The supply-demand balance for domestic products can be presented as follows:

$$\left.\begin{aligned} x_{11}^d + x_{12}^d + F_1^d &= X_1 \\ x_{21}^d + x_{22}^d + F_2^d &= X_2 \end{aligned}\right\} \quad \text{..... [11]}$$

Where input coefficient for domestic intermediate goods is defined as follows:

$$a_{ij}^{d} = \frac{x_{ij}^{d}}{X_j}$$

Then, the equations [11] can be as follows:

$$\left.\begin{aligned} a_{11}^{d}X_1 + a_{12}^{d}X_2 + F_1^{d} &= X_1 \\ a_{21}^{d}X_1 + a_{22}^{d}X_2 + F_2^{d} &= X_2 \end{aligned}\right\} \quad \text{.....[11]'}$$

This can be represented by the following matrix:

$$A^{d}X + F^{d} = X \quad \text{.....[11]"}$$

This is the "non-competitive import type" model. Both intermediate demand ($A^{d}X$) and final demand (F^{d}) cover domestic products and exclude imports.

The solution of [11]" for X is as follows:

$$X - A^{d}X = F^{d}$$
$$(I - A^{d})X = F$$
$$\therefore X = (I - A^{d})^{-1} F^{d}$$

When the final demand for domestic products (F^{d}) is given, the domestic production level (X) can be obtained:

The relationship with the competitive import type model may be presented as follows: When the input coefficient matrix for import is defined as (A^{m}) and the final demand colum vector for imports is defined as (F^{m}), the following equations can be derived:

$$A = A^{d} + A^{m}$$
$$F = F^{d} + F^{m}$$

Based on the above equations, the following supply-demand balance can be obtained:

$$(A^{d} + A^{m})X + (F^{d} + F^{m}) = X + M$$

This is the basic equation of the competitive import type of model.

In the actual economy, input ratios of domestic and imported products may generally differ from sector to sector. Inverse matrix coefficients based on this model represent this situation as is. When this type of inverse matrix coefficients are compared with (2) $[I - (I - \hat{M})A]^{-1}$, significant differences may be observed at times in certain sectors.

In the Input-Output Tables compiled as a five-year project by ten authorities, inputs and outputs are divided into domestic and imported products, making it possible to use two different types of inverse matrix tables. The appropriate one will depend on the purposes of analyses and considerations regarding consistency with assumptions.

3 Index of the Power of Dispersion and Index of the Sensitivity of Dispersion

(1) Index of the Power of Dispersion

The figure in each column in the inverse matrix coefficient table indicates the production required directly and indirectly at each row sector when the final demand for the column sector (that is, demand for domestic production) increases by one unit. The total (sum of column) indicates the scale of production repercussions on entire industries, caused by one unit of final demand for the column sector.

The vertical sum of every column sector of the inverse matrix coefficients is divided by the mean value of the entire sum of column to produce a ratio. This ratio indicates the relative magnitudes of production repercussions; that is, which sector's final demand can exert the greatest production repercussions on entire industries. This is called the "Index of the Power of Dispersion" and can be calculated as follows:

$$\text{Index of the power of dispersion by sector} = \frac{\text{Each sum of cloumn in inverse matrix coefficient table}}{\text{Mean value of entire vertical sum in the inverse matrix coefficient table}}$$

$$= \frac{b_{*j}}{\overline{B}}$$

Here,

$$b_{*j} = \sum_{i}^{n} b_{ij}$$

$$\overline{B} = \frac{1}{n}\sum_{j} b_{*j} = \frac{1}{n}\sum_{i}\sum_{j} b_{ij}$$

(Please refer to Chart 3-5)

The index of the power of dispersion indicated above is referred to as the "first category index of the power of dispersion." Table 3-1 indicates the calculation of the index of the power of dispersion by utilizing $[I-(I-\hat{M})A]^{-1}$ as the inverse matrix in the 32-sector table of the 2000 Input-Output Tables. This indicates that the indices for iron and steel and transportation machinery, etc. have relatively high indices of the power of dispersion, indicating that both sectors exert great production repercussions on entire industries.

Conversely, sectors indicating low indices of the power of dispersion are real estate, petroleum and coal products, education and research and so forth. Service-related sectors generally have slight production repercussions on entire industries.

However, the sum of column of inverse matrix coefficients tends to increase as the intermediate input ratios increase. In addition, since intermediate input includes the "Self-sector input," representing inter-industrial transactions, which may significantly affect intermediate input ratios, the "Self-sector input" may sometimes be excluded from calculations of "indices of the power of dispersion."

In this case, when only indirect effects excluding the direct effect of 1.0 to the self-sector are considered, they are referred to as the "second category index of the power of dispersion." When effects on the self-sector are completely eliminated and only the effects on the other sectors are considered, they are referred to as the "third category index of the power of dispersion."

(2) Index of the Sensitivity of Dispersion

The figure for each row in the inverse matrix coefficient table indicates the supplies required directly and indirectly at each row sector when one unit of the final demand for the column sector at the top of the table occurs. The ratio produced by dividing the total (horizontal sum) by the mean value of the entire sum of row will indicate the relative influences of one unit of final demand for a row sector, which can exert the greatest production repercussions on entire industries. This is called the "Index of the Sensitivity of Dispersion," which can be calculated as follows:

$$\text{Index of the sensitivity of dispersion by sector} = \frac{\text{Each sum of row in inverse matrix coefficient table}}{\text{Mean value of the entire horizontal sum in inverse matrix coefficient table}}$$

$$= \frac{b_{i*}}{\overline{B}}$$

Here,

$$b_{i*} = \sum_j b_{ij}$$

$$\overline{B} = \frac{1}{n}\sum_i b_{i*} = \frac{1}{n}\sum_i \sum_j b_{ij}$$

(Please refer to Chart 3-5)

The index of the sensitivity of dispersion indicated above is referred to as the "primary index of the sensitivity of dispersion."

Table 3-1 indicates the calculation of index of the sensitivity of dispersion utilizing $[I-(I-\hat{M})A]^{-1}$ as the inverse matrix in the 32-sector table of the 2000 Input-Output Tables. Here, since the sensitivity indices of commerce and transportation, etc. are high, these sectors provide raw materials and services to a wide range of sectors. They are thus sensitive to fluctuations in business cycles in entire industries.

As in the case of the indices of the power of dispersion, the "Self-sector input" may be excluded. Again, as well as the index of the power of dispersion, the "second category index of the sensitivity of dispersion " and "third category index of the sensitivity of dispersion " can be defined.

Since they are based on inverse matrix coefficients, different results may obtain, depending on how sectors are aggregated and on the types of inverse matrix (please refer to Section 7).

Chart 3-5 Inverse Matrix Coefficient Table (Model)

	1	2	3	...	n	Sum of column	Index of the Sensitivity of dispersion
1	b_{11}	b_{12}	b_{13}	⋮	b_{1n}	b_{1*}	$b_{1*}/\overline{B}$
2	b_{21}	b_{22}	b_{23}	⋮	b_{2n}	b_{2*}	$b_{2*}/\overline{B}$
3	b_{31}	b_{32}	b_{33}	⋮	b_{3n}	b_{3*}	$b_{3*}/\overline{B}$
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
n	b_{n1}	b_{n2}	b_{n3}		b_{nn}	b_{n*}	$b_{n*}/\overline{B}$
Sum of row	b_{*1}	b_{*2}	b_{*3}	...	b_{*n}	$\sum b_{i*} = \sum b_{*j}$	
Index of the Power of dispersion	$\frac{b_{*1}}{\overline{B}}$	$\frac{b_{*2}}{\overline{B}}$	$\frac{b_{*3}}{\overline{B}}$	...	$\frac{b_{*n}}{\overline{B}}$		

Table 3-1 Tables of Indices of Power of Dispersion and of the Sensitivity of Dispersion for 2000

Sector		Index of Power of Dispersion	Index of the Sensitivity of Dispersion
01	Agriculture, Forestry and Fisheries	0.925502	0.820237
02	Mining	1.007231	0.630754
03	Foods	1.063654	0.762253
04	Textile products	1.056870	0.723778
05	Pulp, paper and wooden products	1.127770	1.332584
06	Chemical products	1.181460	1.389651
07	Petroleum and coal products	0.712059	0.923940
08	Ceramic, stone and clay products	0.993688	0.740982
09	Iron and steel	1.354558	1.489994
10	Non-ferrous metals	1.049262	0.846639
11	Metal products	1.089429	0.819957
12	General machinery	1.145221	0.788896
13	Electrical machinery	1.142114	0.948155
14	Transportation equipment	1.435184	1.057022
15	Precision instruments	1.041187	0.595389
16	Other industrial products	1.099465	1.564406
17	Construction	1.025713	0.817579
18	Electricity, gas and heat supply	0.860691	1.094836
19	Water supply and waste disposal services	0.867925	0.699859
20	Commerce	0.790658	1.765737
21	Financial and insurance	0.816117	1.549578
22	Real estate	0.662876	0.806673
23	Transport	0.974871	1.678109
24	Communication and broadcasting	0.887172	1.001923
25	Public administration	0.786549	0.654389
26	Education and research	0.727891	0.990902
27	Medical service, health and social security and nursing care	0.907220	0.547533
28	Other public services	0.849042	0.573179
29	Business services	0.909706	2.456215
30	Personal services	0.912037	0.638975
31	Office supplies	1.477371	0.594317
32	Activities not elsewhere classified	1.119508	0.695561

(Note) Derived from the 32-Sector Table

(3) Functional Analysis based on Indices of the Power and Sensitivity of Dispersion

By combining the indices of the power of dispersion and those of the sensitivity of dispersion, we can create a typological presentation of the functions of each industrial sector.

As indicated in Chart 3-6, the figures of the sectors are plotted on a chart, with the indices of the power of dispersion on the horizontal axis, and those of the sensitivity of dispersion on the vertical axis. Each position on the chart can reveal characteristics of the industrial sector.

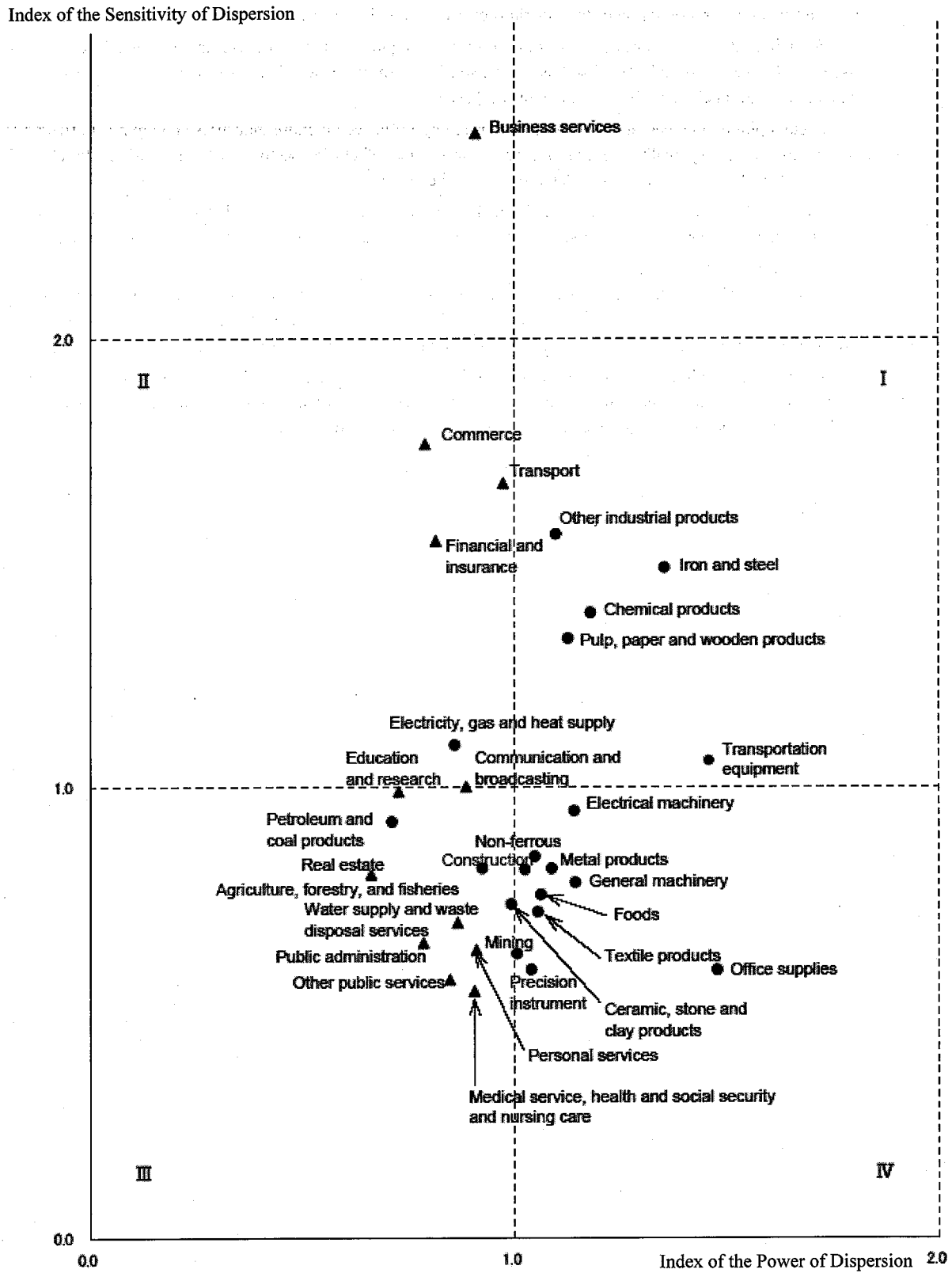
Sectors plotted in Quadrant "I" can both exert strong influence on entire industries and are most affected to external influences. Typically, these are the raw materials manufacturing sectors, including basic materials such as iron and steel, pulp, paper and wooden products, and chemical products.

Quadrant "II" includes sectors whose influence on entire industries is weak, but whose sensitivity is high. Typically, these sectors provide services to other sectors, such as business services, commerce, transportation, and finance and insurance, etc.

Quadrant "III" includes sectors whose influence and sensitivity are both weak; typically, these are primary industrial sectors such as agriculture, forestry, and fisheries, as well as ceramics, stone and clay products, and independent industrial sectors such as real estate, water supply and waste disposal services, etc.

Quadrant "IV" includes sectors with strong influence on entire industries but relatively weak production repercussions. Typically, these sectors involve the manufacture of final goods, including general machinery, textile products, metal products, precision instruments, and construction, etc.

Chart 3-6 Indices of the Power of Dispersion and Sensitivity of Dispersion



(Note) "●" indicates goods sector,"▲" indicates services sector

§ 3 Relationship Between Final Demand and Domestic Production

1 Domestic Production Induced by Individual Final Demand Items

Every industry in the endogenous sector supplies goods and services to each industrial sector as well as final demand sectors. On the whole, however, the industrial activities of the endogenous sectors produce to just satisfy the final demand, and their production levels depend on the size of the respective final demands. Based on the competitive import model and when imports fluctuate in proportion to domestic demand, the following relationship holds in the Input-Output Tables, as indicated by equation [10] of § 2, through the inverse matrix coefficients:

$$X = [I-(I-\hat{M})A]^{-1}\ [I-(I-\hat{M})Y+E]$$

Total domestic products Inverse matrix Value of final demand

Here, final demand (F) can be classified be into six categories: [1] consumption expenditure outside households; [2] private consumption expenditures; [3] consumption expenditure of general government; [4] gross domestic fixed capital formation; [5] increase in stock; and [6] exports (E). Domestic products induced by individual final demand items refer to the production of every industry induced by individual final demand items.

Domestic products induced by individual final demand items can bean indication for analyzing and analyzing the items in the final demand that influence value fluctuations in domestic production, and can be calculated as follows:

As mentioned above, the final demand vector F may be divided into domestic final demand vector Y and export vector E. Domestic final demand vector Y can be dissolved into various vectors of domestic final demand items (e.g., private consumption expenditure and gross domestic fixed capital formation, etc.), which may be represented as follows:

$$Y = Y_1 + Y_2 + Y_3 + \dots Y_n$$

Given that X_K represents the induced production value derived from the respective domestic final demands, domestic final demand may be expressed as follows:

$$X_K = [I-(I-\hat{M})A]^{-1}(I-\hat{M})Y_K$$

$$K = 1,2, \dots, N$$

Production value induced by exports E can be expressed as follows:

$$X_E = [I-(I-\hat{M})A]^{-1}\ E$$

Since the aggregate of induced production values by the respective final demand items is equivalent to the value of domestic production, we derive the following equation:

$$X = \sum_{K=1}^{N} X_K + X_E$$

It is also possible to use $(I - A^d)^{-1}$ as the inverse matrix. In that case, the final demand vector multiplying on the right side represents the final demand for domestic items (F^d).

2 Domestic production Inducement Coefficients by Individual Final Demand Items

"Production inducement coefficient by final demand item" is defined as the domestic products induced by individual final demand items divided by the total for corresponding final demand.

Given that:

$$Y_K = \begin{bmatrix} Y_{1K} \\ \vdots \\ Y_{nK} \end{bmatrix}, \quad X_K = \begin{bmatrix} X_{1K} \\ \vdots \\ X_{nK} \end{bmatrix} \quad K = 1,2,\dots,N \text{ (Domestic final demand items)}$$

And:

$$E = \begin{bmatrix} E_1 \\ \vdots \\ E_n \end{bmatrix}, \quad X_E = \begin{bmatrix} X_{1,N+1} \\ \vdots \\ X_{n,N+1} \end{bmatrix}$$

Then, the domestic production of industry "i" induced by domestic final demand item "K" and exports will be X_{ik} and $X_{i,N+1}$, respectively, and the production inducement coefficients can be expressed as follows:

Production inducement coefficients by final demand items

$$= \begin{cases} \dfrac{X_{ik}}{\sum_{j=1}^{n} Y_{jk}} & \text{(Domestic final demand)} \\ \dfrac{X_{i,N+1}}{\sum_{j=1}^{n} E_j} & \text{(Exports)} \end{cases}$$

This indicates the rate of increase of domestic production in an industry, derived from the total increase of one unit of a certain final demand item (within the same item).

The aggregated production inducement coefficients by final demand items for the respective sectors—that is,

$$\frac{\sum_{j=1}^{n} X_{iK}}{\sum_{j=1}^{n} Y_{jK}} \quad \text{and} \quad \frac{\sum_{i=1}^{n} X_{i,N+1}}{\sum_{j=1}^{n} E_j}$$

—is sometimes known as the production inducement coefficient.

Final demands with higher production inducement coefficients will have greater production repercussion effects. For 2000, exports account for the highest figure.

		Final demand item
		1 2 3 ... ... *N*, *N+1*
Industrial sector	1 2 3 : : n	Production inducement coefficient by final demand item $\left[\dfrac{X_{ik}}{\sum_{j=1}^{n} Y_{jk}}\right]\left[\dfrac{X_{i,N+1}}{\sum_{j=1}^{n} E_j}\right]$
Total		

(Note) X_{ik} and $X_{i,N+1}$: Production inducements by final demand item

$\sum_{j=1}^{n} Y_{jk}, \sum_{j=1}^{n} E_j$: Total of Final demands

3 Domestic production Inducement Distribution Ratios by Individual Final Demand Items

"Production inducement distribution ratios by final demand items" are defined as the proportion ratios of induced production value derived from the respective industrial sectors. They indicate the degree of influence or weighting of the respective final demand items on the domestic productions in industrial sectors.

		Final demand item	Total
		1 2 3 ... ... *N*, *N+1*	
Industrial sector	1 2 3 : : n	Production inducement distribution ratio by final demand item $\left[\dfrac{X_{ik}}{\sum_{j=1}^{n} Y_{jk}}\right]\left[\dfrac{X_{i,N+1}}{\sum_{j=1}^{n} E_j}\right]$	1.0

(Note) X_{ik} and $X_{i,N+1}$: Production inducement by final demand item

X_i: Total of production inducement (total domestic products)

§ 4 Relationship Between Final Demand and Gross Value Added

The domestic production of each sector is comprised of intermediate input and gross value added. Since domestic production can be induced by final demand, we can assume that gross value added, which is part of domestic production, can be similarly induced by final demand.

It is thus possible to apply the relational expression between domestic production and final demand, introduced in § 3, to gross value added and final demand in exactly the same manner.

The ratio of gross value added is defined as the gross value added of each sector divided by the domestic production of the sector. This is the gross value added per unit of production, the elements of which can be represented in a diagonal matrix "$\hat{v}$."

$$\hat{v}=\begin{bmatrix} v_1 & & & 0 \\ & v_2 & & \\ & & v_3 & \\ & & & \ddots \\ 0 & & & v_n \end{bmatrix} \qquad v_i=\frac{V_i}{X_i}(i=1,2,\cdots,n)$$

Therefore, when V is defined as a vector comprised of gross value added,

$$V=\hat{v}X$$

Thus, the supply-demand balance equation mentioned in § 3 can be indicated for the gross value added, as follows:

$$V=\hat{v}\ [I-(I-\hat{M})A]^{-1}[(I-\hat{M})Y+E]$$

This equation can be used to define the following, as in the case of production inducement:

[1] Gross value added inducement

[2] Gross value added inducement coefficient

[3] Gross value added inducement distribution ratio

A characteristic finding from comparisons between the production inducement coefficient and the gross value added inducement coefficient is that "exports" and "gross domestic fixed capital formation," which indicate larger figures among final demand items for production inducement coefficients, give smaller figures than "consumption" for gross value added inducement coefficient. This implies that increasing public sector investment and exports stimulates the economy, but that stimulating consumption is more effective for added value levels (GDP levels).

§ 5 Relationship Between Final Demand and Imports

1 Imports Induced, Imports Inducement Coefficients and Imports Inducement Distribution Ratios by Individual Final Demand Items

When certain final demands are generated, not all are usually satisfied by domestic production. Some are met by imports.

A fundamental field within input-output analyses is a measurement of the scale of production induced at each sector by generation of a certain final demand. Also critical is determining the scale of imports induced by the same cause. This requires the import coefficient of each sector. The scale of imports induced by one unit of final demand can be calculated with the import coefficients.

In the inverse matrix coefficients based on the $[I-(I-\hat{M})A]^{-1}$ type, commonly utilized in Japan, as explained in § 2, the Input-Output Tables do not cover re-exports of imported goods (that is, exports exclude all imports). Thus, import coefficients are defined as ratios to domestic demand, as follows:

$$m_i=\frac{M_i}{\sum_{j=1}^{n}a_{ij}X_j+Y_i} \qquad \hat{M}=\begin{bmatrix} m_1 & & 0 \\ & \ddots & \\ 0 & & m_n \end{bmatrix}$$

$$\therefore M=\hat{M}(AX+Y) \qquad \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots[1]$$

Total domestic products X can be expressed as follows:

$$X = [I - (I - \hat{M})A]^{-1}[(I - \hat{M})Y + E] \quad \cdots\cdots\cdots\cdots [2]$$

The inverse matrix coefficient $[I - (I - \hat{M})A]^{-1}$ is expressed as B and replaces [1] above and expanded as follows:

$$M = \hat{M}AB(I - \hat{M})Y + \hat{M}ABE + \hat{M}Y$$

$$M = [\hat{M}AB(I - \hat{M}) + \hat{M}]\ Y + \hat{M}ABE \quad \cdots\cdots\cdots\cdots [3]$$

In other words, imports can be divided into those induced by domestic final demand, excluding exports (the first term of the right side of M in the equation [3]), and those induced by exports E (the second term on the right side of [3]).

$\hat{M}AB$ can be regarded as the inverse matrix coefficient B multiplied by the input coefficient $\hat{M}A$.

The breakdown of the import inducement by each of the final demand items is presented as the "import inducement coefficient by final demand item." As indicated in equation (3) of the above § 1, imports M can be resolved as follows:

$$M = [\hat{M}AB(I - \hat{M}) + \hat{M}]\ Y + \hat{M}ABE$$

As is apparent from this equation, these factors are given by multiplying the final demands of the relevant items, respectively. Namely, they are given by multiplying the respective final demand item vectors from the "consumption expenditure outside households" to "increase in stocks," which are domestic final demands by the matrix $[\hat{M}AB(I - \hat{M}) + \hat{M}]$, and for "exports" by multiplying the export vector by the matrix $\hat{M}AB$.

Import inducement coefficients by final demand items and import inducement distribution ratios by final demand items are not explained here, as they can be calculated in the same as in the case of production inducement coefficients and production inducement distribution ratios in § 3.

2 Comprehensive Imports Coefficients

The sum of column of the matrix $[\hat{M}AB(I - \hat{M}) + \hat{M}], \hat{M}AB$ are coefficients that indicate the size of import inducements due to generation of one unit of "final demand excluding exports" and "exports" (the same itemized structure), and are referred to as "comprehensive import coefficients." The figures are taken from 188 sectors and 104 sectors in the Data Report (2).

§ 6 Labor Input-Output Analysis Coefficients

1 Labor Inducement Coefficients

In the Input-Output Tables, the following relationship holds between domestic production and final demand with, suggesting inverse matrix coefficients:

$$X = [I - (I - \hat{M})A]^{-1}[(I - \hat{M})Y + E] \quad \cdots\cdots\cdots\cdots [1]$$

X: Total domestic products

$[I - (I - \hat{M})A]^{-1}$: Inverse matrix

$[(I - \hat{M})Y + E]$: Final demand

Here, each row of matrix L of the labor input (man-year) for each sector is divided by domestic production to give the labor input coefficient matrix L'.

(Labor input L)

	Sector 1	Sector 2	Sector 3	.....	Sector n
Total employees	l_{11}	l_{12}	l_{13}	.....	l_{1n}
Self-employed	l_{21}	l_{22}	l_{23}	.....	l_{2n}
Family worker	l_{31}	l_{32}	l_{33}	.....	l_{3n}
:	:	:	:	.....	:
:	:	:	:	.....	:
:	:	:	:	.....	:
Total domestic products	X_1	X_2	X_3	.....	X_n

Table on Employees Engaged in Production Activities (by Occupation)

(Labor input coefficient, L')

	Sector 1	Sector 2	Sector 3	.....	Sector n
Total employees	l'_{11}	l'_{12}	l'_{13}	.....	l'_{1n}
Self-employed	l'_{21}	l'_{22}	l'_{23}	.....	l'_{2n}
Family worker	l'_{31}	l_{32}	l'_{33}	.....	l'_{3n}
:	:	:	:	.....	:
:	:	:	:	.....	:
:	:	:	:	.....	:

Table on Employees Engaged in Production Activities (by Occupation)

(Note) $l'_{ij}=\dfrac{l_{ij}}{X_j}$

Here, the total number of employees and the i-th employee position are analyzed. The i-th row of L is placed vertically to produce vector L_i, and the i-th element of L' is placed diagonally to produce matrix $\hat{L}'_i$, as follows:

$$L_i=\begin{bmatrix} l_{i1} \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ l_{in} \end{bmatrix}, \quad \hat{L}'_i=\begin{bmatrix} l'_{i1} & & & & & 0 \\ & l'_{i2} & & & & \\ & & \cdot & & & \\ & & & \cdot & & \\ & & & & \cdot & \\ & & & & & \\ 0 & & & & & l'_{in} \end{bmatrix}$$

$$L_i=\hat{L}'_iX$$

$$=\hat{L}'_i[I-(I-\hat{M})A]^{-1}[(I-\hat{M})Y+E]$$

$$=\hat{L}'_iB\ [(I-\hat{M})Y+E] \quad \text{..... [2]}$$

Here, the following equation is defined.

$$B=[I-(I-\hat{M})A]^{-1}$$

Each column of the matrix $\hat{L}'_iB$ indicates the size of labor demand required directly and indirectly at each sector when one unit of final demand is generated for each sector. The elements of this matrix $\hat{L}'_iB$ are commonly referred to as "labor inducement coefficients."

Each row of matrix $L'B$ indicates the scale of labor demand by occupational positions required directly and indirectly when one unit of final demand is generated for each sector. This may also be referred to as "labor inducement coefficients." "Occupation inducement coefficients" to be explained later are based on the latter concept.

Domestic final demand Y is comprised of consumption expenditure of households, consumption expenditure of general government, gross domestic fixed capital formation and exports, etc., and can be expressed as follows:

$$Y=Y_1+Y_2+\ldots+Y_m \quad \text{..... [3]}$$

From [2] and [3], the following equation can be obtained:

$$L_i=\hat{L}_iB\ [(I-\hat{M})(Y_1+\cdots+Y_m)+E]$$

$$=\hat{L}'_iB(I-\hat{M})Y_1+\cdots+\hat{L}'_iB(I-\hat{M})Y_m$$

$$+\hat{L}'_iBE \quad \text{..... [4]}$$

Each term on the right-hand side indicates the comprising item of the final demand of labor induced.

In input-output analyses, it is assumed that input coefficients are stable and that no significant differences exist among them between the time at which the tables are compiled and the time at which analyses are made. A similar assumption is applied to labor-related input-output analyses; labor input coefficients are assumed to be stable.

However, unlike input coefficients, labor input coefficients cannot always be stable. For instance, even if production in a certain sector has doubled, the labor input does not necessarily double when industrial robots are installed or the operating ratios are improved. In conducting labor-related input-output analyses, therefore, it is necessary to fully consider changes in operating ratios and labor productivity.

2 Labor-Related Indices of Power and Sensitivity of Dispersion

As the indices of the power of dispersion and those of the sensitivity of dispersion can be obtained from the inverse matrix coefficients, the indices of the power of dispersion and those of the sensitivity of dispersion concerning labor inducements can also be obtained from the labor inducement coefficient matrix $\hat{L}_i'B$.

(1) Index of the power of dispersion for labor inducement

This index is used to compare the sizes of effects at different sectors of an increase of one unit of final demand at a certain sector on labor demand at the respective row sectors.

The "primary index of the power of dispersion for labor inducement" can be calculated as follows:

$$\text{Primary index of the power of dispersion for labor inducement by sector} = \frac{\text{Each vertical sum of labor inducement coefficient matrix}}{\text{Mean of the entire vertical sum of labor inducement coefficient matrix}} = \frac{C_j}{\overline{C}}$$

Here, $C=\hat{L}_i'B=[C_{ij}]$

$$C_j=\sum_i C_{ij},\quad \overline{C}=\frac{1}{n}\sum_j C_j$$

The bigger the index of the power of dispersion, the greater the labor demand at each sector, induced by one unit of final demand at the sector.

While the "primary index of the power of dispersion for labor inducement" indicates the direct and indirect effects of labor inducement, including the self-sector, the "tertiary index of the power of dispersion for labor inducement" completely eliminates the effects on the self-sector and concentrates on labor inducement effects on the other sectors. It is calculated by replacing the diagonal element on the labor inducement coefficient matrix with zero, and using a similar method to that applied for the primary index of the power of dispersion. The bigger the index of the tertiary index of the power of dispersion, the greater the labor inducement effects on the other sectors.

(2) Index of the sensitivity of dispersion for labor inducement

The index of the power of dispersion is calculated from each vertical sum of the labor inducement coefficients. An index can also be calculated from each horizontal sum of the labor inducement coefficients, which is referred to as the "index of the sensitivity of dispersion." Used to compare labor inducement effects received at different sectors from one unit of final demand generated at each sector, the "primary index of the sensitivity of dispersion for labor inducement" is calculated as follows:

$$\text{Primary index of the sensitivity of dispersion for labor inducement by sector} = \frac{\text{Each horizontal sum of labor inducement coefficient matrix}}{\text{Mean of the entire horizontal sums of labor inducement coefficient matrix}} = \frac{C_i}{\overline{C}}$$

Here, $C_i=\sum_j C_{ij},\quad \overline{C}=\frac{1}{n}\sum_i C_i$

Sectors indicating higher "primary indices of the sensitivity of dispersion for labor inducement" are more susceptible to labor inducement effects.

The "tertiary index of the sensitivity of dispersion for labor inducement" indicates the relative effects of labor inducement on each sector, excluding the self-sector, due to generation of one unit of final demand.

3 Occupation Inducement Coefficients

The Employment matrix (table on employees engaged in production activities [by occupation]) makes it possible to calculate the employment inducement coefficient by occupation.

The occupational input coefficient matrix can be derived by dividing each element of the employment matrix S by domestic production at each sector.

(Employment Matrix S)

	Sector 1	Sector 2	Sector 3	.....	Sector n
Occupation 1	S_{11}	S_{12}	S_{13}	.....	S_{1n}
Occupation 2	S_{21}	S_{22}	S_{23}	.....	S_{2n}
Occupation 3	S_{31}	S_{32}	S_{33}	.....	S_{3n}
:	:	:	:	.....	:
:	:	:	:	.....	:
:	:	:	:	.....	:
Domestic production	X_1	X_2	X_3	.....	X_n

Table on Employees Engaged in Production Activities (by Occupation)

(Note) Employees include paid officers.

(Occupation Input Coefficient S')

	Sector 1	Sector 2	Sector 3	.....	Sector n
Occupation 1	S'_{11}	S'_{12}	S'_{13}	.....	S'_{1n}
Occupation 2	S'_{21}	S'_{22}	S'_{23}	.....	S'_{2n}
Occupation 3	S'_{31}	S'_{32}	S'_{33}	.....	S'_{3n}
:	:	:	:	.....	:
:	:	:	:	.....	:
:	:	:	:	.....	:

(Note) $S'_{ij}=\dfrac{S_{ij}}{X_j}$

The vector S^* comprised of the sum of row of S may be expressed as follows:

$$S^*=S'B\ [(I-\hat{M})Y+E] \quad \text{.....[5]}$$

Here, $B = [I-(I-\hat{M})A]^{-1}$

The matrix $S'B$ is the "occupation inducement coefficients" matrix, representing the number of employees by occupation, to be required directly and indirectly by one unit of final demand at each sector.

4 Labor and Occupation Induced Coefficients by Individual Final Demand Items

As stated earlier, domestic final demand Y can be resolved for each item and represented as follows:

$$Y = Y_1+Y_2+\cdots\cdots+Y_m \quad \text{.....[3]}$$

$$L_i = \hat{L}_i'B(I-\hat{M})Y_1+\cdots+\hat{L}_i'B(I-\hat{M})Y_m + \hat{L}_i'BE \quad \text{.....[4]}$$

The above equations can be used to obtain the labor inducement coefficient by final demand items. They can also indicate which final demand items and how many employees or workers in the respective sectors will be required, as well as their respective occupational positions.

In the equation [5], final demands can be resolved for the respective items, as follows:

$$S^*=S'B(I-\hat{M})Y_1+\cdots+S'B(I-\hat{M})Y_m+S'BE$$

This obtains the number of employees by occupations required for specific final demand items (occupation inducement coefficients by final demand items).

§ 7 Problem of Sector Integration

1 Introduction

In the 2000 Input-Output Tables, the 188-sector tables, the 104-sector tables, 32-sector tables and 13-sector classification tables were compiled based on a basic sector classification comprised of 517 rows and 405 columns. In addition, users can easily compile aggregated sector classification tables for their own purposes just by adding up the figures of relevant sectors:

If the objective is to read the Input-Output Tables as they are, sector integration is simply how accuracy the tabulations should be. However, the most important thins in using Input-Output Tables is conducting economic forecasts, measuring the mode of specific economic policies, or analyzing prices using input coefficients, inverse matrix coefficients, production inducement coefficients by final demand item, etc. If Input-Output Tables are to be useful for these purposes, the manner in which the sectors for Input-Output Tables are defined will be crucial.

That is, for calculations of production inducement and other effects with Input-Output Tables (to calculate inverse matrix coefficients), different results are generally obtained from different sector establishments.

This was once pointed out by W. Leontief, founder of Input-Output Tables, as follows:

Industrial classifications for input-output analyses are led by considerations of technical homogeneity.Integration problems may arise from scaling down the matrix by integrating the columns in input-output matrix and the related several rows. The relationship between the nature of the integrated matrix and that of the non-integrated ones depends on the positions at which the input columns of the integrated sectors are placed within the non-integrated matrix. Under certain ideal conditions, the integrated inverse matrix of the original matrix corresponds to the inverse matrix of the integrated matrix. If these conditions are met not completely but approximately, that correspondence has been realized only approximately.

Which sector should be established to eliminate production repercussions? What needs to be kept in mind when integrating sectors? These points will be addressed in the following sections.

2 Theoretical Aspects of Sector Integration

(1) Integration of two sectors

We will discuss a case of integrating Sector 1 and Sector 2 by defining an input coefficient matrix A, as follows:

$$A = \begin{array}{c} \begin{matrix} \text{Sector } l & & \text{Sector 1} & \text{Sector 2} & & \text{Sector } r \end{matrix} \\ \begin{bmatrix} P & \vdots & u_1 & u_2 & \vdots & R \\ \cdots & \cdots & \cdots & \cdots & \vdots & \cdots \\ l_1' & \vdots & a_{11} & a_{12} & \vdots & r_1' \\ l_2' & \vdots & a_{21} & a_{22} & \vdots & r_2' \\ \cdots & \vdots & \cdots & \cdots & \cdots & \cdots \\ Q & \vdots & d_1 & d_2 & \vdots & S \end{bmatrix} \end{array} \begin{array}{l} \text{Sector } l \\ \\ \text{Sector 1} \\ \text{Sector 2} \\ \\ \text{Sector } r \end{array}$$

Here, X_1 and X_2 are defined as domestic productions of Sector 1 and Sector 2, respectively, and the following relationships are established.

$$\alpha = \frac{X_1}{X_1 + X_2} \qquad \beta = \frac{X_1}{X_1 + X_2}$$

In this case, the input coefficient matrix when Sector 1 and Sector 2 are integrated can be represented in the following matrix:

$$\overset{+}{A} = \begin{bmatrix} P & \vdots & au_1 + \beta u_2 & \vdots & R \\ \cdots & \cdots & \cdots & \vdots & \cdots \\ l_1' + l_2' & \vdots & \begin{matrix} \alpha(a_{11} + a_{21}) \\ + \beta(a_{12} + a_{22}) \end{matrix} & \vdots & r_1' + r_2' \\ \cdots & \vdots & \cdots & \cdots & \cdots \\ Q & \vdots & \alpha d_1 + \beta d_2 & \vdots & S \end{bmatrix}$$

Here, final demand can be expressed as follows:

$$F = \begin{bmatrix} F_l \\ F_2 \\ F_3 \\ F_r \end{bmatrix}$$

F_l: Final demand for Sector l
F_1:Final demand for Sector 1
F_2: Final demand for Sector 2
F_r: Final demand for Sector r

In the above inverse matrix model considering, the conditions required to make production inducements in A and $\overset{+}{A}$ identical for a certain final demand F.

First, the input coefficient matrix A prior to the sector integration is used to calculate the primary repercussion on final demand F. When X^1 is defined as the vector of domestic production induced by the primary repercussion on the relevant sectors, the following can be defined:

$$X^1 = \begin{bmatrix} X_l^1 \\ X_1^1 \\ X_2^1 \\ X_r^1 \end{bmatrix} = AF = \begin{bmatrix} PF_l + u_1F_1 + u_2F_2 + RF_r \\ l_1'F_l + a_{11}F_1 + a_{12}F_2 + r_1'F_r \\ l_2'F_l + a_{21}F_1 + a_{22}F_2 + r_2'F_r \\ QF_l + d_1F_1 + d_2F_2 + SF_r \end{bmatrix} \quad \cdots\cdots [1]$$

Next, the input coefficient matrix A after the sector integration is used to calculate the primary repercussion on final demand F:

Here, $\overset{+}{F} = \begin{bmatrix} F_l \\ F_1 + F_2 \\ F_r \end{bmatrix}$.

When X_1 is defined as the vector of domestic production induced by the primary repercussion on the relevant sectors, we can define the following:

$$X^1 = \begin{bmatrix} \overset{+}{X}_l^1 \\ \overset{+}{X}_{1+2}^1 \\ \overset{+}{X}_r^1 \end{bmatrix} = \overset{+}{A}\overset{+}{F} = \begin{bmatrix} PF_l + \\ (l_1' + l_2')F_l + \\ QF_l + \end{bmatrix}$$

$$\begin{bmatrix} (\alpha u_1 + \beta u_2)(F_1 + F_2) & + RF_r \\ \{\alpha(a_{11} + a_{21}) + \beta(a_{12} + a_{22})\}(F_1 + F_2) + (r_1' + r_2')F_r \\ (\alpha d_1 + \beta d_2)(F_1 + F_2) & + SF_r \end{bmatrix} \quad \cdots\cdots [2]$$

Here, regardless of the status of integration, any F should meet the following conditions to make production inducements by the primary repercussion coincide:

$$\begin{bmatrix} X_l^1 = \overset{+}{X}_l^1 \\ X_1^1 + X_2^1 = \overset{+}{X}_{1+2}^1 \\ X_r^1 = \overset{+}{X}_r^1 \end{bmatrix} \quad \cdots\cdots [3]$$

If we substitute [1] and [2] into [3], we obtain the following from $\alpha + \beta = 1$.

$$\begin{bmatrix} u_1 = u_2 \\ a_{11} + a_{21} = a_{12} + a_{22} \\ d_1 = d_2 \end{bmatrix} \quad \cdots\cdots [3]'$$

As mentioned above, the equations in [3]' indicate conditions under which sector integration does not affect the magnitude of the primary repercussions. They can also be the conditions for the coincidence of the domestic production inducements, X^2 and $\overset{+}{X}^2$, due to the secondary repercussions obtained by replacing F of [1] and $\overset{+}{F}$ of [2] into X^1 and $\overset{+}{X}^1$, respectively, and furthermore the conditions for the coincidence of the sizes of the ultimate repercussions (so-called "production inducements"). The conditions under which integration will not change production inducements at each sector specified in [3]'; that is, input coefficients of the respective sectors to be integrated should coincide with the input coefficients of the relevant sectors after integration. In other words, there are no changes in production inducements before and after integration only when the input coefficients representing the technological structures for production are identical.

Classifications of sectors in the Input-Output Tables for Japan are based on activities relating the types of goods and services. The above conditions indicate that the activity-based homogeneity is required for defining sectors. In this sense, they indicate the criteria and principles of section definition.

(2) Effects of production inducements on other sectors due to sector integration

Next, effects of sector integration on production inducements of other sectors will be considered. Here, to simplify the discussion, a certain sector (sector "l") is represented all sectors.

The conditions under which the sizes of primary repercussions before and after sector integration are identical are the ones give below from (3) above.

$$X_l^1 = \overset{+}{X}_l^1$$

The condition derived from the above is:

$$u_1 = u_2$$

In other words, when the production coefficients from Sector l to Sector 1 and Sector 2 to be integrated are identical, the primary production repercussions on Sector l due to any final demand are identical before and after sector integration. However, for second and further repercussions, they generally do not coincide before and after integration.

Specifically, when the following can be defined,

$$u_1 = u_2 = 0 \quad \text{and} \quad R = 0$$

or, when sectors other than Sector l, which is under study, do not receive any input from Sector l, while sectors other than Sector l are integrated, no effects will be found in production inducements to Sector l.

A clearer overall picture of these relationships can be provided by blocking the input coefficient table modified as follows by maintaining the relationships between, and at the same time changing the orders of, the row and column sectors of the input coefficient tables.

	I	II	III	IV
I	× × ×			
II		× ×× ××× ××××		
III			×× ××	
IV	××× ××× ×××	×××× ×××× ××××	×× ×× ××	××× ××× ×××

(Note) All except "×" are "0."

Here, to analyze the repercussion effects from a certain final demand, for instance, only concerning Group I, regardless how Groups II, III, and IV are integrated, the inducement effects at I are held constant. The same is true of Group II or Group III.

Or, when the relative ratios of final demands at the sectors to be integrated are equivalent to the respective domestic production ratios—that is, the following relations can be established:

$F_1:F_2 = X_1:X_2 = \alpha : \beta \quad (\alpha + \beta = 1)$

Here, the following can be defined.

$$X^1 = \begin{bmatrix} PF_l + (u_1 + \dfrac{\beta}{\alpha}u_2)F_1 + RF_r \\ l_1'F_l + (a_{11} + \dfrac{\beta}{\alpha}u_{12})F_1 + r_1'F_r \\ l_2'F_1 + (a_{21} + \dfrac{\beta}{\alpha}a_{22})F_1 + r_2'F_r \\ QF_l + (d_1 + \dfrac{\beta}{\alpha}d_2)F_1 + SF_r \end{bmatrix}$$

$$\overset{+}{X}^1 = \begin{bmatrix} PF_l + (\alpha u_1 + \beta u_2) \\ (l_1' + l_2')F_l + \{\alpha(a_{11} + a_{21}) + \beta(a_{12} + a_{22})\} \\ QF_l + (\alpha d_1 + \beta d_2) \end{bmatrix}$$

$$
\begin{bmatrix}
\times & (1+\frac{\beta}{\alpha})F_1 + RF_r \\
\times & (1+\frac{\beta}{\alpha})F_1 + (r_1' + r_2')F_r \\
\times & (1+\frac{\beta}{\alpha})F_1 + SF_r
\end{bmatrix}
$$

$$
= \begin{bmatrix}
PF_1 & +(u_1 + \frac{\beta}{\alpha}u_2)F_1 \\
(l_1' + l_2')F_l + \left\{(a_{11}+a_{21}) + \frac{\beta}{\alpha}(a_{12}+a_{22})F_1\right\} & \\
QF_l & +(d_1 + \frac{\beta}{\alpha}d_2)F_1
\end{bmatrix}
$$

$$
\begin{bmatrix}
+ & RF_r \\
+ & (r_1' + r_2')F_r \\
+ & SF_r
\end{bmatrix}
$$

In other words, integrated X^1 corresponds to $\overset{+}{X}{}^1$.

(3) Conditions for preventing production repercussion effects due to integration

The following conclusions summarize the above:

[1] When the input coefficients of the sectors to be integrated are identical to the input coefficients of the sectors after integration, production repercussions are completely identical for any final demand.

[2] When the input coefficients of the sectors to be integrated from the other specific sectors do not change before and after sector integration, the primary production repercussions on the specific sectors have not been changed with respect to any final demand.

[3] For sectors that have not received any input from certain specified sectors, whatever integration may take place, there is no effect on production repercussions on the specified sector.

[4] When the mutual ratios of the final demands at the sectors to be integrated are equal to those of the respective domestic productions, the primary production repercussions due to the final demands are identical in all relevant sectors.

Furthermore, when considering the inverse matrix model that accounts for imports, except for [3] above, another condition is added: that import ratios of the sectors to be affected by $[I-(I-\hat{M})A]^{-1}$ of the integration are equal. In this manner, except for such highly unusual cases in which input structures do not change before and after integration, it should always be kept in mind that the integration (or establishment) of sectors may cause different results to production repercussions and inducements.

3 Example of Sector Integration

Effects of example sector integration will be investigated using the 2000 Input-Output Table. The following two methods are used to calculate production inducements (by final demand item) of the 13 sectors and compare the results.

The $[I-(I-\hat{M})A]^{-1}$ type inverse matrix coefficient is used.

[1] Calculations are conducted with 188 sectors, then the results are integrated into 13 sectors.

[2] Calculations are conducted with 13 sectors from the beginning.

The comparison results are as indicated in Table 3-2, the figures represent the difference ratios of [2] against [1]. These figures make it quite clear that significant differences exist, particularly in the agriculture, forestry, and fisheries sector and in the mining sector, suggesting notable effects from sector integration. In addition, looking at the weighted average figures of the absolute values of the above ratios by the weights of production inducements derived from [1] for each row and column (which are referred to as "deviation rates"), consumption expenditure outside households and exports indicate greater figures for the respective final demand items.

Furthermore, instead of [2] above, the following comparisons with [1] have been conducted similarly:

[2]' After calculations are conducted with the 32 sectors, the results are integrated into 13 sectors.

[2]" After calculations are conducted with 104 sectors, the results are integrated into 13 sectors.

The results can be presented only in the form of deviation rates by final demand items, as in Table 3-3.

4 Summary

In Section 3 above, the integration to 13 sectors was reviewed for the sake of convenience. In actual analyses, however, integration is commonly conducted to 32 or more sectors. Still, the basic premise remains the same.

Given the recent remarkable progress in computing power, it is now recommended that integration be conducted after calculating as many sectors as possible. Computations should at least be performed for sector tables one stage higher that the one required for analysis at hand, specifically, when the results need to be compared for final demand items and respective sectors. However, in sector integration within the scope in which conditions specified in "2" may be satisfied even approximately, the repercussion effects are not exceptional. Specifically, when only certain sectors are analyzed, "blocking" may realize effective sector integration.

Table 3-2 Difference in Production Inducement due to Sector Integration (Difference Ratio)

(unit : %)

	Consumption expenditure outside households	Consumption expenditure (private)	Consumption expenditure of general government	Gross domestic fixed capital formation	Increase in stocks	Exports total	Deviation rate (λ_{i*})
01 Agriculture,forestry and fishery	-61.71	-33.25	104.54	260.29	-9.81	801.95	61.29
02 Mining	329.49	294.52	324.78	-62.77	-141.82	237.37	103.37
03 Manufacturing	-6.38	7.93	9.99	-2.04	-30.53	-9.43	6.57
04 Construction	13.93	-2.83	1.51	0.11	-136.76	3.70	0.39
05 Electric power,gas and water supply	-26.53	-1.08	1.98	16.34	-58.00	-8.27	4.63
06 Commerce	-18.54	-0.72	5.66	2.77	36.65	3.12	2.31
07 Finance and insurance	-6.82	1.92	33.29	-15.39	-309.67	-5.52	6.28
08 Real estate	-12.07	0.39	40.82	-14.39	-569.35	-19.94	1.73
09 Transport	-11.49	2.41	6.11	-7.31	55.10	1.11	3.79
10 Communication and broadcasting	1.62	-1.16	47.13	-10.28	-175.43	-19.58	7.09
11 Public administration	-17.04	1.62	0.04	-11.02	-118.39	-3.80	0.16
12 Services	5.78	3.57	-0.93	-8.80	-40.61	-8.87	4.04
13 Activities not elsewhere classified	-17.04	5.30	23.18	-11.02	-118.42	-3.80	8.30
Deviation rate (λ*j)	10.66	4.24	3.78	4.69	-122.17	10.72	5.26

Note: i : Industrial sectors, j : Final demand sectors

Z ij is calculated by 188 sectors and is integrated by 13 sectors.

Z'ij is calculated by 13 sectors.

Difference ratio : $\rho_{ij} = (Z'_{ij}/Z_{ij} - 1) \times 100$

Deviation rate : $\lambda_{i*} = \sum_j \left(|\rho_{ij}| \times \frac{Z_{ij}}{\sum_j Z'_{ij}} \right)$ $\lambda_{*j} = \sum_i \left(|\rho_{ij}| \times \frac{Z_{ij}}{\sum_i Z'_{ij}} \right)$

$$\lambda_{ij} = \sum_{ij} |\rho_{ij}| \times \frac{Z_{ij}}{\sum_{ij} Z'_{ij}}$$

Table 3-3 Deviation Rates by Final Demand Item at Each Aggregated sector

(unit : %)

	Consumption expenditure outside households	Consumption expenditure (private)	Consumption expenditure of general government	Gross domestic fixed capital formation	Increase in stocks	Exports total	Deviation rate (λ_{ij})
[2] (13/188)	10.66	4.24	3.78	4.69	-122.17	10.72	5.26
[2]′ (32/188)	8.52	2.58	2.97	3.64	-249.54	3.35	3.18
[2]″ (104/188)	1.64	1.11	0.85	1.60	-106.96	1.61	1.28

CHAPTER Ⅳ

SUPPLEMENTARY TABLES

The Basic Transaction Tables summarize transactions involving all goods and services produced for a period of one year, based on all available data. The 2000 Input-Output tables are comprised of 517 row sectors and 405 column sectors.

The core of the Input-Output Tables, the Basic Transaction Tables are compiled in accordance with certain rules, based on 68 SNA and 93 SNA advocated by the United Nations, as well as Input-Output Table compilation theories accumulated so far. However, it is difficult to incorporate all information into Basic Transaction Tables. To meet the purposes of various input-output analyses, supplementary information is required to compensate for the limitations of the Basic Transaction Tables.

In the 2000 Input-Output Tables, the following supplementary tables are compiled for respective purposes:

1 Table on Trade Margins and Table on Domestic Freights

(1) Concepts

These two tables show, in matrix form, distribution expenses, or trade margins and domestic freight, for transactions involving goods between each sector recorded in the Basic Transaction Table.

As Mentioned above (§ 1, Chapter Ⅱ), Basic Transaction Tables can be divided into "Input-Output Tables at producers' prices" and "Input-Output Tables at purchasers' prices," based on different treatments of distribution expenses. The Input-Output Tables at producers' price value each trade at shipments price of the manufacturer. The distribution expenses from manufacturers to user are collectively recorded at the intersection of the column sector in the intermediate and final demand sectors and the row sector in the trade and transport. The Input-Output Tables at purchasers' price value transactions at actual purchase prices paid by the demanders; and the distribution expenses from manufacturers to users are included in respective transaction values, without distinguishing prices of goods.

It is impossible to deduce trade margins or domestic freight required for individual transactions directly from these tables. Thus, the table on trade margins and the table on domestic freights are compiled, as shown in Chart 4-1, to supplement the Basic Transaction Tables.

Tables on trade margins and tables on domestic freights function as connecting the Input-Output Tables at producers' prices and the Input-Output Tables at purchasers' prices. In the 2000 reports, the relevant tables are compiled, based on the medium aggregated sector classification (104 sectors), in the Data Report (2). However, the trade margins (wholesale and retail trade margins) and domestic freights (freights for seven transport modes) presented on the tables are total figures only. For the basic sector classification (517 row sectors and 405 column sectors) and the minor aggregated sector classification (188 sectors), tables on trade margins or tables on domestic freights are not compiled. However, the respective "Output tables" indicate wholesale and retail trade margins for each transaction and domestic freights by seven transport modes. The output tables perform the functions of both tables.

In output tables and input tables, trade margins and domestic freights carry the specific codes, "6" and "7," respectively, after the column codes or row codes.

(2) Types and scopes of tables on trade margins and tables on domestic freights

i) Tables on trade margins

Tables on trade margins are compiled for wholesale margins and retail trade margins. They do not include commissions received by agencies from the import and export of goods (recorded in "special trade") and cost trade margins, such as trade margins derived from second-hand goods (please refer to Section 1, Chapter 2). In addition, freight paid by trade sectors is excluded from trade margins that treated as domestic freight.

ii) Tables on domestic freights

Tables on domestic freights are compiled for domestic freight and fees derived from operating transportation activities.

Freight incurred outside the Japanese territory in international transportation and "cost transport margins" (please refer to § 1, Chapter Ⅱ) are not counted as domestic freight.

Tables on domestic freights are compiled by estimating the transportation expenses incurred in each transaction by the following seven transport modes:

[1] Railway freight transport

[2] Road freight transport

[3] Coastal and inland water freight transport

[4] Port transport

[5] Domestic air freight transport

[6] Handling of freight transport

[7] Warehouse

Chart 4-1 Relationships Between Basic Transaction Tables and Tables on Trade Margins and Tables on Domestic Freights

[1] Input-Output Table at Producers' Prices (Model)

		Intermediate demand					Final demand	Domestic production
		A	B	C	Commerce	Transport	·····	
Intermediate input	A		20					
	B	40	40	70	40	10	····· 100	300
	C		110					
			Trade margins					
	Commerce		50				···	900
			Domestic freights					
	Transport		30				···	700
Gross value added	⋮		⋮					
			50					
Domestic production			300					

(Note) Input-Output Tables at purchasers' prices can be compiled by recording the trade margins and domestic freights recorded as a lump sum at the intersections of the commerce (row) and the transport (row) at each demanding sector (column) in the Basic Transaction Tables, by input goods of the relevant column sectors.

[2] Input-Output Table at Purchasers' Price (Model)

		Intermediate demand					Final demand	Total demand	Deduction		Domestic production
		A	B	C	Commerce	Transport	·····		Trade margins	Domestic freight	
Intermediate input	A		30 (5+5)								
	B	55 (10+5)	55 (10+5)	90 (12+8)	70 (18+12)	15 (3+2)	····· 125 (17+8)	410	-70	-40	300
	C		165 (35+20)								
	Commerce		0					0	900	0	900
								0	0	700	700
	Transport		0								
Gross value added	⋮		⋮								
			50								
Domestic production			300								

(Note) The figures in parentheses indicate (trade margins + domestic freight) and are included in the respective figures above. Removing them and compiling a model makes it possible to compile a "table on trade margins" and a "table on domestic freight."

[3] Table on Trade Margins (Model)

		Intermediate demand					Final demand	Total
		A	B	C	Commerce	Transport	·····	
Intermediate input	A		5					
	B	10	10	12	18	3	17	70
	C		35					
	Commerce		-50					-900
	Transport		0					
Total			0					0

(Note) This is compiled by removing trade margins from the Input-Output Table at purchasers' price.

[4] Table on Domestic Freights (Model)

		Intermediate demand					Final demand	Total
		A	B	C	Commerce	Transport	·····	
Intermediate input	A		5					
	B	5	5	8	12	2	8	40
	C		20					
	Commerce		0					0
	Transport		-30					-700
Total			0					0

(Note) This is compiled by taking out domestic freight from the Input-Output Table at purchasers' price.

(3) Compilation method of table on trade margins

Tables on trade margins are compiled in the following manner.

i) Removing the total trade margins by wholesale and retail trade

Calculate trade sales and margins from the "Census of Commerce" and estimate the gross margins by wholesale and retail by multiplying the trade sales by the margin rates. The total figures are domestic production at wholesale and retail sectors.

ii) Estimating trade margins by row sector

Using the same data as above, estimate the trade margins by commodities by type of industrial section in itemized sectors and the trade margins by row sector.

iii) Estimating the transaction value subject to trade margins

For individual transactions, estimate the ratios of transactions not covered by trade margins and of transactions whose margin ratios differ.

The factors generating or not generating trade margins or generating the difference of margin ratios in different transactions can include the following:

[1] Consumption in one's own factory

[2] Consumption in other factories of one's own company

[3] Direct sales to other companies (without intermediary wholesale or retail trade; as for wholesale trade, direct sales without intermediary retail trade)

[4] Whether there is a ratio of discount margins

[5] Whether there is a kickback

[6] Differences between distribution systems

[7] Whether there is multistage distribution (such as first, second, and third wholesale)

[8] Differences due to large- and small-sized transactions

iv) Estimating trade margins by each transaction

Wholesale and retail trade margins are estimated by each transaction based on the results of ii) and iii).

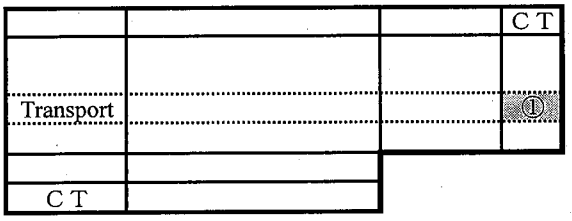
(4) Compilation method of table on domestic freights

Overviews of the method of compiling the tables on domestic freight are as follows.

i) Estimating domestic production in the transport sector

"Freight" as domestic production in transport sectors, including cost transport margins, is estimated for seven transport modes.

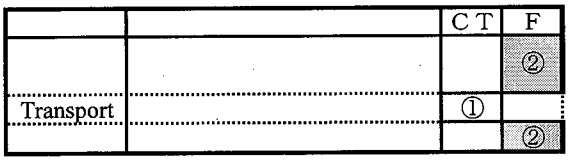
Aggregate domestic production in the transport sector (CT) [1] for the seven transport modes.



ii) Estimating freight by row sector (transport commodities)

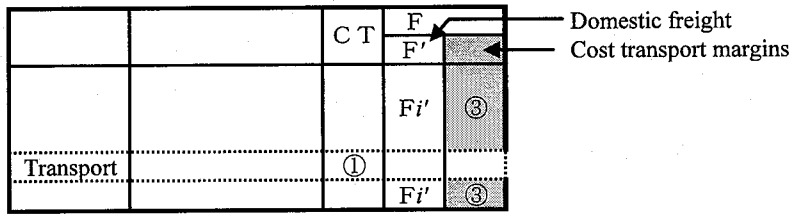
First, classify the freight established by the seven transport modes broadly for the respective transport commodity groups, then gradually divide into smaller commodity groups. Finally, estimate freight by row sector (transport commodities).

Next, estimate the freight by row sector (F) [2]. The total of [2] is equal to [1].



iii) Separation of cost transport margins

From the freight established for the respective row sectors, separate the cost transport margins by row sector (commodities) estimated. Estimate the freight by row sector to be covered by the freight.



iv) Estimating the transaction value subject to freight

Not all transactions involving goods require freight, nor is the ratio of freight in all transactions constant. In consideration of these facts, makes it judgment which part of each transaction value, by each good and its output sector (column sector), is subject to freight and, contrary, which part is not subject to freight. At the same time, the "Table of the Ratio Not Subject to Freight" by each transaction is compiled in view of the ratio of freight in the transactions subject to freight.

The following factors presumably caused the differences in the ratio not subject to freight:

- Whether the portion was consumed in one's own factory and its ratio
- The ratio of the self-transport portion
- Whether pipeline transport is involved
- Difference in the distance of transport
- Whether discount freight is applied

Next, the "transaction value subject to freight in each transaction" is computed by multiplying each transaction value by [1 - the ratio not subject to freight]. Then, this is totaled by row sector, and the "transaction value subject to freight by row sector" is estimated.

v) Computation of freight by each transaction

The ratio of freight by row sector to the transaction value subject to freight by row sector is defined as the "ratio of freight by row sector." "Freight by each transaction" is computed by multiplying the "ratio of freight by row sector" by the transaction value subject to freight by each transaction obtained in iv).

$$F'_{ij}=X'_{ij}\cdot\frac{F'_i}{X'_i}$$

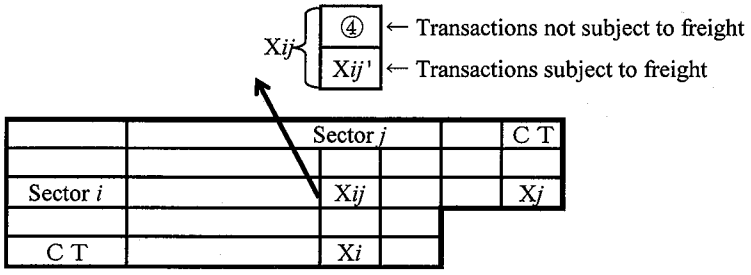
Notes:

F'_{ij} : Freight by each transaction excluding cost transport margins

X'_{ij} : Transaction value subject to freight by each transaction excluding cost transport margins

F'_i : Freight by row sector excluding cost transport margins

X'_i : Transaction value subject to freight by row sector excluding cost transport margins



$\frac{④}{X_{ij}}=n_{ij}$=Freight non-coverage ratios

$\sum_j X'_{ij}=X'_i=$ Transaction to be covered by freight in Sector i

$\frac{F'_i}{X'_i}=$ Freight ratio in Sector i

2 Table on Imports

(1) Concepts

There are two methods of treating imports: the "competitive import type" method, which makes no distinction between imported goods and domestic goods, and the "non-competitive import type" method, which distinguishes between imported goods and domestic goods.

The competitive import type table shows the breakdown of imports by commodity by goods and services in the column vector only. The totals of domestic and imported goods are append in each individual transaction amounts. Therefore, the transaction value of either imported or domestic goods only cannot be determined from the Basic Transaction Table.

The table on imports is compiled by extracting only the transaction amounts of imports from the Basic Transaction Table (Chart 4-2). This makes it possible grasp what types of imports, and how much, are consumed by which sectors.

Within the import transaction amounts disclosed in the Basic Transaction Tables (basic sector classification), ordinary trade, special trade, direct purchases, customs duties, as well as import commodity taxes are exogenously indicated in the form of respective row vectors. In the table on imports, imports aggregated in totals for respective transactions are recorded and indicated, in their entirety, in matrix form.

Chart 4-2 Relationship Between Basic Transaction Table and Table on Imports

[1] Input-Output Tables at Producers' Price (Model)

	A	B	C	D	Consumption	Fixed capital formation, etc.	Exports	Import deduction	Domestic production
A	…	60 (10)	…	…	…	…	…	…	…
B	20 (5)	10 (0)	50 (15)	10 (0)	20 (10)	15 (5)	10 (0)	-35 (-35)	100
C	…	10 (5)	…	…	…	…	…	…	…
D	…	5 (0)	…	…	…	…	…	…	…
Gross value added	… … …	… … 15	… … …	… … …					
Domestic production	…	100	…	…					

(Note) Figures in parentheses indicate transaction amounts for imported goods and are included in the above figures.

[2] Table on Import (Model)

	A	B	C	D	Consumption	Fixed capital formation, etc.	Exports	Total
A	…	10	…	…	…	…	…	…
B	5	0	15	0	10	5	0	35
C	…	5	…	…	…	…	…	…
D	…	0	…	…	…	…	…	…
	…	15	…	…	…	…	…	…

(2) Compilation method

In compilation of the table on imports, the demand figures for each column sector are estimated for "ordinary trade," "special trade," "direct purchases," "customs duties," and "import commodity taxes" in the respective row sectors. Estimates are made as follows:

i) Ordinary trade

Imports by row sector in the Basic Transaction Tables (row vector) are first calculated by reclassifying the Foreign Trade Statistics to the Input-Output Table sectors. For these imports, demand figures for respective row sectors are then estimated, based on the product characteristics of the individual imported goods belonging to each row sector (Note: 9-digit items of the HS classifications) and the preliminary import tables.

ii) Special trade

Demand sectors are determined in accordance with the product characteristics of the goods and services to distribute import figures by row sector.

As for row sectors for which demand sectors cannot be determined, distributions are made using the import ratios of the row sectors (imports/domestic final demand).

iii) Direct purchases

Total amounts are recorded in household consumption expenditure sectors, based on the concepts, definitions and scopes.

iv) Custom duties

Individual import items (9-digit items of HS classification) have been examined to determine whether customs duties are applied; if so, they are estimated accordingly.

As for imported items for which application of the customs duties cannot be determined, duties are distributed in accordance with the ratios of demanders to the imports by row sector concerning ordinary trade.

v) Import commodity taxes

Determine the demand sectors for import items to be taxed. Taxes are distributed in accordance with the transaction ratios of the relevant sectors. Consumption taxes on imported items are distributed in accordance with the ratios of demand sectors to ordinary trade to which is added customs duties and import commodity taxes.

Import tables based on the basic sector classification (517 row sectors, 405 column sectors) and minor aggregated sector classification (188 sectors) are not compiled. However, the functions of import tables are secured by indicating import breakdowns for individual transactions in the "output tables" and in the "input tables."

(Note) Used in the import item list of the Monthly Trade Statistics (Ministry of Finance), these are 9-digit codes regulated in accordance with the HS (Harmonized Commodity Description and Coding System: a unified system of product names and classifications) Treaty.

3 Table on Scrap and By-Products

(1) Concepts of Table on Scraps and By-products

"Scraps" and "by-products" may be treated in compiling the basic transaction tables by several different methods. The method applied in Japan is the "minus input method" (Stone method; refer to § 1, CHAPTER II). In the table of conventional basic transaction tables based on the minus input method, the output of scraps and by-products is recorded as a negative value at the intersection of the output sector (column) and the competing sector (row), while the input is recorded as a positive value at the intersection of the competing sector (row) and demand sector (column), and production is offset to be zero (Chart 4-3 [1]).

However, due to the "Reuse and recycling" sector newly established in the 2000 Input-Output Tables, all scraps and by-products generated (negative) are output in the basic transaction tables to the sector, and through that sector, output (positive) to each input sector, while generally maintaining the minus input method. Imports/exports of scraps and by-products are recorded as a lump sum in the "Reuse and recycling" sector to stabilize the import coefficient and ensure analytical consistency. (Chart 4-3 [2]). However, in this table, all scraps and by-products are output from the single sector of "Reuse and recycling," making it impossible to determine specific goods and input values. Although scraps and by-products output to each input sector can be specifically determined, as indicated in Chart 4-3 [3], they are recorded as a lump sum in the "reuse and recycling" sector in the table.

The "Table on Scraps and By-products" thus clarifies the generation and input status of scraps and by-products by compiling the generated and input values of scraps and by-products, as compiled in Chart 4-3 [4].

Chart 4-3 Relationship Between Transaction Table and Table on Scrap and By-Products

[1] Input-Output Tables at Producers' Price (Model) (conventional)

	A	B	C	D	Final demands	Imports	Domestic production
A		70	5	···	25		100
		(5)			(△5)		(0)
B	60	20	△10	70	60		200
	(15)	(0)	(△30)	(20)	(△5)		(0)
C	···	40	···	···	···		···
		(0)					(0)
D	18	40	···	···	···	△5	···
	(△5)	(10)				(△5)	(0)
Total value added	22	30	···	···			
Domestic production	100	200	···	···			

(Note) The figures in parentheses are outputs (negative) or inputs (positive) of scrap and by-products and are included in the respective figures above.

[2] Input-Output Tables at Producers' Price (Model) (2000 table)

	A	B	C	D	Reuse and recycling	Final demands	Imports	Domestic production
A		65	5	・・・	5	25		100
					(5)	(△5)		(0)
B	45	20	△10	50	35	60		200
			(△30)		(35)	(△5)		(0)
C	・・・	40	・・・	・・・	・・・	・・・		・・・
								(0)
D	18	30	・・・	・・・	5	・・・		・・・
	(△5)				(5)			(0)
Reuse and recycling	18	18	・・・	24	・・・	・・・	△5	55
	(15)	(15)		(20)			(△5)	(45)
Total value added	19	27	・・・	・・・	10			
Domestic production	100	200	・・・	・・・	55			

The figures in parentheses are generated values (double-counted). Positive values represent the input value before adding processing costs. In addition, the establishment of the "reuse and recycling" sector increases domestic production (total).

[3] Contingency tables by goods for reuse and recycling (row)

		A	B	C	D	Reuse and recycling	Final demands	Imports	Domestic production
A			65	5	・・・	5	25		100
						(5)	(△5)		(0)
B		45	20	△10	50	35	60		200
				(△30)		(35)	(△5)		(0)
C		・・・	40	・・・	・・・	・・・	・・・		・・・
									(0)
D		18	30	・・・	・・・	5	・・・		・・・
		(△5)				(5)			(0)
Reuse and recycling		18	18	・・・	24	・・・	・・・	△5	55
	A		6						
	B	18			24				
	C		12					△5	
Total value added		19	27	・・・	・・・	10			
Domestic production		100	200	・・・	・・・	55			

In the presentation, scraps and by-products are output in a lump sum after diversion to the reuse and recycling sector (row), but in the above case, scraps and by-products are separately recorded as double-counted figures by goods.

[4] Table on scraps and by-products (template)(The 2000 Table)

Competing sector	Output sector	Output	Input sector	Input	Recyclable input
A	Final demand	△5	B	5	6
B	C	△30	A	15	18
	Final demand	△5	D	20	24
	Total	△35	Total	35	42
C	・・・	・・・	・・・	・・・	・・・
D	A	△5	B	10	12
	Import	△5			
	Total	△10			

In the 2000 Table, information on "input of recycled products," which adds processing cost to the input, is added to the conventional "table on scraps and by-products," based on the minus input method. The value is equivalent to the output of "reuse and recycling" (row) in the basic transaction tables and presents a connection between the "table on scraps and by-products" and the basic transaction tables.

(2) How to Compile the Table on Scraps and By-Products

Scraps and by-products can be distinguished from other transactions by appending the following special codes to sector codes when compiling the basic transaction tables.

Special code	Special classification
2	Scrap input
3	Scrap output
4	By-product input
5	By-product output

Actually, estimates involving to which column sectors output or input what types of scraps and by-products are generated as follows.

[1] Consumption of scraps and by-products is converted to a monetary value from various current surveys of industrial production. The generated monetary values can be estimated through correspondence to the specific column sectors from the production technology structure.

[2] Of all scraps, for scrap iron and non-ferrous metal scraps, consumption by each column sector can be estimated from the Statistical Yearbook of Iron and Steel, etc. Due to the scarcity of relevant data, generated monetary values can be estimated for each sector from input value of iron, etc., at each industrial sector.

[3] For used paper, consumption values are estimated consumption values derived from waste paper supply/demand statistics, etc.

4 Table on Value and Quantity

(1) Concepts

This table indicates the transacted quantities of major goods listed in the Basic Transaction Tables.

Ideally, in input-output analyses, Basic Transaction Tables would be based on the quantity of transactions between sectors to ensure the stability of input coefficients. Actually, given the various input materials in the column sectors, it is impossible to measure their size in a single numerical unit. The Basic Transaction Tables are thus based on monetary value. The tables on values and quantities are compiled to present quantitative data concerning the Basic Transaction Tables, although to limited extent.

Compiling tables on values and quantities of selected goods will make it possible to conduct quantitative analyses of the prospects of supply and demand in energy and other subjects.

(2) Limitations of the table on value and quantity of selected goods

At this time, it is impossible to compile tables on values and quantities for all sectors for the following reasons:

[1] To compile a table on value and quantity, the transaction amount of each commodity must be identified with "quantity multiplied by unit price." However, service sectors in the Input-Output Tables (for which measurements of quantitative units are extremely difficult) account for more than 50% of all sectors.

[2] In the goods sectors, there are cases in which multiple commodities are included in the same sector, making it impossible to calculate the amounts by row sector units.

[3] In sectors represented as "Other ..." and those related to processing and assembling, various commodities with different unit prices and units may be combined. In these sectors, quantity-based indication by row sector is almost meaningless.

[4] The availability of quantity-related information by output destination is significantly reduced.

(3) Compilation method

i) The sectors for which the table on value and quantity of selected goods is compiled are producers of major materials, primarily basic materials, among the row sectors in the Basic Transaction Tables. Those with significant differences in price levels of detailed items comprising the row sectors and those for which multiple quantitative units are used to estimate detailed items are generally excluded.

ii) The table on value and quantity of selected goods is basically compiled by estimating transaction units for individual output destinations and using these units to calculate transaction quantities by output destination (monetary transaction amounts/transaction unit prices). The following was done for the 2000 Input-Output Tables (Chart 4-4).

[1] Imported goods and domestic goods are separated and the transaction quantities by output destinations estimated.

[2] For imports, the qualities of ordinary trades are taken from the Foreign Trade Statistics. The amounts of special trades and direct purchases are divided by the average unit prices of the ordinary trades to estimate quantities. The total of the quantities of ordinary trades, special trades, and direct purchases are regarded as import quantities for individual row section. Next, import quantities are distributed to each column sector, in accordance with import input proportion for the output table.

[3] For domestic production, the quantities of ordinary trades among exported goods are taken from the Foreign Trade Statistics. The amounts of special trades and direct purchases are derived from the average unit prices of the ordinary trades to estimate quantities, as in the case of estimates of import quantities. The domestic supply quantities for row section of the domestic production are estimated by deducting export quantities from the domestic production quantities by row acquired from Domestic Production Table by Sector and Commodity. Next, the domestic product quantities are distributed to each column sector, in accordance with the domestic production input information of the output table.

[4] The table on value and quantity of selected goods is compiled by adding [2] and [3] above.

(Thus, differences in unit prices of imported goods and domestic products are reflected on the table on value and quantity of selected goods, but differences in unit prices due to different demand sources of individual products are not reflected.)

iv) Thus, the limitations of the table on value and quantity must be kept in mind, since quantitative estimates are limited to specified sectors and estimation methods tend to be mechanical.

Chart 4-4 Relationship Between Transaction Table and Table on Value and Quantity

[1] Input-Output Tables at Producers' Price (Model)

	A	B	C	D	Consumption	Fixed capital formation, etc.	Exports	Domestic production
A	…	…	…	…	…	…	…	…
B	600 (40×15)	150 (10×15)	500 (25×20)	250 (10×25)	120 (4×30)	180 (9×20)	100 (5×20)	1900
C	…	…	…	…	…	…	…	…
D	…	…	…	…	…	…	…	…
Gross value added	… … …	… … …	… … …	… … …				
Domestic production	…	1900	…	…				

(Note) Figures in parentheses are quantity multiplied by unit price. The table on value and quantity of selected goods extracts and lists these parts.

[2] Table on Value and Quantity (Model)

		A	B	C	D	Consumption	Fixed capital formation, etc.	Exports	Domestic production
Sectors for major goods	A Quantity (unit price)	…	…	…	…	…	…	…	…
	A Monetary value (million yen)	…	…	…	…	…	…	…	…
	B Quantity (unit price)	40	10	25	10	4	9	5	103
	B Monetary value (million yen)	600	150	500	250	120	180	100	1900
	C Quantity (unit price)	…	…	…	…	…	…	…	…
	C Monetary value (million yen)	…	…	…	…	…	…	…	…
	⋮								

5 Table on Employees Engaged in Production Activities (by Occupation)

(1) Concepts

The "table on Employees engaged in production activities" shows the amount of labor input by each sector for production activities during one year by employment status, such as the number of employees (full-time, part-time, and day workers), number of paid executives, number of self-employed workers, and number of family workers. As in the Basic Transaction Table, the sector classifications of this table are based on activities.

The incomes of employees and paid executives correspond to the "compensation of employees" in the Basic Transaction Table, while those of self-employed workers and family workers are included in the "operating surplus."

From the table on persons engaged in production activities, the labor input coefficients and labor inducement coefficients corresponding to the input coefficients and production inducement coefficients, among others, are calculated. Labor input coefficients indicate the labor directly required for unit production, generally corresponding to the inverse of labor productivity. Labor inducement coefficients indicate how much labor is required for each sector to produce goods and services directly and indirectly induced by the increase of one unit of final demand.

These coefficients are used to identify the repercussion processes of changes in final demand on employment demand and entire employment demand figures, which enable analyses of labor force flow and employment structures, analyses of the effects of economic fluctuations on employment and employment demand prospects outlook, etc.

(2) Compilation method

The "number of paid executives" and the "number of employees" provide the bases for estimating "compensation of employees" in the gross value added sector of the Basic Transaction Table, and are collected for the respective column sectors of the Basic Transaction Table, based primarily on data such as the Establishment and Enterprise Census and the Census of Manufacturers. For agriculture, forestry, and fisheries, in which estimates based on such data are difficult to make, the Population Census and the Census of Agriculture and Forestry are used. For the public administration and public corporation sectors, estimates are based on the respective budgets.

The number of self-employed workers and family workers are generally estimated from the Population Census and the Employment Status Survey.

To avoid duplication or omission of estimates and to compile the employment matrix (to be discussed later), estimates should be made while sector-related corresponding relationships are analyzed for all three of Population Census, Establishment and Enterprise Census, and the Table on persons engaged in production activities.

6 Employment Matrix (Table on Employees Engaged in Production Activities [by Occupation])

(1) Concepts

The employment matrix gives a breakdown into occupational categories of paid executives and employees by production activity sectors, obtained from the above table on persons engaged in production activities. The employment matrix can indicate the number of employees by occupation and in terms of production activities. In addition, calculating occupational inducement coefficients makes it possible to analyze how many of what types of employees is required due to changing economic structures or other factors.

(2) Compilation method

To compile the employment matrix, the occupational component ratios by industries are compiled for paid executives and employees from the Population Census data.

Next, by using the correspondence between "sectors" of the Input-Output Tables and "industries" of the Population Census, obtained during the employment table compilation process, the occupational component ratios by industries are transformed in accordance with the sector concepts of the medium aggregated sectors (104 sectors) of the Input-Output Tables.

Since the "production activity units" of the Input-Output Tables and the "industries" of the Population Census are different concepts, occupational component ratios need to be adjusted by considering the employment formats for individual production activities.

Furthermore, by multiplying the occupational component ratios for sectors calculated and transformed in accordance with the 104 sectors of the Input-Output Tables, by the numbers of employees by sector, the number

of employees by occupations comprised of the 104 sectors.(since "House rent(imputed rent)","self-transport" and "office supplies" are excluded, the actually 101 sectors) can be calculated.

Finally, consistency between the numbers of employees by occupation estimated by considering the number of those with public qualifications and the status of main and subsidiary businesses and the numbers of employees by occupation in respective sectors obtained above should be flowed up and reconciled.

Chart 4-5 Relationship Between Basic Transaction Table and Table on Persons Engaged in Production Activities (by Employment Status)

[1] Basic Transaction Table

	A	B	C	D	・・・	Final demand	Domestic production
A							
B							
C							
D							
・							
・							
・							
Gross value added							
	Compensation of employees						
	Operating surplus						
Domestic production							

[2] Table on Employees Engaged in Production Activities (by Occupation)

	A	B	C	D	・・・	
Number of employees by occupational position	Total					Total
	Paid directors					
	Regular employees					
	Temporary or Day employees					
	Self-employed workers					
	Family workers					

(Note) In the actual table, the top and side are transposed (please refer to Chart 4-6).

(Note) Since the incomes of self-employed workers occupy only part of the operating surpluses, and since family workers are in principle unpaid, these numbers are estimated, regardless of the gross value added.

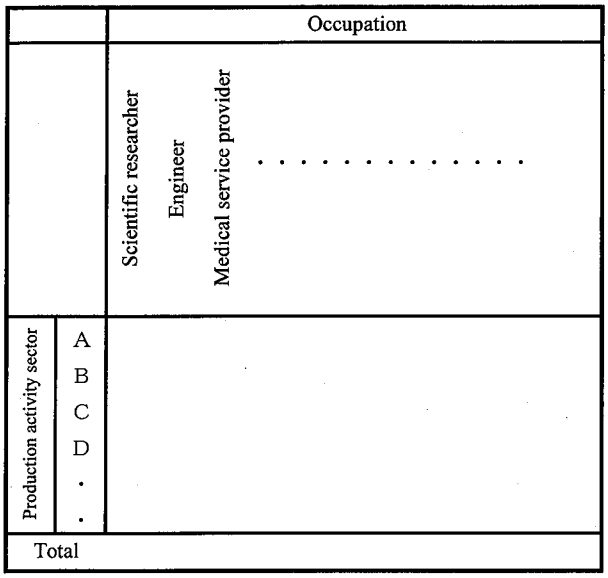
Chart 4-6 Relationship Between Table on Employees Engaged in Production Activities (by Occupation) and Employment Matrix
(Table on Employees Engaged in Production Activities [by Occupation])

[1] Table on Employees Engaged in Production Activities

		Total	Self-employed workers	Family workers	Paid directors and employees	Paid directors	Employees	Regular employees	Temporary or Day employees	Per captia compensation of paid directors and employees	Per captia wages of regular employees
Production activity sector	A										
	B										
	C										
	D										
	・										
	・										
Total											

(Note) Paid executives and employees for production activity sectors are classified by occupation to produce the "employment matrix."

[2] Employment Matrix



(Note) The "occupation" is classified into 288 types, including "Unable to classify."
Production activity sectors are comprised of 104 sectors of medium aggregated sector classifications (since "house rent (imputed rent)","self-transport" and "office supplies" are excluded, the actual number is 101).

7 Fixed Capital Matrix (Table on Fixed Capital Formation)

(1) Concepts

The "gross domestic fixed capital formation" basically covers the transaction values of reproducible capital assets with purchaser unit price of 100,000 yen or more and utility duration of one year or longer, including buildings, machinery, and equipment, as well as growth and increase of productive capital services provided by livestock and fruit trees. (please refer to Section 2, Chapter 7).

From the 1995 Input-Output Tables, intangible fixed assets have also been included under capital formation to cover the software industry. Similarly, mineral exploration is included under "other business services."

In the Basic Transaction Table, fixed capital formation is treated as "total domestic fixed capital formation (public)" and "total domestic fixed capital formation (private)" merely to record the total capital goods in the column vectors. It is thus impossible to identify how much capital formation has occurred in which sector.

The table on fixed capital formation (fixed capital matrix) supplements the Basic Transaction Tables. As indicated in Chart 4-7, the fixed capital matrix can indicate which and how much capital goods and have been purchased ("capital formation") by which column sectors ("capital formation sectors") for different investment entities (public or private).This data then makes it possible to conduct dynamic input-output analyses that treat capital formation values at column sectors as endogenous variables, and cost analyses including capital formation, etc.

The capital formation sectors at the top of the fixed capital matrix in Chart 4-7 are based in principle on the medium aggregated sector classifications (104 sectors).

Fixed capital formation includes general social capital, which cannot be treated as capital for production activities at specific sectors such as housing, roads, and parks. Such capital is defined as "Other" under the medium aggregated sector classification. The classifications and scopes are as indicated in Table 4-1. Furthermore, in the fixed capital formation, the cost trade margins generation of scrap and by-products are excluded from the scope of the fixed capital matrix.

(2) Compilation method

Compilation of the fixed capital matrix for both public and private sector capitals begins with estimates of breakdowns by output destination for respective capital goods (capital formation sectors) based on data such as the Survey of Capital Goods Demand Structure, Census of Manufacturers, Survey of Building Construction Started, and domestic production in detailed items, etc. Necessary adjustments are then made, based on specific information from the input sectors.

All capital goods concerning the goods rental and leasing sectors are estimated by the Ownership approach.

Chart 4-7 Relationship Between the Basic Transaction Table and Fixed Capital Matrix

[1] Basic Transaction Table

	A B C D ···	Consumption	Domestic total fixed capital formation (public)	Domestic total fixed capital formation (private)	Exports	Domestic production
A	··· ··· ··· ··· ···		200			
B	··· ··· ··· ··· ···		500			
C						
D						
·						
·						
·						
Gross value added						
Domestic production						

(Note) The fixed capital formation recorded in the final demand in a lump sum is distributed to output destinations to formulate the "fixed capital matrix."

[2] Fixed Capital Matrix

Capital formation sector / Sector of capital goods	Total	Agriculture	Steel	Construction	···	Other: Road	Other: Housing	Other: ···
A	200			50		100	50	
B	500	50	200	100			150	
C								
D								
·								
·								
Total								

(Note) Three types of tables are compiled: public, private, and public + private.

Table 4-1 Detailed Classification and Scope in "Other"

Classification	Scope
Road	Road businesses (including maintenance, repair, restoration after disaster operations, etc. (the same applying to the following)) and street business. However, toll road businesses are classified under "transportation services (providing road transportation facilities)."
Housing	Owner-occupied units, built-for-sale units (public, public corporation, and private) (sold public and public-corporation units are "private," but unsold ones are "public"). Rental units and company housing units are included in the "real estate (rental housing rents)."
Environment and hygiene	City parks (including maintenance, repair, restoration after disaster operations, etc. (the same applying to the following)), natural parks, public parks, drainage. Water-supply facilities and waste disposal facilities are classified under "water supply and waste management services."
Land conservation	Soil conservation (soil conservation accounts in the special account for national forestry) (including maintenance, repair, restoration after disaster operations, etc. (the same applying to the following)) and water control (special account for water control), coastal preservation business, forest reserves, mine pollution recovery business
Land development	Residential land development, industrial land development, reclamation

8 Table on Commodity Output by Industry (Make table)

(1) Concepts

Respective sector classifications comprising endogenous sectors of the Input-Output Tables (Basic Transaction Table) are based on activities of the "production activity units" producing goods and services and established in accordance with a concept similar to commodity classification (Commodity-by-Commodity).

For instance, in the case of an enterprise producing multiple types of goods and services, this means that while classifications are determined by types of goods and services produced by the enterprise based on enterprises in ordinary statistics, production activities within a single enterprise for the purpose of the Input-Output Tables (Basic Transaction Table) are categorized into different sectors in accordance with types of goods and services (Chart 4-8).

The table on commodity output by industry (hereafter referred to as "Make Table") indicates the amount of goods and services produced by each industry (establishments), including scrap and by-products. The table is structured in a matrix (industry-by-commodity), with the industry on the side and commodity on the top.

The side of the table indicates the industrial classifications with each establishment as a unit. The top indicates the commodity classifications in accordance with the types of goods and services.

(2) Compilation method

To compile the V table, the amounts of shipment by establishment and item captured in the Census of Manufacturers must first be reclassified and aggregated to produce the necessary figures. Product (service) output by industry should be obtained based on enterprise incomes by industry and product in the results of the reclassification of the Survey on Service Industries, to permit reclassification so that sector classifications are the same as in the V table of the manufacturing sectors, and obtain the relevant figures.

For the other sectors, estimates should be made by utilizing as much relevant statistical data as possible.

Figures are then determined by making the various necessary adjustments.

In the Basic Transaction Table, the creation of the new "Reuse and recycling" sector for the 2000 Input-Output Tables outputs the value of scraps and by-products as a lump sum to the reuse and recycling sector. Subsequently, this sum and the cost of collection and treatment are output from the relevant sector to each input sector. In the V table, the outputs of scrap and by-products are input to each input sector directly, and the cost of collection and treatment are only recorded to its intersection of the "Reuse and recycling" sector. The scrap and by-products which outputs form household is not recorded because of deviate from concept.

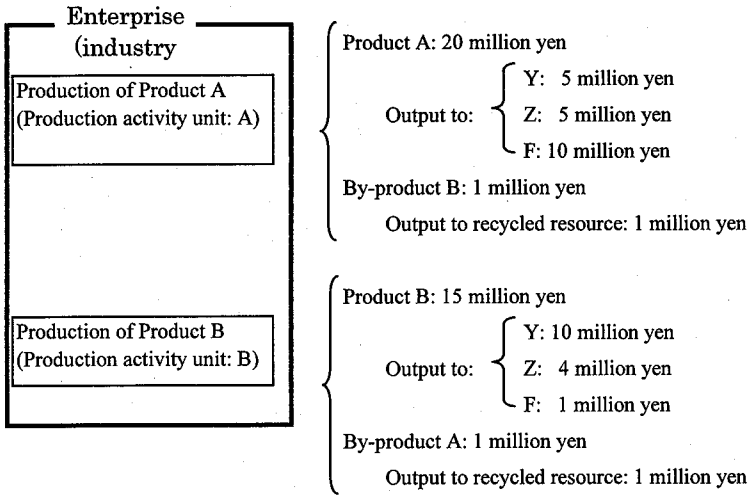
As a result, the total by commodity (output by commodity = each row total in the Make table) deducted scrap and by-products equals the total domestic products in the Basic Transaction Table (Chart 4-9), however, it doesn't equal in the "Reuse and recycling" sector.

The use of basic estimation data to compile Make table requires some attention, due to certain inadequacies with respect to "goods/industry-by-service product" and "service industry-by-goods/products."

The industries on the side of the table are set in principle in accordance with medium aggregated sector classifications (104 sectors), but partly in accordance with the minor aggregated sector classifications due to the requirements of analyses and tabulations.Industries are categorized into [1] Industry; [2] Producers of government service activity; and [3] Producers of private non-profit service for households.

The commodities at the top of the table (goods and services) are set to match on a one-to-one basis with the industries on the side. Thus, Make table is a square matrix.

Chart 4-8 Enterprises and Production Activity Units



(Explanation)

In terms of industrial classification, this establishment is regarded to belong under "Industry A" due to a major product for which production amounts to 46 million yen. However, it is regarded as "Commodity A" and "Commodity B" in the sector classification of the Input-Output Tables, with production at A amounting to 20 million and production at B reaching 15 million yen. By-product is not recorded as a domestic production, since the Basic Transaction Table is in principle compiled by the negative input method.

Chart 4-9 Relationship Between Basic Transaction Table and the Table on Commodity Output by Industry (Make Table)

[1] Basic Transaction Table

		Intermediate demand					Final demand	Domestic production
		A	B	Reuse and recycling	Y	Z	F	
Intermediate input	A	0	△10	10	5	5	10	50
	B	△0	…	1	4	4	1	15
	Reuse and recycling	0	15	0	0	4	6	25
	Y	5	…	2	…	…	…	…
	Z	10	…	…	…	…	…	…
Gross value added		…	…	…	…	…		
		6	10	12	…	…		
		…	…	…	…	…		
		…	…	…	…	…		
		…	…	…	…	…		
Domestic production		50	10	…	…	…		

[2] Table on Commodity Output by Industry (Make table)

		Product (goods and services)					Domestic production
		A	B	Reuse and recycling	Y	Z	
Industry	A	30	16	0	…	…	46
	B	…	…	0	…	…	…
	Reuse and recycling	…	…	14	…	…	14
	Y	…	…	0	…	…	…
	Z	…	…	0	…	…	…
Total		30	16	14	…	…	…
Scrap and by-products		10	1	0	…	…	…
Domestic production		20	15	25	…	…	…

9 Table on Self-Transports

(1) Concepts

The table on self-transports indicates the detailed goods and services input for activities related to "Self-transport by private cars (passengers)" and "Self-transport by private cars (freight)," which are dummy sectors (refer to § 1, Chapter Ⅱ) representing self-activities, under the column sector of the Basic Transaction Table.

In Basic Transaction Table, expenses for fuel, non-life insurance, and auto repairs, etc., input by each column sector to conduct self-transport activities are not recorded directly at the intersection of the respective column sectors and the rows of the goods and services. Instead, the expenses required for self-transport activities for passenger and freight services are aggregated and the "Self-transport by private cars (passengers)" and "Self-transport by private cars (freight)" are regarded as input in a lump sum. It is thus impossible to identify the breakdown of the expenses required for the self-transport activities in each column sector.

The table on self-transports is compiled as a supplementary table to fill the gap, revealing the input structure of goods and services required for self-transport activities at each column sector and the status of the output of goods and services required for self-transport activities to each column sector.

"Self-Transport" sector is dummy sector, and doesn't record value added.

(2) Compilation method

The table on self-transports is compiled in parallel with the compilation of the Basic Transaction Table, as follows.

i) Each column sector distributes the expenses required for self-transport proportionately from the goods and services input to date, accumulates these figures, and estimates the inputs for "Self-transport by private cars (passengers)" and "Self-transport by private cars (freight)."

ii) In parallel with i), inputs of goods and services are estimated from various data for private automobiles in both sectors of "Self-transport by private cars (passengers)" and "Self-transport by private cars (freight)." The output of each column is also estimated (refer to Chapter V). Input and output to the private automobile sector are established by making the necessary adjustments with the relevant sectors.

iii) With the input of the self-transport sector obtained in ii) above and the output of the self-transport sector to each column as CT (Control Totals), the table on self-transport of the preceding table and various data on the subsequent changes of the self-transport activities at each industry are used to distribute the input of the column sectors, which are then adjusted with the output sectors (including readjustments for cases in which the figures of ii) need to be changed at this stage) to complete the table on self-transport.

The Basic Transaction Table to be provided on magnetic media have been compiled in two formats: one indicating the self-transport sectors at columns and rows, and one not setting self-transport sectors, with each sector directly inputting goods and services related to self-transport. The two formats are offered to meet varying needs.

Chart 4-10 Relationship Between Basic Transaction Table and Table on Self-Transports

[1] Basic Transaction Table

	A	B	C	D	Self-transport	E	Final demand	Domestic production
A			(5)		20			
B			(20)	40	80			
C		Disaggregated	(5)		30			
D			(0)		10			
Self-transport	20	40	30	50	(0)	10	·····	150
E			(0)		10			
Gross value added					0			
Domestic production					150			

(Note) Expenses concerning self-transport aggregated and recorded in the self-transport sectors in the rows of the Basic Transaction Table are disaggregated into each row sector to produce the table on self-transports.

[2] Table on Self-Transports

	A	B	C	D	E	Total
A	···	···	5	···	···	20
B	···	···	20	···	···	80
C	4	8	5	10	3	30
D	···	···	0	···	···	10
E	···	···	0	···	···	10
Total	20	40	30	50	10	150

CHAPTER V

CONCEPT, DEFINITION AND SCOPE BY SECTOR

This chapter stipulates the concept, definition, and scope of individual sectors that are shown in the basic sector classification table of the 2000 I-O Tables. The sector classifications of the 2000 I-O Tables follow those of 1995 in principle, but some alterations were made; those changes are described for each sector where applicable. The Standard Industrial Classification for Japan (JSIC) referred to in this chapter is the revised version dated October 1995.

The concept, definition, and scope of the sectors are generally described in following ways.

(Column and Row Codes, Name of Sector)
For endogenous sectors, final demand sectors, and gross value-added sectors, descriptions are specified in individual columns and rows, ordered according to their coding numbers (a row only in the case of gross value-added sectors).

(Ministry or Agency in charge)
The responsible Ministry or Agency in charge of the sector is shown.

(Definition and scope)
The definition and the scope of the sectors are summarized.

(Corresponding ISIC)
For reference, the ISIC sector code number is provided, together with a description of the corresponding sector.

(Examples)
Examples of major goods or services that are generated by the sector's activities are shown. However, no example is given if a row code name easily identifies the relevant goods or services.

(Changes)
Changes in concept, definition, or scope are shown in the 2000 Input-Output Tables if they differ from those of 1995 I-O Tables.

(Notes)
When necessary, notes are provided on the concept, definition, and/or scope of sectors, or any related differences between the 1995 Tables and the 2000 Tables.

Notes 1 A star mark in the column of the sector name signifies that sector's major acting body.
★★ Producer of government services
★ Producer of private non-profit services for households
(nothing) Industry

2 P represents a dummy sector.

3 All dates in this chapter of the I-O Tables are expressed in calendar years only; the corresponding era name and year are omitted.

1 Agriculture, forestry, and fishery

Column Code	Row Code	Sector Name
0111-01		**Rice**
	0111-011	**Rice**
	0111-012	**Rice straw**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Rice crop farms" as specified in Industry Number 0111 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 0111 Growing of cereals and other crops n.e.c.

(Given examples)
Rice, rice straw

Column Code	Row Code	Sector Name
0111-02		**Wheat, barley, and the like**
	0111-021	**Wheat (domestic)**
	0111-022	**Wheat (imported)**
	0111-023	**Barley (domestic)**
	0111-024	**Barley (imported)**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Grain and soybean farms, except for rice farms" as specified in Industry Number 0112 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 0111 Growing of cereals and other crops n.e.c.

(Given examples)
Wheat, barley (nijo, rokujo), hadaka-mugi

Column Code	Row Code	Sector Name
0112-01		**Potatoes and sweet potatoes**
	0112-011	**Sweet potatoes**
	0112-012	**Potatoes**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Potato and sweet potato farms" as specified in Industry Number 0117 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 0111 Growing of cereals and other crops n.e.c.

(Given examples)

Sweet potatoes, potatoes

(Notes)
Taro and yams are classified in the "Vegetables (outdoor)" sector.

Column Code	Row Code	Sector Name
0112-02		**Pulses**
	0112-021	**Soybeans (domestic)**
	0112-022	**Soybeans (imported)**
	0112-029	**Other pulses**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Grain and soybean farms, except rice farms" as specified in Industry Number 0112 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 0111 Growing of cereals and other crops n.e.c.

(Given examples)
Soybeans (domestic), soybeans (imported), other pulses (peas, broad beans, kidney beans, adzuki beans, Sasage, peanuts, other pulses)

(Notes)
Immature soybeans, peas, broad beans, and kidney beans are classified in the "Vegetables (outdoor)" sector.

Column Code	Row Code	Sector Name
	0113-001	**Vegetables**
0113-01		**Vegetables (outdoor)**
0113-02		**Vegetables (under facilities)**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The vegetable production activities of "Vegetable farms, including those growing mushrooms" as specified in Industry Number 0113 of the Standard Industrial Classification for Japan. Furthermore, the scope of vegetables (under facilities) corresponds to the vegetable production activities of glasshouses (or any permanent facilities using glass as a major building material), and houses and tunnels (facilities covered by materials other than glass and with lower building heights that prevent workers from entering); the scope of vegetables (outdoor) corresponds to other vegetable production activities.

(Corresponding ISIC)
Class 0112 Growing of vegetables, horticultural specialties and nursery products

(Given examples)
Fruit vegetables (outdoor): Pumpkins, green peppers, cucumbers, melons (outdoor), water melons, eggplants, tomatoes, strawberries, young peas (immature peas), immature corn, green soybeans (immature soybeans), kidney beans (immature kidney beans), other fruit vegetables

Leafy vegetables (outdoor): cabbages, Chinese cabbages, non-fruit Chinese cabbages, spinach, long leeks, onions, leeks, hornworts, crown daisies, garlic, lettuces, celery, cauliflower, broccoli, asparagus, bamboo shoots, other leaf vegetables

Root vegetables: Japanese radish, Japanese turnip, carrots, burdock root, taros, yams, lotus root, ginger, other root vegetables

Fruit vegetables (under facilities): pumpkins, green peppers, cucumbers, greenhouse melon, water melon, eggplants, tomatoes, strawberries

Leafy vegetables (outdoor): Lettuces

Column Code	Row Code	Sector Name
0114-01		**Fruits**
	0114-011	**Citrus fruits**
	0114-012	**Apples**
	0114-019	**Other fruits**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Fruit and nut farms" as specified in Industry Number 0114 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 0113 Growing of fruit, nuts, beverage and spice crops

(Given examples)
Citrus fruits: Oranges, summer oranges, navel oranges, hassaku oranges, iyo oranges, other citrus fruits, and the growing of citrus fruits

Apples: Apples and the growing of apples

Other fruits: Grapes, Japanese pears, pears, peaches, plums, otoh, Japanese apricots, loquats, persimmons, Japanese chestnuts, kiwi fruits, pineapples, other fruits, and the growing of other fruits

Major fruits imported: Oranges, grapefruits, pineapples, bananas, lemons, kiwi fruits

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Column Code	Row Code	Sector Name
0115-01	**0115-011**	**Sugar crops**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for sugar crops among those listed

as "Industrial crop farms" as specified in Industry Number 0116 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 0111 Growing of cereals and other crops n.e.c.

(Given examples)
Sugar canes, sugar beets

Column Code	Row Code	Sector Name
0115-02		**Crops for beverages**
	0115-021	**Coffee and cocoa beans (imported)**
	0115-029	**Other crops for beverages**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for crops for beverages that are among those listed as "Industrial crop farms" as specified in Industry Number 0116 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 0113 Growing of fruit, nuts, beverages, and spice crops

(Given examples)
Coffee beans, cocoa beans (imported), materials for beverages, tea leaves, hops, and the growing of tea leaves

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Column Code	Row Code	Sector Name
0115-09		**Other edible crops**
	0115-091	**Miscellaneous cereals**
	0115-092	**Oil seeds**
	0115-093	**Edible industrial crops n.e.c.**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for edible crops that are not classified elsewhere and that are among those listed as "Crop farms" as specified in Group Number 011 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 0111 Growing of cereals and other crops n.e.c.

Class 0112 Growing of vegetables, horticultural specialties, and nursery products

Class 0113 Growing of fruit, nuts, beverages and spice crops

(Given examples)
Miscellaneous cereals (edible crops): ryes, buckwheat

Miscellaneous cereals (rough grains): enbaku, corn, foxtail millets, millets, hie

Miscellaneous cereals (major import items): corn, grain , sorghum buckwheat

Oil seeds plants: rape seeds (seeds), sesame, olives

Edible crafted crops (excluding those shown separately): konnyaku potatoes, spice crops (imported), cassava taro for feed(imported)

(Notes)
The sector names under "0111-03 Miscellaneous cereals" and "0115-09 Other edible crops" that both appeared in the 1990 I-O Tables were integrated in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
0116-01	**0116-011**	**Crops for feed and forage**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Miscellaneous crop farms" as specified in Industry Number 0119 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 0111 Growing of cereals and other crops n.e.c.

(Given examples)
Young corns, pasture grass, feed turnips

Column Code	Row Code	Sector Name
0116-02	**0116-021**	**Seeds and seedlings**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for seeds and seedlings among those listed as "Miscellaneous crop farms" as specified in Industry Number 0119 of the Standard Industrial Classification for Japan; production activities relating to products inputted directly to their own sectors are excluded.

(Corresponding ISIC)
Class 0112 Growing of vegetables, horticultural specialties, and nursery products

(Given examples)
Farm products seeds (excluding stock farm products and cocoons), bulbs, seedlings (excluding seedlings for mountain planting)

(Notes)
Flowering tree saplings are included in "0116-03, -031 Flowers and plants"

Column Code	Row Code	Sector Name
0116-03	**0116-031**	**Flowers and plants**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Flower farms" as specified in Industry Number 0115 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 0112 Growing of vegetables, horticultural specialties and nursery products

(Given examples)
Cut flowers, potted plants, flowering trees, flowering tree saplings, grasses

Column Code	Row Code	Sector Name
0116-09		**Other inedible crops**
	0116-091	**Leaf tobacco**
	0116-092	**Raw rubber (imported)**
	0116-093	**Raw cotton (imported)**
	0116-099	**Crops for inedible agricultural products n.e.c.**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for other inedible crops that are not elsewhere classified among those listed as "Crop farms" as specified in Group Number 011 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 0111 Growing of cereals and other crops n.e.c.

Class 0112 Growing of vegetables, horticultural specialties and nursery products

Class 0113 Growing of fruit, nuts, beverages and spice crops

(Given examples)
Leaf tobacco, raw rubber (imported), raw cotton (imported), medicinal crops (medicinal carrots, ama-cha-tsuru), crops for paper (paper mulberry, mitsumata plants, and so forth), crops for mattresses (rushes and so forth), crops for textiles

(hemp plants), other industrial crops (indigo plants, safflowers)

(Notes)
The sector names that appeared under "0116-02 Leaf tobaccos" in the 1990 I-O Tables were integrated in "0116-09 Other inedible crops" of the 1995 I-O Tables.

Column Code	Row Code	Sector Name
0121-01		**Dairy cattle farming**
	0121-011	**Raw milk**
	0121-019	**Other dairy farming products**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Dairy cattle farms" as specified in Industry Number 0121 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 0121 Farming of cattle, sheep, goats, horses, asses, mules and hinnies; diary farming

(Given examples)
Raw milk, young milk cows (for slaughter or breeding), increase in number of milk cows and growth, manure

Column Code	Row Code	Sector Name
0121-02	**0121-021**	**Hen eggs**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for hen eggs among those listed as "Layers and broilers farms" as specified in Industry Number 0124 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 0122 Other animal farming; production of animal products n.e.c.

(Given examples)
Hen eggs, hens (including the increase of the number of chickens in relation to the number of hens), abnormal eggs, chicken manure

Column Code	Row Code	Sector Name
0121-03	**0121-031**	**Fowls and broilers**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for fowls and broilers among those listed as "Layers and broilers farms" as specified in Industry Number 0124 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 0122 Other animal farming; production of animal products n.e.c.

(Given examples)

Broilers, chicken manure

Column Code	Row Code	Sector Name
0121-04	**0121-041**	**Hogs**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Pig and hog farms" as specified in Industry Number 0123 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 0122 Other animal farming; production of animal products n.e.c.

(Given examples)
Hogs (including the increase of the number of young hogs in relation to the number of hogs), manure

Column Code	Row Code	Sector Name
0121-05	**0121-051**	**Beef cattle**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Beef cattle farms" as specified in Industry Number 0122 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 0121 Farming of cattle, sheep, goats, horses, assess, mules and hinnies; dairy farming

(Given examples)
Cattle for slaughter (including the increase of the number of breeding in relation to the number of cattle), cattle for breeding, manure

Column Code	Row Code	Sector Name
0121-09		**Other livestock**
	0121-091	**Sheep and lamb wool**
	0121-099	**Other livestock**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for livestock that are not classified elsewhere and of "Sericulture farms" as specified in Industry Number 0131 that are among those listed as "Livestock farms" specified in Group Number 012 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 0121 Farming of cattle, sheep, goats, horses, asses, mules and hinnies; dairy farming

Class 0122 Other animal farming; production of animal products n.e.c.

(Given examples)
Wool, horses (including stallions), goats, sheep, fur animals (the breeding of minks and rabbits, their furs, and other furs), edible fowl, other edible livestock (goat's milk, bee honey, quail eggs), pet animals and birds, experimental animals (mice, guinea pigs), manure, silkworm cocoons, seed cocoons, mulberry leaves, mulberry plant cultivation

(Changes)
"Sericulture" that appeared under Column Code 0122-01, Row Code 0122-011 in the 1995 I-O Tables is now integrated into this sector.

Column Code	Row Code	Sector Name
0131-01	**0131-011**	**Veterinary service**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Veterinary services" as specified in Industry Number 8441 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 8520 Veterinary activities

Column Code	Row Code	Sector Name
0131-02	**0131-021**	**Agricultural services (except veterinary service)**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Agricultural services, except horticultural services" as specified in Group Number 014 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 0140 Agricultural and animal husbandry service activities, except veterinary activities

(Given examples)
Grain elevators, rice centers, community facilities for rice seedbeds, land reformation areas, community sorting facilities for fruits and vegetables, crop spraying, community breeding beds for silkworms, stud services, incubator services

Column Code	Row Code	Sector Name
0211-01	**0211-011**	**Silviculture**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Timber tracts" under Industry Number 0211 and "Timber tract services" under Industry Number 0241 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 0200 Forestry, logging, and related service activities

(Given examples)
Seedlings, the planting of trees

(Notes)
Although seedlings for forestry use are intermediate products, they are included in this sector.

This sector covers "Tree seed gathering and forest nursery services" under Industry Number 0243 of the Standard Industrial Classification for Japan, but does not record its production value because of transaction within its own sector.

Column Code	Row Code	Sector Name
0212-01		**Logs**
	0212-011	**Logs (domestic)**
	0212-012	**Logs (imported)**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Logging" under Industry Number 0221 and "Logging services" under Industry Number 0242 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 0200 Forestry, logging and related service activities

(Given examples)
Logs (soma-corner, large-cut parts)

Column Code	Row Code	Sector Name
0213-01	**0213-011**	**Special forest products (incl. hunting)**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production and harvesting activities of forest products, excluding logs, for general use among those listed as "Vegetable farms, including those cultivating mushrooms" as specified in Industry Number 0113, "Special forest product production, except cultivating of mushrooms" as specified in Group Number 023, and "Miscellaneous forestry" as specified in Group Number 029 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 0112 Growing of vegetables, horticultural specialties and nursery products

Class 0150 Hunting, trapping and game propagation including related service activities

Class 0200 Forestry, logging and related service activities

(Given examples)
Mushrooms (matsutake, shiitake, velvet shank, and so forth), nuts (chestnuts, walnuts, and so forth), bark (hemp palm bark and so forth), raw lacquer from lacquer trees, bamboo, fire wood, charcoal (black charcoal and white charcoal), animal skins from hunting

(Notes)
Cultivated nuts are included in the "Fruits" sector in Column Number 0114-01, and the "Other fruits" sector under Row Number 0114-019.

This sector covers "Miscellaneous forestry services" under Industry Number 0249 of the Standard Industrial Classification for Japan, but does not record its production value because of transaction within its own sector.

Column Code	Row Code	Sector Name
	0311-001	**Marine fisheries (domestic)**
0311-01		**Coastal fisheries**
0311-02		**Off-shore fisheries**
0311-03		**Distant water fisheries**
	0311-002	**Marine fisheries (imported)**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Marine fisheries" under Group Number 031 and "Whaling" under Group Number 032 of the Standard Industrial Classification for Japan; the scopes of coastal fisheries, off-shore fisheries, and distant water fisheries are defined as follows according to the "Statistics on Fisheries and Culture Production":

Coastal fisheries: Fishing undertaken without boats or fishing vessels, by boats without engines, or by boats with engines but weighing less than ten tons, including fixed-net fishing and dragnet fishing

Off-shore fisheries: Fishing by boats or vessels weighing ten tons or more, excluding distant water fisheries, fixed-net fishing, and dragnet fishing

Distant water fisheries: Tuna long-line fishing, deepwater trawling, west-bound trawling and whaling

(Corresponding ISIC)
Class 0500 Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing

(Given examples)
Fish, shrimp, crabs, squid, octopus, sea urchins, sea cucumbers, shell fish, seaweed, whales

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Column Code	Row Code	Sector Name
0311-04	**0311-041**	**Marine culture**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Marine culture" as specified in Group Number 041 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 0500 Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing

(Given examples)
Horse mackerel, yellowtail, sea breams, prawns, sea squirts, scallops, oysters, konbu seaweed, wakame seaweed, seaweed, pearls

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Column Code	Row Code	Sector Name
	0312-001	**Inland waters fisheries and culture**
0312-01		**Inland waters fisheries**
0312-02		**Inland waters culture**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Inland waters fisheries" as

specified under Group Number 033 and "Inland water culture" under Group Number 042 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 0500 Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing

(Given examples)
Inland water fisheries: Salmon, Sakhalin trout, shrimp trout, hime trout, rainbow trout, chars, smelts, sweetfish, whitebait, carp, crucians, eels, corbiculas, shrimp, seaweed

Inland water culture: Trout, sweetfish, carp, crucians, eels, tirapia, water pearls, gold fish, golden carp

2 Mining

Column Code	Row Code	Sector Name
0611-01		**Metallic ores**
	0611-011	**Iron ores**
	0611-012	**Non-ferrous metallic ores**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The mining and ore sorting activities of "Metal Mining" as specified in Major Group Number 05 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 1200 Mining of uranium and thorium ores

Class 1310 Mining of iron ores

Class 1320 Mining of non-ferrous metal ores, except uranium and thorium ores

(Given examples)
Non-ferrous metallic ores: Copper ores, lead and zinc ores, gold ores, silver ores, tin ores, tungsten ores, iron sulfide ores

(Notes)
"Iron ores" under Column Number 0611-01 and "Non-ferrous metallic ores" under Column Number 0612-01, which appeared separately in the 1990 I-O Tables, were integrated in the 1995 I-O Tables. Furthermore, "Copper ores" under Row Number 0612-011, "Lead and Zinc ores" under Row Number 0612-012, and "Other non-ferrous metallic ores" under Row Number 0612-019 were also integrated in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
0621-01		**Materials for ceramics**
	0621-011	**Limestone**
	0621-019	**Other materials for ceramics**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The mining and ore sorting activities of "Ceramic mineral mining (minerals only for refractory, pottery and porcelain, glass, and cement materials)" as specified in Group Number 082 of the Standard Industrial Classification for Japan; scrap and by-products (gypsum, chemical gypsum, blast furnace slag, fly ash, glass scrap) that appear in other sectors are competing with this sector.

(Corresponding ISIC)
Class 1410 Quarrying of stone, sand and clay

Class 1429 Other mining and quarrying n.e.c.

(Given examples)
Other materials for ceramics: Silica, silica sand, dolomite,

soapstone, clay, silicate, porcelain, kaolin

(Notes)
"Limestone" under Column Number 0621-01 and "Other materials for ceramics" under Column Number 0621-09, which appeared separately in the 1990 I-O Tables, were integrated in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
0622-01	**0622-011**	**Gravel and quarrying**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The mining, quarrying, and ore sorting activities of "Stone quarrying, sand and gravel pits" under Group Number 081 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1410 Quarrying of stone, sand and clay

(Given examples)
Gravel, sand, peridotite (extracted)

Column Code	Row Code	Sector Name
0622-02	**0622-021**	**Crushed stones**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Crushed stones" as specified in Industry Number 2581 of the Standard Industrial Classification for Japan; scrap and by-products (tailing) that appear in other sectors are competing with this sector.

(Corresponding ISIC)
Class 2696 Cutting, shaping and finishing of stone

(Given examples)
Crushed stone, stone materials

Column Code	Row Code	Sector Name
0629-09	**0629-099**	**Other non-metallic ores**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The mining and ore sorting activities of "Clay mining, except otherwise classified" under Group Number 083 and "Miscellaneous non-metallic mineral mining" under Group Number 089 of the Standard Industrial Classification for Japan; by-products (sulfur) that appear in other sectors are competing with this sector.

(Corresponding ISIC)
Class 1410 Quarrying of stone, sand and clay

Class 1421 Mining of chemical and fertilizer minerals

Class 1422 Extraction of salt

(Given examples)
Barite, bentonite, clay such as diatomite, olivine sand

Column Code	Row Code	Sector Name
0711-01	**0711-011**	**Coking coal mining**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The mining and ore sorting activities of "Coal and lignite mining" as specified in Major Group Number 06 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1010 Mining and agglomeration of hard coal

Class 1020 Mining and agglomeration of lignite

Class 1030 Extraction and agglomeration of peat

(Given examples)
Crude coal, coal, anthracite, lignite, low-grade coal

(Changes)
"Cokes coal" under Row Number 0711-011 and "Steam coal, lignite and anthracite" under Row Number 0711-012, which appeared separately in the 1995 I-O Tables, were integrated.

Column Code	Row Code	Sector Name
0721-01		**Crude petroleum and natural gas**
	0721-011	**Crude petroleum**
	0721-012	**Natural gas**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The extraction and sorting activities of "Crude petroleum and natural gas production" as specified in Group Number 07 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1110 Extraction of crude petroleum and natural gas

(Given examples)
Crude oil, natural gas, liquefied natural gas, compressed gas

(Notes)
"Crude petroleum" under Column and Row Numbers 0721-01 and -011 and "Natural gas" under Column and Row Numbers 0731-01 and -011, which appeared separately in the 1990 I-O Tables, were integrated in the 1995 I-O Tables.

3 Foods

Column Code	Row Code	Sector Name
1111-01		**Slaughtering and meat processing**
	1111-011	**Beef meat (bone meat)**
	1111-012	**Pork (bone meat)**
	1111-013	**Poultry meat**
	1111-014	**Other meat (bone meat)**
	1111-015	**By-products of slaughtering and meat processing**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
Chilled meat product processing activities listed in "Meat products" under Industry Number 1211, edible fowl and their processing listed in "Miscellaneous livestock products" under Industry Number 1219, and the activities of "Slaughter-houses" under Industry Number 9521 of the Industry Number of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1511 Production, processing and preserving of meat and meat products

(Given examples)
Beef, pork, poultry, other meats (horse, ram, or kid meat), by-products of slaughtering (unprocessed skins, internal organs, and by-products of meat processing)

Column Code	Row Code	Sector Name
1112-01	**1112-011**	**Processed meat products**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for hams, bacons, sausages, and so forth from among those listed as "Meat products" as specified in Industry Number 1211 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1511 Production, processing and preserving of meat and meat products

(Given examples)
Ham, bacon, sausages, hamburger (chilled), roasted pork

Column Code	Row Code	Sector Name
1112-02	**1112-021**	**Bottled or canned meat products**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of bottled or canned meat products from among those listed as "Meat products" as specified in Industry Number 1211 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1511 Production, processing and preserving of meat and meat products

Class 1549 Manufacture of other food products n.e.c.

(Given examples)
Bottled and canned meat products (canned corned beef, canned boiled quail eggs), canned processed food (canned curry, canned meat sauce, canned soup)

Column Code	Row Code	Sector Name
1112-03		**Dairy farm products**
	1112-031	**Drinking milk**
	1112-032	**Dairy products**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Dairy products" as specified in Industry Number 1212 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1520 Manufacture of dairy products

(Given examples)
Drinking milk: Milk, processed milk

Dairy products: Milk drinks, milk powder, condensed milk, butter, cheese, ice-cream, powder mix, cream, fermented milk, lactic acid beverage

(Changes)
The Code Numbers 1112-04, -041, and –042 that appeared in the 1995 I-O Tables were changed to 1112-03, -031 and –032, respectively, in these I-O Tables.

Column Code	Row Code	Sector Name
1113-01	**1113-011**	**Frozen fish and shellfish**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Frozen seafood products (unprocessed and packaged)" listed under Industry Number 1116 and "Frozen seafood products (processed and packaged)" listed under Industry Number 1227 of the Standard Industrial Classification for Japan.

Freeze-drying on boats is also included.

(Corresponding ISIC)
Class 1512 Processing and preserving of fish and fish

products

(Given examples)
Frozen fish and shellfish, frozen processed fish and shellfish (whole or cut into three pieces and processed as frozen "sashimi"), frozen minced fish, by-products of "fish bone with little flesh"

(Notes)
Fish frozen on boats are the output of "Marine fisheries (domestic) under Row Number of 0311-001" to this sector as fresh fish.

Column Code	Row Code	Sector Name
1113-02	**1113-021**	**Salted, dried, or smoked seafood**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for salted, dried, or smoked fish and shellfish from among those listed as "Miscellaneous seafood products" as specified in Industry Number 1229 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1512 Processing and preserving of fish and fish products

(Given examples)
Boiled and dried seafood, dried seafood, salted and dried seafood, smoked seafood, by-products of "fish bone with little flesh"

(Notes)
Dried shrimp and sweetened dried-fish are included in "1113-09, -099 Other processed seafood."

Column Code	Row Code	Sector Name
1113-03	**1113-031**	**Bottled or canned seafood**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Canned seafood and seaweed" as specified in Industry Number 1221 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1512 Processing and preserving of fish and fish products

(Given examples)
Crab, salmon, tuna, bonito, mackerel, sardines, other bottled or canned seafood, by-products of "fish bone with little flesh"

(Notes)
Tsukudani (preserved seafood boiled reduced in soy sauce) are included, regardless of packaging, in sector "1113-09, -009 Other processed seafood."

Column Code	Row Code	Sector Name
1113-04	**1113-041**	**Fish paste**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Fish meat "ham" and sausage" listed under Industry Number 1224 and "Fish paste products" listed under Industry Number 1225 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1512 Processing and preserving of fish and fish products

(Given examples)
Baked fish paste, boiled fish-paste, ham-and sausage-like products made of fish meat, by-products of "fish bone with little flesh"

Column Code	Row Code	Sector Name
1113-09	**1113-099**	**Other processed seafood**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities, excluding those for salted, dried, or smoked seafood, of "seaweed products, except canned" listed under Industry Number 1222, "Agar-agar and isinglass" listed under Industry Number 1223, and "Miscellaneous seafood products" listed under Industry Number 1229 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1512 Processing and preserving of fish and fish products

(Given examples)
Dried bonito, tsukudani seafood, agar-agar, toasted and flavored seaweed, dried shrimp, sweetened dried-fish

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Column Code	Row Code	Sector Name
1114-01		**Grain milling**
	1114-011	**Milled rice**
	1114-019	**Other grain milling**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Rice cleaning and polishing" listed under Industry Number 1261 and "Wheat and barley cleaning and polishing" listed under Industry Number 1262

of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1531 Manufacture of grain mill products

(Given examples)
Milled rice, rice waste, rice bran, milled wheat, wheat waste

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Column Code	Row Code	Sector Name
1114-02		**Flour and other grain milled products**
	1114-021	**Wheat flour**
	1114-029	**Other grain milled products**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities of "Wheat flour milling" listed under Industry Number 1263 and "Miscellaneous flour and grain mill products" under Industry Number 1269 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1531 Manufacture of grain mill products

(Given examples)
Wheat, "fusuma" powder, "soba" powder, "konnyaku" powder, rice powder

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Column Code	Row Code	Sector Name
1115-01	**1115-011**	**Noodles**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Noodles, macaroni and spaghetti" listed under Industry Number 1293 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1544 Manufacture of macaroni, noodles, couscous and similar farinaceous products

(Given examples)
Dried noodles, instant noodles, macaroni and spaghetti, noodles

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Column Code	Row Code	Sector Name
1115-02	**1115-021**	**Bread**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for cooked breads and sandwiches listed among those of "Bread" in Industry Group Number 1271 and "Food and related products, n.e.c." in Industry Group Number 1299 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1541 Manufacture of bakery products

(Given examples)
Breads, cookie bread, processed bread, sandwiches

(Notes)
"Bread provided for schoolchildren" that appeared in the 1990 I-O Tables was changed to "School Meal (public schools) under 1119-04, -041" and "School Meal (private schools) under 1119-05, -051."

Column Code	Row Code	Sector Name
1115-03	**1115-031**	**Confectionery**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Pastries and cakes" listed under Industry Group Number 1272, "Biscuits, crackers and other dry bakery products" listed under Industry Group Number 1273, "Baked rice confections" listed under Industry Group Number 1274, and "Miscellaneous bakery and confectionery products" listed under Industry Group Number 1279 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1541 Manufacture of bakery products

Class 1543 Manufacture of cocoa, chocolate and sugar confectionery

Class 1549 Manufacture of other food products n.e.c.

(Given examples)
Caramel, sweet drops, candies, chocolate, chewing gums, baked cookies, biscuits, rice cakes, Japanese cakes, cakes, snack cookies, fatty cakes, cocoa

(Notes)
Ice cream is included in "1112-03 Dairy farm products" and "1112-032 Dairy products."

Column Code	Row Code	Sector Name
1116-01	**1116-011**	**Bottled or canned vegetables and fruits**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for preserved vegetables and fruits (bottled or canned) and undiluted juices as listed among those specified in "Canned and preserved fruit and vegetable products" under Group Number 123 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1513 Processing and preserving of fruit and vegetables

(Given examples)
Bottled or canned vegetables, bottled or canned fruits, bottled or canned jams, vegetable juice, condensed undiluted fruit juice

(Notes)

1 Fruit juices other than undiluted condensed fruit juices are classified in "1129-02, -021 Soft drinks," and canned cakes are classified in "1115-03, -031 Confectionery."

2 Bottled or canned gravy sauce, soup, and tomato-based products (ketchup, puree,) excluding juice, are classified in "1117-06, -061 Condiments and seasonings."

3 The classification of vegetable juices and undiluted condensed fruit juices is not affected by the type of containers in use.

Column Code	Row Code	Sector Name
1116-02	**1116-021**	**Preserved agricultural foodstuffs (other than bottled or canned)**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for preserved vegetables and fruits (except for bottled or canned undiluted juices and dried mushrooms) listed among those specified in "Canned and preserved fruit and vegetable products" under Group Number 123 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1513 Processing and preserving of fruit and vegetables

(Given examples)
Dried vegetables, frozen vegetables, pickles, cup-jam, dried gourd, dried cut radishes, mashed potatoes, dried persimmon

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Column Code	Row Code	Sector Name
1117-01		**Sugar**
	1117-011	**Refined sugar**
	1117-019	**Other sugar and by-products of sugar manufacturing**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Sugar, except refined sugar" listed under Industry Number 1251 and "Refined sugar products" listed under Industry Number 1252 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1542 Manufacture of sugar

(Given examples)
Refined sugar (beet sugar, sugarcane), honey, by-products (sugar honey, beet pulp)

(Notes)
This sector covers the production activities of non-refined sugar from cane (domestic) and of refined sugar from non-refined sources, but does not record their production value that carry out these processes because of input within their own sector.

Column Code	Row Code	Sector Name
1117-02	**1117-021**	**Starch**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Starch" listed under Industry Number 1292 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1532 Manufacture of starches and starch products

(Given examples)
Sweet potato starch, potato starch, wheat starch, corn starch, starch lees

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Column Code	Row Code	Sector Name
1117-03	**1117-031**	**Dextrose, syrup, and isomerized sugar**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Glucose, starch syrup and high-fructose corn syrup" listed under Industry Number

1253 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1532 Manufacture of starches and starch products

Column Code	Row Code	Sector Name
1117-04		**Vegetable oils and meal**
	1117-041	**Vegetable oil**
	1117-042	**Cooking oil**
	1117-043	**Vegetable meal**

(Ministry or agency in charge)

Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for hardened oils (edible oils) listed among those specified in "Vegetable oils and fats" under Industry Group Number 1281, "Edible oils and fats" under Industry Group Number 1283, and "Fatty acids, hydrogenated oils and glycerin" under Industry Group Number 2051 of the Standard Industrial Classification for Japan

The competing sector of the other sector's scrap and by-products (fruit juice strained lees, vegetable scrap) is "Vegetable meal".

(Corresponding ISIC)
Class 1514 Manufacture of vegetable and animal oils and fats

(Given examples)
Vegetable oils and fats: Edible rape seed oil, edible bean oil, non-edible vegetable oils (linseed oil, castor oil)

Processed oils and fats: Margarine, shortening

Vegetable meal: Rape seed oil lees, bean oil lees, rice bran, other oil lees

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Column Code	Row Code	Sector Name
1117-05	**1117-051**	**Animal oils and fats**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Animal oils and fats" listed under Industry Number 1282 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1511 Production, processing and preserving of meat and meat products

Class 1514 Manufacture of vegetable and animal oils and fats

(Given examples)
Animal oils and fats, refined lard, fish oils

(Changes)

1 Only the "fish oils" section of "1113-05, -051 Fish oils and fish lees" that appeared in the 1995 I-O Tables was integrated into this sector.

2 The numbers "1112-03, 031" that appeared in the 1995 I-O Tables were changed to "1117-05, -051."

(Notes)

This sector covers production activities for non-edible animal oils, their processing and refining, and the production of edible animal oils and fats.

Column Code	Row Code	Sector Name
1117-06	**1117-061**	**Condiments and seasonings**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Seasonings" listed under Group Number 124 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1549 Manufacture of other food products n.e.c.

(Given examples)
Soybean paste, soy sauce, edible amino-acids, sauce, mayonnaise, tomato ketchup, tomato puree, edible acids, instant curry, glutamic acid soda, spices, soup, fermented seasonings, floverings, gravy sauce, soba soup, rice and tea, toppings, instant soy bean soup, clear soup, mayonnaise by-products (albumen)

(Changes)
The code numbers "1117-05, -051" that appeared in the 1995 I-O Tables were changed to "1117-06, -061."

Column Code	Row Code	Sector Name
1119-01	**1119-011**	**Prepared frozen foods**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Precooked frozen foods" listed under Industry Number 1297 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1549 Manufacture of other food products n.e.c.

(Given examples)
Prepared frozen fried foods (croquettes, pork steak, fried fish), prepared frozen rice and grain, prepared frozen hamburgers, prepared frozen meat balls with rice powder covering

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Column Code	Row Code	Sector Name
1119-02	**1119-021**	**Retort foods**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Retort foods" listed among those specified in "Food and related products, n.e.c." under Industry Number 1299 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1549 Manufacture of other food products n.e.c.

(Given examples)
Retort foods (Curry, bean curd flover, meat sauce, soup)

Column Code	Row Code	Sector Name
1119-03	**1119-031**	**Dishes, sushi, and lunch boxes**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for sushi and lunch boxes listed among those specified as "Side-dish foods" under Industry Number 1298 and "Food and related products n.e.c." listed under Industry Number 1299 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1549 Manufacture of other food products n.e.c.

(Given examples)
Side-dishes, sushi, lunch boxes

Column Code	Row Code	Sector Name
1119-04	**1119-041**	**School lunch (public schools) ★★**

(Ministry or agency in charge)
Ministry of Education, Culture, Sports, Science and Technology

(Definition, Scope)
The production activities for school meals provided for school children at compulsory public schools, in accordance with the "School Meals Law" (No. 160 of 1954), as well as the production activities of providing meals by school meals centers and food processing businesses that are assigned by municipal school meals committees belonging to the "Delicatessen stores" specifications listed under Industry Number 5692 of the Standard Industrial Classification for Japan

(Notes)

1 School meals programs shall be basically implemented by the schools themselves. However, in reality there are cases in which school meals are provided by school organizations or by external organizations such as school meals centers and so forth that have been contracted. Confusion may arise if the classification is made according to meal service providers, and therefore it is made according to the educational entity that is supposed to provide the school meals service: either "public school" or "private school."

2 In the 1995 I-O tables, this sector was separately described from the column and row numbers of "1119-09, -099 Other foods" that appeared in the 1990 I-O Tables.

3 The Ministry of Agriculture, Forestry and Fisheries took charge of this sector up until the 1995 I-O Tables, but the Ministry of Education, Culture, Sports, Science and Technology assumed responsibility for this sector in the 2000 I-O tables.

Column Code	Row Code	Sector Name
1119-05	**1119-051**	**School lunch (private schools) ★**

(Ministry or agency in charge)
Ministry of Education, Culture, Sports, Science and Technology

(Definition, Scope)
The production activities for school meals provided for school children at compulsory private schools, in accordance with the "School Meals Law" (No. 160 of 1954), as well as the production activities of providing meals by school meals centers and food processing businesses that are assigned by municipal school meals committees belonging to the "Delicatessen stores" specifications listed under Industry Number 5692 of the Standard Industrial Classification for Japan

(Notes)
Same as "1119-04, -041 School meals (public schools)"

Column Code	Row Code	Sector Name
1119-09	**1119-099**	**Other foods**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Miscellaneous livestock products" excluding edible fowl listed under Industry

Number 1219, "Baking powder, yeast and other leavening compounds" listed under Industry Number 1291, "Malt and malt extract" listed under Industry Number 1294, "Soy bean curd ("tofu") and fried bean curd ("aburage") listed under Industry Number 1295, "Sweet bean paste ("anko") and related products" listed under Industry Number 1296, and "Food and related products, n.e.c." excluding soybean milk, instant cocoa, retort foods, sushi, lunch boxes, sandwiches, and prepared breads listed under Industry Number 1299 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1549 Manufacture of other food products n.e.c.

(Given examples)
Tofu, aburage (fried bean curd), nama-age, ganmodoki, nama-an (sweet bean paste), konnyaku (jelly), natto (fermented soybeans), mugicha (barley tea), ripened bananas, juice powder, rice cakes

Column Code	Row Code	Sector Name
1121-01	**1121-011**	**Refined sake**

(Ministry or agency in charge)
Ministry of Finance

(Definition, Scope)
The production activities for "Rice wine 'sake'" listed under Industry Number 1323 and the production activities for mirin as specified in "Distilled, rectified and blended liquors" listed under Industry Number 1324 of the Standard Industrial Classification for Japan

(Corresponding ISIC))
Class 1551 Distilling, rectifying and blending of spirits; ethyl alcohol production from fermented materials

Class 1552 Manufacture of wines

(Given examples)
Refined sake, mirin, sake lees, mirin lees

Column Code	Row Code	Sector Name
1121-02	**1121-021**	**Beer**

(Ministry or agency in charge)
Ministry of Finance

(Definition, Scope)
The production activities for "Malt liquors" listed under Industry Number 1322 and the production of low-malt beer as specified in "Distilled, rectified and blended liquors" listed under Industry Number 1324 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1551 Distilling, rectifying and blending of spirits; ethyl alcohol production from fermented materials

Class 1553 Manufacture of malt liquors and malt

(Given examples)
Beer, hops, beer lees, dry yeast, fresh yeast, low-malt beer

(Notes)
In the 1995 I-O Tables the "low-malt beer" stipulated in Clause 1 of Article 4 of the Liquor Tax Law was added to the detailed classification of "Miscellaneous liquor" in "1121-09, -99 Other liquors."

Column Code	Row Code	Sector Name
1121-03	**1121-031**	**Whisky and brandy**

(Ministry or agency in charge)
Ministry of Finance

(Definition, Scope)
The production activities for whiskey and brandy listed among those of "Distilled, rectified and blended liquors" specified under Industry Number 1324 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1551 Distilling, rectifying and blending of spirits; ethyl alcohol production from fermented materials

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Column Code	Row Code	Sector Name
1121-09	**1121-099**	**Other liquors**

(Ministry or agency in charge)
Ministry of Finance

(Definition, Scope)
The production activities for "Wine" listed under Industry Number 1321 and "Distilled, rectified and blended liquors," excluding the production of whiskey, brandy, mirin, and low-malt beer, listed under Industry Number 1324 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 1551 Distilling, rectifying and blending of spirits; ethyl alcohol production from fermented materials

Class 1552 Manufacture of wines

(Given examples)
Fruit liquors, synthetic sake, shochu, spirits, liquors, miscellaneous liquors except for low-malt beer, additive alcohol

(Changes)
The entry "1121-03, -031 additive alcohol" that appeared separately in the 1995 I-O Tables was integrated into this sector.

(Notes)
The "low-malt beer" stipulated in Clause 1 of Article 4 of the Liquor Tax Law was deleted from the detailed classification of "miscellaneous liquor" in the 1995 I- O Tables.

Column Code	Row Code	Sector Name
1129-01	**1129-011**	**Tea and roasted coffee**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Tea and coffee" listed under Group Number 133 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1549 Manufacture of other food products n.e.c.

(Given examples)
Green tea, Tea, Chinese tea, Coffee

(Notes)
Coffee drinks, tea drinks and Chinese tea drinks are

classified under "1129-02, -021 Soft drinks." Barley tea is classified under "1119-09, -099 Other foods." Cocoa is classified under "1115-03, -031 Confectionery."

Column Code	Row Code	Sector Name
1129-02	**1129-021**	**Soft drinks**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Soft drinks and carbonated water" listed under Group Number 131 and the production of soybean milk listed among the production activities for "Food and related products, n.e.c." specified in Industry Number 1299 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1513 Processing and preserving of fruit and vegetables

Class 1554 Manufacture of soft drinks; production of mineral waters

(Given examples)
Cider, lemon soda, coke drinks, flavor soda drinks, other soda drinks, fruit drinks, coffee drinks, tea drinks, Chinese tea drinks, sports drinks, mineral waters, soybean milk

(Notes)
Fermented milk and lactic acid beverages are classified in "1112-03 Dairy farm products" and "1112-032 Dairy products." Vegetable juices, undiluted condensed fruit juices, and natural fruit juices are classified in "1116-01, -011 Bottled or canned vegetables and fruits."

Column Code	Row Code	Sector Name
1129-03	**1129-031**	**Manufactured ice**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Manufactured ice" listed under Group Number 134 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 1554 Manufacture of soft drinks; production of mineral waters

(Given examples)
Salable ice

Column Code	Row Code	Sector Name
1131-01	**1131-011**	**Feeds**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Balanced compound feeds" listed under Industry Group Number 1361 and "Elemental feeds" listed under Industry Group Number 1362 of the Standard Industrial Classification for Japan

This sector is the competing sector of the other sector's scrap and by-products (meat scrap, cocoon scrap and by-products).

(Corresponding ISIC)
Class 1512 Processing and preserving of fish and fish products

Class 1533 Manufacture of prepared animal feeds

(Given examples)
Feed for livestock and poultry, feed for fish farming, pet foods, fish meal

(Changes)
Only the entry "fish meal," from "1113-05, -051 Fish oil and meal" that appeared in the 1995 I-O Tables, is integrated into this sector.

Column Code	Row Code	Sector Name
1131-02	**1131-021**	**Organic fertilizers, n.e.c.**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Organic fertilizers" listed under Industry Number 1363 of the Standard Industrial Classification for Japan

(Given examples)
Animal-based organic fertilizers (fish meal, meat and bone meal, processed poultry manure), plant-based organic fertilizers (rape seed oil lees, rice bran oil lees, cotton oil lees), others (manure)

(Notes)
"Excluding ones separately shown" means manure and poultry droppings that are included in "0121-01, -011 Other dairy farming products," "0121-02, -021 Hen eggs," "0121-03, -031 Fowls and broilers," "0121-04, -041 Hogs," and "0121-05, -051 Beef cattle."

Column Code	Row Code	Sector Name
1141-01	**1141-011**	**Tobacco**

(Ministry or agency in charge)
Ministry of Finance

(Definition, Scope)
The production activities of "Tobacco manufactures" listed under Group Number 135 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 0111 Growing of cereals and other crops n.e.c.

Class 1600 Manufacture of tobacco products

(Given examples)
Rolled cigarettes, cigars, loose tobacco, pipe tobacco

(Notes)
The classification was based on individual companies until the 1995 I-O Tables were published. It is now based on the production activities of companies.

4 Textile products, pulp, paper, wood products, printing, publishing

Column Code	Row Code	Sector Name
1511-01	**1511-011**	**Fiber yarns**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities of "Silk reeling plants" listed under Group Number 141, "Spinning mills" listed under Group Number 142, and for "Twisting and bulky yarns" listed under Group Number 143 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1711 Preparation and spinning of textile fibres; weaving of textiles

(Given examples)
Natural fiber: Silk, by-silk fiber

Cotton fiber: cotton, mixed cotton fiber

Chemical fiber: Viscose staple fiber, cupra staple fiber, acetate fiber, vinylon fiber, nylon fiber, acrylic fiber, polyester fiber, polypropylene fiber

Wool: Raw wool fiber, spun wool fiber

Other fiber: Silk fiber, saku-fiber, noil silk yarn, hemp fiber, wa-fiber, twisted yarn, bulk processed fiber

(Changes)
The sectors "1511-01, -011 Raw silk" and "1511-02, -021 Fiber yarns" that appeared in the 1995 Tables have been integrated into the sector "1511-01, -011 Spun fiber."

(Notes)
The sectors "1511-02, -021 Cotton," "1511-03, -031 Chemical fiber," "1511-04, -041 Wool," and "1511-09, -091 Other fibers" that appeared in the 1990 Tables were integrated in the 1995 Tables.

Column Code	Row Code	Sector Name
1512-01	**1512-011**	**Cotton and staple fiber fabrics (incl. fabrics of synthetic spun fibers)**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities of "Fabric mills, woven cotton and spun rayon" listed under Industry Number 1441 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1711 Preparation and spinning of textile fibres; weaving of textiles

Class 1729 Manufacture of other textiles n.e.c.

(Given examples)
Cotton fabrics, viscose staple fiber fabrics, chemical fiber fabrics, cotton, staple fiber, and synthetic fiber textile

(Notes)

(1) Fabrics of 13.0 cm or less width shall be classified as narrow width fabrics in the sector "1519-099 Other fabricated textile products." (This criteria applies throughout the textile products sector.)

(2) The production value includes those products commissioned from non-manufacturing businesses. (This applies throughout the textile products sector.)

Column Code	Row Code	Sector Name
1512-02	**1512-021**	**Silk and artificial silk fabrics (inc. fabrics of synthetic filament fibers)**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities of "Fabric mills, woven silk and rayon" listed under Industry Number 1442 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1711 Preparation and spinning of textile fibres; weaving of textiles

Class 1729 Manufacture of other textiles n.e.c.

(Given examples)
Silk textiles, silk fabrics, artificial silk fabrics, synthetic long filament fiber fabrics, chemical fiber tire cord

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Column Code	Row Code	Sector Name
1512-03	**1512-031**	**Woolen fabrics, hemp fabrics, and other fabrics**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities of "Fabric mills, woven woolen and worsted" listed under Industry Number 1443, "Fabric mills, woven hard and bast fiber" listed under Industry Number 1444, and "Miscellaneous woven fabric mills" listed under Industry Number 1449 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1711 Preparation and spinning of textile fibres; weaving of textiles

(Given examples)
Woolen fabrics: Woolen fabrics, woven woolen fabrics,

woolen-like synthetic fiber fabrics, woven felt

Hemp fabrics: Hemp fabrics, ramie fabrics, jute fabrics

Other fabrics: Horse hair, moquette, hemp-like synthetic fiber fabrics

(Notes)
The sectors "1512-03 Woolen fabrics" and "1512-09 Other fabrics" that appeared in the 1990 I-O Tables were integrated into the sector "1512-03 Woolen fabrics, hemp fabrics and other fabrics" in the 1995 I-O Tables. Furthermore, the sectors "1512-031 Woolen fabrics" and "1519-099 Other fabrics, n.e.c." were integrated into the sector "1512-031 Woolen fabrics, hemp fabrics and other fabrics." The sector "1512-091 Narrow width fabricated textile" was integrated into the sector "1519-099 Other fabricated textile products."

Column Code	Row Code	Sector Name
1513-01	**1513-011**	**Knitting fabrics**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities of "Knit fabrics mills" listed under Group Number 145 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1730 Manufacture of knitted and crocheted fabrics and articles

(Given examples)
Circular knitted textiles, knitted textiles (horizontal), knitted textiles (vertical)

(Notes)
The item "Knitted textile" in the sector "1513-01, -011 Knitted products" that appeared in the 1990 I-O Tables was removed and entered in a newly established sector. ("Knitted textile" was previously treated as an intermediate product, but is now treated as a product.)

Column Code	Row Code	Sector Name
1514-01	**1514-011**	**Yarn and fabric dyeing and finishing(processing on commission only)**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Dyed and finished textiles" listed under Group Number 146 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1712 Finishing of textiles

(Notes)
The production value is split into the market value (raw

materials purchase value) and the trade commission (supplied materials value). However, this sector is defined to cover only the production activities for dyeing and finishing that does not purchase the raw materials, and the raw materials purchase value is deducted from the market value.

Column Code	Row Code	Sector Name
1519-01	**1519-011**	**Ropes and nets**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Rope and netting" listed under Group Number 147 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1723 Manufacture of cordage, rope, twine and netting

(Given examples)
Ropes, cordage, twine, fishing net, net cloth other than fishing net

Column Code	Row Code	Sector Name
1519-02	**1519-021**	**Carpets and floor mats**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Carpets and other textile mats" listed under Industry Number 1496 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1722 Manufacture of carpets and rugs

(Given examples)
Carpets, rugs, turf carpet, palm-leaf flooring, floor padding and fabricated flooring textile

Column Code	Row Code	Sector Name
1519-03	**1519-031**	**Fabricated textiles for medical use**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The production activities for "Textile-made sanitary materials" listed under Industry Number 1498 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1729 Manufacture of other textiles n.e.c.

(Given examples)
Gauze, bandage, absorbent cotton, sticking plaster, cotton swab

(Notes)
Paper products for sanitary use are classified under "1829-01, -011 Paper textile for medical use."

Column Code	Row Code	Sector Name
1519-09	**1519-099**	**Other fabricated textile products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Lace and other textile goods" listed under Group Number 148, "Scouring and combing plants" listed under Industry Number 1491, "Scratching hard and bast fibers" listed under Industry Number 1492, "Shearing plants" listed under Industry Number 1493, "Wadding" listed under Industry Number 1494, "Felt and bonded fabrics" listed under Industry Number 1495, "Coated, water-proof fabrics" listed under Industry Number 1497, and "Textile mill products n.e.c." listed under Industry Number 1499 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1711 Preparation and spinning of textile fibres; weaving of textiles

Class 1723 Manufacture of cordage, rope, twine and netting

Class 1729 Manufacture of other textiles n.e.c.

(Given examples)
Lace textile, strings, narrow width fabricated textile, other fabricated products "Ririan" (knitted sting), moll, tasseles, washed wool, tops, bedding cotton, cotton fabric, felt, non-fabricated cloth, coated water-proof fabricated textiles

(Notes)
The item "Cotton fabric" listed in the sector "1529-01 Cotton fabric and bedding" that appeared in the 1990 I-O Tables was integrated into the sector "1519-09 Other fabricated textile products" in the 1995 I-O Tables.

The items of "Cotton fabric" listed in the sectors "1512-091 Narrow width fabricated textile" and "1529-011 Cotton fabrics and bedding" were integrated into the sector "1519-099 Other fabricated textile products."

Column Code	Row Code	Sector Name
1521-01	**1521-011**	**Woven fabric apparel**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Textile outer garments and shirts, including bonded fabrics and lace, except Japanese style" listed under Group Number 151, "Textile underwear" listed under Industry Number 1531, "Textile nightclothes"

listed under Industry Number 1533, and "Japanese style apparel" listed under Industry Number 1551 of the Standard Industrial Classification for Japan, as well as production-related activities in the production and retailing of apparel, and production activities outsourced by non-manufacturers.

(Corresponding ISIC)
Class 1810 Manufacture of wearing apparel, except fur apparel

(Given examples)
Men's apparel, women's apparel, infant's clothing, working clothes, sporting gear, school uniforms, white shirts, underwear, pajamas, kimono and associated accessories, Japanese clothing accessories like mufflers

(Notes)
The sector name "Apparel" that appeared in the 1990 I-O Tables was changed to "Woven fabric apparel" in the 1995 I-O Tables. If the Industry Statistics Table (by commodity) is used for estimated production value, production value for non-manufacturers (trading firms) cannot be ascertained. However, the production value may be estimated by the following equation given that the "trade margin revenue minus commissioned production cost" in the industrial statistics survey is the commissioned value from external businesses (trading firms). Fabric for apparel is most likely to be purchased by trading firms.

Production value due to retailers = Commission value outsourced by non-retailers / [Processing price / Production price]

Column Code	Row Code	Sector Name
1521-02	**1521-021**	**Knitted apparel**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Knitted garments and shirts" listed under Group Number 152, "Knitted underwear" listed under Industry Number 1532, "Knitted nightclothes" listed under Industry Number 1534, and "Foundation garments" listed under Industry Number 1535 of the Standard Industrial Classification for Japan; outsourced production commissioned from non-manufacturers is included in this sector.

(Corresponding ISIC)
Class 1730 Manufacture of knitted and crocheted fabrics and articles

(Given examples)
Men's knitted apparel, women's knitted apparel, knitted sporting wear, knitted swimming gear, knitted infant apparel, knitted underwear, knitted pajamas, foundation garments

(Notes)
The sector "1513-01, -011 Knitted products" that appeared in the 1990 I-O Tables was split and a new sector, "Knitted apparel," was established in the 1995 I-O Tables. Knitted socks and gloves that were included in the sector "1513-01, -011 Knitted products" were removed and integrated into the sector "1522-09, -099 Other wearing apparel and clothing accessories." Furthermore, "foundation garments" that were included in the sector "1521-01 Wearing apparel" were integrated into this sector.

Column Code	Row Code	Sector Name
1522-09	**1522-099**	**Other wearing apparel and clothing accessories**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Fur apparel and apparel accessories" listed under Group Number 154, "Japanese socks (tabi)" listed under Industry Number 1552, and "Other textile apparel and accessories" listed under Group Number 156 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1730 Manufacture of knitted and crocheted fabrics and articles

Class 1810 Manufacture of wearing apparel, except fur apparel

Class 1820 Dressing and dyeing of fur; manufacture of articles of fur

(Given examples)
Hats, fur apparel and accessories, neck-ties, scarves, neckerchiefs, handkerchiefs, tabi, leather apparel, fabric footwear

(Notes)
Gloves and socks were removed from "1512-01, -011 Knitted products" that appeared in the 1990 I-O Tables and integrated into the 1995 I-O Tables. The relating code number was changed from "1522-01, -011" to "1522-09, -099."

Column Code	Row Code	Sector Name
1529-01	**1529-011**	**Bedding**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Bedding" listed under Industry Number 1591 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1721 Manufacture of made-up textile articles, except apparel

(Given examples)
Futons, down futons, futon covers, sheets, cotton blankets, pillows

(Notes)
Bedding was removed from the sector "1529-01, -011 Fabricated textile and bedding" that appeared in the 1990 I-O Tables and entered in a newly established sector in the 1995 I-O Tables. Fabricated textile was integrated into "1519-099 Other fabricated textile products."

Column Code	Row Code	Sector Name
1529-09	**1529-099**	**Other ready-made textile products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Canvas products" listed under Industry Number 1592, "Textile bags" listed under Industry Number 1593, "Embroidery" listed under Industry Number 1594, "Towels" listed under Industry Number 1595, and "Fabricated textile products, n.e.c." listed under Industry Number 1599 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1721 Manufacture of made-up textile articles, except apparel

(Given examples)
Canvas products (sheets, tents, and awnings), fabricated bags (hemp sack, cotton sack, and synthetic fiber sack), embroidery products, towels, curtains, tablecloths

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Column Code	Row Code	Sector Name
1611-01	**1611-011**	**Timber**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and fisheries

(Definition, Scope)
The production activities of "General sawing and planning mills" listed under Industry Number 1611 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2010 Sawmilling and planing of wood

(Given examples)
Timber board, hikiwari, hikikado, scrap

Column Code	Row Code	Sector Name
1611-02	**1611-021**	**Plywood**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and fisheries

(Definition, Scope)
The production activities for "Veneer wood" listed under Industry Number 1612, "Flooring mills" listed under Industry Number 1617, and "Plywood" listed under Industry Number 1622 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 2010 Sawmilling and planing of wood

Class 2021 Manufacture of veneer sheets; manufacture of plywood, laminboard, particle board and other panels and boards

(Given examples)
Single board, floorings, general plywood, special plywood, laminboards

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Column Code	Row Code	Sector Name
1611-03	**1611-031**	**Wooden chips**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and fisheries

(Definition, Scope)
The production activities of "Wood chip mills" listed under Industry Number 1618 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2010 Sawmilling and planing of wood

Column Code	Row Code	Sector Name
1619-09		**Other wooden products**
	1619-091	**Wooden products for construction**
	1619-099	**Other wooden products, n.e.c.**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Shingle wood" listed under Industry Number 1613, "Wooden shavings and chips, except chipping boxes and match-boxes" listed under Industry Number 1614, "Excelsior mills" listed under 1615, "Cooperage stock mills" listed under Industry Number 1616, "Sawing and planing mills, n.e.c." listed under Industry Number 1619, "Millwork, except lumber for fixtures" listed under Industry Number 1621, "Prefabricated wooden buildings and structural members" listed under Industry Number 1623, "Particle board" listed under Industry Number 1624, "High-grade decorative boards and wood" listed under Industry Number 1625, "Wooden, bamboo and rattan containers" listed under Group Number 163, and "Miscellaneous manufacture of wood products, including bamboo and rattan" listed under Group Number 169 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1920 Manufacture of footwear

Class 2021 Manufacture of veneer sheets; manufacture of plywood, laminboard, particle board and other panels and boards

Class 2022 Manufacture of builders' carpentry and joinery

Class 2023 Manufacture of wooden containers

Class 2029 Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials

(Given examples)
Wooden products for construction: Fittings, pre-fabricated wooden parts, particle board, name plates, main pillars, stage pillars

Other wooden products, n.e.c.: Thin-sliced wooden pieces, barrels, tubs, bamboo, cane and "kiryu" containers, folding boxes, wooden boxes, frames, roll frames, Japanese barrels, western barrels, chemically treated wood, last, chopsticks, other bamboo products, cane and "kiryu" products, cork products

(Notes)
Cork products that were included in "3919-09, -099 Miscellaneous manufacturing products" in the 1990 I-O Tables were removed and integrated into this sector in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
1711-01	**1711-011**	**Wooden furniture and fixtures**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities (including the production portion of manufacturing and retailing businesses) of "Wooden furniture, except japanned" listed under Industry Number 1711, "Mattresses and box springs" listed under Industry Number 1713, "Furniture for religious purposes" listed under 172, "Japanese screens, clothes racks and bamboo shades" listed under Industry Number 1793, "Mirror frames and picture frames" listed under Industry Number 1794, and "Furniture and fixtures, n.e.c." listed under Industry Number 1799 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3610 Manufacture of furniture

(Given examples)
Desks, tables, chairs, sinks, cooking tables, dresser drawers, shelves, cupboards, cabinets for audio-visual equipment, wooden furniture like beds, mattresses combined with springs, religious articles, Japanese paper partitions, bamboo dress hangers, bamboo screens, mirror frames, picture frames

(Notes)
Stone and clay furniture, plastic furniture, glass furniture, and porcelain furniture are also included in this sector.

Column Code	Row Code	Sector Name
1711-02	**1711-021**	**Wooden fixtures**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities (including the production portion of manufacturing and retailing businesses) for "Sliding doors and screens" as listed under Group Number 173 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2022 Manufacture of builders' carpentry and joinery

(Given examples)
Window screens (wooden sliding doors and windows), paper sliding doors, paper screens

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Column Code	Row Code	Sector Name
1711-03	**1711-031**	**Metallic furniture and fixtures**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Metal furniture" listed under Industry Number 1712, "Office and store fixtures" listed under Industry Number 1791, and "Window and door screens and shades" listed under Industry Number 1792 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3610 Manufacture of furniture

(Given examples)
Desks, chairs, tables, beds, sinks, cooking ranges, gas ovens, shelves, metal furniture like cupboards, partitions, showcases, office fixtures like accordion style curtains, windows and door screens

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Column Code	Row Code	Sector Name
1811-01	**1811-011**	**Pulp**
	1811-012P	**Waste paper**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Pulp" listed under Group Number 181 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2101 Manufacture of pulp, paper, and paperboard

(Given examples)
Dissolved pulp, processing pulp

(Notes)
There is no competing sector that yields waste paper as its major product; therefore, a dummy sector showing the row number is created.

Column Code	Row Code	Sector Name
1812-01	**1812-011**	**Paper**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Paper" listed under Industry Number 1821, "Machine-made Japanese paper" listed under Industry Number 1823, and "Hand-made Japanese paper" listed under Industry Number 1824 of the Standard Industrial Classification for Japan. The sector also includes the production activities for washi (Japanese paper) used in currency printed by the Printing Bureau of the Ministry of Finance

(Corresponding ISIC)
Class 2101 Manufacture of pulp, paper and paperboard

(Given examples)
Paper for newspaper, printing and information paper, packaging paper, sanitary paper, other paper, hand-made Japanese paper, Japanese washi for bill on bankbote

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Column Code	Row Code	Sector Name
1812-02	**1812-021**	**Paperboard**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Paperboard" listed under Industry Number 1822 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2101 Manufacture of pulp, paper and paperboard

(Given examples)
Corrugated paper, white paper, colored paper, paper for construction use, other flat paper

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Column Code	Row Code	Sector Name
1813-01	**1813-011**	**Corrugated cardboard**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Corrugated board" listed under Industry Number 1832 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2102 Manufacture of corrugated paper and paperboard and of containers of paper and paperboard

(Given examples)
Corrugated cardboard (sheet)

Column Code	Row Code	Sector Name
1813-02	**1813-021**	**Coated paper and building (construction) paper**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Coated paper" listed under Industry Number 1831, and "Wall paper and sliding door ("fusuma") paper) listed under Industry Number 1833 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2101 Manufacture of pulp, paper and paperboard

(Given examples)
Insulating paper, insulating tape, asphalt-based coated paper, other coated paper, processed paper, wall paper, fusuma (paper wall) paper

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Column Code	Row Code	Sector Name
1821-01	**1821-011**	**Corrugated cardboard boxes**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Corrugated board boxes" listed under Industry Number 1853 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2101 Manufacture of pulp, paper, and paperboard

Column Code	Row Code	Sector Name
1821-09	**1821-099**	**Other paper containers**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Sacks for heavy weight shipping" listed under Industry Number 1851, "Square bottom paper bags" listed under Industry Number 1852, "Paperboard boxes and cups" listed under Industry Number 1854, and "Solid fiber and vulcanized fiber products" listed

under Industry Number 1855 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2102 Manufacture of corrugated paper and paperboard and of containers of paper and paperboard

Class 2109 Manufacture of other articles of paper and paperboard

(Given examples)
Cement sacks, packaging sacks for heavy use like rice and wheat sacks, shopping bags, paper sacks with rectangular bottoms, folded paper boxes, boxes made of paper and glue, paper tubes, paper cups, paper plates and other paper containers, solid fiber, vulcanized fiber containers

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Column Code	Row Code	Sector Name
1829-01	**1829-011**	**Paper textile for medical use**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Paper-made sanitary materials" listed under Industry Number 1893 and the production activities for paper textile materials and products for medical use as specified in "Pulp, paper and paper worked products, n.e.c." listed under Industry Number 1899 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2109 Manufacture of other articles of paper and paperboard

(Given examples)
Sanitary paper and cotton, sanitary paper supplies like sanitary cotton pulp, paper towels, paper diapers, sanitary supplies, paper supplies like tissue paper

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Column Code	Row Code	Sector Name
1829-09	**1829-099**	**Other pulp, paper, and processed paper products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Bookbinding cloth" listed under Industry Number 1834, "Paper products" listed under Group Number 184, "Cellophane" listed under Industry Number 1891, "Fiberboard" listed under Industry Number 1892, and "Pulp, paper and paper worked products, n.e.c." excluding production activities for sanitary paper materials and products listed under Industry Number 1899 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2109 Manufacture of other articles of paper and paperboard

(Given examples)
Paper and fabric book-binding cloth, office paper supplies, paper supplies for schools, paper supplies for home use, cellophane, paper tubes, paper string, paper tape

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Column Code	Row Code	Sector Name
1911-01	**1911-011**	**Newspapers**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities of "Newspaper industries" listed under Group Number 191 of the Standard Industrial Classification for Japan; revenue from advertisements is also included in the production value

(Corresponding ISIC)
Class 2212 Publishing of newspapers, journals, and periodicals

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Column Code	Row Code	Sector Name
1911-02	**1911-021**	**Printing, plate making, and book binding**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities of "Printing, except mimeograph printing industries" listed under Group Number 193, "Plate making for printing" listed under Group Number 194, "Bookbinding and printed matter" listed under Group Number 195, and "Service industries related to printing trade" listed under Group Number 199 of the Standard Industrial Classification for Japan, as well as the activities of the Printing Bureau of the Ministry of Finance for printing, plate-making, and book-binding; revenue from advertisements of the Printing Bureau, Ministry of Finance is included in the production value. Revenue of trade margins from general printing is not included in the production value because most of the activities are commissioned from similar businesses.

(Corresponding ISIC)
Class 2221 Printing

Class 2222 Service activities related to printing

(Given examples)
Letterpress printing, offset printing, lithographic printing (gravure), special printing, plate-making, gazette printing, currency printing

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Column Code	Row Code	Sector Name
1911-03	**1911-031**	**Publishing**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities of "Publishing industries" listed under Group Number 192 of the Standard Industrial Classification for Japan; the production value includes revenue from advertisements.

(Corresponding ISIC)
Class 2211 Publishing of books, brochures, musical books and other publications

Class 2212 Publishing of newspapers, journals, and periodicals

Class 2219 Other publishing

(Given examples)
Books, magazines, journals, other publications

5 Chemical products, petroleum, and coal products

Column Code	Row Code	Sector Name
2011-01	**2011-011**	**Chemical fertilizer**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Nitrogenous and phosphate fertilizers" excluding nitric acid, sodium nitrate, and sodium nitrite listed under Industry Number 2011, "Compound fertilizers" listed under Industry Number 2012, "Miscellaneous chemical fertilizers" listed under Industry Number 2019, and production activities for ammonium chloride as specified in "Soda" listed under Industry Number 2021 of the Standard Industrial Classification for Japan; scrap and by-products (ammonium sulfate and calcium silicate), which appeared in other sectors, consider this sector as a competitor.

(Corresponding ISIC)
Class 2412 Manufacture of fertilizers and nitrogen compounds

(Given examples)
Ammonia, ammonia water

Nitrogen fertilizer: Urea, ammonium nitrate, sodium nitrate

Other fertilizer: Sodium single superphosphate, fused phosphate fertilizer, sodium triple superphosphate, phosphrous fertilizer

Compound fertilizer: Ammonium phosphate (fertilizer use), high-grade chemical fertilizer, standard-grade chemical fertilizer, NK fertilizer, blended fertilizer

(Changes)
The column "2011-01, -011 Ammonia" and "2011-02, -021 Chemical fertilizers" that appeared in the 1995 I-O Tables were integrated into the sector "2011-01, -011 Chemical fertilizers."

(Notes)
The Column sectors "2011-02 Fertilizer" and "2011-03 Compound fertilizer" that appeared in the 1990 I-O Tables were combined into the sector "2011-02 Chemical fertilizers" in the 1995 I-O Tables. Furthermore, the row sectors were similarly integrated into the sector "2011-021 Chemical fertilizers."

Column Code	Row Code	Sector Name
2021-01		**Industrial soda chemicals**
	2021-011	**Soda ash**
	2021-012	**Caustic soda**
	2012-013	**Liquid chlorine**
	2021-019	**Other industrial soda chemicals**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Soda" excluding those of ammonium chloride listed under Industry Number 2021 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2411 Manufacture of basic chemicals, except fertilizers and nitrogen compounds

(Given examples)
Other industrial soda chemicals: Chlorine gas, gaseous hydrochloric acid, oxygen chloride bleaching powder, chlorinated lime solvent, sodium chlorate

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Column Code	Row Code	Sector Name
2029-01		**Inorganic pigment**
	2029-011	**Titanium oxide**
	2029-012	**Carbon black**
	2029-019	**Other inorganic pigments**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Inorganic pigments" listed under Industry Number 2023 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2411 Manufacture of basic chemicals, except fertilizers and nitrogen compounds

(Given examples)
Other inorganic pigments: Zinc oxide, ferric oxide, chrome yellow, minium, lead oxide, cadminium pigment, ginshu lacquer

(Notes)
The row code of this sector was changed from "2029-02" to "2029-01" in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
2029-02	**2029-021**	**Compressed gas and liquefied gas**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Compressed and liquefied gases" listed under Industry Number 2024 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2411 Manufacture of basic chemicals, except fertilizers and nitrogen compounds

(Given examples)
Oxygen, nitrogen, argon, hydrogen, acetylene, carbon dioxide

(Notes)
The row code of this sector was changed from "2029-03" to "2029-02" in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
2029-03		**Salt**
	2029-031	**Crude salt**
	2029-032	**Salt**

(Ministry or agency in charge)
Ministry of Finance

(Definition, Scope)
The production activities for "Salt" listed under Industry Number 2025 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2429 Manufacture of other chemical products n.e.c.

(Given examples)
Salt, table salt, sea water, bittern

(Notes)

1 The sector "Foods" in the basic classification of the 1990 I-O Tables was changed to "Chemical products" in the 1995 I-O Tables.

2 Rock salt is classified under "0629-09, -099 Other non-metallic ores."

Column Code	Row Code	Sector Name
2029-09	**2029-099**	**Other industrial inorganic chemicals**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Nitrogenous and phosphatic fertilizers" listed under Industry Number 2011, excluding nitric acid, sodium nitrate, and sodium nitrite, and also the activities of both the "Electric health industry" listed under Industry Number 2022 and for "Miscellaneous industrial inorganic chemicals" listed under Industry Number 2029, excluding catalysts, of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2411 Manufacture of basic chemicals, except fertilizers and nitrogen compounds

Class 2412 Manufacture of fertilizers and nitrogen compounds

(Given examples)
Sulphuric acid salt, sulfide, fluoride, phosphorite, potassium, barium, activated charcoal

(Notes)
The sector "2029-01, -011 Sulfuric acid" that appeared in

the 1990 I-O Tables was integrated into this sector in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
2031-01		**Petrochemical basic products**
	2031-011	**Ethylene**
	2031-012	**Propylene**
	2031-019	**Other petrochemical basic products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for primary products created by the dissolution of naphtha such as ethylene, propylene, butane, butylene, butadiene, paraffin, dissolved gasoline, and top gas as specified in "Basic petrochemicals, including derivatives produced from a process production" listed under Industry Number 2031 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2320 Manufacture of refined petroleum products

Column Code	Row Code	Sector Name
2031-02		**Petrochemical aromatic products (except synthetic resin)**
	2031-021	**Pure benzene**
	2031-022	**Pure toluene**
	2031-023	**Xylene**
	2031-029	**Other petrochemical aromatic products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for aromatic solvent, and products created by reformate and dissolved gasoline, such as pure benzene, pure toluene, and xylene (refined o-xylene, m-xylene, and refined p-xylene) specified in "Basic petrochemicals, including derivatives produced from a process production" listed under Industry Number 2031 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 2411 Manufacture of basic chemicals, except fertilizers and nitrogen compounds

(Notes)
In the 1995 I-O Tables the names of sectors were changed as follows: from "pure benzol" to "pure benzene; " from "pure toluol" to "pure toluene;" and from "xylol" to "xylene."

Column Code	Row Code	Sector Name
2032-01		**Aliphatic intermediates**
	2032-011	**Synthetic alcohol**
	2032-012	**Acetic acid**
	2032-013	**Ethylene dichloride**
	2032-014	**Acrylonitrile**
	2032-015	**Ethylene glycol**
	2032-016	**Acetic acid vinyl monomer**
	2032-019	**Other aliphatic intermediates**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Aliphatic intermediates, including aliphatic solvent" listed under Industry Number 2032 of the Standard Industrial Classification for Japan; products in this sector are derivatives of olefin such as ethylene, propylene, and butylene.

(Corresponding ISIC)
Class 2411 Manufacture of basic chemicals, except fertilizers and nitrogen compounds

(Given examples)
Synthetic alcohol: Ethyl alcohol, high-grade synthetic alcohol (C9 or higher), isopropyl alcohol, compound octanol, compound butanol

Other aliphatic intermediates: Ethylene oxide, vinyl chloride (monomer)

Column Code	Row Code	Sector Name
2032-02		**Cyclic intermediates**
	2032-021	**Styrene monomer**
	2032-022	**Synthetic phenol**
	2032-023	**Terephthalic acid (high purity)**
	2032-024	**Capro lactam**
	2032-029	**Other cyclic intermediates**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for cyclic intermediates as specified in "Cyclic intermediates, synthetic dyes and organic pigments" listed under Industry Number 2036 of the Standard Industrial Classification for Japan; products in this sector are derivatives of benzene, toluene, and xylene.

(Corresponding ISIC)
Class 2411 Manufacture of basic chemicals, except fertilizers and nitrogen compounds

(Given examples)
Other cyclic intermediates: alkylbenzene, phthalic anhydride, dimethyl terephthalate, cyclohexane

Column Code	Row Code	Sector Name
2033-01	**2033-011**	**Synthetic rubber**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Synthetic rubber" listed under Industry Number 2038 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2413 Manufacture of plastics in primary forms and of synthetic rubber

Column Code	Row Code	Sector Name
2039-01	**2039-011**	**Methane derivatives**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Methane derivatives" listed under Industry Number 2033 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2411 Manufacture of basic chemicals, except fertilizers and nitrogen compounds

(Given examples)
Refined methanol, formalin, methyl chloride, CFC gases

(Notes)
The sector code number was changed from "2039-02, -021" to "2039-01, -011" in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
2039-02	**2039-021**	**Oil and fat industrial chemicals**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Fatty acids, hydrogenated oils and glycerin," but excluding those of hardened edible oils, as listed under Industry Number 2051 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2424 Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations

(Given examples)
Hardened oils (industrial use), fatty acids, glycerin

(Notes)
The sector code number was changed from "2039-03, -031" to "2039-02, -021" in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
2039-03	**2039-031**	**Plasticizers**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for plasticizers specified in "Miscellaneous industrial organic chemicals" listed under Industry Number 2039 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2411 Manufacture of basic chemicals, except fertilizers and nitrogen compounds

(Given examples)
Phthalate plasticizer, fatty-acid plasticizer, phosphorus plasticizer, adipic acid plasticizer, polyester plasticizer, epoxy plasticizer

(Notes)
The sector code number was changed from "2039-04, -041" to "2039-03, -031" in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
2039-04	**2039-041**	**Synthetic dyes**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for synthetic dyes (including pigment resin color) as specified in "Cyclic intermediates, synthetic dyes and organic pigments" listed under Industry Number 2036 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2411 Manufacture of basic chemicals, except fertilizers and nitrogen compounds

(Notes)
The sector code number was changed from "2039-05, -051" to "2039-04, -41" in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
2039-09	**2039-099**	**Other industrial organic chemicals**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities of the "Fermentation industry" listed under Industry Number 2034, "Coal-tar products" listed under Industry Number 2035, "Cyclic intermediates, synthetic dyes and organic pigments" (excluding lake) listed under Industry Number 2036, and "Miscellaneous industrial

organic chemicals" (excluding plasticizers) listed under Industry Number 2039 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 1551 Distilling, rectifying, and blending of spirits; ethyl alcohol production from fermented materials

Class 2411 Manufacture of basic chemicals, except fertilizers and nitrogen compounds

(Given examples)
Pure benzene (non-petroleum), creosote oil, pitch, naphthalene, ethyl alcohol, lake, rubber accelerator, rubber antioxidant, high-grade alcohol (fatty products)

(Notes)
The sector "2039-01, -011 Coal tar products" that appeared in the 1990 I-O Tables was integrated into this sector in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
2041-01	**2041-011**	**Thermo-setting resins**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for phenol resin, urea resin, melamine resin, unsaturated polyester resin, alkyd resin, epoxy resin, and silica resin as specified in "Plastics" listed under Industry Number 2037 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2413 Manufacture of plastics in primary forms and of synthetic rubber

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Column Code	Row Code	Sector Name
2041-02		**Thermoplastic resins**
	2041-021	**Polyethylene (low density)**
	2041-022	**Polyethylene (high density)**
	2041-023	**Polystyrene**
	2041-024	**Polypropylene**
	2041-025	**Vinyl chloride resins**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for polyethylene, polystyrene, polypropylene, and vinyl chloride resin as specified in "Plastics" listed under Industry Number 2037 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2413 Manufacture of plastics in primary forms and of synthetic rubber

(Notes)
EVA (Ethylene-vinyl acetate copolymers) are classified under "2041-021 Polyethylene (low density)."

Column Code	Row Code	Sector Name
2041-03	**2041-031**	**High functionality resins**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for polyamide resin, polycarbonate, polyacetate, polyethylene terephthalate (excl. fiber use), polybutylene terephthalate, and modified polyphenylene ether specified in "Plastics" listed under Industry Number 2037 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2413 Manufacture of plastics in primary forms and of synthetic rubber

(Given examples)
Polyamide resin, polycarbonate, polyacetate, polyethylene terephthalate (excluding fiber use), polybutylene terephthalate, modified polyphenylene ether

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Column Code	Row Code	Sector Name
2041-09	**2041-099**	**Other resins**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities of synthetic resins that are not elsewhere classified such as petroleum resin, methacrylic resin, polyvinyl alcohol, vinyliden chloride resin, fluorin resin, acetyl cellulose, and polyethylene terephthalate (fiber use) specified in "Plastics" listed under Industry Number 2037 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2413 Manufacture of plastics in primary forms and of synthetic rubber

(Given examples)
Petroleum resin (polybuten, petroleum resin), methacrylic resin (formed materials, plate materials), polyvinyl alcohol, vinyliden chloride resin, fluorocarbon resin, polyethylene terephthalate (fiber use)

Column Code	Row Code	Sector Name
2051-01	**2051-011**	**Rayon and acetate**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Rayon, acetate fibers" listed under Industry Number 2041 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2430 Manufacture of man-made fibres

(Given examples)
Viscose fiber, cupra fiber, acetate fiber

Column Code	Row Code	Sector Name
2051-02	**2051-021**	**Synthetic fibers**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Synthetic fibers" listed under Industry Number 2042 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2430 Manufacture of man-made fibres

(Given examples)
Nylon fiber, polyester fiber, acrylic fiber, vinyl-nylon fiber, polypropylene fiber

Column Code	Row Code	Sector Name
2061-01	**2061-011**	**Medicaments**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The production activities for "Drugs and Medicines" listed under Group Number 206 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2421 Manufacture of pesticides and other agro-chemical products

Class 2423 Manufacture of pharmaceuticals, medicinal chemicals and botanical products

Class 2429 Manufacture of other chemical products n.e.c.

(Given examples)
Ethical pharmaceuticals (cardiovascular use, antibiotic use), consumer products (cold remedies, analgesic agents, deodorants, repellents, pesticides, disinfectants, ointments, vitamin tablets, calcium tablets), veterinary medicines, consumer medicine

(Notes)
Cosmetics and toothpaste are classified under "2071-02, -021 Cosmetics, toilet preparations and dentifrice" and agricultural chemicals are classified under "2074-01, -011 agricultural chemicals."

Column Code	Row Code	Sector Name
2071-01		**Soap, synthetic detergents, and surface active agents**
	2071-011	**Soap and synthetic detergents**
	2071-012	**Surface active agents**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Soaps and synthetic detergents" listed under Industry Number 2052, and "Surface-active agents, except soaps and synthetic detergents" listed under Industry Number 2053 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2424 Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations

(Given examples)
Surface-active agents: Anionic surfactants, cation surfactants, ionic surfactants, non-ionic surfactants, softener agents

Column Code	Row Code	Sector Name
2071-02	**2071-021**	**Cosmetics, toilet preparations, and dentifrices**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Cosmetics, toothpaste and toilet preparations" listed under Group Number 207 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2424 Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations

(Given examples)
Perfumes, colognes, hair treatments (shampoos, rinses, tonics, conditioners), skin-care products (creams, moisturizers, lotions, masques), cosmetics (foundation, powders, lipsticks, facial coloring, eye make-up), special cosmetics (sunscreens, after-shave lotions), toothpaste

Column Code	Row Code	Sector Name
2072-01	**2072-011**	**Paint and varnishes**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Paints" listed under Industry Number 2054 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2422 Manufacture of paints, varnishes and similar coatings, printing ink and mastics

(Given examples)
Oil paints, lacquers, insulating paints, synthetic resin paints, thinners

Column Code	Row Code	Sector Name
2072-02	**2072-021**	**Printing ink**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Printing ink" listed under Industry Number 2055 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2422 Manufacture of paints, varnishes and similar coatings, printing ink and mastics

(Given examples)
Ink for general purposes, newspaper printing inks, additives, printing varnishes

Column Code	Row Code	Sector Name
2073-01	**2073-011**	**Photographic sensitive materials**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Photosensitive materials" listed under Industry Number 2095 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2109 Manufacture of other articles of paper and paperboard

Class 2429 Manufacture of other chemical products n.e.c.

(Given examples)
Films, photographic papers, photosensitive papers, chemical agents for photography

Column Code	Row Code	Sector Name
2074-01	**2074-011**	**Agricultural chemicals**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Agricultural chemicals" listed under Industry Number 2092 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2421 Manufacture of pesticides and other agri-chemical products

(Given examples)
Insecticides, sterilizers, herbicides, pesticides, plant nutrition, additives

(Notes)
Production activities for insecticides and pesticides (excluding agri-chemicals) and production activities for sterilizers and disinfectants are classified under "2061-01, -011 Medicaments."

Column Code	Row Code	Sector Name
2079-01	**2079-011**	**Gelatin and adhesives**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Gelatin and adhesives" listed under Industry Number 2094 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2429 Manufacture of other chemical products n.e.c.

(Notes)
The sector code number was changed from "2079-02, -021" to "2079-01, -011" in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
2079-09		**Other final chemical products**
	2079-091	**Catalyzer**
	2079-099	**Other final chemical products n.e.c.**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for catalysts as specified in "Miscellaneous industrial inorganic chemicals" listed under Industry Number 2029, "Cleaning and scouring preparations" listed under Industry Number 2056, "Candles" listed under Industry Number 2057, "Explosives" listed under Industry Number 2091, "Perfumes and fragrances" listed under Industry Number 2093, "Natural resin and wood chemical products" listed under Industry Number 2096, "Reagents" listed under Industry Number 2097, and "Chemicals and allied products n.e.c." listed under Industry Number 2099 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2424 Manufacture of soap and detergents, cleaning and polishing preparations, perfumes, and toilet preparations

Class2429 Manufacture of other chemical products n.e.c.

(Given examples)
Propellants (excluding ammunition), electrically ignited percussion caps, cleansers, waxes, shoe creams, candles, natural fragrances, synthetic fragrances, mixed fragrances, dextrin (incl. soluble starch), erasing fluid

(Notes)
The sector "2079-01, 011 Explosives" that appeared in the 1990 I-O Tables was integrated into this sector in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
2111-01		**Petroleum refinery products**
	2111-011	**Gasoline**
	2111-012	**Jet fuel oils**
	2111-013	**Kerosene**
	2111-014	**Light oils**
	2111-015	**Heavy oil A**
	2111-016	**Heavy oils B and C**
	2111-017	**Naphtha**
	2111-018	**LPG (liquefied petroleum gas)**
	2111-019	**Other petroleum refinery products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities of "Petroleum refining" listed under Group Number 211, "Lubricating oils and greases (not made in petroleum refineries)" listed under Group Number 212, and "Miscellaneous petroleum and coal products" listed under Group Number 219 of the Standard Industrial Classification for Japan

A part of plastic scrap generated in the other sectors is considered to be a competitor of the sector "2111-017 Naphtha".

Liquefied petroleum gas generated as a by-product in the sector "2031-01 Petrochemical basic products" is considered to be a competing section "2111-018 Liquefied petroleum gas".

(Corresponding ISIC)
Class 2320 Manufacture of refined petroleum products

(Given examples)
Other petroleum refinery products: Grease, lube-oil, paraffin, asphalt, crude oil for refining and blending, petroleum gas, oil cokes

(Changes)
The sector name "2111-011 Benzene" that appeared in the 1995 I-O Tables was changed to "Gasoline."

Column Code	Row Code	Sector Name
2121-01		**Coal products**
	2121-011	**Coke**
	2121-019	**Other coal products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Coke" listed under Group Number 213 and "Briquettes and briquette balls" listed under Group Number 214 of the Standard Industrial

Classification for Japan; the sector also includes coal tar generated in the cooling process of coal gas, and crude benzol extracted directly from coal tar and coal gas.

A part of plastic scrap generated in the other sectors is considered to be a competitor of the sector "2121-011 Coke" and the sector "2121-019 Other coal products".

Blast furnace gas, basic oxygen furnace gas and electric furnace gas generated as a by-product in the other sectors are considered to be competing section "2121-01 Other coal products".

(Corresponding ISIC)
Class 1010 Mining and agglomeration of hard coal

Class 1020 Mining and agglomeration of lignite

Class 2310 Manufacture of coke oven products

(Given examples)
Other coal products: Briquettes, briquette balls, crude benzol, coal tar, coke oven gas

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Column Code	Row Code	Sector Name
2121-02	**2121-021**	**Paving materials**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Paving materials" listed under Group Number 215 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2310 Manufacture of coke oven products

(Given examples)
Mixed materials for asphalt paving, mixed materials for tar paving

6 Plastic products, rubber products, leather products, ceramic, stone, and clay products

Column Code	Row Code	Sector Name
2211-01		**Plastic products**
	2211-011	**Plastic films and sheets**
	2211-012	**Plastic plates, pipes, and bars**
	2211-013	**Foamed plastic products**
	2211-014	**Industrial plastic products**
	2211-015	**Reinforced plastic products**
	2211-016	**Plastic containers**
	2211-017	**Plastic tableware, kitchenware, and other household articles**
	2211-019	**Other plastic products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for the "Manufacture of plastic products, except otherwise classified" listed under Major Group Number 22 of the Standard Industrial Classification for Japan

A part of plastic scrap generated in the other sectors is considered to be a competitor of the sector "2211-019 Other plastic products".

(Corresponding ISIC)
Class 2520 Manufacture of plastic products

(Given examples)
Plastic films and sheets: Plastic film, plastic sheeting, plastic flooring, synthetic leather extrusion products

Plastic plates, pipes, and bars: plastic plates, waveform plates, layer plates, laminated plates and rods, hard plastic tubes, plastic hoses, plastic joints, troughs, other plastic extrusion products, processed articles of plastic plate, tubes, bars, joints and plastic extrusion products

Foam plastic products: Polyurethane foam, polyethylene foam, vinyl chloride foam, polystyrene foam, polystyrene paper, foam plate products

Industrial plastic products: Plastic products for vehicles (bumpers, dashboards, hubcaps), plastic products for electrical appliances (television cabinets, cleaner bodies, refrigerator parts), other plastic products for industrial use

Reinforced plastic products: Reinforced plastic plates, bars, and joints, reinforced plastic containers, bathtubs, and septic tanks, reinforced hard hats, insulators, bridge piers, and containers, processed articles of foam and reinforced plastic products

Plastic containers: Plastic kerosene containers, containers for industrial chemicals, containers for detergents and shampoos, containers for beer bottles, containers for agricultural and fishery use, trash cans

Plastic tableware, kitchenware and other household articles: Plastic cutting boards, plastic bowls, kitchen and tableware like trays, sundries, toiletries

Other plastic products: Plastic parts, waste plastic products (piles, shelves, fishing banks), binding tapes, plastic insulating tapes, watch covers, waterproofing, artificial turf, processed articles (not classified elsewhere)

Column Code	Row Code	Sector Name
2311-01	**2311-011**	**Tires and inner tubes**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Tires and inner tubes" listed under Group Number 231 and "Retreaded tires" listed under Industry Number 2394 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2511 Manufacture of rubber tyres and tubes; retreading and rebuilding of rubber tyres

(Given examples)
Automobile tires and tubes, aircraft tires and tubes, bicycle tires and tubes, tractors tires and tubes, solid tires, re-treaded tires

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Column Code	Row Code	Sector Name
2319-01	**2319-011**	**Rubber footwear**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Rubber footwear and its accessories" listed under Industry Number 2321 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1920 Manufacture of footwear

(Given examples)
Rubber-soled canvas boots, rubber-soled shoes, rubber boots, rubber zori slippers, slippers (including sponge-soled), related rubber supplies (rubber soles, rubber heels, zori slipper soles, uppers)

Column Code	Row Code	Sector Name
2319-02	**2319-021**	**Plastic footwear**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Plastic footwear and its findings" listed under Industry Number 2322 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1920 Manufacture of footwear

(Given examples)
Plastic shoes (synthetic leather shoes, plastic formed shoes), plastic sandals, slippers and zori slippers, plastic athletic shoes, plastic shoe accessories

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Column Code	Row Code	Sector Name
2319-09	**2319-099**	**Other rubber products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Rubber belts and hoses and mechanical rubber goods products" listed under Group Number 233, "Rubber coated fabric and its products" listed under Industry Number 2391, "Medical and sanitary rubber products" listed under Industry Number 2392, "Rubber sheet (repair sheet)" listed under Industry Number 2393, "Reclaimed rubber" listed under Industry Number 2395, and "Rubber products, n.e.c." listed under Industry Number 2399 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2519 Manufacture of other rubber products

(Given examples)
Conveyor belts, flat belts, v-shape belts (including fan belts), rubber hoses, industrial rubber products (vibration proof rubber, rubber packing), rubber coated sheets, rubber coated sheet products (air mattress), medical and sanitary rubber products, (nursing-bottle heads, water pillows, ice bags, surgical gloves, rubber), rubber for retreading, recycled rubber other rubber products (foam rubber and rubber gloves but excluding those for surgical use, rubber abrasives, rubber bands)

Column Code	Row Code	Sector Name
2411-01	**2411-011**	**Leather footwear**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Cut stock and findings for boots and shoes" listed under Group Number 243 and "Leather footwear" listed under Group Number 244 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1920 Manufacture of footwear

(Given examples)
Men's leather shoes (over 23 cm), women's and children's leather shoes, athletic leather shoes (mountaineering shoes, skating shoes, golfing shoes), work shoes (safety shoes, anti-static shoes), leather zori slippers, slippers and sandals, supplies and components for leather shoes (uppers, soles, and heels)

Column Code	Row Code	Sector Name
2412-01	**2412-011**	**Leather and fur skins**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Leather tanning and finishing" listed under Group Number 241 and "Fur skins" listed under Group Number 248 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1820 Dressing and dyeing of fur; manufacture of articles of fur

Class 1911 Tanning and dressing of leather

(Given examples)
Cowhide uppers, ox hide uppers, cowhide soles, coated cattle leather, other cattle leather, horsehide, pigskin, goat and sheep skin, other coated leather (crocodile, lizard, and snake skin), fur (processed but not finished)

(Notes)
Fur clothing, coated leather clothing, and fur apparel accessories (coats, mufflers, and fur accessories) are classified under "1522-09, -099 Other wearing apparel and clothing accessories."

Column Code	Row Code	Sector Name
2412-02	**2412-021**	**Miscellaneous leather products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Mechanical leather products, except gloves and mittens" listed under Group Number 242, "Leather gloves and mittens" listed under Group Number 245, "Luggage" listed under Group Number 246, "Handbags and small leather cases" listed under Group Number 247, and "Miscellaneous leather products" listed under Group Number 249 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 1912 Manufacture of luggage, handbags and the like, saddlery and harnesses

(Given examples)
Industrial leather products (industrial leather belts, leather packing, gaskets), leather gloves (for dress, work, and sport, and including those of synthetic leather), luggage (regardless of materials; leather travel bags, leather brief cases, school bags, and school satchels, plastic luggage, and synthetic leather cases), bags (wallet, purse, and shopping bags), handbags (regardless of materials), other leather products (dress leather belts, saddles, spurs, and wristwatch bands)

(Notes)
Leather athletic goods (like gloves) are classified under "3911-02, -021 Sporting and athletic goods" and leather clothes are classified under "1522-01, -011 Other wearing apparel and clothing accessories."

Column Code	Row Code	Sector Name
2511-01		**Sheet glass and safety glass**
	2511-011	**Sheet glass**
	2511-012	**Safety glass and multi-layered glass**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Flat glass" listed under Industry Number 2511, and "Processed flat glass" listed under Industry Number 2512 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2610 Manufacture of glass and glass products

(Given examples)
Regular flat glass, laminated flat glass, polished flat glass, laminated glass, reinforced glass, multilayered glass, ground glass, bent glass, mirrors

Column Code	Row Code	Sector Name
2512-01	**2512-011**	**Glass fiber and glass fiber products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Glass fiber and its products" listed under Industry Number 2517 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2610 Manufacture of glass and glass products

(Given examples)
Glass fiber felt, glass fiber board, glass fiber tube, glass fiber roving, glass fiber chopped strand, glass fiber thread, glass fiber cloth, glass fiber matting, optical fiber (strand)

Column Code	Row Code	Sector Name
2519-09		**Other glass products**
	2519-091	**Glass processing materials**
	2519-099	**Other glass products , n.e.c.**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Glass processing materials" listed under Industry Number 2513, "Glass containers" listed under Industry Number 2514, "Scientific glass instruments" listed under Industry Number 2515, "Table and kitchen glassware" listed under Industry Number 2516, and "Miscellaneous glass and its products" listed under Industry Number 2519 of the Standard Industrial Classification for Japan; scrap and by-products(glass gottles) generated in other sectors are considered to be in competition to this sector.

(Corresponding ISIC)
Class 2610 Manufacture of glass and glass products

(Given examples)
Glass processing materials: Glass base for optical use (including eyeglasses), glass for electric bulbs, glass for electronic tubes, glass for tubes, rods, and bulbs (excluding electrical use)

Other glass products (n.e.c.): Glass containers (glass containers for drinks, foods and seasonings, cosmetics, and ink bottles), glassware for scientific and medical use (flasks, beakers, test tubes, ampoules, and medicine bottles), table glassware, kitchen and dining table glassware, other glassware (inner glass containers for thermoses, glass products for lighting and signaling, glass blocks, and glass tiles)

Column Code	Row Code	Sector Name
2521-01	**2521-011**	**Cement**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Cement" listed under Industry Number 2521 of the Standard Industrial Classification for Japan; cement clinkers are classified as semi-products.

(Corresponding ISIC)
Class 2694 Manufacture of cement, lime and plaster

(Given examples)
Portland cement, fly ash cement, blast furnace cement, white Portland cement

Column Code	Row Code	Sector Name
2522-01	**2522-011**	**Ready-mixed concrete**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Fresh concrete" listed under Industry Number 2522 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2695 Manufacture of articles of concrete, cement and plaster

Column Code	Row Code	Sector Name
2523-01	**2523-011**	**Cement products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Concrete products" listed under Industry Number 2523 and "Miscellaneous cement products" listed under Industry Number 2529 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2695 Manufacture of articles of concrete, cement and plaster

(Given examples)
Concrete panels, centrifugal reinforced concrete products (pipes, pillars, and piles), regular concrete pipes, and hollow concrete blocks, concrete blocks for earth works, concrete products for pavement, pre-stressed concrete products, terrazzo products, asbestos cement board, waveform asbestos slate, other cement products (cement roof tiles, thick type slate, wood cement products, and aerated concrete products)

Column Code	Row Code	Sector Name
2531-01		**Pottery, china, and earthenware**
	2531-011	**Pottery, china, and earthenware for construction**
	2531-012	**Pottery, china, and earthenware for industry**
	2531-013	**Pottery, china, and earthenware for home use**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Pottery and related products" listed under Group Number 254 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2691 Manufacture of non-structural non-refractory ceramic ware

Class 2693 Manufacture of structural non-refractory clay and ceramic products

(Given examples)
Pottery, china, and earthenware for construction: Plumbing fixtures (bathtubs, hand basins, and toilet bowls), tiles (mosaic tiles, interior tiles)

Pottery, china, and earthenware for industry: Porcelain for electrical applications (insulators, insulating tubes, special porcelain parts for electrical use, fine ceramic IC-boards, and packaged board (annealed)), porcelain products for scientific and industrial use, and fine ceramics (annealed) for scientific and industrial use

Pottery, china, and earthenware for home use: Pottery tableware, pottery kitchen and cooking ware, pottery ornaments, painted pottery, pottery clay

Column Code	Row Code	Sector Name
2599-01	**2599-011**	**Clay refractories**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities of "Clay refractories" listed under Group Number 255 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2692 Manufacture of refractory ceramic products

(Given examples)
Refractory bricks, unshaped refractory materials (refractory mortar, castable refractory materials), artificial refractory materials (magnesia-clinker, synthetic mullite), and other refractory materials (including clay melting pot)

Column Code	Row Code	Sector Name
2599-02	**2599-021**	**Other structural clay products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Structural clay products, except those of pottery" listed under Group Number 253 and "Gypsum products" listed under Industry Number 2596 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2694 Manufacture of cement, lime and plaster

Class 2695 Manufacture of articles of concrete, cement and plaster

(Given examples)
Plaster board, laminated plaster board, LAS plaster board, waterproof plaster board, reinforced plaster board, gypsum plaster, baked plaster, clay roof tiles (ibushi roof tiles, glazed roof tiles, and salt-baked roof tiles), regular bricks, porcelain pipes

Column Code	Row Code	Sector Name
2599-03	**2599-031**	**Carbon and graphite products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Carbon and graphite products" listed under Group Number 256 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2699 Manufacture of other non-metallic mineral products n.e.c.

(Given examples)
Electrodes (graphite electrodes, electrolytic plate, carbon electrodes, and continuous self-burning electrode paste), carbon bars (for gauging and batteries), brushes (artificial graphite, metallic graphite), carbon fibers, graphite melting pots, special carbon products

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Column Code	Row Code	Sector Name
2599-04	**2599-041**	**Abrasives**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Abrasive products" listed under Group Number 257 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 2699 Manufacture of other non-metallic mineral products n.e.c.

(Given examples)
Natural abrasives, processed abrasives, abrasive grinders, abrasive cloth paper

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Column Code	Row Code	Sector Name
2599-09	**2599-099**	**Miscellaneous ceramic, stone, and clay products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Artificial aggregates" listed under Industry Number 2582, "Cut-stone and stoneware products" listed under Industry Number 2583, "Diatomaceous earth and its products" listed under Industry Number 2584, "Minerals and stones crushed or otherwise treated" listed under Industry Number 2585, "Enameled iron ware" listed under 2591, "Cloisonne" listed under Industry Number 2592, "Artificial jewels" listed under Industry Number 2593, "Rock wool, slag wool and its products" listed under Industry Number 2594, "Asbestos products" listed under Industry Number 2595, "Lime products" listed under Industry Number 2597, "Molds, including cores" under Industry Number 2598, and "Ceramic, stone and clay products, n.e.c." listed under Industry Number 2599 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2696 Cutting, shaping and finishing of stone

Class 2699 Manufacture of other non-metallic mineral products n.e.c.

(Given examples)
Joint sheets, brake linings, enameled containers (enameled kitchen and table ware, enameled sanitary articles), lime ash (raw lime, slaked lime, light calcium carbonate), other stone and clay products (artificial bones, stone-made parts, diatomite and its products, crushed minerals, crushed stone and clay, and other treated items), cloisonne products, artificial jewels, rock wool and its products, molds, other ceramic, stone, and clay products (enamel, mica)

(Notes)
The sector "2599-091 Asbestos products" that appeared in the 1990 I-O Tables was integrated into the sector "2599-099 Miscellaneous ceramic, stone and clay products" in the 1995 I-O Tables, and the description in the parenthesis (n.e.c.) was deleted at the same time.

7 Iron and steel, non-ferrous metals, and metal products

Column Code	Row Code	Sector Name
2611-01	**2611-011**	**Pig iron**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for blast furnace iron and pig iron which are not carried out by blast furnaces; the sector includes raw iron, pure iron, and base metal.

(Corresponding ISIC)
Class 2710 Manufacture of basic iron and steel

(Given examples)
Blast furnace iron, electric furnace iron

Column Code	Row Code	Sector Name
2611-02	**2611-021**	**Ferro alloys**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Ferro-alloys" listed under Industry Number 2623 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2710 Manufacture of basic iron and steel

(Given examples)
Ferro-nickel, ferro-chrome, ferro-manganese, ferro-molybdenum, ferro-vanadium

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Column Code	Row Code	Sector Name
2611-03	**2611-031**	**Crude steel (converters)**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for crude steel carried out by converters.

(Corresponding ISIC)
Class 2710 Manufacture of basic iron and steel

(Given examples)
Ordinary crude steel, special crude steel

Column Code	Row Code	Sector Name
2611-04	**2611-041**	**Crude steel (electric furnaces)**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for crude steel carried out by electric furnaces

(Corresponding ISIC)
Class 2710 Manufacture of basic iron and steel

(Given examples)
Ordinary crude steel, special crude steel

Column Code	Row Code	Sector Name
	2612-011P	**Scrap Iron**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
This sector competes with iron scrap generating in the production activities of manufacturers and in the final demand sectors.

(Corresponding ISIC)
Class 2710 Manufacture of basic iron and steel

(Notes)
No sector generating iron scrap as a major product competes with this sector, and therefore the row code is set as a dummy sector.

Column Code	Row Code	Sector Name
2621-01		**Hot-rolled steel**
	2621-011	**Section steel (ordinary steel)**
	2621-012	**Steel plate (ordinary steel)**
	2621-013	**Steel strip (ordinary steel)**
	2621-014	**Steel bar (ordinary steel)**
	2621-015	**Other hot-rolled steel (ordinary steel)**
	2621-016	**Hot-rolled steel (special steel)**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for semi-finished steel products, rails, tool steel, bar and rod steel, steel wire materials, steel plate, steel pipes and tube materials, steel band, paddle wheels, tool steel, structural steel, and steel for special applications; semi-finished steel is treated as an intermediate product.

(Corresponding ISIC)
Class 2710 Manufacture of basic iron and steel

(Given examples)
Tool steel (ordinary steel): Structural steel plate, H-shape steel, large, medium, and small tool steel

Tool steel plate (ordinary steel): Thick plate, medium thickness plate, thin plate

Strip steel (ordinary steel): Cold-rolled steel band, steel band for other uses

Bar and rod steel (ordinary steel): Round bar for small structural use, deformed bar for small structural, other small steel bar and rod products

Other hot-rolled steel (ordinary steel): Rails, large and medium steel bars and rods, steel pipes and tubes, bar in coil form, wire materials, paddle wheel

Hot-rolled special steel materials: Tool steel, structural steel, spring steel, bearing steel, stainless steel, refractory steel, free-cutting steel, piano string materials, high-tensile steel, manganese steel, alloy steel materials

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Column Code	Row Code	Sector Name
2622-01		**Steel pipes and tubes**
	2622-011	**Steel pipes and tubes (ordinary steel)**
2622-012		**Steel pipes and tubes (special steel)**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for hot-worked steel pipes and tubes, cold-worked steel pipes and tubes, and coated steel

(Corresponding ISIC)
Class 2710 Manufacture of basic iron and steel

(Given examples)
Ordinary steel pipes and tubes: Ordinary hot-worked steel pipes and tubes (seamless steel pipes and tubes, high-frequency welded steel tubes, and arc-welded steel tubes), ordinary steel pipes and tubes for cold drawing, ordinary coated steel pipes and tubes

Special steel pipes and tubes: Hot-worked special steel pipes and tubes (seamless steel pipes and tubes, high frequency welded steel tubes, and arc-welded steel tubes), special steel pipes and tubes for cold drawing

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Column Code	Row Code	Sector Name
2623-01		**Cold-finished steel**
	2623-011	**Cold-finished steel (ordinary steel)**
	2623-012	**Cold-finished steel (special steel)**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for cold-rolled tool steel, strip steel, bar and rod steel, cold-rolled steel plate, cold-rolled wide steel band, cold-rolled electric furnace strip steel, steel wire, carbon steel for cold rolling, hard steel wire, solder rod core wire, P.C. steel wire, piano strings, stainless steel wire, and other special steel wire

(Corresponding ISIC)
Class 2710 Manufacture of basic iron and steel

(Changes)
The sector "2623-011 Cold-finished steel" that appeared in the 1995 I-O Tables has been split into two sectors: "2623-011 Cold-finished steel (ordinary steel)" and "2623-012 Cold-finished steel (special steel)."

Column Code	Row Code	Sector Name
2623-02	**2623-021**	**Coated steel**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Tin plates" listed under Industry Number 2651, "Galvanized steel sheets" listed under Industry Number 2652, "Coated steel wire" listed under Industry Number 2654, and "Miscellaneous coated steel" listed under Industry Number 2659 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2710 Manufacture of basic iron and steel

(Given examples)
Tin plate, zinc-coated steel, steel wire, zinc-coated hard steel wire, aluminum-coated steel plates, tin-free steel

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Column Code	Row Code	Sector Name
2631-01		**Cast and forged steel**
	2631-011	**Forged steel**
	2631-012	**Cast steel**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Steel castings" listed under Industry Number 2663 and "Steel forgings" listed under Industry Number 2665 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 2710 Manufacture of basic iron and steel

(Given examples)
Forged steel: Ordinary forged steel materials and special forged steel materials (before gas-cutting)

Cast steel: Ordinary cast steel materials and special cast steel materials (before riser cutting)

Column Code	Row Code	Sector Name
2631-02	**2631-021**	**Cast iron pipes and tubes**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Cast iron pipe" listed under Industry Number 2694 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2710 Manufacture of basic iron and steel

(Given examples)
Straight pipes (regular type, hard cast iron), deformed pipes (regular type, hard cast iron)

Column Code	Row Code	Sector Name
2631-03		**Cast and forged materials (iron)**
	2631-031	**Cast materials**
	2631-032	**Forged materials (iron)**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Iron castings, except cast iron pipes and malleable iron castings" listed under Industry Number 2661, "Malleable iron castings" listed under Industry Number 2662, and "Secondary forging" listed under Industry Number 2664 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2731 Casting of iron and steel

Class 2891 Forging, pressing, stamping and roll-forming of metal; powder metallurgy

(Given examples)
Cast iron parts: Iron castings, spheroidal graphite cast iron, alloy cast iron, malleable cast iron, precision cast parts, malleable cast iron joints

Forged materials (iron): Forged parts (for automobiles, for industrial machines)

Column Code	Row Code	Sector Name
2649-01	**2649-011**	**Iron and steel shearing and slitting**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Iron and steel shearing and slitting" listed under Industry Number 2692 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2710 Manufacture of basic iron and steel

Column Code	Row Code	Sector Name
2649-09	**2649-099**	**Other iron or steel products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Iron powder" listed under Industry Number 2691 and "Iron and steel, n.e.c." listed under Industry Number 2699 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2710 Manufacture of basic iron and steel

(Given examples)
Iron powder, rolled pure iron, pellets

(Notes)
The item "PC strands" that appeared in the 1990 I-O Tables was integrated into the sector "2899-092 Fabricated wire products" in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
2711-01	**2711-011**	**Copper**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for the "Primary smelting and refining of copper" listed under Industry Number 2711 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2720 Manufacture of basic precious and non-ferrous metals

Column Code	Row Code	Sector Name
2711-02	**2711-021**	**Lead and zinc (incl. regenerated lead)**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for the "Primary smelting and refining of lead" listed under Industry Number 2712, "Primary smelting and refining of zinc" listed under Industry Number 2713, "Secondary smelting and refining of lead, including lead alloys" listed under Industry Number 2721, and "Secondary smelting and refining of zinc, including zinc alloys" listed under Industry Number 2722 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2720 Manufacture of basic precious and non-ferrous metals

(Given examples)
Lead, regenerated lead, anti-friction metal alloy, solder, zinc, regenerated zinc, zinc alloy

(Notes)
The sectors "2711-02, -021 Lead (incl. regenerated lead)" and "2711-03, -031 Zinc (incl. zinc alloy)" that both appeared in the 1990 I-O Tables were integrated into the sector "2711-02, -021 Lead and zinc (incl. regenerated)" in the 1995 I-O tables.

Column Code	Row Code	Sector Name
2711-03	**2711-031**	**Aluminum (incl. regenerated aluminum)**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for the "Primary smelting and refining of aluminum" listed under Industry Number 2716 and "Secondary smelting and refining of aluminum, including aluminum alloys" listed under Industry Number 2723 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2720 Manufacture of basic precious and non-ferrous metals

(Given examples)
Raw aluminum, alumina, hydro-oxide aluminum, regenerated aluminum, aluminum alloy

(Notes)
The sector number "2711-04, -41" that appeared in the 1990 I-O Tables was changed to "2711-03, -031" in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
2711-09	**2711-099**	**Other non-ferrous metals**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for the "Primary smelting and refining of precious metals" listed under Industry Number 2714, "Primary smelting and refining of nickel" listed under Industry Number 2715, "Primary smelting and refining of titanium" listed under Industry Number 2717, "Primary smelting and refining of uranium and thorium" listed under Industry Number 2718, "Miscellaneous primary smelting and refining of non-ferrous metals" listed under Industry Number 2719, and "Miscellaneous secondary smelting and refining of non-ferrous metals, including non-ferrous alloys" listed under Industry Number 2729 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2720 Manufacture of basic precious and non-ferrous metals

(Given examples)
Gold, silver, titanium, tungsten, tin, antimony, regenerated gold, gold alloy, regenerated silver, silver alloy, regenerated copper, copper alloy

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Column Code	Row Code	Sector Name
	2712-011P	**Non-ferrous metal scrap**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
A competitive sector for non-ferrous metal scrap generated in the production activities of manufacturers and in the final demand sectors

(Notes)
No sector generating non-ferrous metal scrap as a major product competes with this sector, and therefore the row code is set as a dummy sector.

Column Code	Row Code	Sector Name
2721-01	**2721-011**	**Electric wires and cables**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Electric wire and cable, except optical fiber cable" listed under Industry Number 2741 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3130 Manufacture of insulated wire and cable

(Given examples)
Telecommunication cables, power cables

(Notes)
The sectors "2721-011 Copper wire and cable", "2721-012 Aluminum wire and cable" and "2721-013 Cables" that appeared in the 1995 I-O Tables were integrated into the sector "2721-011 Electric wires and cables" (optical fiber cables excluded).

Column Code	Row Code	Sector Name
2721-02	**2721-021**	**Optical fiber cables**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Optical fiber cables, including telecommunication composite cables" listed under Industry Number 2742 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3130 Manufacture of insulated wire and cable

(Notes)
Optical fiber cables were removed from the "2721-013 Cables" sector and entered into the newly established "2721-02, -021 Optical fiber cables" sector in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
2722-01	**2722-011**	**Rolled and drawn copper and copper alloys**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Rolling and drawing of copper and copper alloys" listed under Industry Number 2731 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2720 Manufacture of basic precious and non-ferrous metals

(Given examples)
Rolled and drawn articles of copper, yellow copper, and bronze

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Column Code	Row Code	Sector Name
2722-02	**2722-021**	**Rolled and drawn aluminum**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for the "Rolling of aluminum and aluminum alloys, including drawing and extruding" listed under Industry Number 2733 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2720 Manufacture of basic precious and non-ferrous metals

(Given examples)
Aluminum plates, aluminum discs, aluminum thread, aluminum tubes, aluminum bars, aluminum formed materials, aluminum wires, aluminum foil

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Column Code	Row Code	Sector Name
2722-03	**2722-031**	**Non-ferrous metal castings and forgings**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Non-ferrous metal machine parts and tooling products" listed under Group Number 275 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2732 Casting of non-ferrous metals

Class 2891 Forging, pressing, stamping and roll-forming of metal; powder metallurgy

(Given examples)
Copper alloy castings, light metal alloy castings, zinc die-cast components, copper die-cast components, aluminum die-cast components, precision castings, forged products (aluminum)

(Notes)
The sector name was changed from "Non-ferrous metal castings and forgings" to "Non-ferrous metal formed parts" in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
2722-04	**2722-041**	**Nuclear fuel**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Nuclear fuel" listed under Industry Number 2791 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2330 Processing of nuclear fuel

Column Code	Row Code	Sector Name
2722-09	**2722-099**	**Other non-ferrous metal products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Rolling of lead and alloys, including extruding" listed under Industry Number 2732, "Miscellaneous rolling of non-ferrous metals and alloys, including drawing and extruding" listed under Industry Number 2739, and "Non-ferrous metal products, n.e.c." listed under Industry Number 2799 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2720 Manufacture of basic precious and non-ferrous metals

(Given examples)
Lead pipes, lead plates, drawn lead-alloy wires, zinc products, drawn gold, silver, platinum, nickel, and the like, non-ferrous metal alloy powder

Column Code	Row Code	Sector Name
2811-01	**2811-011**	**Metal products for construction**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Fabricated construction-use metal products" listed under Industry Number 2841 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2811 Manufacture of structural metal products

(Given examples)
Steel frames, light-gauge steel frames, iron bridge components, iron tower components, floodgates, metal ladders

Column Code	Row Code	Sector Name
2812-01	**2812-011**	**Metal products for architecture**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Fabricated architectural metal products, except structural hardware" listed under Industry Number 2842 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 2811 Manufacture of structural metal products

(Given examples)
Aluminum window and door sashes, other metal window and door sashes, shutters, metal lathes, steel-framed pre-fabricated houses, unit-type houses, metal plate structural products

Column Code	Row Code	Sector Name
2891-01	**2891-011**	**Gas and oil appliances, and heating and cooking apparatus**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Gas and oil appliances" listed under Industry Number 2832, "Heated air and hot water heating systems" listed under Industry Number 2833, and "Miscellaneous heating and cooking apparatus, except electrical appliances and gas and oil appliances" listed under Industry Number 2839 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2930 Manufacture of domestic appliances n.e.c.

(Given examples)
Gas appliances such as gas ovens, bath heaters and flash water heaters, oil appliances such as kerosene stoves, heated air systems, head water systems such as heated water boilers, heating and cooking apparatus, solar heating appliances

Column Code	Row Code	Sector Name
2899-01	**2899-011**	**Bolts, nuts, rivets and springs**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Bolts, nuts, rivets, machine screws and wood screws" listed under Group Number 288, and "Metallic springs" listed under Industry Number 2892 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2899 Manufacture of other fabricated metal products n.e.c.

Column Code	Row Code	Sector Name
2899-02	**2899-021**	**Metal containers, fabricated plate and sheet metal**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Tin cans and other plated sheet products" listed under Group Number 281 and "Fabricated plate work and sheet metal work" listed under Industry Number 2843 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2812 Manufacture of tanks, reservoirs and containers of metal

(Given examples)
Oil drums, 18 liter cans, metal cans (for canned foods), general purpose cans, containers, tanks made of metal sheet, high pressure vessels tanks

Column Code	Row Code	Sector Name
2899-03		**Plumber's supplies, powder metallurgy products and tools**
	2899-031	**Plumber's supplies**
	2899-032	**Powder metallurgy products**
	2899-033	**Cutlery and tools**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Edge tools for machinery" listed under Industry Number 2822, "Edge tools, artisans' hand tools, except files, saws, and knives for kitchen use" listed under Industry Number 2823, "Work tools, except files" listed under Industry Number 2824, "Files" listed under Industry Number 2825, "Hand saws and saw blades" listed under Industry Number 2826, "Agricultural tools, except agricultural machinery" listed under Industry Number 2827, "Plumber's supplies, except valves and cocks" listed under Industry Number 2831, and "Powder metallurgy products" listed under Industry Number 2853 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2891 Forging, pressing, stamping and roll forming of metal; powder metallurgy

Class 2893 Manufacture of cutlery, hand tools and general hardware

Class 2899 Manufacture of other fabricated metal products n.e.c.

(Given examples)
Plumbing accessories: Pipe joint (metal), metal sanitary ware, atomizing nozzles, sprinkler heads, drain-pipe shut-off plugs

Powder metallurgy products: Machine parts (powder metallurgy), carbide tips

Cutting tools and tools: Machine edge, artisan's tools and hand tools (cooking knives, knives, scissors, and barber's tools, picks, hammers, shovels, and scoops), files, work tools (hand saws, saw edges, wrenches, cutting pliers, and screwdrivers), farm tools (rakes, hoes, and scythes), farm tool parts

Column Code	Row Code	Sector Name
2899-09		**Other metal products**
	2899-091	**Stamped and pressed metal products**
	2899-092	**Fabricated wire products**
	2899-099	**Other metal products, n.e.c.**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Tableware (occidental type)" listed under Industry Number 2821, "Miscellaneous hardware" listed under Industry Number 2829, "Stamped and pressed aluminum products and aluminum alloys" listed under Industry Number 2851, "Stamped and pressed metal products, except aluminum and aluminum alloys" listed under Industry Number 2852, "Metal coating, engraving and heat treating, except enameled ironware" listed under Group Number 286, "Fabricated wire products, except screws" listed under Group Number 287, "Safes" listed under Industry Number 2891, and "Fabricated metal products, n.e.c." listed under Industry Number 2899 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2892 Treatment and coating of metals, general mechanical engineering on a free or contract basis

Class 2893 Manufacture of cutlery, hand tools and general hardware

Class 2899 Manufacture of other fabricated metal products n.e.c.

Class 2919 Manufacture of other general-purpose machinery

(Given examples)
Stamped and pressed metal products: Aluminum machine parts, aluminum kitchen and tableware, aluminum cans for drinks, other metal products (stamped and pressed machine parts, bottle crowns)

Wire products: Nails, Metal nets, PC steel twisted wire, wire rope, welding rods

Other metal products (n.e.c.): Metal cutlery, metal ware (keys, locks, structural metal ware, and cable metal ware), engraved metal products, heat-treated metal products, safes, coins, metal packing and gaskets, metal name tags, metal tube clamps, and safe parts, fixtures and accessories

8 General purpose machinery, electrical machinery, transportation equipment, precision instrument, and miscellaneous manufacturing products

Column Code	Row Code	Sector Name
3011-01	**3011-011**	**Boilers**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Boilers" listed under Industry Number 2911 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 2813 Manufacture of steam generators, except central heating hot water boilers

(Given examples)
Steam boilers, water heaters, and boiler parts, fixtures and accessories

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Column Code	Row Code	Sector Name
3011-02	**3011-021**	**Turbines**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Steam engines, turbines and water wheels, except marine engines" listed under Industry Number 2912 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2911 Manufacture of engines and turbines, except aircraft vehicle and cycle engines

(Given examples)
Steam turbines, water-powered turbines, gas-fired turbines, parts, fixtures and accessories for steam engines, turbines, and water-powered turbines

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Column Code	Row Code	Sector Name
3011-03	**3011-031**	**Engines**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Internal combustion engines" listed under Industry Number 2913 and "Miscellaneous engines and turbines" listed under Industry Number 2919 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2911 Manufacture of engines and turbines, except aircraft, vehicle, and cycle engines

(Given examples)
General-purpose gasoline engines, general-purpose kerosene engines, general-purpose diesel engines, atomic power reactors, water wheels (excluding water power turbines), windmill engines, compressed-air engines, parts, fixtures and accessories for general-purpose internal combustion engines, atomic power reactors, and other engines

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Column Code	Row Code	Sector Name
3012-01	**3012-011**	**Conveyors**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Elevators and escalators" listed under Industry Number 2973 and "Conveyors and conveying equipment" listed under Industry Number 2974 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2915 Manufacture of lifting and handling equipment

(Given examples)
Elevators, escalators, cranes, hoists, conveyors, and parts, fixtures and accessories for conveying machines

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Column Code	Row Code	Sector Name
3013-01	**3013-011**	**Refrigerators and air conditioning apparatus**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Refrigerators and air conditioning apparatus" listed under Industry Number 2983 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2919 Manufacture of other general purpose machinery

(Given examples)
Refrigerators, refrigerated and cooled display cases (incl. shelves for frozen foods), packaged air-conditioners, water coolers, cooling towers, cooling apparatus, freezing apparatus, ice-making apparatus, dehumidifiers (excluding for consumer use), parts, fixtures and accessories for refrigerators, and heat and humidity conditioners

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Column Code	Row Code	Sector Name
3019-01	**3019-011**	**Pumps and compressors**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Pumps and pumping equipment" listed under Industry Number 2971, "Air compressors, gas compressors and blowers" listed under Industry Number 2972, and "Oil hydraulic equipment" listed under Industry Number 2977 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2912 Manufacture of pumps, compressors, taps and valves

(Given examples)
Single-step rotary pumps, multi-step rotary pumps, pumps (anti-corrosive type), electric pumps (for household), hand-operated pumps, cylindrical compressors, rotary compressors, centrifugal compressors, axial flow compressors, vacuum pumps, hydraulic pumps, hydraulic motors, hydraulic cylinders, hydraulic valves, air compressors, and parts, fixtures, and accessories for pumps and compressors

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Column Code	Row Code	Sector Name
3019-02	**3019-021**	**Machinists' precision tools**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Machinists' precision tools, except powder metallurgy products" listed under Industry Number 2944 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2893 Manufacture of cutlery, hand tools and general hardware

(Given examples)
Special steel cutting tools, carbide tipped tools (excluding powder metallurgy), air tools, electric tools, diamond bladed tools, and jigs and accessories for metal processing

(Notes)
The column and row codes of "3019-03, 031 Machinists' precision tools" that appeared in the 1990 I-O Tables were changed to "3019-02, -021" in the 1995 Tables.

Column Code	Row Code	Sector Name
3019-09	**3019-099**	**Other general industrial machinery and equipment**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Mechanical power transmission equipment, except ball and roller bearings" listed under Industry Number 2975, "Industrial furnaces and ovens" listed under Industry Number 2976, "Miscellaneous general industry machinery and equipment" listed under Industry Number 2979, and "Packing machines" listed under Industry Number 2997 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2913 Manufacture of bearings, gears, gearing and driving elements

Class 2914 Manufacture of ovens, furnaces and furnace burners

Class 2919 Manufacture of other general purpose machinery

(Given examples)
Transmissions, gears (including those of plastics), roller chains, industrial ovens, oil and gas burners, mechanical parking devices, wrapping and packaging machines, packing machines, and parts, fixture, and accessories for other industrial machinery

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Column Code	Row Code	Sector Name
3021-01	**3021-011**	**Machinery and equipment for construction and mining**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Machinery and equipment for construction and mining, including tractors for construction, agriculture and transportation of goods" listed under Group Number 293 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2924 Manufacture of machinery for mining, quarrying and construction

(Given examples)
Excavators, construction cranes, grounding machines, Asphalt paving machines, concrete machines, foundation work machines, drilling machines, rock drilling machines, iron piles, crushing machines, triturator, sorters, wheel tractors, caterpillar tractors, and parts, fixtures, and accessories of construction and mining machines

(Changes)
The sector name of "3021-01, -011 Mining, civil engineering and construction machinery" that appeared in the 1995 I-O Tables was changed to "Construction and Mining Machines."

Column Code	Row Code	Sector Name
3022-01	**3022-011**	**Chemical machinery**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Chemical machinery and its

equipment" listed under Industry Number 2978 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2919 Manufacture of other general purpose machinery

(Given examples)
Heat exchangers (including partial condensers), annealing machines, compressors, filters, separators, mixers, agitators, kneading machines, dissolvers, granulator emulsifiers, crushers, reactors, production furnaces, pyrolysis furnaces electrolytic bathes, evaporators, distillers, machines for crystallizations, dryers, roasting machines, sintering machines, dust controllers, chemical tanks,(fixed types, floating-roof types, spheres, and others) and parts, fixtures, and accessories of chemical machines

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Column Code	Row Code	Sector Name
3023-01	**3023-011**	**Industrial robots**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Industrial robots" listed under Industry Number 2998 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2919 Manufacture of other general purpose machinery

Class 2922 Manufacture of machine-tools

(Given examples)
Manual manipulators, fixed-sequence robots, variable-sequence robots, playback robots, computer-controlled robots, and parts, fixtures, and accessories for industrial robots

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Column Code	Row Code	Sector Name
3024-01	**3024-011**	**Metal machine tools**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Metal machine tools" listed under Industry Number 2941 and parts and accessories for metal working machines specified in "Parts and accessories

for metal working machines and machine tools, except machinists' precision tools, molds and dies" listed under Industry Number 2943 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2922 Manufacture of machine-tools

(Given examples)
Turning machines, drilling machines, boring machines, milling machines, flat grinding machines, broaching machines, grinding machines, gear-cutting machines, gear finishing machines, machining centers, transverse planing machines, horning machines, lapping machines, metal sawing machines, and parts, fixtures, and accessories for machine-tools

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Column Code	Row Code	Sector Name
3024-02	**3024-021**	**Metal processing machinery**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Metal-working machinery, except metal machine tools" listed under Industry Number 2942 and parts and accessories for metal-working machines specified in "Parts and accessories for processing machines and machine tools, except machinists' precision tools, molds and dies" listed under Industry Number 2943 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2922 Manufacture of machine-tools

Class 2923 Manufacture of machinery for metallurgy

(Given examples)
Metal rolling machines, refiner, bending machines, hydraulic pressing machines, mechanical pressing machines, shearing machines, forging machines, wire-forming machines, gas welding machines, fusing machines, rolls for metal rolling, and parts, fixtures, and accessories for metal machine tools

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Column Code	Row Code	Sector Name
3029-01	**3029-011**	**Machinery for agricultural use**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Agricultural machinery and equipment" listed under Group Number 292 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2921 Manufacture of agricultural and forestry machinery

(Given examples)
Cultivators, push tractors, sprays, dust sprays, rice seeding machines, rice chaffing machines, agricultural drying machines, combines, cropping machines, feed machines, and parts, fixtures, and accessories for agricultural machinery

(Changes)
The sector name "3029-01, -011 Agricultural machinery" that appeared in the 1995 I-O Tables was changed to "Machinery for Agricultural use."

(Notes)
Hand tools for farming are classified under "2899-033 Cutlery and tools" and farming tractors under "3021-011 Construction and mining machinery."

Column Code	Row Code	Sector Name
3029-02	**3029-021**	**Textile machinery**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Textile machinery" listed under Group Number 295 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2926 Manufacture of machinery for textile, apparel and leather production

(Given examples)
Chemical fiber fabrication machines, fiber spinning machines, textile fabrication machines, knitting machines, dyeing and finishing machines, sawing machines (household sawing machines, industrial sawing machines), and parts, fixtures, and accessories of textile machinery

(Notes)
"Sawing machine," which was listed in the sector "3019-02, -021 Sawing machines and wool weaving machines" that appeared in the 1990 I-O Tables, was removed and integrated into this sector in the 1995 Tables, and "wool weaving machines" was integrated into "3031-09, -099 Other general machines and parts."

Column Code	Row Code	Sector Name
3029-03	**3029-031**	**Food processing machinery**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Food processing machinery" listed under Industry Number 2961 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2925 Manufacture of machinery for food, beverage and tobacco processing

(Given examples)
Grain processing machines and systems, bakery and confectionary machines and systems, brewing machines, milk-processing and diary products processing machines and systems, meat and marine products processing machines, and parts, fixtures, and accessories for food processing machinery

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Column Code	Row Code	Sector Name
3029-04	**3029-041**	**Semi-conductor manufacturing equipment**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Semiconductor manufacturing equipment" listed under Industry Number 2967 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 2929 Manufacture of other special purpose machinery

(Given examples)
Handling devices for wafer processes (electronic circuitry formation), semiconductor assembly devices, flat panel display manufacturing devices, and parts, fixtures, and accessories for semiconductor manufacturing devices

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Column Code	Row Code	Sector Name
3029-09		**Other special machinery for industrial use**
	3029-091	**Sawmill, wood working, veneer and plywood machinery**
	3029-092	**Pulp equipment and paper machinery**
	3029-093	**Printing, bookbinding and paper converting machinery**
	3029-094	**Casting equipment**
	3029-095	**Plastic processing machinery**
	3029-099	**Other special machinery for industrial use n.e.c.**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Woodworking machinery" listed under Industry Number 2962, "Pulp and paper industry machinery" listed under Industry Number 2963, "Printing, bookbinding and paper converting machinery"

listed under Industry Number 2964, "Foundry equipment" listed under Industry Number 2965, "Plastic working machinery and accessories" listed under Industry Number 2966, and "Miscellaneous special industry machinery" listed under Industry Number 2969 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2929 Manufacture of other special purpose machinery

(Given examples)
Timber, woodwork, and plywood machinery: Timber

sawing machinery (band saws, circular saws), woodwork machinery (planers, saws, and nailers), plywood machinery (veneer lathes, presses, and cutters), and parts, fixtures, and accessories for machinery for timber, woodwork, and plywood

Pulp and paper machines: Pulp machines and machinery (chip-makers, chip-crushers, and refiners), paper machines (long net, round net, short net, combined net), cutters, winders, coating machines, and parts, fixtures, and accessories of pulp and paper machines

Printing, bookbinding, and paper processing machines: Printing machines (relief printing machines, lithographic printing machines, (for sizes greater than B3 paper), special printing machines, intaglio printing machines), bookbinding machines (cutters, binders, and folders), paper processing machines (for paper boxes, corrugate boxes, paper sacks and envelop, and paper cups), plate-making machines (type-casting machines, photographic typesetting machines), and parts, fixtures, and accessories of printing, bookbinding, and paper processing machines

Casting machines: Die-casting machines, other casting machines (die-molding, die-inserting, inner arrangement, and specialty die molding), dies and die-fitting (limited to iron and steel), and parts, fixtures, and accessories for casting machines

Plastic processing machines: Injectors, Extruders, other plastic processing machines (compressed molding, blow molding, vacuum molding), and parts, fixtures, and accessories for plastic processing machines

Other special industrial machinery, n.e.c.: Machines and tools for the rubber industry, specialty machines for the glass industry, other specialty industrial machines (tobacco machines, specialty machines for the chemical and drug, hat-making, leather-processing, and shoe-making industries), and parts, fixtures, and accessories for other specialty industrial machines

(Changes)
The sector name of "3029-093 Printing, bookbinding and paper processing machinery" that appeared in the 1995 Tables was changed to "Printing, bookbinding and paper converting machinery," and "Other special industrial machinery, n.e.c." was changed to "Other specialty machinery for industrial use."

(Notes)
The semiconductor manufacturing devices that appeared in "3029-099 Other special industrial machinery, n.e.c." in the 1990 Tables were removed and separately classified as "3029-04 Semiconductor making equipment."

Column Code	Row Code	Sector Name
3031-01	**3031-011**	**Metal molds**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Molds and dies, parts and accessories" listed under Industry Number 2996 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2929 Manufacture of other special purpose machinery

(Given examples)
Metal molds for press machines, metal molds for forging, metal molds for casting (including die-casting), metal molds for plastics, molds for rubber, and parts and accessories for molds and dies

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Column Code	Row Code	Sector Name
3031-02	**3031-021**	**Bearings**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Ball and roller bearings" listed under Industry Number 2994 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2913 Manufacture of bearings, gears, gearing and driving elements

(Given Examples)
Bearing shaft receptacles, roller shaft receptacles, shaft units, and bearing parts

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Column Code	Row Code	Sector Name
3031-09	**3031-099**	**Other general machines and parts**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Woolen yarn hand knitting machines" listed under Industry Number 2982, "Fire extinguishing equipment and its apparatus" listed under Industry Number 2991, "Valves and fittings" listed under Industry Number 2992, "Fabricated pipe and fittings" listed under Industry Number 2993, "Piston rings" listed under Industry Number 2995, and "Machine shops (jobbing and repair)" listed under Industry Number 2999 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2912 Manufacture of pumps, compressors, taps and valves

Class 2919 Manufacture of other general purpose machinery

(Given Examples)
Wool knitting machines, fire extinguishing gear, fire engine equipment, high-temperature high pressure valves,

automatic adjustable valves, supply and drain valves, cocks, general purpose valves and cocks, cut, bent, and threaded pipe articles, piston rings, parts, fixtures, and accessories for fire extinguishing gear, attachments for valves and cocks, and other machine parts not elsewhere classified

(Notes)
The wool knitting machine items specified in "3019-02, -021 Mechanists' precision tools" that appeared in the 1990 I-O Tables were removed and integrated into the sector "3031-09, -099 Other general machines and parts" in the 1995 Tables.

Column Code	Row Code	Sector Name
3111-01	**3111-011**	**Copy machines**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for copying machines specified in "Office machines" listed under Industry Number 2981 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3000 Manufacture of office, accounting and computing machinery

(Given examples)
Electrostatic indirect copying machines, digital copying machines, full-color copying machines, and parts, fixtures, and accessories for copying machines

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Column Code	Row Code	Sector Name
3111-09	**3111-099**	**Other office machines**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Office machines," excluding copying machines, listed under Industry Number 2981 of

the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3000 Manufacture of office, accounting and computing machinery

(Given Examples)
Computing machines, word processors, accounting registers (cash registers), typewriters, time recorders, duplicators, address printers, microfilm machines, offset printing machines (for sizes smaller than B3 paper), coin calculators, shredders, and parts, fixtures, and accessories for office machines except copying machines

(Changes)
The sectors "3111-091 Electronic calculator" and "3111-092 Word processing machine" that appeared in the 1995 Tables were removed and integrated into the sector "3111-099 Other office machines, n.e.c." From the sector name, the description "n.e.c. or, not elsewhere classified" was deleted.

(Notes)
Electronic computers are classified either under "3311-01, 011 Personal computers" or "3311-02, -021 Electronic computer mainframe (excl. personal computers)." Abacuses, sliding calculators, duplicators, and drafting machines and tools are classified under "3912-02, -021 Writing instruments and stationery."

Column Code	Row Code	Sector Name
3112-01		**Machinery for service industry**
	3112-011	**Vending machines**
	3112-012	**Amusement machinery**
	3112-019	**Other machinery for service industry**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Miscellaneous office, service industry and household machines" listed under Industry Number 2989 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2919 Manufacture of other general purpose machinery

(Given Examples)
Vending machines: Vending machines for food stuffs, tobacco vending machines, ticket tellers, and parts, fixtures, and accessories for vending machines

Amusement machinery: "Pachinko" machines, slot machines (pachinko tables, pachinko ball feeders, and slot machine tables), amusement machines for game centers (arcade game machines, crane game machines, and industrial TV game machines), machines for amusement parks (jet coasters, merry-go-rounds, and other amusement rides), and parts, fixtures, and accessories for amusement machinery

Other machinery for the service industry: Professional laundry machines, automobile adjustment and repair tools, other machines for the service industry and household (money exchangers, automatic ticket inspection machines, automatic inspection machines for entry, coin lockers), and parts, fixtures, and accessories for other machinery for the service industry

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Column Code	Row Code	Sector Name
3211-01	**3211-011**	**Electric audio equipment**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Electric audio equipment" listed under Industry Number 3044 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3230 Manufacture of television and radio receivers, sound or video recording or reproducing apparatus, and associated goods

(Given examples)
Audio equipment, car audio equipment, tape-recorders, digital audio disc players, Hi-fi amplifiers, Hi-fi speakers and automobile speaker systems, acouophone, speakers, microphones, earphones, and parts, fixtures, and accessories for electric audio equipment

(Notes)
The sector "3212-09, -099 Parts and accessories of electric audio equipment" that appeared in the 1990 I-O Tables was integrated into "3211-01, -011 Electric audio equipment" in the 1995 Tables.

Column Code	Row Code	Sector Name
3211-02	**3211-021**	**Radio and television sets**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Radio and television receivers" listed under Industry Number 3043 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3230 Manufacture of television and radio receivers, sound or video recording or reproducing apparatus, and associated goods

(Given examples)
Radio receivers, color television receivers (excluding LCD types), and liquid crystal display television receivers

(Notes)
Parts and accessories for radio and television receivers are classified in "3359-09, -099 Other electronic components."

Column Code	Row Code	Sector Name
3211-03	**3211-031**	**Video recording and playback equipment**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Video recording and duplicating equipment," excluding magnetic tape recording and playback devices, listed under Industry Number 3062 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3230 Manufacture of television and radio receivers, sound or video recording or reproducing apparatus, and associated goods

(Given examples)
Video tape recorders, video disc players, video cameras (excluding for broadcasting), digital cameras, and parts, fixtures, and accessories for video equipment

(Notes)
Recorded cassette tapes and discs that were classified under this sector in the 1990 I-O Tables were re-classified under "3919-02 Information recording devices".

Column Code	Row Code	Sector Name
3212-01	**3212-011**	**Household air-conditioners**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Household electric appliances," excluding household air-conditioners, listed under Group Number 302 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2930 Manufacture of domestic appliances n.e.c.

(Given examples)
Household air-conditioners (window type, separate type), and parts, fixtures, and accessories for household air-conditioners

(Changes)
The sector "3212-01, -011 Household electric appliances" that appeared in the 1995 Tables was divided into "3212-01, -011 Household air-conditioners" and "3212-02, -021 Household electric appliances (excl. air conditioners)."

(Notes)
The sector "3211-09, -099 Other household electric appliances" had its name and code number changed to "3212-01-, -011 Household electric appliances" in the 1995 Tables.

Column Code	Row Code	Sector Name
3212-02	**3212-021**	**Household electric appliances (excl. air-conditioners)**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for household air-conditioners specified in "Household electric appliances" listed under Group Number 302 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2930 Manufacture of domestic appliances n.e.c.

(Given examples)
Electric irons, electric kotatsu, other heating and heat preserving appliances, electric rice cookers, microwave, electric fans, electric ventilation fans, electric washers, electric refrigerators, electric cleaners, electric cosmetic appliances, electrically-heated flushing toilet seats, and parts, fixtures, and accessories for household electric appliances (excluding household air conditioners)

(Changes)
The sector "3212-01, -011 Household electric appliances" that appeared in the 1995 Tables was divided into "3212-01, -011 Household air conditioners" and "3212-02, -021 Household electric appliances (excl. air conditioners)."

(Notes)
The sector "3211-09, -099 Other household electric appliances" was changed to "3212-01, -011 Household electric appliances" in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
3311-01	**3311-011**	**Personal computers**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for personal computers specified in "Electronic data processing machines, digital and analog computers, equipment and accessories" listed under Group Number 305 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3000 Manufacture of office, accounting and computing machinery

(Given examples)
Desktop computers, notebook computers, laptop computers

(Changes)
Personal computers, which appeared in "3311-01, -011 Electronic computer mainframe" in the 1995 Tables, were established as a new sector.

Column Code	Row Code	Sector Name
3311-02	**3311-021**	**Electronic computing equipment (except personal computers)**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Electronic data processing machines, digital and analog computers, equipment and accessories," excluding personal computers, listed under Group Number 305 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3000 Manufacture of office, accounting and computing machinery

(Given Examples)
General purpose computers, office computers, mini-computers, workstations, and parts, fixtures, and accessories for computer mainframes

(Changes)
The sector "3311-01, -011 Electronic computer mainframe" that appeared in the 1995 Tables was divided into "3311-01, -011 Personal computers" and "3311-02, -021 Electronic computing equipment (except Personal computers)."

Column Code	Row Code	Sector Name
3311-03	**3311-031**	**Electronic computing equipment (accessory equipment)**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for electronic computer accessory equipment specified in "Electronic data processing machines, digital and analog computer, equipment and accessories," listed under Group Number 305 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 3000 Manufacture of office, accounting and computing machinery

(Given examples)
Magnetic disc devices, optical disc devices, flexible disc devices, printer devices (serial printers, line printers), display deices (display devices, drafting devices), terminal devices, and parts, fixtures, and accessories of electronic computer accessory equipment

(Changes)
The code number of the sector "3311-02, -021 Electronic computer accessory equipment" that appeared in the 1995 Tables was changed to "3311-03, -031."

Column Code	Row Code	Sector Name
3321-01	**3321-011**	**Wired communication equipment**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Communication equipment (wired)" listed under Industry Number 3041 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3220 Manufacture of television and radio transmitters

and apparatus for line telephony and line telegraphy

(Given Examples)
Telephone machines, telephone applied devices, facsimile machines, telephone exchanges, and transmission equipment

(Notes)
Parts and accessories of wired communication equipment are classified under the sector "3359-09, -099 Other electronic components."

Cellular phones and portable handy phones (PHS) are classified under the sector "3321-02, -021 Cellular phones." However, cordless handset of a telephone machine or a facsimile machine that are available for independent use as portable handy phones (PHS) shall also be classified in this sector, while a PHS unit that is available as a slave unit of a telephone machine shall be classified under the sector "3321-02, -021 Cellular phones."

Column Code	Row Code	Sector Name
3321-02	**3321-021**	**Cellular phones**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for cellular phones specified in "Radio and television receivers" listed under Industry Number3042 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3220 Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy

(Given Examples)
Cellular phones, portable handy phones (PHS)

(Changes)
Cellular phones that appeared in the sector "3321-02, -021 Radio communication equipment" in the 1995 Tables were established as a new sector.

Column Code	Row Code	Sector Name
3321-03	**3321-031**	**Radio communication equipment (excl. cellular phones)**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Radio communication equipment," excluding cellular phones, listed under Industry Number 3042 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3220 Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy

(Given examples)
Radio and television broadcasting equipment, fixed radio communication equipment, mobile radio communication equipment (excluding cellular phones and portable handy phones (PHS)), portable radio communication equipment, applied radio equipment (including car navigation systems), and other radio communication equipment

(Changes)
The sector "3221-02, -021 Radio communication equipment" that appeared in the 1995 Tables was divided into "3321-02, -021 Cellular phones" and "3321-03, -031 Radio communication equipment (excluding cellular phones)."

Column Code	Row Code	Sector Name
3321-09	**3321-099**	**Other communications equipment**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Railway signal and safety appliances" listed under Industry Number 3045 and "Miscellaneous communication equipment and related products" listed under Industry Number 3049 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3190 Manufacture of other electrical equipment n.e.c.

(Given examples)
Traffic signal safety devices (traffic signals, manual signals, electric rail switchers, mechanical rail switchers), fire alarms, security alarms, lighting signals, communication signals, and parts, fixtures, and accessories for traffic signal safety devices

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Column Code	Row Code	Sector Name
3331-01	**3331-011**	**Applied electronic equipment**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "X-ray equipment" listed under Industry Number 3061, "Video recording and duplicating equipment," excluding industrial magnetic recording and playback devices (excluding those for broadcasting), listed under Industry Number 3062, "Medical instruments electronic equipment" listed under Industry Number 3063, and "Miscellaneous electronic equipment" listed under Industry Number 3069 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3230 Manufacture of television and radio receivers, sound or video recording or reproducing apparatus, and associated goods

Class 3312 Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment

(Given examples)
X-ray devices for medical use, X-ray devices for industrial use, electronic devices for medical use, applied ultrasound devices, applied high frequency power devices, electronic microscopes, numerical control devices, industrial magnetic recording and playback devices (excluding for broadcasting), laser devices, applied laser treatment devices, Geiger counters, applied magnetic probing devices, and parts, fixtures, and accessories for applied electronic equipment

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Column Code	Row Code	Sector Name
3332-01	**3332-011**	**Electric measuring instruments**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Electric measuring instruments" listed under Group Number 307 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3312 Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment

Class 3313 Manufacture of industrial process control equipment

(Given Examples)
Electric meters (watt-hour meters, ammeters, and voltmeters), electric measuring instruments (voltage standards, ammeter standards, and circuit testers), semiconductor and IC testers, industrial process control instruments, medical instruments, and parts, fixtures, and accessories for electric measuring instruments

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Column Code	Row Code	Sector Name
3341-01	**3341-011**	**Semiconductor devices**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Semiconductor devices" listed under Industry Number 3082 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3210 Manufacture of electronic valves and tubes and other electronic components

(Given examples)
Diodes, rectifiers, silicon transistors, transistors, photoelectric converters, and LEDs (light-emitting diode)

(Changes)
The sector "3341-01 Semiconductor devices and integrated circuits" that appeared in the 1995 Tables was divided into "3341-01 Semiconductor devices" and "3341-02 Integrated circuits."

(Notes)
Components of semiconductor devices are classified under the sector "3421-09, -099 Other electrical devices and parts."

Column Code	Row Code	Sector Name
3341-02	**3341-021**	**Integrated circuits**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Integrated circuits" listed under Industry Number 3083 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3210 Manufacture of electronic valves and tubes and other electronic components

(Given examples)
Bipolar ICs, MOS ICs, linear ICs, HICs (Hybrid ICs; thin and thick films), ICs not mounted (for export)

(Changes)
The sector "3341-01 Semiconductor device and integrated circuits" that appeared in the 1995 Tables was divided into "3341-01 Semiconductor devices" and "3341-02 Integrated circuits."

(Notes)
Components of integrated circuits are classified under the sector "3421-09, -099 Other electrical devices and parts."

Column Code	Row Code	Sector Name
3359-01	**3359-011**	**Electron tubes**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Electron tubes" listed under Industry Number 3081 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3210 Manufacture of electronic valves and tubes and other electronic components

(Given examples)
Microwave tubes, cathode-ray tubes (Braun tubes), display tubes, X-ray tubes

(Notes)
Electron tube components are classified under the sector "3421-09, -099 Other electrical devices and parts."

Column Code	Row Code	Sector Name
3359-02	**3359-021**	**Liquid crystal devices**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for liquid crystal devices specified in "Miscellaneous electronic parts" listed under Industry Number 3089 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3210 Manufacture of electronic valves and tubes and other electronic components

(Given examples)
Active type (TFT), passive type

(Notes)
This sector was newly established in the 1995 I-O Tables.

Column Code	Row Code	Sector Name
3359-03	**3359-031**	**Magnetic tapes and discs**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Magnetic tapes and discs" listed under Industry Number 3093 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3230 Manufacture of television and radio receivers, sound or video recording or reproducing apparatus, and associated goods

(Given examples)
Magnetic tape (unrecorded; for sound or image recording and for computer use), magnetic discs (unrecorded; flexible discs, magnetic optical discs)

(Notes)

1 The sector "3212-01, -011 Magnetic tapes and flexible discs" that appeared in the 1990 I-O Tables was changed to "3359-03, -031 Magnetic tapes and magnetic discs" in the 1995 Tables.

2 This sector is defined only for unrecorded tapes and discs.

Column Code	Row Code	Sector Name
3359-09	**3359-099**	**Other electronic components**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Resistors, capacitors, transformers and composite parts" listed under Industry Number 3084, "Electro acoustic transducers, magnetic heads and small motors" listed under Industry Number 3085, "Connectors, switches and relays" listed under Industry Number 3086, "Switching power supplies high-frequency assemblies and remote controls" listed under Industry Number 3087, "Printed circuits" listed under Industry Number 3088, and "Miscellaneous electronic parts" excluding liquid crystal devices listed under Industry Number 3089 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3190 Manufacture of other electrical equipment n.e.c.

Class 3210 Manufacture of electronic valves and tubes and other electronic components

Class 3230 Manufacture of television and radio receivers, sound or video recording or reproducing apparatus, and associated goods

(Given examples)
Resistors, fixed capacitors, capacitors, transducers, audio parts, magnetic heads, small motors (less than 3W), connectors, switches, relays, switching power supplies, TV tuners, control units, printed wiring boards, printed circuit boards, magnetic components (including powder and gold)

(Notes)
Super mini-motors (less than 3W) were removed from the sector "3411-012 Generators" in the 1995 I-O Tables and integrated into this sector.

Furthermore, the sector name was changed from "Other parts of electronic and communication equipment" to "Other electronic components."

Column Code	Row Code	Sector Name
3411-01		**Rotating electrical equipment**
	3411-011	**Generators**
	3411-012	**Electric motors**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Generators, motors and other rotating electrical machinery" listed under Industry Number 3011 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3110 Manufacture of electric motors, generators and transformers

(Given examples)
Turbine generators, engine generators, DC motors, single-phase induction motors, tri-phase induction motors, other AC motors (synchronous motors, brush motors), DC and AC mini-motors, other mini-motors (synchronous motors, stepping motors), other generators (DC generators, hydro-generators, motor-driven generators), and parts, fixtures, and accessories for rotary electrical machine

(Notes)
Super mini-motors that were included in the sector "3411-012 Electric motors" in the 1995 Tables were removed and integrated into the sector "3359-099 Other electronic components."

Column Code	Row Code	Sector Name
3411-02	**3411-021**	**Relay switches and switchboards**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Relay switches, switchboards and electrical control equipment" listed under Industry Number 3013 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3120 Manufacture of electricity distribution and control apparatus

(Given examples)
Power distribution boards, monitoring control panels, distribution panels, relays, circuit breakers, switchgear, programmable controllers, and parts, fixtures, and accessories for switchgear, distribution panels, and power control systems

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Column Code	Row Code	Sector Name
3411-03	**3411-031**	**Transformers and reactors**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Power and distribution transformers, except electronic appliance transformers" listed under Industry Number 3012 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3110 Manufacture of electric motors, generators and transformers

(Given examples)
Standard transformers, non-standard transformers, transformers for special applications, instrument transformers, inductive voltage controllers, reactors, and parts, fixtures, and accessories for transformers

(Notes)
The sector name was changed in the 1995 Tables from "Other power distribution equipment" to "Transformers and transducers."

Column Code	Row Code	Sector Name
3411-09	**3411-099**	**Other industrial heavy electrical equipment**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Electrical welding equipment" listed under Industry Number 3015 and "Miscellaneous industrial electrical apparatus, including those for vehicles and vessels" listed under Industry Number 3019 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2922 Manufacture of machine-tools

Class 3110 Manufacture of electric motors, generators and transformers

(Given examples)
Arc-welding machines, resistance welding machines, condensers, electric furnaces, industrial heating devices, power converters, silicon and selenium rectifiers, and parts, fixtures, and accessories for other industrial heavy electrical equipment

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Column Code	Row Code	Sector Name
3421-01	**3421-011**	**Electric lighting fixtures and apparatus**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Electric lighting fixtures" listed under Industry Number 3032 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3150 Manufacture of electrical lamps and lighting equipment

(Given examples)
Incandescent lamps and fixtures, fluorescent lamps, mercury lamps, lamps with generators, portable searchlights, UV sterilizers, flashlights, sodium lamps, and parts, fixtures, and accessories for electric lighting fixtures and apparatus

Column Code	Row Code	Sector Name
3421-02	**3421-021**	**Batteries**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Storage batteries" listed under Industry Number 3091 and "Primary batteries (dry and wet)" listed under Industry Number 3092 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3140 Manufacture of accumulators, primary cells and primary batteries

(Given examples)
Cylinder-type manganese dry cells, layer-type manganese dry cells, lithium-ion cells, alkali-manganese dry cells, lead storage batteries, alkali storage batteries, and parts, fixtures, and accessories for battery cells

Column Code	Row Code	Sector Name
3421-03	**3421-031**	**Electric bulbs**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Electric bulbs" listed under Industry Number 3031 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3150 Manufacture of electric lamps and lighting equipment

(Given examples)
General purpose light bulbs, miniature lamps, Xmas tree light bulbs, automobile lamps, infra-red lamps, flash bulbs for photography, pilot lamps, halogen lamps, fluorescent lamps, mercury lamps, UV lamps, sterilizer lamps, neon tubes, arc lamps

(Notes)
Parts for electric lamps are classified under the sector "3421-09, -099" Other electrical devices and parts."

Column Code	Row Code	Sector Name
3421-04	**3421-041**	**Wiring devices and supplies**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Wiring devices and supplies" listed under Industry Number 3014 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3120 Manufacture of electricity distribution and control apparatus

(Given examples)
Small switchgear, flasher unit, cord connectors, lamp holders, panel boards, small wiring boxes, fuses, wiring attachments

Column Code	Row Code	Sector Name
3421-05	**3421-051**	**Electrical equipment for internal combustion engines**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Auxiliary equipment for internal combustion engines" listed under Industry Number 3016 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 3190 Manufacture of other electrical equipment n.e.c.

(Given examples)
Battery igniters, ignition motors, magnetic igniters, ignition coils, distributors, spark plugs, and parts, fixtures, and accessories for internal combustion engines

(Notes)
This sector covers the electrical equipment for internal combustion engines of the car and the airplane, etc.

Column Code	Row Code	Sector Name
3421-09	**3421-099**	**Other electrical devices and parts**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Electrical machinery equipment and supplies, n.e.c." listed under Industry Number 3099 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 3190 Manufacture of other electrical equipment n.e.c.

(Given examples)
Lead wires, silicon wafers (surface grounded), lamp sockets, tungsten wire for electrical lamps and electronics, permanent magnets, electrical contacts, solar cells

(Notes)
The sector name was changed in the 1995 Tables from "Other light electricity equipment and devices" to "Other electrical devices and parts."

Column Code	Row Code	Sector Name
3511-01	**3511-011**	**Passenger motorcars**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for passenger motorcars specified in "Motor vehicles, including motorcycles" listed under Industry Number 3111 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3410 Manufacture of motor vehicles

(Given examples)
Compact cars, small cars, sedans

(Notes)
Vehicle chassis or CKD (Completely Knocked Down) vehicles (to be exported unassembled, where the shipping value per vehicle is over 60% of the total composite parts of an assembled vehicle [on FOB price basis]), are classified under this sector.

Column Code	Row Code	Sector Name
3521-01	**3521-011**	**Trucks, buses, and other cars**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Motor vehicles, including motorcycles" but excluding passenger cars and motorcycles listed under Industry Number 3111 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3410 Manufacture of motor vehicles

(Given examples)
Small buses, large buses, light trucks, small trucks (gasoline or diesel), trucks (gasoline or diesel), trailers, special purpose vehicles

(Notes)
Vehicles chassis or CKD (completely knocked-down) vehicles (to be exported unassembled, where the shipping value per vehicle is over 60% of the total composite parts of an assembled vehicle [on FOB price basis]), are classified under this sector.

Column Code	Row Code	Sector Name
3531-01	**3531-011**	**Two-wheel motor vehicles**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for motorcycles specified in "Motor vehicles, including motorcycles" listed under Industry Number 3111 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3410 Manufacture of motor vehicles

Class 3591 Manufacture of motorcycles

(Notes)
Bicycles with engines, motor scooters, vehicles with side-cars, or CKD vehicles (to be exported unassembled, where the shipping value per vehicle is over 60% of the total composite parts of an assembled vehicle [on FOB price basis]), are classified under this sector.

Column Code	Row Code	Sector Name
3541-01	**3541-011**	**Motor vehicle bodies**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Motor vehicle bodies and trailers" listed under Industry Number 3112 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3420 Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers

(Given examples)
Trailers, passenger vehicle bodies, small and large bus bodies, small truck bodies, truck bodies, special purpose vehicle bodies

Column Code	Row Code	Sector Name
3541-02	**3541-021**	**Internal combustion engines for motor vehicles and related parts**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for internal combustion engines for motor vehicles and related parts specified in "Motor vehicle parts and accessories" listed under Industry Number 3113 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3430 Manufacture of parts and accessories for motor vehicles and their engines

(Given examples)
Gasoline engines for motor vehicles, diesel engines for motor vehicles, internal combustion engines for motorcycles and motor scooters, and parts, fixtures, and accessories for internal combustion engines for motor

vehicles (radiators, oil strainers, oil filters, pistons, inlet valves, exhaust valves, cylinders, carburetors, air cleaners, and fuel injection devices)

Column Code	Row Code	Sector Name
3541-03	**3541-031**	**Motor vehicle parts and accessories**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for internal combustion engines and related parts specified in "Motor vehicle parts and accessories," but excluding internal combustion engines for motor vehicles and related parts, listed under Industry Number 3113 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3430 Manufacture of parts and accessories for motor vehicles and their engines

(Given examples)
Parts for driving, transmitting, and steering devices, parts for suspension and braking devices, parts for chassis and bodies, car air-conditioners, car heaters, car seats, knocked-down parts (for passenger cars, busses, trucks, and motorcycles)

(Notes)
Sets of knocked-down parts (to be exported unassembled, where the shipping value per vehicle is under 60% of the total composite parts of an assembled vehicle [on FOB price basis]), are classified under this sector.

Column Code	Row Code	Sector Name
3611-01	**3611-011**	**Steel ships**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The production activities of steel shipbuilding specified in "Steel shipbuilding and repairing" listed under Industry Number 3141 and "Hull blocks" listed under Industry Number 3142 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3511 Building and repairing of ships

(Given examples)
Cargo vessels, cargo and passenger vessels, passenger vessels, automobile carrier vessels, oil tankers, fishing vessels

(Notes)

1 Hull manufacturing is the production activities for own sector. Therefore, its production value will, in principle, not be counted in but is treated as one of ship building processes.

2 The refurbishing of steel vessels is included in this sector.

Column Code	Row Code	Sector Name
3611-02	**3611-021**	**Ships (except steel ships)**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The production activities for wooden vessels specified in "Wooden shipbuilding and repairing" listed under Industry Number 3143 and activities related to shipbuilding specified in "Small watercraft building and repairing" listed under Industry Number 3144 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3511 Building and repairing of ships

Class 3512 Building and repairing of pleasure and sporting boats

(Given examples)
Wooden vessels, wooden boats, plastic boats, metal fabricated boats

(Notes)

1 Vessels made primarily from reinforced plastic or aluminum are classified under this sector.

2 All related refurbishing and repairing are classified under this sector.

Column Code	Row Code	Sector Name
3611-03	**3611-031**	**Internal combustion engines for vessels**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The production activities for "Marine engines" listed under Industry Number 3145 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 2911 Manufacture of engines and turbines, except aircraft, vehicle and cycle engines

(Given examples)
Diesel engines for vessels, hot-bulb engines for vessels, electrical ignition engines for vessels, steam engines for vessels, gas turbines for vessels, steam turbines for vessels, and parts, fixtures, and accessories for vessel engines

Column Code	Row Code	Sector Name
3611-10	**3611-101**	**Repair of ships**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The repair activities specified in "Steel shipbuilding and repairing" listed under Industry Number 3141, "Wooden shipbuilding and repairing" listed under Industry Number 3143, and "Small watercraft building and repairing" listed under Industry Number 3144 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3511 Building and repairing of ships

Class 3512 Building and repairing of pleasure and sporting boats

(Notes)

1 Repair work undertaken by the users of the vessels is classified under this sector.

2 Refurbishing is not included in this sector but is included in either "3611-01, -011 Steel ships" or "3611-02, -021 Ships except steel ships."

Column Code	Row Code	Sector Name
3621-01	**3621-011**	**Rolling stock**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The production and repair activities for "Railroad equipment and parts" listed under Group Number 312 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3520 Manufacture of railway and tramway locomotives and rolling stock

(Given examples)
Locomotives for railways and tramcars, passenger carriages, cargo trains, special purpose trains, related parts

(Notes)

1 Production and repair activities carried out by railways are classified under this sector.

2 Signal safety devices are not included in this sector but classified under "3321-09, -099 Other communication equipment."

Column Code	Row Code	Sector Name
3621-10	**3621-101**	**Repair of rolling stock**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The repair activities for "Railroad cars" listed under Industry Number 3121 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3520 Manufacture of railway and tramway locomotives and rolling stock

(Notes)

1 Repair work for rolling stock is not classified under this sector but included in "3621-01, -011 Rolling stock."

2 Repair work carried out by railways is included in this sector.

Column Code	Row Code	Sector Name
3622-01	**3622-011**	**Aircrafts**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The production activities, other than repair activities, specified in "Aircraft and parts" listed under Group Number 315 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3530 Manufacture of aircraft and spacecraft

(Given examples)
Piston-engine aircraft, turbojet aircraft, turboprop aircraft, helicopters, gliders, and parts and accessory devices for aircraft bodies, engines (pistons, turbojets, turboprops, turbo shafts), other aircraft related parts and accessory devices (propellers, blades auxiliary devices, aeronautical instruments, aircraft steering training facilities, and air rescue devices)

Column Code	Row Code	Sector Name
3622-10	**3622-101**	**Repair of aircrafts**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The repair activities for "Aircraft and parts" listed under Group Number 315 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3530 Manufacture of aircraft and spacecraft

(Notes)
This sector covers the aircraft service which is done with the airport.

Column Code	Row Code	Sector Name
3629-01	**3629-011**	**Bicycles**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Bicycles and parts" listed

under Group Number 313 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3592 Manufacture of bicycles and invalid carriages

(Given examples)
Finished bicycles (racing bicycles, children's bicycles, infant bicycles, mini bicycles, mountain bicycles, motor-assisted bicycles, and special purpose bicycles), wheelchairs, bicycle frames, and parts, fixtures, and accessories for bicycles

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Column Code	Row Code	Sector Name
3629-09		**Other transport equipment**
	3629-091	**Transport equipment for industrial use**
	3629-099	**Other transport equipment, n.e.c.**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Miscellaneous transportation equipment" listed under Group Number 319 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2915 Manufacture of lifting and handling equipment

Class 3530 Manufacture of aircraft and spacecraft

Class 3599 Manufacture of other transport equipment n.e.c.

(Given examples)
Transport vehicles for industry: Fixed platform truck (powered by batteries or internal combustion engines, and motor-driven transport vehicles), forklift trucks, bulldozers, industrial trailers, industrial locomotives, industrial carriages, straddle carriers, pallet trucks, and parts, fixtures, and accessories for industrial transport vehicles

Other transport vehicles (n.e.c.): Aircraft and spacecraft (rockets, satellites, and spaceship), and parts, fixtures, and accessories for aircraft and spacecraft, other transport vehicles not elsewhere classified (transport carts, carts, shopping carts, golf cars, and golf carts), and parts, fixtures, and accessories for other transport vehicles not elsewhere classified

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Column Code	Row Code	Sector Name
3711-01	**3711-011**	**Camera**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Cameras and their parts" listed under Industry Number 3252 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3320 Manufacture of optical instruments and photographic equipment

(Given examples)
35mm cameras (focal-plane shutter type, lens shutter type, and compact cameras), cameras other than 35mm cameras (twin-lens cameras, miniature cameras, professional cameras), photographic and related devices (enlarging devices, developing, printing, and finishing devices, photo dryers, readers, and viewers) and parts, fixtures, and accessories for photographic devices (filters, hoods, tripods, geared heads with mounting plates, self-timers, range finders, exposure meters, shutters, bodies, foldable camera bodies, camera attachments for close-up photography and telescopic photography, and electronic flash)

Column Code	Row Code	Sector Name
3711-09	**3711-099**	**Other photographic and optical instruments**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Microscopes and telescopes" listed under Industry Number 3251, "Motion picture equipment and their parts" listed under Industry Number 3253, "Optical lenses and prisms" listed under Industry Number 3254, and "Ophthalmic goods, including fames" listed under Group Number 326 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3320 Manufacture of optical instruments and photographic equipment

(Given examples)
Telescopes, binoculars, microscopes, magnifiers, film cameras, film projectors, slide projectors, film developing devices, film printing devices, film screens, camera lenses, interchangeable camera lenses, optical lenses, prisms, eyeglasses, eyeglass frames, eyeglass lenses, (including contact lenses), and parts, fixtures, and accessories for other optical equipment

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Column Code	Row Code	Sector Name
3712-01	**3712-011**	**Watches and clocks**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Watches, clocks, clockwork-operated devices and parts" listed under Group Number 327 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3330 Manufacturer of watches and clocks

(Given examples)
Watches (including movements; spring-driven watches, battery-operated watches), clocks (including movements; mechanical clocks, clocks, alarm clocks, wall clocks, and instrument panel clocks), other watches and clocks (stop watches, timer watches, metronomes), watch and clock parts (dial plates, springs, gears, and screws)

Column Code	Row Code	Sector Name
3719-01	**3719-011**	**Professional and scientific instruments**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Physical and chemical instruments" listed under Group Number 324 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3312 Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment

(Given examples)
Laboratory instruments (chemical instruments, physical instruments, observatory instruments), educational instruments (experimental instruments for physics, chemistry, natural history and mathematics), geophysical instruments (gravity meters, magnetometers), astronomical instruments, and parts, fixtures, and accessories for scientific chemical instruments

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Column Code	Row Code	Sector Name
3719-02	**3719-021**	**Analytical instruments, testing machines, measuring instruments**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Measuring instruments, analytical instruments and testing machines" listed under Group Number 321 and "Surveying instruments" listed under Group Number 322 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3312 Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment

(Given examples)
Range finders, integral volume meters (oil volume meters, gas volume meters, and water volume meters), other volume meters (measuring cups, volume meters for chemistry, and measuring flasks), scales (fixed scales, spring scales, and electronic scales), thermometers (glass), pressure meters, metallic thermometers, flow meters, level meters, precision measuring instruments, industrial range finders, optical analyzers, other analyzers, material testers, other testers, optical meters, optical flux meters, luxmeters, refracto meters, pollution-measuring instruments, density meters, specific gravity meters, noise level meters, wave counters, speedometers, seismographs, geophysical measuring apparatus (gyroscopic instruments, magnetic compasses, angle-measuring apparatus, and level-measuring apparatus), and parts, fixtures, and accessories for analytical instruments, testing instruments, meters, measuring instruments

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Column Code	Row Code	Sector Name
3719-03	**3719-031**	**Medical instruments**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Medical instruments and apparatus" listed under Group Number 323 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3311 Manufacture of medical and surgical equipment and orthopedic appliances

(Given examples)
Medical instruments, apparatus, and devices, apparatus and devices for hospitals, dental apparatus and devices, veterinary tools and apparatus, medical supplies, materials for dentistry, and parts, fixtures, and accessories for medical instruments and apparatus

(Notes)
X-ray equipment, electronic equipment, and laser equipment are classified under the sector "3331-01, -011 Applied electronic equipment."

Column Code	Row Code	Sector Name
3911-01	**3911-011**	**Toys and games**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Games and toys, except dolls and children's vehicles" listed under Industry Number 3431, "Dolls" listed under Industry Number 3432, and "Children's vehicles" listed under Industry Number 3433 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3694 Manufacture of games and toys

(Given examples)
Cards, hanafuda cards, igo games, shogi games, mahjong games, television games (home use), electronic toys,

metallic toys, model kits, air-filled vinyl toys, stuffed animal toys, wooden toys, plastic toys, Japanese dolls, sekku dolls, hina dolls, western-style dolls, children's carriage vehicles (walkers for infants, baby carriages, and tricycles), and parts and accessories for toys

(Notes)
Game software included in this sector in the 1990 I-O Tables was transferred to the sector "3919-02 Information recording materials" in the 1995 Tables.

Column Code	Row Code	Sector Name
3911-02	**3911-021**	**Sporting and athletic goods**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Sporting and athletic goods" listed under Industry Number 3434 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3693 Manufacture of sports goods

(Given examples)
Baseball gear, softball gear, basketball gear, volleyball gear, rugby gear, soccer gear, tennis gear, ping-pong gear, badminton gear, golf gear, hockey gear, ski gear, water-ski gear, skating gear, track and field gear, gymnastics gear, fishing gear and accessories, swings, slides, air-guns, hunting guns, Japanese fencing gear, hang-gliding gear, and parts and accessories for sporting goods

(Notes)
Hats, uniforms, shoes, belts, and so forth are not classified under this sector but are included in their respective sectors.

Column Code	Row Code	Sector Name
3919-01	**3919-011**	**Musical instruments**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Musical instruments" listed under Group Number 342 of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 3692 Manufacture of musical instruments

(Given examples)
Pianos, electronic pianos, guitars, electronic guitars, electronic musical instruments ("Electone", synthesizers, electronic keyboards), organs, electronic organs, accordions, drums, pipe instruments, stringed instruments, shamisen, koto, shakuhachi, harmonicas, music box movements, and parts, fixtures, and accessories for musical instruments

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Column Code	Row Code	Sector Name
3919-02	**3919-021**	**Audio and video records, other information recording media**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Information recording materials, except newspapers, books, other printed products, etc." listed under Industry Number 3496 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2213 Publishing of recorded media

Class 2230 Reproduction of recorded media

(Given examples)
Audio discs (CD), audiotapes, videodiscs, videotapes, game cassettes, prepaid cards, computer software floppy discs

(Notes)
The sector "3919-02, -021 Records" that appeared in the 1990 Tables was changed to "Information recording materials" in the 1995 Tables. Furthermore, video software in "3211-03 Video recording and playback equipment," prepaid cards in "3919-09 Miscellaneous manufacturing products," and TV game software in "3911-01 Toys" were integrated into this sector.

Computer software programs are treated as the production activities for software industry, and this sector covers only the processing fee of information recording materials.

Column Code	Row Code	Sector Name
3919-03	**3919-031**	**Stationery**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities of "Pens, lead pencils, painting materials and stationery" listed under Group Number 344 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3699 Other manufacturing n.e.c.

(Given examples)
Fountain pens, refillable lead pencils, ball-point pens, marking pens, pencils, lead for refillable lead pencils, water color tubes, crayons, pastels, sketchbooks, brushes, paint brushes, oil paint tubes, canvas, drawing plates, drawing clothes, poster colors, seals, seal pads, stamps, stamp pads, rulers, compasses, drafting boards, abacuses, glue for offices and industries, staplers, pencil boxes, hole punchers, pencil sharpeners, and parts and accessories for writing instruments and stationery

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Column Code	Row Code	Sector Name
3919-04	**3919-041**	**Jewelry and adornments**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for "Precious metal products, including jewel processing" listed under Group Number 341 and "Costume jewelry, costume accessories, buttons and related products, except precious metals and jewelry" listed under Group Number 345 of the Standard Industrial Classification for Japan

The metallic art objects produced by the Mint Bureau of Ministry of Finance as a special account are included in this sector.

(Corresponding ISIC)
Class 3691 Manufacture of jewellery and related articles

Class 3699 Other manufacturing n.e.c.

(Given examples)
Necklaces, bracelets, rings, earrings, broaches, lockets, cuff links, powder compacts, badges, buckles, medals, combs, jewel boxes, accessory cases, and natural, grown, or artificial accessories (necklaces, bracelets, rings, earrings, broaches, cuff links, tie-pins), tin and antimony products, buttons, sewing needles, machine needles, zips, snaps, hooks, wigs, kamoji, decorative medals, and parts and accessories for small accessories

(Notes)
Japanese fans, Japanese performance fans, paper lanterns, umbrellas, Japanese umbrellas, and cigars, pipes, and related accessories that appeared in this sector in the 1990 I-O Tables were re-classified under "3919-09 Miscellaneous manufacturing products."

Furthermore, artificial flowers, decorative feathers, needles, pins, hooks, and zips that were included in "3919-09 Miscellaneous manufacturing products" were re-classified under this sector.

Column Code	Row Code	Sector Name
3919-05	**3919-051**	**"Tatami" (Straw matting) and straw products**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

(Definition, Scope)
The production activities for "Straw-mats ("tatami")" listed under Industry Number 3472 and "Straw, panama hats, and straw goods" listed under Industry Number 3471 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2029 Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials

(Given examples)
Tatami mats, tatami flooring, tatami floor coverings, goza (thin woven-straw floorings), mushiro (woven-straw wall hangings), hana-mushiro (woven-straw flower patterned wall hangings), kamasu, straw, rope, straw hats, woven-rope hats

Column Code	Row Code	Sector Name
3919-06	**3919-061**	**Ordnance**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities of the "Manufacture of ordnance and accessories" listed under Major Group Number 33 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 2927 Manufacture of weapons and ammunition

(Given examples)
Weapons, heavy weapons, grenade launchers, military vehicles, cartridges, shells, explosives, command-center systems and equipment, weapons parts and accessories, weapons repairs

Column Code	Row Code	Sector Name
3919-09	**3919-099**	**Miscellaneous manufacturing products**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities of "Lacquerware" listed under 346, "Fans and lanterns (Japanese style)" listed under Industry Number 3473, "Brooms and brushes" listed under Industry Number 3474, "Umbrellas, parasols and parts, of wood and paper" listed under Industry Number 3475, "Matches" listed under Industry Number 3476, "Smoking accessories and supplies, except precious metals and jewelry" listed under Industry Number 3477, "Thermos bottles" listed under Industry Number 3478, "Fireworks" listed under Industry Number 3491, "Signboards and signs" listed under Industry Number 3492, "Pallets" listed under Industry Number 3493, "Models and patterns, except of paper" listed under Industry Number 3494, "Pattern manufactured of industrial use" listed under Industry Number 3495, and "Miscellaneous manufacturing industries, n.e.c." listed under Industry Number 3499 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 3699 Other manufacturing n.e.c.

(Given examples)
Japanese lacquer furniture, Japanese lacquer kitchen utensils and tableware, other Japanese lacquerware,

Japanese fans, Japanese performance fans, paper lanterns, toothbrushes, brushes for cosmetic use, other brushes, brooms, dusters, mops, other cleaning gear, umbrellas, Japanese umbrellas, matches, cigarette lighters, fireworks (incl. toy models), signboards, signs, displays, male and female mannequins, body stand for sewing, models (globes, food stuffs), industrial models (incl. wooden models), thermoses, pallets, textile wall components, scents, safety and protection gear, life-saving gear, life saving equipment, prefabricated houses, interior lighting, lamp shades, funeral accessories

(Notes)
In the 1995 Tables, the item "Prepaid cards" included in this sector in the 1990 Tables was integrated into "3919-02 Information recording materials," the items "Artificial flowers, Decoration feathers, Needles, Pins, Hooks, Fasteners" included in this sector in the 1990 Tables were integrated into "3919-04 Small personal adornments," and the items "Straw hats, Straw knitted hats" included in this sector in the 1990 Tables were integrated into "3919-05 "Tatami (straw matting) and straw products." Furthermore, Japanese fans, Japanese performance fans, paper lanterns, umbrellas, Japanese umbrellas, and cigarette lighters and smoking accessories that were included in "3919-04 Small personal adornments" are now integrated into this sector.

Column Code	Row Code	Sector Name
3921-01	**3921-011**	**Reuse and recycling**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The recovery and processing activities for recyclable materials such as iron scrap. This sector becomes a bridging sector for by-products in addition to scrap. The 2000 I-O Tables include iron scrap, non-ferrous metal scrap, plastic scrap, glass scrap, and waste paper.

(Corresponding ISIC)
Class 3710 Recycling of metal waste and scrap

Class 3720 Recycling of non-metal waste and scrap

(Given examples)
Iron scrap, non-ferrous metal scrap, plastic scrap, glass scrap, waste paper, cotton fiber waste, wool waste, animal hair waste, plaster, blast furnace slag, fly ash, mineral waste, sulfur, by-produced chrysalis, fruit juice pulp, scrap meat, vegetable waste, soy sauce lees, coffee lees, ammonium sulfate, silicic acid calcium, LPG, coke, coalbed gas, blast furnace gas, converter gas

(Changes)
The Recyclable Materials Recovery and Processing sector was established to cope with recycling issues; it eliminates unstable import coefficients due to negative input methods, and, in comparison with past Tables, total domestic products will increase due to the addition of scrap and by-products that are now factored into this new sector.

(Notes)
The recyclable materials wholesale activities in "6111-01 Wholesale trade" are the recovery activities, and are classified under this sector.

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9 Construction

Column Code	Row Code	Sector Name
4111-01	**4111-011**	**Residential construction (wooden)**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The activities related to the building of new wooden houses, expanding existing houses, and refurbishing houses; houses are stipulated as being buildings that are used exclusively for residential use or as (living quarters of) "combined buildings for living and commercial use." The key component, referred to as the "key building component," stipulated in Article 2 of the Building Standards Law (the same definition applies hereafter), of the aforementioned buildings (as defined in Article 2 of the same Law and also applied hereafter) shall be wood.

(Corresponding ISIC)
Class 4510 Site preparation

Class 4520 Building of complete constructions or parts thereof; civil engineering

Class 4530 Building installation

Class 4540 Building completion

(Given examples)
Housing building (wooden), living quarters of combined housing for both living and commercial use (wooden)

(Notes)

1 The drawing of plans for buildings may be carried out by the house owners themselves, by professional design engineers, or by sub-contractors of building contractors. The activities conducted by professional design engineers are classified as inputs from the sector "8519-03, -031 Civil engineering and construction services" on a lump sum basis.

The same shall apply to all sectors in "17 Construction" of the aggregated sector classification, except for the sector "4111-01, -011 Residential construction (wooden)."

2 "Building new houses" refers to the construction of buildings on new sites where no buildings exist.

"Expansion" refers to construction related to existing buildings, thereby increasing the floor space.

"Refurbishment" refers to the construction of new buildings including the elimination, wholly or partially, of existing buildings, with usage, size, and structure remaining generally similar to that of the pre-existing construction.

3 Activities related to regular repairs for buildings (housing and non-housing) are classified under the sector "4121-01, -011 Repair of construction."

Column Code	Row Code	Sector Name
4111-02	**4111-021**	**Residential construction (non-wooden)**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The activities related to constructing new buildings, expanding existing buildings, and refurbishing buildings; the buildings referred herein are those buildings that are used exclusively for living or as (living quarters of) "combined buildings for living and industry use." The key building component of the aforementioned buildings shall be non-wooden materials.

(Corresponding ISIC)
Class 4510 Site preparation

Class 4520 Building of complete constructions or parts thereof; civil engineering

Class 4530 Building installation

Class 4540 Building completion

(Given examples)
Housing buildings (non-wooden), living quarters of combined housing buildings for both residential and industry use (non-wooden)

(Notes)
The structural classification of non-wooden buildings is as following:

Steel framed and reinforced concrete structure (SRC structure): This refers to buildings with an integral steel frame and reinforced concrete structure. Key building components are defined in Point 5, Article 2 of the Building Standards Law. (The same applies hereafter.)

Reinforced concrete structure (RC structure): This refers to buildings with an integral structure of reinforced concrete.

Iron structure (S structure): This refers to buildings with frames of iron or other metals (including reinforced iron bars with "ri-pu-ra-su" treatment and light steel frame structures).

"Concrete block structure (CB structure): This refers to buildings built with concrete blocks reinforced by iron bars (including those with exterior walls of concrete block).

Others: This refers to buildings built with other structures, such as stone, bricks, concrete without reinforcing bars, concrete blocks without reinforcing bars, and other structures that are not elsewhere classified.

Column Code	Row Code	Sector Name
4112-01	**4112-011**	**Non-residential construction (wooden)**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The activities of constructing new buildings, expanding existing buildings, and refurbishing buildings of wood, except those specified in "4111-01 Residential construction (wooden)"

(Corresponding ISIC)
Class 4510 Site preparation

Class 4520 Building of complete constructions or parts thereof; civil engineering

Class 4530 Building installation

Class 4540 Building completion

(Given examples)
Factory and warehouse buildings, office buildings

Column Code	Row Code	Sector Name
4112-02	**4112-021**	**Non-residential construction (non-wooden)**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The activities of constructing new buildings, expanding existing buildings, and refurbishing buildings of non-wooden materials, except those specified in "4111-02 Residential construction (non-wooden)"

(Corresponding ISIC)
Class 4510 Site preparation

Class 4520 Building of complete constructions or parts thereof; civil engineering

Class 4530 Building installation

Class 4540 Building completion

(Given examples)
Factory and warehouse buildings, office buildings, school buildings, and hospital and store buildings

(Notes)
The structural classification of "non-wooden" buildings is the same as that of "4111-02, -021 Residential construction (non-wooden)."

Column Code	Row Code	Sector Name
4121-01	**4121-011**	**Repair of construction**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)

(1) The regular repair work of buildings (housing and non-housings buildings) and civil construction (railways, electric power, telecommunication, water supply, and drainage facilities, gas tanks, parking lots, and golf links). Output is considered to be building repairs and civil construction repairs.

(2) However, the following are not considered to be activities of this sector, but those of corresponding sectors.

1 Large-scale modernization causing a significant increase in the life expectancy of the construction

2 Maintenance and repair work relating to public works, and restoration work following natural disaster

3 Replacement and repair work relating to rails, power, and signal facilities, power transmission and distribution facilities, and transmission and telecommunication cables

(Corresponding ISIC)
Class 4510 Site preparation

Class 4520 Building of complete constructions or parts thereof; civil engineering

Class 4530 Building installation

Class 4540 Building completion

(Notes)
The value of building and construction repairs in relation to housing is determined by examining, in the following order, "Building and construction repair," "Housing lease," and "Household expenditure."

Column Code	Row Code	Sector Name
4131-01	**4131-011**	**Public construction of roads**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The following public works, including new construction as well as maintenance and repair work

1 Construction of roads and streets implemented by the government and by local governments

2 Toll road businesses conducted by the Japan Highway Public Corporation, Metropolitan Expressway Public Corporation, Hanshin Expressway Public Corporation, Honshu-Shikoku Bridge Authority, and local governments

(Corresponding ISIC)
Class 4510 Site preparation

Class 4520 Building of complete constructions or parts thereof; civil engineering

Class 4530 Building installation

Class 4540 Building completion

(Given examples)
Roads, streets, toll roads, land re-adjustment projects

(Notes)

1 Small-scale maintenance and repair work for roads and streets may be classified in the sector "4121-01 Repair of construction" as regular and constant expenditures. However, every item is treated, as before, as a public work (capital formation) and is listed chrorologically. (In the 1968 SNA (System of National Accounts), maintenance and repair work was listed as public construction and treated as capital formation; the same applies in the 1993 SNA.)

2 The activities of the sectors "4131-01 Public construction of roads," "4131-02 Public construction of rivers, drainage and others," "4131-03 Agricultural public construction," and "4131-04 Other public construction" may be considered more or less as established items rather than as activities. For example, the activities of road construction are not included in this sector in their entirety but divided between the government, local governments, Japan Highway Public Corp., Metropolitan Expressway Public Corp., Hanshin Expressway Public Corp., and Honshu-Shikoku Bridge Authority. Construction activities by private entities are classified in a separate sector, "4132-09 Other civil engineering and construction."

Column Code	Row Code	Sector Name
4131-02	**4131-021**	**Public construction of rivers, drainages and others**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The following public works, including maintenance and repair work, in addition to new construction

1 Rivers: Activities implemented by the government and local governments relating to rivers, soil erosion prevention and sediment control, and the sea shore, as well as activities implemented by the Water Resources Development Public Corporation

2 Urban planning: Activities implemented by the government and local governments relating to drainage, parks, and waste treatment facilities

3 Ports and harbors: Activities implemented by the government and local governments relating to ports and fishing harbors

4 Airports: Activities implemented by the government and local governments as well as by Narita Airport Authority, Kansai International Airport Co., Ltd., and the Central Japan International Airport Co., Ltd. relating to airports

5 Reconstruction after natural disaster: Reconstruction activities related to natural disasters, mine pollution, and urban disasters, all implemented by the government and local governments for the aforementioned, and for "4131-01 Public construction of roads."

6 Offshore fishing-bed preparation: Activities implemented by the government and local governments relating to offshore fishing-bed preparation

(Corresponding ISIC)
Class 4510 Site preparation

Class 4520 Building of complete constructions or parts thereof; civil engineering

Class 4530 Building installation

Class 4540 Building completion

(Given examples)
River restoration, the overall development of rivers, soil erosion prevention and sediment control, seashore, drainage, waste treatment facilities, park, port, fishing harbor, airport, reconstruction after disaster

(Notes)

1 Small-scale maintenance and repair work is classified under the sector "4121-01 Repair of construction" as regular and constant expenditure. However, every item is treated, as before, as a public work (capital formation) and is listed chronologically. (In the 1968 SNA (System of National Accounts), maintenance and repair work was listed as public construction and treated as capital formation; the same applies in the 1993 SNA.)

2 The activities related to drainage that are specified in point 2 above used to be classified in the sector "4009-90 Other construction" up until the 1970 I-O Tables. However, these should now be treated as public works due to the nature of the activities, and therefore classified in this sector in the 1975 Tables and thereafter; the sector was renamed accordingly.

Column Code	Row Code	Sector Name
4131-03	**4131-031**	**Agricultural public construction**

(Ministry or agency in charge)
Ministry of Agriculture, Forestry and Fisheries

Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The activities of the following public works, including maintenance and repair works, in addition to new construction

1 Agricultural public works: Agricultural infrastructure improvement activities implemented by the government, local governments, land improvement sectors, other entities, and the Farmland Improvement Authority

2 Forest paths: Activities implemented by the government and local governments relating to forest paths, as well as activities by the Forest Development Agency

3 Mountain forest preservation: Activities implemented by the government and local governments relating to mountain forest preservation

4 Reconstruction following natural disaster: Reconstruction activities, relating to the aforementioned points 1 through 3, implemented by the government and local governments

(Corresponding ISIC)
Class 0140 Agricultural and animal husbandry service activities, except veterinary activities

Class 4510 Site preparation

Class 4520 Building of complete constructions or parts thereof; civil engineering

Class 4530 Building installation

Class 4540 Building completion

(Given examples)
Land improvement, forest paths, mountain forest preservation, reconstruction after disaster

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Column Code	Row Code	Sector Name
4132-01	**4132-011**	**Railway construction**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The construction activities relating to railways implemented by Japan Railway, Japan Railway Construction Corporation, public railways, private railways, Teito Rapid Transit Authority, and Honshu-Shikoku Bridge Authority, as well as the replacement and repair activities of rails and power and signal facilities.

(Corresponding ISIC)
Class 4510 Site preparation

Class 4520 Building of complete constructions or parts thereof; civil engineering

Class 4530 Building installation

Class 4540 Building completion

(Given examples)
Construction relating to railways

(Notes)
Activities of the sectors "4132-01 Railway construction," "4132-02 Electric power facilities construction," "4132-03 Telecommunication facilities construction," and "4132-09 Other civil engineering and construction" may be considered more or less as established items rather than as activities similar to the sector of "Public works." In short, the classification of the sectors in the "Construction" sector is defined on a production (construction) basis, while in the "Civil engineering" sector it is based on investment.

Civil engineering construction activities implemented by other establishments than those that are defined according to investment will be classified in the sector "4132-09 Other civil engineering and construction."

Column Code	Row Code	Sector Name
4132-02	**4132-021**	**Electric power facilities construction**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
Electricity business activities conducted by nine power companies, Okinawa Power Company, Electric Power Development Company, and local public enterprises as well as facility construction work activities conducted by other electricity business entities and Japan Atomic Power Company relating to power generation, transmission and distribution.

Facilities replacement and repair work is included in this sector, and entities that obtain the licensed permission for installing in-house power generation of more than 500kW are also included in this sector.

(Corresponding ISIC)

Class 4510 Site preparation

Class 4520 Building of complete constructions or parts thereof; civil engineering

Class 4530 Building installation

Class 4540 Building completion

(Given examples)

Facilities relating to power generation, transmission, and distribution

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Column Code	Row Code	Sector Name
4132-03	**4132-031**	**Telecommunication facilities construction**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)

Telecommunication facilities construction activities conducted by Type 1 telecommunication carriers, and facilities replacement and repair works, are included in this sector.

(Corresponding ISIC)
Class 4510 Site preparation

Class 4520 Building of complete constructions or parts thereof; civil engineering

Class 4530 Building installation

Class 4540 Building completion

(Given examples)
Construction of telecommunication related facilities

Column Code	Row Code	Sector Name
4132-09	**4132-099**	**Other civil engineering and construction**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The following civil construction works by private sectors and that are not classified elsewhere, and civil construction works other than government public works.

1 Water supplies and water supplies for industry:

Facilities construction conducted by local public entities relating to water supplies, small-scale water-supply systems, and water supplies for industry

2 Site preparation:

Site preparation work conducted by the Urban Development Corporation, the Japan Regional Development Corporation, local public entities, and the private sector

3 Other civil engineering:

Restoration work, in relation to mining pollution, carried out by the government and local public entities, gas related works carried out by local public entities and the private sector, investment-oriented construction work by unemployed people placement programs conducted by local public entities, parking maintenance work conducted by the government, and other private sector civil engineering construction not previously mentioned

(Corresponding ISIC)
Class 4510 Site preparation

Class 4520 Building of complete constructions or parts thereof; civil engineering

Class 4530 Building installation

Class 4540 Building completion

(Given examples)
Facilities relating to water supplies and water supplies for industry, reclamation and site preparation work, construction work for gas tanks, parking lots, golf links, ball parks, recreation parks and pipelines, district streets in housing complexes conducted by private sectors, piers and bank roads, and river construction work

10 Electricity, gas, and water

Column Code	Row Code	Sector Name
	5111-001	**Electricity**
5111-01		**Electricity (nuclear power)**
5111-02		**Electricity (thermal power)**
5111-03		**Electricity (water power, etc.)**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities for the "Production, collection and distribution of electricity" excluding private power generation listed under Major Group Number 35 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 4010 Production, collection and distribution of electricity

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Column Code	Row Code	Sector Name
5111-04	**5111-041**	**Private power generation**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The non-commercial, continuous power generation activities (over 500 kW output) of the mining industry division specified in "Production, collection and distribution of electricity" listed under Major Group Number 35 of the Standard Industrial Classification for Japan

(Notes)
This sector is defined as an independent activity sector, not as a self-activity sector, despite the sector name "private power generation."

Column Code	Row Code	Sector Name
5121-01	**5121-011**	**Gas supply**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities of the "Manufacture of gas" listed under Major Group Number 36 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 4020 Manufacture of gas; distribution of gaseous fuels through mains

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Column Code	Row Code	Sector Name
5122-01	**5122-011**	**Steam and hot water supply**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The production activities of "Heat supply" listed under Major Group Number 37 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 4030 Steam and hot water supply

Column Code	Row Code	Sector Name
5211-01	**5211-011**	**Water supply**

(Ministry or agency in charge)
Ministry of Health, Labour and welfare

(Definition, Scope)
The production activities of "Water for end users, except industrial users" excluding water supply for shipping listed under Group Number 381 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 4100 Collection, purification and distribution of water

(Given examples)
Activities of water bureaus (departments), water supply offices, water purification pools, drainage facilities, water pumping stations

(Notes)

1 This sector applies to activities related to drinking water supplies, regardless of usage (mains water, general water supplies, and small-scale water-supply systems, as specified in the Water Law).

2 Activities related to water supplies for shipping are included in "7189-02 Port and water traffic control ★★."

Column Code	Row Code	Sector Name
5211-02	**5211-021**	**Industrial water supply**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
Industrial water supply activities by local public entities for manufacturing entities based on the "Water Business Law for Industrial Use" specified in "Water for industrial users" listed under Group Number 382 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 4100 Collection, purification and distribution of water

(Notes)
Water supply activities for industrial use conducted by bodies other than local public entities (including water supplies), and water supplies and small-scale water supply activities conducted by local public entities according to the "Water Law" are classified in the sector "5211-01, -011 Water supplies."

Column Code	Row Code	Sector Name
5211-03	**5211-031**	**Sewage disposal ★★**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The associated treatment activities for "Sewerage" listed under Group Number 383 of the Standard Industrial Classification for Japan; namely, the activities of sewage bureau (departments), sewerage facilities, sewerage offices, and sewerage pumping stations.

(Corresponding ISIC)
Class 9000 Sewage and refuse disposal, sanitation and similar activities

(Notes)
This sector covers the business activities of facilities that drain sewerage and rain water within the scope of public sewerage activities conducted by local public entities. Therefore, the activities of this sector are aimed at sanitation by way of drains, drainage canals and other ancillary facilities (such as filtration facilities). Activities by local public entities in treating waste and excretion are classified in the sector "5212-01, -011 Waste disposal services (public)."

Column Code	Row Code	Sector Name
5212-01	**5212-011**	**Waste disposal management services (public) ★★**

(Ministry or agency in charge)
Ministry of the Environment

(Definition, Scope)
The activities of local public entities among those specified in "Waste treatment services" listed under Major Group Number 87 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 9000 Sewage and refuse disposal, sanitation and similar activities

(Given examples)
Activities related to the collection and treatment of human waste, waste, and industrial waste

Column Code	Row Code	Sector Name
5212-02	**5212-021**	**Waste disposal management services (private)**

(Ministry or agency in charge)
Ministry of the Environment

(Definition, Scope)
The activities of private entities among those specified in "Waste treatment services" listed under Major Group Number 87 of the Standard Industrial Classification for Japan; activities commissioned by local public entities are included, while in-house disposal is not included.

(Corresponding ISIC)
Class 9000 Sewage and refuse disposal, sanitation and similar activities

(Given examples)
Activities related to the collection and treatment of human waste, waste, and industrial waste

11 Wholesale trade, financial services, insurance, and real estate

Column Code	Row Code	Sector Name
6111-01	**6111-011**	**Wholesale trade**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The wholesale trade activities related to Group Numbers 48 through 53 of the Standard Industrial Classification for Japan; the production values are wholesale trade margins.

The sector includes sales activities of Agriculture Cooperative Unions, Fishery Cooperative Unions, Processed Marine Products Cooperative Unions, and Forestry Cooperative Unions, sales and procurement activities of the Japan Agriculture Cooperative Association, Japan Fishery Cooperative Association, Japan Processed Marine Products Cooperative Association, and Japan Forestry Cooperative Association, and activities of the Food Control Special Account, Alcohol Monopoly Program Special Account, Silk Fiber and Sugar Price Stabilization Corporation, Agriculture and Livestock Industries Corporation, and National Stadium and School Health Center of Japan.

(Corresponding ISIC)
Class 5010 Sale of motor vehicles

Class 5030 Sale of motor vehicle parts and accessories

Class 5110 Wholesale on a fee or contract basis

Class 5121 Wholesale of agricultural raw materials and live animals

Class 5122 Wholesale of food, beverages and tobacco

Class 5131 Wholesale of textiles, clothing and footwear

Class 5139 Wholesale of other household goods

Class 5141 Wholesale of solid, liquid and gaseous fuels and related products

Class 5142 Wholesale of metals and metal ores

Class 5143 Wholesale of construction materials, hardware, plumbing and heating equipment and supplies

Class 5149 Wholesale of other intermediate products, waste and scrap

Class 5150 wholesale of machinery, equipment and supplies

Class 5190 Other wholesale

(Note)
The recyclable materials wholesale activities are not included in this sector because "Recyclable materials recovery and processing" is newly established in 2000 I-O Tables.

Column Code	Row Code	Sector Name
6112-01	**6112-011**	**Retail trade**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The retail trade activities of Group Numbers 54 through 59 of the Standard Industrial Classification for Japan; production values are retail trade margins.

The sector includes the procurement activities of Agriculture Cooperative Unions, Fishery Cooperative Unions, Processed Marine Products Cooperative Unions, and Forestry Cooperative Unions, and activities of retail stores and Co-ops. The production activities of manufacturing and retailing are not classified in this sector, but classified in the corresponding sector of manufacturing.

(Corresponding ISIC)
Class 5010 Sale of motor vehicles

Class 5030 Sale of motor vehicle parts and accessories

Class 5040 Sale, maintenance and repair of motorcycles and related parts and accessories

Class 5211 Retail sale in non-specialized stores with foods, beverages or tobacco predominating

Class 5219 Other retail sale in non-specialized stores

Class 5220 Retail sale of food, beverages and tobacco in specialized stores

Class 5231 Retail sale of pharmaceutical and medical goods, cosmetic and toilet articles

Class 5232 Retail sale of textiles, clothing, footwear and leather goods

Class 5233 Retail sale of household appliances, articles and equipment

Class 5234 Retail sale of hardware, paints and glass

Class 5239 Other retail sale in specialized stores

Class 5240 Retail sale of second-hand goods in stores

Class 5251 Retail sale via mail order houses

Class 5252 Retail sale via stalls and markets

Class 5259 Other non-store retail sale

(Notes)
Examples of manufacturing and retailing: Retail of menswear, confectionery, bread, processed food such as tofu, kamaboko, and so forth, the retail of cooked dishes, furniture, housing fixtures, tatami, religious ceremonial articles

Column Code	Row Code	Sector Name
6211-01		**Financial service**
	6211-011	**Financial service (imputed interest), public**
	6211-012	**Financial service (imputed interest), private**
	6211-013	**Financial service (commission), public**
	6211-014	**Financial service (commission), private**

(Ministry or agency in charge)
Financial Services Agency

(Definition, Scope)
The activities of "Banks and trust banks" listed under Major Group Number 62, "Financial institutions for small-businesses, except government related financial institutions" listed under Major Group Number 63, "Financial institutions for agriculture, forestry and fisheries finances, except government related financial institutions" listed under Major Group Number 64, "Government-related financial institutions, except otherwise classified," excluding Japan Financial Services for Promotion of Private Schools, and oil storing activities by Japan National Oil Corporation listed under Major Group Number 65, "Non-deposit money corporations engaged in the provision of finance, credit and investment, except government-related financial institutions" excluding "662 Pawnbrokers," listed under Major Group Number 66, "Financial auxiliaries" listed under Major Group Number 67, and "Securities and futures commodity dealing activities," excluding lottery ticket sales activities, listed under Major Group Number 68 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 6511 Central banking

Class 6519 Other monetary intermediation

Class 6592 Other credit granting

Class 6599 Other financial intermediation n.e.c

Class 6711 Administration of financial markets

Class 6712 Security dealing activities

Class 6719 Activities auxiliary to financial intermediation n.e.c.

(Given examples)
Bank of Japan, city banks, regional banks (including second-tier regional banks), trust banks, long-term credit banks, foreign banks in Japan, postal savings, postal notes, postal transfers, Japan Bank of International Cooperation, Development Bank of Japan, Okinawa Development Finance Corporation, Fund for Promotion of Development of Amami Islands, Japan Finance Corporation for Municipal Enterprises, Norinchukin Bank, JA Bank Shin-ren, JF Bank Shin-gyoren, JA Co-op unions (credit facility), JF Co-op unions (credit facility), Agriculture, Forestry and Fisheries Finance Corporation, Credit finance services, Shin-kin Federation Bank, credit co-op unions, Shin-kin Central Bank, Shoko Chukin Bank, Japan Finance Corporation for Small Businesses, National Life Finance Corporation, Rokin banks, Rokin Federation Bank, Government Housing Loan Corporation (loan facility), Housing loan service companies, Japan National Oil Corporation (finance facility), Social Welfare and Medical Corporation, Pension Welfare Service Public Corporation (finance facility), Agriculture, Forestry and Fisheries Credit Foundations, Fisheries Mutual Fund, Corporation for Advanced Transport and Technology, Industrial Structure Improvement Fund, short-term financing companies, Agriculture Mutual Fund, securities financing companies, Credit Insurance Corporation for Small Businesses, National Credit Guarantee Fund, Bio-oriented Technology Research Advancement Institution, Tokyo Small and Medium Business Investment Consultation Company, Nagoya Small and Medium Business Investment Consultation Company, Osaka Small and Medium Business Investment Consultation Company, securities companies, securities investment trust companies, securities investment advisory companies, stock exchange organizations

(Changes)
In conjunction with the rational reorganization of special-purpose companies in the field of public financing, the Japan Development Bank and Overseas Economy Cooperation Fund were integrated into the Japan Bank for International Cooperation, the Japan Development Bank and Hokkaido-Tohoku Development Finance Public Corporation were integrated into the Development Bank of Japan, the People's Finance Services and Environment and Health Finance Services were integrated into National Life Finance Corporation, and the Railway Improvement Fund was integrated into the Corporation for Advanced Transport and Technology.

(Notes)

1 Public finance covers the following institutions; the Bank of Japan as the central bank of Japan; the four special accounts of postal savings, finance operations of the Ministry of Finance, industrial investments, and urban development finance; two banks of the Development Bank of Japan, and the Japan Bank for International Cooperation; seven finance service institutions such as the National Life Finance Corporation; the Corporation for Advanced Transport and Technology, Agriculture Mutual Fund, Agriculture and Fisheries Credit Foundations, Industrial Structure Improvement Fund, Social Welfare and Medical Corporation, Pension Welfare Service Public Corporation (lending facility), Japan National Oil Corporation (financing facility), and the Bio-oriented Technology Research Advancement

Institution. Other finance institutions are ranked as private finance institutions.

2 Financing activities conducted by life insurance businesses and insurance businesses are not classified in this sector but in the sectors of "6212-01, -011 Life insurance" and "6212-02, -021 Non-life insurance."

3 Public pawnbrokers were categorized as governmental finance institutions in the 1970 I-O Tables. However, the activities of these organizations were considered to be providing welfare services, and therefore after 1975 Tables they were classified in either "8111-01, -011 Public administration (central)" or "8112-01, -011 Public administration (local)."

4 Lottery ticket sales are classified in the sector "8611-09, -099 Other amusement and recreation services."

5 The row code of Finance was split into "public" and "private" after the 1975 Tables to maintain consistency in separating acquisition spending in the SNA (System of National Accounts) from the capital acquisition account and to clarify differences in output structure.

6 Financing activities of the Japan National Oil Corporation and lending activities of the Pension Welfare Service Public Corporation are included in this sector.

7 Regarding activities of non-banking institutions that were classified in "Finance" by definition, no estimation was made until the 1990 I-O Tables because of the unavailability of appropriate data and methodology for estimation. However, estimation was undertaken since the 1995 Tables so as to reflect the reality of the economy.

Column Code	Row Code	Sector Name
6212-01	**6212-011**	**Life insurance**

(Ministry or agency in charge)
Financial Services Agency

(Definition, Scope)
The activities of "Life insurance institutions" listed under Group Number 691, "Life insurance agents and brokers" listed under Industry Number 6941, "Mutual aid organizations" listed under Group Number 693, and "Miscellaneous insurance service institutions" listed under Industry Number 6959 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 6601 Life insurance

Class 6720 Activities auxiliary to insurance and pension funding

(Given examples)
Life insurance, pension insurance, postal life insurance, postal pensions, re-insurance of life insurance, life insurance agents, re-insurance of JA mutual aid insurance (such as life insurance mutual aid), retrocession of re-insurance, life insurance consultancy

(Notes)

1 The Government Housing Loan Corporation (Group life insurance facility) is included in this sector.

2 Postal life insurance special accounts and the government housing loan corporation (group life insurance facility) are classified in this sector. Also, foreign life insurance companies (branch offices) registered in Japan are included in this sector.

3 A study was conducted in the 1985 I-O Tables to establish a row code for imputed interest because activities of life insurance companies would produce pure insurance services and, simultaneously, they would produce imputed services for finance as a combined product. However, this idea was withdrawn in consideration of the 68SNA.

Column Code	Row Code	Sector Name
6212-02	**6212-021**	**Non-life insurance**

(Ministry or agency in charge)
Financial Services Agency

(Definition, Scope)
The activities of "Non-life insurance institutions" listed under Group Number 692, "Non-life insurance agents and brokers" listed under Industry Number 6942, "Rate-making services" listed under Industry Number 6951, "Appraisers" listed under Industry Number 6952, "Mutual aid organizations" listed under Group Number 693, "Mutual aid agents and brokers" listed under Industry Number 6943, and "Miscellaneous insurance service institutions" listed under Industry Number 6959 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 6603 Non-life insurance

Class 6720 Activities auxiliary to insurance and pension funding

(Given examples)
Fire insurance, earthquake insurance, marine insurance, automobile insurance (compulsory, arbitrary), theft insurance, transportation insurance, re-insurance of non-life insurance, trade insurance, non-life insurance agents, JA mutual aid (fire, car), re-insurance of JA mutual aid (fire, car), and retrocession of re-insurance

(Notes)

1 Agriculture, Forestry and Fisheries Credit Foundations is included in this sector.

2 This sector covers foreign non-insurance companies in Japan in addition to the government insurance and re-insurance special accounts, the Government Housing Loan Corporation (housing loan insurance), the Japan Small and Medium Enterprise Corporation, and the Agriculture, Forestry and Fisheries Credit Foundations.

Column Code	Row Code	Sector Name
6411-01	**6411-011**	**Real estate agencies and managers**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The activities of real estate agents and brokers specified in "Sales agents of buildings and houses and land sub dividers and developers" listed under Group Number 701, "Real estate agents and brokers" listed under Group Number 702, and "Real estate managers" listed under Group Number 713 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 7010 Real estate activities with own or leased property

Class 7020 Real estate activities on a fee or contract basis

(Given examples)
Commission fees for selling, leasing, swapping, and brokering real estate, real estate management fees

(Notes)

1 The construction activities of construction and sales businesses are not included in this sector but are classified in the construction sector.

2 Regarding the activities of property sales, only commission fees for trade agencies and brokerages are included in production values. Costs needed for site preparation are included in the construction sector.

Column Code	Row Code	Sector Name
6411-02	**6411-021**	**Real estate rental services**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The activities of "Real estate lessors, except house and room lessors" listed under Group Number 711, excluding those specified under "7112 Land lessors," of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 7010 Real estate activities with own or leased property

Class 7020 Real estate activities on a fee or contract basis

(Given examples)
Leasing fees for real estate leasing (commercial property rentals (or partial property rental in the case of combined housing), building rental, warehouse rental)

(Notes)
The leasing fee for the housing portion in the case of combined housing shall be classified in the sector "6421-01, -011 House rent."

Column Code	Row Code	Sector Name
6421-01	**6421-011**	**House rent**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The activities of "House and room lessors" listed under Group Number 712 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 7010 Real estate activities with own or leased property

Class 7020 Real estate activities on a fee or contract basis

(Notes)
The sector "6421-01, -011 House rent" that appeared in the 1995 Tables was split into house rent and imputed house rent and accordingly classified in "6421-01, -011 House rent" and "6422-01,-011 House rent (imputed rent)."

Column Code	Row Code	Sector Name
6422-01	**6422-011**	**House rent (imputed house rent)**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
This sector covers the scope of services generated by the use of a rented house. The related production value should correspond to the gross rental fee, regardless of ownership of the house in question, for the housing as well as for a portion of that housing in case of combined housing used by a household.

(Changes)
The sector "6421-01, -011 House rent" that appeared in the 1995 Tables was split into house rent and imputed house rent and accordingly classified in "6421-01, -011 House rent" and "6422-01,-011 House rent (imputed rent)."

12 Transportation

Column Code	Row Code	Sector Name
7111-01	**7111-011**	**Railway transport (passengers)**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The activities related to passenger transport specified in "Railway transport" listed under Major Group Number 39 of the Standard Industrial Classification for Japan; other activities of the railway business, including carriage repair activities, shall be ranked in separate sectors according to their nature.

(Corresponding ISIC)
Class 6010 Transport via railways

Class 6021 Other scheduled passenger land transport

(Given examples)
Passenger transportation activities undertaken by JR, public and private railways, and tramways (regular railways, tramways, underground railways, monorail railways, guided rail type tramways, cable tramways, ropeways, and non-rail tramways)

(Changes)
The sectors "7111-011 Railway passenger transport (JR)" and "7111-012 Railway passenger transport (excl. JR)" that appeared in the 1995 I-O Tables were integrated.

(Notes)

1 Revenues relating to advertisements in carriage and on station premises, and the sales of goods, public telephone services, and coin locker use shall not be included in this sector.

2 Revenues derived from other forms of transport such as "Bus transport services" shall be treated in the same way.

Column Code	Row Code	Sector Name
7112-01	**7112-011**	**Railway transport (freight)**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The activities of cargo transportation specified in "Railway transport" listed under Major Group Number 39 of the Standard Industrial Classification for Japan

(Corresponding ISIC)
Class 6010 Transport via railways

(Given examples)
Cargo transport by JR, private railways

Column Code	Row Code	Sector Name
7121-01	**7121-011**	**Bus transport service**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities of "Road passenger transport" excluding "402 Common taxicab operators" and "4092 Mini-sized vehicle passenger transport" under 40 of the Major Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 6021 Other scheduled passenger land transport

Class 6022 Other non-scheduled passenger land transport

(Given examples)
Passenger transportation by passenger bus transport, passenger rental bus, special-purpose passenger car transport

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Column Code	Row Code	Sector Name
7121-02	**7121-021**	**Hired car and taxi transport**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities of "Common taxicab operators" under 402, and "Mini-sized vehicle passenger transport" under 4092 of the Group and Industry Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 6022 Other non-scheduled passenger land transport

(Given examples)
Passenger transportation by hired car, taxicab, mini-sized passenger cars

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Column Code	Row Code	Sector Name
7122-01	**7122-011**	**Road freight transport**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities of "Road freight transport" excluding "414 Collect-and-deliver freight transport" under 41 of the Major Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 6023 Freight transport by road

(Given examples)
Freight transport by trucks (regular freight, special combined freight, specific-purpose freight), by mini-sized vehicle

Column Code	Row Code	Sector Name
7131-01P	**7131-011P**	**Self-transport by private cars (passengers)**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities of transporting people by private vehicles according to own demands (excluding self-driven travel.) Further, transportation by cargo vehicles is included in this sector.

(Notes)

1 The production values are calculated by aggregating expenses relating to goods and services that were needed for the transport by the private cars. However, expenses that are ranked as gross value added sector items shall not be charged against the sector of transport by private cars, a dummy sector that does not book added values, but shall be charged against corresponding gross value added sectors. Such expenses referred to above relating transport by private cars are personnel expense included in "9311-000 Wages and compensation", and expenses for car inspection, car registration, and car park certificate included in "9403-000 Indirect taxes (excluding custom duty and import commodity tax)."

2 The "Matrix of transport by private cars" will be created, both for passengers and for freight, as a supporting table showing expense details for goods and services by respective industry that were needed for transport activities by private cars.

Column Code	Row Code	Sector Name
7132-01P	**7132-011P**	**Self-transport by private cars (freight)**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities of transporting cargo by private vehicles according to own demands (excluding self-driven travel.)

(Notes)
Same as those of aforementioned sector "transport by private cars (passengers)."

Column Code	Row Code	Sector Name
7141-01	**7141-011**	**Ocean transport**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities of "Oceangoing transport" under 421 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 6110 Sea and coastal water transport

(Given examples)
Passenger and freight transportation by ocean transport

(Notes)

1 Activities of "Vessel rental, except coastwise ship leasing" under 4241 of the Industry Number of the Standard Industrial Classification for Japan are included in this sector. However, charter fee payment or receipt is the transaction within the sector and shall not be counted in the production values. A charter agreement with foreign "ocean transport" or "vessel leasing" shall, however, be counted in view of the international balance of payment. The import side of this (payment side of charter fee) shall be counted in at the point of intersection of own sector.

   The aforementioned shall be applicable to the charter agreements between businesses of other transport ("7122-01 Road freight transport", "7142-01 Coastal and inland water transport", "7151-01 Air transport" and "7161-01 Freight forwarding."

2 Activities of freight forwarding by ocean transport are not included in this sector, but included in "7161-01 Freight forwarding."

Column Code	Row Code	Sector Name
7142-01		**Coastal and inland water transport**
	7142-011	**Coastal and inland water transport (passengers)**
	7142-012	**Coastal and inland water transport (freight)**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities of "Coastwise transport" under 422, and "Inland water transport" under 423 of the Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 6110 Sea and coastal water transport

(Given examples)
Passenger transport by coastal water transport (including transport of passengers below twelve people), freight transport by coastal water transport, passenger transport by port transport, passenger and freight transport by river water transport and inland water transport

(Notes)

Activities of "Coastwise ship leasing" under 4242 of the Industry Number of the Standard Industrial Classification for Japan are included in this sector. However, the related charter fee, payment and receipt, shall not be counted in this sector because of transactions within the sector. Activities by marine freight transport are not included in this sector, but are included in "7161-01 Freight forwarding."

Column Code	Row Code	Sector Name
7143-01	**7143-011**	**Harbor transport service**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities of "Port transport" under 452 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 6301 Cargo handling

(Given examples)
Regular port transport, port-cargo handling, lighter transport (including towing lighters and rafts), coastal cargo handling and raft cargo handling

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Column Code	Row Code	Sector Name
7151-01		**Air transport**
	7151-011	**International air transport**
	7151-012	**Domestic air transport (passengers)**
	7151-013	**Domestic air transport (freight)**
	7151-014	**Aircraft service except air transport**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities of "Air transport" under 43 of the Major Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 6210 Scheduled air transport

Class 6220 Non-scheduled air transport

(Given examples)
Passenger and freight transportation internationally or domestically, and aircraft services (chemical spray by aircrafts, aerial photography) by air transport

(Notes)
Activities by air freight forwarders are not included in this sector, but are included in "7161-01 Freight forwarding."

Column Code	Row Code	Sector Name
7161-01	**7161-011**	**Freight forwarding**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities of "Collect-and-deliver freight transport" under 414, and "Freight forwarding, except collect-and-deliver freight transport" under 453 of the Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 6023 Freight transport by road

Class 6301 Cargo handling

Class 6309 Activities of other transport agencies

(Given examples)
1st group freight forwarder, 2nd group freight forwarder, freight forwarding agent

(Notes)
The production value of this sector corresponds to the amount of transport fare and trade commission deducted by transport fare payable to actual transportation entities and trade commission, in order to avoid double counting of freight transport fare.

Column Code	Row Code	Sector Name
7171-01	**7171-011**	**Storage facility service**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities of "Warehousing" under 44 of the Major Group Number of the Standard Industrial Classification for Japan, and those of co-op warehousing.

(Corresponding ISIC)
Class 6302 Storage and warehousing

(Given examples)
Regular warehousing (outdoor warehousing, storage silo, storage tank, trunk room), storage and cargo handling at chilled warehouse, lumber storage on water surface, JA warehouse, marine products union warehouse, forestry union warehouse, union warehouse for small businesses

(Notes)
Activities at a private warehouse shall be included in the activities of the corresponding industry. However, activities at union warehouses shall be included in this sector because union warehouses charge similar as commercial warehouses do.

Column Code	Row Code	Sector Name
7181-01	**7181-011**	**Packing service**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities of "Packing and crating" under 456 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 6309 Activities of other transport agencies

(Given examples)
Packing, cargo packing, crating, industrial products crating, export packing

(Notes)
Private packing activities shall be treated as inputs of packing materials of corresponding sector, and shall not be included in this sector.

Column Code	Row Code	Sector Name
7189-01	**7189-011**	**Facility service for road transport**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities of "Transport facilities services" excluding those relating to road transport under 457, and "Automobile parking" excluding parking lots for car storage and parking lots on roads under 73 of the Major Group and Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 6303 Other supporting transport activities

(Given examples)
Motorways, toll roads, toll bridges, toll tunnels, car terminals, facilities relating to road transport among "Fixed cargo handling facilities", toll parking lot

(Notes)

1 Rent-a-car and leasing cars are included in "8514-01Car rental and leasing."

2 Parking lot on a monthly fee basis shall be considered as properly leasing, and therefore, is counted in the sector "6411-01Real estate agencies and managers."

3 Parking lots on roads are not included in this sector, but included in "8111-02 Public administration (local)" for the following reasons; parking lots on roads are the tentative measure for car parking until such time that sufficient volume of regular parking space becomes available; and parking lots on roads provided with parking meters and tickets that are prepared by the National Public Safety Commission are aiming at parking hours control for better road utilization.

Column Code	Row Code	Sector Name
7189-02	**7189-021**	**Port and water traffic control ★★**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities of "Piers and docs" under 4575, those of port related activities like cargo handling pier facilities among those of" Terminal facilities for handling freight" under 4574, water supply activities for vessels among those of "Water for end users, except industrial users" under 381, and activities of providing waterways information by waterway signaling office (lighthouse), and by the water traffic center among those of "Miscellaneous services incidental to transport" under 459 of the Group and Industry Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 4100 Collection, purification and distribution of water

Class 6303 Other supporting transport activities

(Given examples)
Management of port and fishing harbor, provision of waterways information

(Notes)

1 Management activities conducted by pier public corporations within port premises for a part of facilities are also included in this sector.

2 Regarding vessel tonnage tax and special tonnage tax, those taxes are primarily paid to customs directly by captains of inbound vessels or by operators. However, those taxes are the cost of using port facilities by inbound vessels and, therefore, shall be input to this sector as expenses booked as indirect taxes to consist the production value. In the similar manner, canal passage tax and lighthouse tax are booked in this sector, but limited to those for import.

Column Code	Row Code	Sector Name
7189-03	**7189-031**	**Services relating to water transport**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities of measuring quantities, volume, transport appraisal, ship pilot, salvage, marine rescue, rope handling on anchoring, and vessel

towing among those of "Miscellaneous services incidental to transport" under 4599 of the Industry Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 6303 Other supporting transport activities

(Given examples)
Ship pilot, quantity inspection, volume inspection, appraisal

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Column Code	Row Code	Sector Name
7189-04	**7189-041**	**Airport and air traffic control (public) ★★**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the management activities of airports (Class 1, 2 and 3) by the government and local public entities among those of "Airports and air fields heliports" under 4576, and air traffic control activities among "Miscellaneous services incidental to transport" under 459 of the Group and the Industry Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 6303 Other supporting transport activities

(Given examples)
Airport control, air traffic control

(Notes)

1 Airport management activities conducted by the Narita Airport Authority are included in the sector "7189-05 Airport and air traffic control (industrial)."

2 Import (payment relating to foreign airport facilities) shall be counted in the sector "7189-05 Airport and air traffic control (industrial)."

Column Code	Row Code	Sector Name
7189-05	**7189-051**	**Airport and air traffic control (industrial)**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities conducted by other than the government and local public entities among those of "Airports and air fields heliports" under 4576 of the Industrial Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 6303 Other supporting transport activities

(Given examples)
Airport management

(Notes)

1 Airport management activities by the Narita Airport Authority are included in this sector treating the authority as a public corporation.

2 Import (payment relating to foreign airport facilities) shall be counted in this sector.

Column Code	Row Code	Sector Name
7189-06	**7189-061**	**Services relating to air transport**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the supporting activities relating to air transport (on-board food services, operation service, passenger boarding, luggage loading, aircraft fuel control and fuel supply charge, and other related services) among those of "Miscellaneous services incidental to transport" excluding air traffic control activities under 459 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 6303 Other supporting transport activities

(Given examples)
Provision of facilities for fueling aircrafts, provision of convenience facilities, provision of supply facilities

(Notes)
Airport terminal buildings are included in "6411-02 Real estate rental service", passenger transportation limousine buses are in "7121-01 Bus transport service", fuel supply (sale of fuel) is in "Trade", and aircraft maintenance and repair are in "3622-10 Repair of aircrafts" respectively.

Column Code	Row Code	Sector Name
7189-09	**7189-099**	**Travel agency and other services relating to transport**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities conducted by tourism associations among those of "Travel agency" under 451, "Transport agencies" under 454, "Booking of transport" under 455, and "Miscellaneous services incidental to transport" under 459 of the Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 6303 Other supporting transport activities

Class 6304 Activities of travel agencies and tour operators; tourist assistance activities n.e.c.

(Given examples)
Travel agencies, transport agencies, transport intermediates

(Notes)
This sector covers other transport businesses not elsewhere classified.

13 Telecommunication and broadcasting

Column Code	Row Code	Sector Name
7311-01	**7311-011**	**Postal service**

(Ministry or agency in charge)
Ministry of Internal affairs and Communications

(Definition, Scope)
The scope corresponds to the activities relating to post among those of "Postal services" under 461 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 6411 National post activities

(Given examples)
Regular post, parcel post

(Notes)
Activities relating to post conducted by Head Office of the Ministry, Postal Services Agency, and regional postal bureau are also included in this sector.

Column Code	Row Code	Sector Name
7312-01	**7312-011**	**Fixed telecommunication**

(Ministry or agency in charge)
Ministry of Internal affairs and Communications

(Definition, Scope)
The scope corresponds to the activities of "Domestic telecommunications, except wire broadcast telephones" under 471 excluding "4713 Mobile communications", and the activities of providing telecommunication services by own telecommunication network among those of "International telecommunications" under 472 of the Group and Industry Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 6420 Telecommunications

(Given examples)
Telephone, wire, cable, personal

(Changes)
The sectors "7312-01, -011 Domestic telecommunication (except mobile communications)" and "7312-03, -031 International telecommunications" were integrated and then split into "Fixed telecommunications" and "Other telecommunications."

(Notes)
Self-operated telecommunication network systems and telephone systems such as public offices, electricity, railways, aircrafts and ships are not included in this sector.

Column Code	Row Code	Sector Name
7312-02	**7312-021**	**Mobile telecommunication**

(Ministry or agency in charge)

Ministry of Internal affairs and Communications

(Definition, Scope)

The scope corresponds to the activities of "Mobile communications" under 4713 of the Industry Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)

Class 6420 Telecommunications

(Given examples)

Mobile phone, PHS, on-demand radio communication , airport radio phone

(Changes)

The sector name was changed from "Mobile communication" to "Mobile telecommunications."

(Notes)
The sector "7312-01, -011 Domestic telecommunication" appeared in 1990 Tables was split in 1995 Tables.

Column Code	Row Code	Sector Name
7312-03	**7312-031**	**Other telecommunication**

(Ministry or agency in charge)

Ministry of Internal affairs and Communications

(Definition, Scope)

The scope corresponds to the activities of "Domestic telecommunications, except wire broadcast telephones" under 471 excluding "4713 Mobile communications", and the activities of providing telecommunication services by leasing telecommunication network from other entity among those of "International telecommunications" under 472 of the Group and Industry Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)

Class 6420 Telecommunications

(Given examples)

Internet connection service, voice storing service, fax storing service, server hosting service

(Changes)
The sectors "7312-01, -011 Domestic telecommunication (except mobile communications)" and "7312-03, -031 International telecommunications" were integrated and then split into "Fixed telecommunications" and "Other telecommunications."

Column Code	Row Code	Sector Name
7319-09	**7319-099**	**Other services relating to communication**

(Ministry or agency in charge)
Ministry of Internal affairs and Communications

(Definition, Scope)
The scope corresponds to the activities of "Contracted postal services" under 462, "Wire broadcast telephones" under 473, and "Services incidental to telecommunications" under 474 of the Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 6420 Telecommunications

(Given examples)
Wire broadcasting phone, mobile radio, fishery radio, mobile telecommunication services, postal stamp selling stand (trade commission), telephone subscription trading (including subscription leasing)

(Notes)
The item of telephone subscription trading was added in 1995 Tables according to the revision of the Standard Industrial Classification for Japan (effective October 1993.)

Column Code	Row Code	Sector Name
7321-01	**7321-011**	**Public broadcasting**

(Ministry or agency in charge)
Ministry of Internal affairs and Communications

(Definition, Scope)
The scope corresponds to the activities of "Public broadcasting, except cablecasting" under 811 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 9213 Radio and television activities

(Given examples)
Television, radio, satellite broadcasting by Japan Broadcasting Corporation

(Notes)
The Science & Technical Research Laboratories, and the Broadcasting Culture Research Institute, both are belong to NHK are included in this sector.

Column Code	Row Code	Sector Name
7321-02	**7321-021**	**Private broadcasting**

(Ministry or agency in charge)
Ministry of Internal affairs and Communications

(Definition, Scope)
The scope corresponds to the activities of "Private

broadcasting, except cablecasting" under 812 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 9213 Radio and television activities

(Given examples)
Television, radio, satellite broadcasting supported primarily by advertisement commission revenue or fee from broadcasting on contract

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Column Code	Row Code	Sector Name
7321-03	**7321-031**	**Cable broadcasting**

(Ministry or agency in charge)
Ministry of Internal affairs and Communications

(Definition, Scope)
The scope corresponds to the activities of "Cablecasting" under 813 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 6420 Telecommunications

(Given examples)
Cable television broadcasting, cable radio broadcasting

14 Public administration

Column Code	Row Code	Sector Name
8111-01	**8111-011**	**Public administration (central) ★★**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to the activities of "National government services" in general under 97 of the Major Group Number of the Standard Industrial Classification for Japan. To be precise, the scope covers the central government general accounts and special accounts as well as the government services by central government-related entities categorized as government service producers excluding those of sectors that are ranked in "semi-public administration" sector.

(Corresponding ISIC)
Class 7511 General (overall) public service activities

(Notes)
Activities by Self Defense Force are included in this sector.

Column Code	Row Code	Sector Name
8112-01	**8112-011**	**Public administration (local) ★★**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to the activities of "Local government services" in general under 98 of the Major Group Number of the Standard Industrial Classification for Japan. To be precise, the scope covers the government services by local government-related entities categorized as government service producers among regular local public entities and special local public entities excluding those of sectors that are ranked in "semi-public administration" sector.

(Corresponding ISIC)
Class 7511 General (overall) public service activities

15 Education and research

Column Code	Row Code	Sector Name
8211-01	**8211-011**	**School education (public)** ★★

(Ministry or agency in charge)
Ministry of Education, Culture, Sports, Science and Technology

(Definition, Scope)
The scope corresponds to the activities of schools opened by the government and local governments among "Elementary schools" under 911, "Lower secondary schools" under 912, "Upper secondary schools" under 913, "Advanced educational organizations" under 914, "Special schools" under 915, "Kindergartens" under 916, and "Special training schools and miscellaneous schools" under 917 of the Group Number of the Standard Industrial Classification for Japan respectively. Further, the activities of the University of the Air are included in this sector.

(Corresponding ISIC)
Class 8010 Primary education

Class 8021 General secondary education

Class 8022 Technical and vocational secondary education

Class 8030 Higher education

Class 8090 Adult and other education

(Given examples)
Elementary schools, middle schools, high schools, universities, junior colleges, specialized high schools, schools for the blind, schools for the deaf, nursery schools, kindergartens, special training schools, other types of school

(Notes)
Libraries attached to schools are classified in this sector. However, hospitals and research institutes attached to schools are classified in "Medical" and "Research institutions" respectively.

Column Code	Row Code	Sector Name
8211-02	**8211-021**	**School education (private)** ★

(Ministry or agency in charge)
Ministry of Education, Culture, Sports, Science and Technology

(Definition, Scope)
The scope corresponds to the activities of schools opened by entities other than the government and local governments among "Elementary schools" under 911, "Lower secondary schools" under 912, "Upper secondary schools" under 913, "Advanced educational organizations" under 914, "Special schools" under 915, "Kindergartens" under 916, and "Special training schools and miscellaneous schools" under 917 of the Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 8010 Primary education

Class 8021 General secondary education

Class 8022 Technical and vocational secondary education

Class 8030 Higher education

Class 8090 Adult and other education

(Given examples)
Elementary schools, middle schools, high schools, universities, junior colleges, specialized high schools, schools for the blind, schools for the deaf, nursery schools, kindergartens, special training schools, other types of school

(Notes)
Libraries attached to schools are classified in this sector. However, hospitals and research institutes attached to schools are classified in "Medical" and "Research institutions" respectively.

Column Code	Row Code	Sector Name
8213-01	**8213-011**	**Social education (public)** ★★

(Ministry or agency in charge)
Ministry of Education, Culture, Sports, Science and Technology

(Definition, Scope)
The scope corresponds to the activities of social educational facilities opened by the government and local governments among "Social educational services" under 918 of the Group Number of the Standard Industrial Classification for Japan. To be specific, the activities refer to organizational and educational activities outside of those that are conducted according to school education curriculums.

(Corresponding ISIC)
Class 8090 Adult and other education

Class 9231 Library and archives activities

Class 9232 Museums activities and preservation of historical sites and buildings

Class 9233 Botanical and zoological gardens and nature reserves activities

(Given examples)
Public hall, Library, museum, art museum, zoo, botanical garden, aquarium, educational facilities for youths (youth's house, nature house for boys), social education by correspondence, education hall for women

Column Code	Row Code	Sector Name
8213-02	**8213-021**	**Social education (private, non-profit) ★**

(Ministry or agency in charge)
Ministry of Education, Culture, Sports, Science and Technology

(Definition, Scope)
The scope corresponds to the activities of social educational facilities opened by the corporate entities established according to article 34 of the Civil Law, by other corporate entities, groups and individuals among "Social educational services" under 918 of the Group Number of the Standard Industrial Classification for Japan. To be specific, the activities refer to organizational and educational activities outside of those that are conducted according to school education curriculums

(Corresponding ISIC)
Class 8090 Adult and other education

Class 9231 Library and archives activities

Class 9232 Museums activities and preservation of historical sites and buildings

Class 9233 Botanical and zoological gardens and nature reserves activities

(Given examples)

Public hall, library, museum, art museum, zoo, botanical garden, aquarium, educational facilities for youths (youth's house, nature house for boys), social education by correspondence, education hall for women

Column Code	Row Code	Sector Name
8213-03	**8213-031**	**Other educational and training institutions (public) ★★**

(Ministry or agency in charge)
Ministry of Education, Culture, Sports, Science and Technology

(Definition, Scope)
The scope corresponds to the activities of employees training facilities and vocational training facilities opened by the government, local governments and some special purpose corporations among "Employees' training facilities" under 9191, and "Vocational guidance centers" under 9192 of the Industry Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 8090 Adult and other education

(Given examples)
Aeronautical Safety College, National Defense Academy, National Police Academy, Local Autonomy College, Meteorological College, Fire Academy, Vocational Ability Development School, National Institute for Sea Training

Column Code	Row Code	Sector Name
8213-04	**8213-041**	**Other educational and training institutions (profit-making)**

(Ministry or agency in charge)
Ministry of Education, Culture, Sports, Science and Technology

(Definition, Scope)
The scope corresponds to the activities of employees training facilities and vocational training facilities opened by other entities or individuals than the government, local governments and some special purpose corporations among "Employees' training facilities" under 9191, and "Vocational guidance centers" under 9192 of the Industry Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 8090 Adult and other education

(Given examples)
Training school for dental hygiene specialist (other than specialized schools nor other types of school), Training center of NTT, cooking schools (other than specialized schools nor other types of school), dressmaking schools (other than specialized schools nor other types of school),driving training school (other than specialized schools nor other types of school)

Column Code	Row Code	Sector Name
8221-01	**8221-011**	**Research institutes for natural sciences (public) ★★**

(Ministry or agency in charge)
Ministry of Education, Culture, Sports, Science and Technology

(Definition, Scope)
The scope corresponds to the experimental, testing and researching activities relating to natural science conducted by the research institutes of the government, local governments and special purpose public entities among "Research institutes for natural sciences" under 921 under the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 7310 Research and experimental development on natural sciences and engineering (NSE)

(Given examples)
Theoretical research institutes, engineering research institutes, agricultural research institutes, medical and medicine research institutes

(Notes)
Activities of research institutes attached to public schools are included in this sector.

Column Code	Row Code	Sector Name
8221-02	**8221-021**	**Research institutes for cultural and social science (public) ★★**

(Ministry or agency in charge)
Ministry of Education, Culture, Sports, Science and Technology

(Definition, Scope)
The scope corresponds to the research and study activities relating to cultural and social science conducted by the research institutes of the government, local governments and special purpose public entities among "Cultural and social science research institutes" under 922 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 7320 Research and experimental development on social sciences and humanities (SSH)

(Given examples)
National Education Policies Research Institute, National Institute for Japanese Language, National Institute of Social Security Research, National Institute of Population Research, Research Institute of Postal Policies

(Notes)
Activities of research institutes attached to public schools are included in this sector.

Column Code	Row Code	Sector Name
8221-03	**8221-031**	**Research institutes for natural sciences (private, non-profit) ★**

(Ministry or agency in charge)
Ministry of Education, Culture, Sports, Science and Technology

(Definition, Scope)
The scope corresponds to the experimental, testing and researching activities relating to natural science conducted by the research institutes attached to private schools, and those established under Article 34 of the Civil Law among "Research institutes for natural sciences" under 921 under the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 7310 Research and experimental development on natural sciences and engineering (NSE)

(Given examples)
Theoretical research institutes, engineering research institutes, agricultural research institutes, medical and medicine research institutes

Column Code	Row Code	Sector Name
8221-04	**8221-041**	**Research institutes for cultural and social science (private, non-profit) ★**

(Ministry or agency in charge)
Ministry of Education, Culture, Sports, Science and Technology

(Definition, Scope)
The scope corresponds to the research and study activities relating to cultural and social science conducted by the research institutes attached to private schools and those established under Article 34 of the Civil Law among "Cultural and social science research institutes" under 922 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 7320 Research and experimental development on social sciences and humanities (SSH)

(Given examples)
Institute of Oriental Culture, Broadcasting Culture Research Institute of NHK

Column Code	Row Code	Sector Name
8221-05	**8221-051**	**Research institutes for natural sciences (profit-making)**

(Ministry or agency in charge)
Ministry of Education, Culture, Sports, Science and Technology

(Definition, Scope)
The scope corresponds to the experimental, testing and researching activities relating to natural science conducted by the research institutes except for the following entities among those of "Research institutes for natural sciences" under 921 under the Group Number of the Standard Industrial Classification for Japan.

1 Research institutes of the government and local governments, and special purpose corporations (including research institutes attached to public schools)

2 Research institutes attached to private schools, and opened by entities under Article 34 of the Civil Law

(Corresponding ISIC)
Class 7310 Research and experimental development on natural sciences and engineering (NSE)

(Given examples)
Theoretical research institutes, engineering research institutes, agricultural research institutes, medical and medicine research institutes

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Column Code	Row Code	Sector Name
8221-06	**8221-061**	**Research institutes for cultural and social science (profit-making)**

(Ministry or agency in charge)
Ministry of Education, Culture, Sports, Science and Technology

(Definition, Scope)
The scope corresponds to the research and study activities relating to cultural and social science conducted by the research institutes conducted by the research institutes except for the following entities except for the followings among those of "Cultural and social science research institutes" under 922 of the Group Number of the Standard Industrial Classification for Japan.

1 Research institutes of the government and local governments, and special purpose corporations (including research institutes attached to public schools)

2 Research institutes attached to private schools, and opened by entities under Article 34 of the Civil Law

(Corresponding ISIC)
Class 7320 Research and experimental development on social sciences and humanities (SSH)

(Given examples)
Cultural and social research institutes, social science research institutes

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Column Code	Row Code	Sector Name
8222-01	**8222-011**	**Research and development (intra-enterprise)**

(Ministry or agency in charge)
Ministry of Education, Culture, Sports, Science and Technology

(Definition, Scope)
The scope corresponds to creative efforts and research activities by enterprises to get new knowledge on materials, functions or phenomena, or to have existing knowledge utilized for new directions. Further, research and development activities by enterprises relating to production and manufacturing processes of products (commodities), or technical improvement thereof are included in this sector.

(Given examples)

1 Examples refer to thoughts, ideas, gathering of information and data, proto-type production, experiment, examination, analysis and reports that are needed for activities and research. Therefore, activities of making machines, tools or devices for the researches, growing animals and plants and surveying documents are included in this sector.

2 Examples also refer to the activities described in the aforementioned paragraph as well as engineering and manufacturing of a pilot plan and prototype with testing at other site than the entity's research laboratory or research and development division, for example at manufacturing plant.

(Notes)
Research activities of "Enterprises" stipulated in the survey on research of science and technology (Special Statistics Number 61) are included in the scope except for those conducted by special purpose corporations.

16 Medical service, health, sociel welfare and nursing care

Column Code	Row Code	Sector Name
8311-01	**8311-011**	**Medical service (public)**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities by the central government, local governments, social insurance business entities such as public health insurance (municipals of city, town and village), and welfare business groups among those of "Medical and other health services" under 88 of the Major Group Number of the Standard Industrial Classification for Japan. Service activities by nursing care insurance are included in "nursing care (In-home)" and "nursing care (In-facility)".

(Corresponding ISIC)
Class 8511 Hospital activities

Class 8512 Medical and dental practice activities

Class 8519 Other human health activities

(Given examples)
Hospitals, general clinics, dental clinics, midwifery centers, practitioner, nursing, dental technicians, eye banks, hygiene examinations

(Changes)
1 Home nursing care covered by nursing care insurance is included in "8314-01, -011 Nursing care (In-home)."

2 Nursing home care (seniors nursing care facility, Medical service facility of nursing care type (nursing beds of hospitals and general clinics covered by nursing care insurance)) covered by nursing care insurance is included in "8314-02, -021 Nursing care (In-facility)".

(Notes)

1 Medical service activities for government line-function employees are included in "8311-03, -031 Social Insurance (public)".

2 Hospitals attached to schools opened by the central and local governments are included in this sector.

3 For the scope of social insurance businesses (public), refer to "8313-01, -011 Social insurance (public).★★"

4 To respond to 93SNA., the activity body was changed from "government service producers" to "industries" in 1995 I-O Tables. Accordingly, the suffix of the sector name of "8311-01, -011 Medical service (public)" was deleted.

Further, to respond to "dual sources of consumption concept", medical benefits of the government and medical insurance that were treated as households imputed consumption and expenditure were transferred to consumption expenditure by governments.

Column Code	Row Code	Sector Name
8311-02	**8311-021**	**Medical services (non-profit foundations, etc.)**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities of Japanese Red Cross Society, JA (medical service) Association, Public entities (corporation, foundation), Social Insurance business group (non-profit) by mutual aid association and federation, and non-profit private entities like social welfare entities among those of "Medical and other health services" under 88 of the Major Group Number of the Standard Industrial Classification for Japan. Nursing care insurance services are included in "nursing care (home)" and "nursing care (nursing home)".

(Corresponding ISIC)
Class 8511 Hospital activities

Class 8512 Medical and dental practice activities

Class 8519 Other human health activities

(Given examples)
Same as those of "8311-011 Medical service (public)"

(Changes)

1 Home nursing care covered by nursing care insurance is included in "8314-01, -011 Nursing care (home care)."

2 Nursing home care (seniors nursing care facility, Medical service facility of nursing care type (nursing beds of hospitals and general clinics covered by nursing care insurance)) covered by nursing care insurance is included in "8314-02, -021 Nursing care (nursing home care)".

(Notes)

1 Hospitals attached to schools opened by entities other than the central and local governments are included in this sector.

2 For the scope of social insurance businesses (non-profit), refer to "8313-02, -021 Social insurance (non-profit).★"

3 The activity body was changed from "non-profit private service producers for households" to "industries" in 1995 I-O Tables. Accordingly, the sector name was changed from "8311-02, -021 Medical service (non-profit) ★" to "Medical service (public)".

Further, to respond to "dual sources of consumption concept", medical benefits of the government and medical insurance that were treated as households imputed consumption and expenditure were transferred to consumption expenditure by governments.

Column Code	Row Code	Sector Name
8311-03	**8311-031**	**Medical service (medical corporations, etc.)**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the medical services for government operating sectors' employees (posts, printing) and activities by medical entities, corporation and individuals among those of "Medical and other health services" under 88 of the Major Group Number of the Standard Industrial Classification for Japan. Nursing care insurance services are included in "nursing care (In-home)" and "nursing care (In-facility)". Medicine preparation work based on prescription by physicians or dentists are included in this sector.

(Corresponding ISIC)
Class 8511 Hospital activities

Class 8512 Medical and dental practice activities

Class 8519 Other human health activities

(Given examples)

Same as those of "8311-011 Medical service (public)"

(Changes)

1 Home nursing care covered by nursing care insurance is included in "8314-01, -011 Nursing care (In-home)."

2 Nursing home care (seniors nursing care facility, Medical service facility of nursing care type (nursing beds of hospitals and general clinics covered by nursing care insurance) covered by nursing care insurance is included in "8314-02, -021 Nursing care (In-facility)".

(Notes)
The sector name was changed from "8311-03, -031 Medical service (industries)" to "Medical service (medical corporations, etc.)".

Further, to respond to "dual sources of consumption concept", medical benefits of the government and medical insurance that were treated as households imputed consumption and expenditure were transferred to consumption expenditure by governments.

Column Code	Row Code	Sector Name
8312-01	**8312-011**	**Health and hygiene (public)** ★★

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities by the government and local governments among those of "Public health centers" under 891, "Health consultation offices" under 892 , "Quarantine stations, except animal and plant quarantines" under 893, and "Miscellaneous public health services" under 899 of the Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 7512 Regulation of the activities of agencies that provide health care, education, cultural services and other social services excluding social security

(Given examples)
Public health centers, health consultation offices, quarantine (excluding animal and plants), medical-related examiners (parasites, water quality)

Column Code	Row Code	Sector Name
8312-02	**8312-021**	**Health and hygiene (profit-making)**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities by entities other than the government and local governments among those of "Health consultation offices" under 892, and "Miscellaneous public health services" under 899 of the Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 7512 Regulation of the activities of agencies that provide health care, education, cultural service s and other social services excluding social security

(Given examples)
Health consultation offices, medical-related examiners (parasites, water quality), sterilizer business (articles, phones)

(Changes)
The sector "8312-02, -021 Health and hygiene (non-profit)" was integrated in this sector, and the basic sector classification code was changed to "8312-02, -021 Health and hygiene (industries)".

Column Code	Row Code	Sector Name
8313-01	**8313-011**	**Social Insurance (public)** ★★

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities by the government and local governments relating social insurances among those of "Social insurance organizations" under 901 of the

Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 7530 Compulsory social security activities

(Given examples)
Insurance administrative works for welfare pension, national pension, national health insurance (municipal), government health insurance, seamen's insurance, nursing care insurance

(Notes)
Nursing insurance office work was added in 2000 I-O Tables.
Activities for hygiene facilities (recreation centers, lodging facilities) for the insured and their families by social insurance business groups are included in "8613-01, -011 Hotel and other lodging places."

Column Code	Row Code	Sector Name
8313-02	**8313-021**	**Social Insurance (private, non-profit) ★**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities by entities other than the government and local governments relating to social insurances among those of "Social insurance organizations" under 901 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 7530 Compulsory social security activities

(Given examples)
Insurance administrative works for mutual aid, national health insurance (union), union health insurance, social insurance medical service reimbursement fund

(Notes)
Nursing insurance office work was added in 2000 I-O Tables.
Activities for health and hygiene facilities (recreation centers, lodging facilities) for the insured and their families by social insurance business groups are included in "8613-01, -011 Hotel and other lodging places."

Column Code	Row Code	Sector Name
8313-03	**8313-031**	**Social welfare (public) ★★**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to social welfare facility service activities and social welfare regional service activities by the government and local governments, social insurance business groups (public) as well as by workmen's welfare operations and posts insurance welfare operations among those of "Welfare offices" under 902, "Child welfare services" under 903, "Welfare services for the aged" under 904, "Welfare services for mental retarded persons and physically disabled persons" under 905, "Social protection services" under 906, and "Miscellaneous social insurance and social welfare" under 909 of the Group Number of the Standard Industrial Classification for Japan respectively.
The services with nursing insurance are classified under "Nursing care (In-home)" or "Nursing care (In-facility)."

(Corresponding ISIC)
Class 8531 Social work with accommodation

Class 8532 Social work without accommodation

(Given examples)
Infant nursing facilities, children's welfare facilities (children's playing park, children's houses), children's nursing care facilities, senior's nursing care home, senior's inexpensive nursing home, senior's welfare centers, mental retarded person helping facilities, physically disabled childbirth facilities

(Changes)
1 Nursing care (home care) under nursing care insurance is included in "8314-01, -011 Nursing care (In-home)".

2 Facility service(senior's special nursing care home) under nursing care insurance is included in "8314-02, -021 Nursing care (In-facility)".

Column Code	Row Code	Sector Name
8313-04	**8313-041**	**Social welfare (private, non-profit) ★**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the social welfare facility services by railways mutual aid and other private entities as well as social welfare regional services by non-profit private entities such as social welfare consultation, physically handicapped children association, physically disabled association, mutual fund, goodwill bank among those of "Child welfare services" under 903, "Welfare services for the aged" under 904, "Welfare services for mental retarded persons and physically disabled persons" under 905, "Social protection services" under 906, and "Miscellaneous social insurance and social welfare" under 909 of the Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 8531 Social work with accommodation

Class 8532 Social work without accommodation

(Given examples)
Same as those of "8311-03, -031 Social welfare (public) ★★"

(Changes)
1 Nursing care (In-home) under nursing care insurance is included in "8314-01, -011 Nursing care (In-home)".

2 Facility service (senior's special nursing care home) under nursing care insurance is included in "8314-02, -021 Nursing care (In-facility)".

Column Code	Row Code	Sector Name
8314-01	**8314-011**	**Nursing care (In-home)**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the nursing care (In-home) activities among those of "Medical and other health services" under 88, "Welfare services for the aged" under 904, and "Miscellaneous social insurance and social welfare" under 909 of the Major Group and Group Numbers of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 8511 Hospital activities

Class 8519 Other human health activities

Class 8531 Social work with accommodation

Class 8532 Social work without accommodation

(Given examples)
Visiting and commuting nursing care services, short-term facility nursing care services, nursing care (In-home) assisting services

(Changes)
Nursing care (In-home) services of nursing care insurance were separated from "8311-01 through -03, -011 through -031 Medical service" and "8313-03 through 04, -031 through -041 Social welfare service" respectively and integrated.

(Notes)
Kinds of nursing care (In-home) services are as follows:

Nursing care services on visits, nursing care bathing services on visits, medical care services on visits, rehabilitation services on visits, management and guidance of medical home care, nursing care services at care home, rehabilitation services at care home, short-term nursing care services living at care home, short-term medical care services living at care home, nursing care services for dementia under community life, nursing care services at specified facility, leasing welfare gear, purchase of welfare gear for home care, help for nursing care at home

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Column Code	Row Code	Sector Name
8314-02	**8314-021**	**Nursing care (In-facility)**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the nursing care (In-home) activities under nursing care insurance among those of "Medical and other health services" under 88, and "Welfare services for the aged" under 904 of the Major Group and Group Numbers of the Standard Industrial Classification for Japan respectively.

Class 8511 Hospital activities

Class 8519 Other human health activities

Class 8531 Social work with accommodation

(Given examples)
Nursing care senior's welfare facilities (special medical care senior's care home), nursing care senior's health facilities, nursing care medical care facilities (medical care beds under nursing care insurance at hospitals and medical clinics)

(Changes)
Nursing care facility services of nursing care insurance were separated from "8311-01 through -03, -011 through -031 Medical service" and "8313-03 through 04, -031 through -041 Social welfare service" respectively and integrated.

17 Business services, office supplies

Column Code	Row Code	Sector Name
8411-01	**8411-011**	**Private non-profit organizations serving enterprises**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to the activities of private non-profit entities opened by corporate organizations promoting related interest by among those of "Cooperative associations, n.e.c." under 85, and "Business and professional associations" under 941 of the Major Group and Group Number of the Standard Industrial Classification for Japan respectively.

Further, interest-oriented activities such as purchasing and selling among the activities of "Cooperative associations, n.e.c." under 85 are not included in this sector, but included in the activity sectors of wholesale and retail.

(Corresponding ISIC)
Class 9111 Activities of business and employers' organizations

Class 9112 Activities of professional organizations

(Given examples)
Cooperative association of fabrics, Chamber of commerce and industry, Japan Business Federation, Life Insurance Association, Japanese Bankers Association

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Column Code	Row Code	Sector Name
8411-02	**8411-021**	**Private non-profit organizations serving households n.e.c. ★**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to the activities of "Religion" under 93, "Labor organizations" under 942, "Non-profit cultural, science and art organizations" under 943, "Political organizations" under 944, "Non-profit organizations, n.e.c." under 949, and "Meeting halls" under 951 of the Major Group and Group Number of the Standard Industrial Classification for Japan respectively. The sector includes the activities of non-profit private entities providing free services or services of no-economic significance to households.

Corresponding ISIC)
Class 9120 Activities of trade unions

Class 9191 Activities of religious organizations

Class 9192 Activities of political organizations

Class 9199 Activities of other membership organizations n.e.c.

(Given examples)
Religious groups, labor groups, academic groups, cultural groups, political groups, bachelor groups, "igo" federation, prefecture citizens halls, culture halls

(Changes)
By the introduction of nursing care insurance, a part of nursing care services that were conducted by non-profit entities other than social welfare corporations as non-profit services have been covered by the insurance. And this area of the services are included in newly established sectors, "Nursing care (home care) and (care home)", but are not included in this sector.

Column Code	Row Code	Sector Name
8511-01		**Advertising services**
	8511-011	**Television and radio advertising services**
	8511-012	**Newspaper, magazine and other advertising services**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The scope corresponds to the activities of "Advertising" under 831 of the Group Number of the Standard Industrial Classification for Japan.

Further, advertising activities conducted by other industrial sectors (private broadcasting, newspapers and magazines) providing advertising medias are included in this sector.

(Corresponding ISIC)
Class 7430 Advertising

(Given examples)
Newspaper, magazine and other advertisement: newspaper advertisement, magazine advertisement, direct mailing advertisement, outdoor advertisement, traffic advertisement, insertion advertisement

(Notes)
Own advertising activities by industry sectors were not included in this sector, but treated as inputs of advertisement-related materials for the corresponding section in 1990 Tables.

Column Code	Row Code	Sector Name
8512-01		**Information services**
	8512-011	**Computer programming and other software services**
	8512-012	**Data processing and research and information services**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The scope corresponds to the activities of "Computer programming and other software services" under 821, and "Data processing and information services" under 822 of the Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 7210 Hardware consultancy

Class 7220 Software consultancy and supply

Class 7230 Data processing

Class 7240 Data base activities

Class 7413 Market research and public opinion polling

(Given examples)
Software business: software development, information system development
programming and information processing and supply: computation services, computer center, machine time service, punching services, economic information provider service, real estate information provider service, weather information provider service, traffic information provider service, market research, polling service

(Notes)
The sector "8512-011 Information services" appeared in 1990 Tables was split into "8512-011 Software business" and "8512-012 Information processing and supply service" in 1995 Tables.

Column Code	Row Code	Sector Name
8512-02	**8512-021**	**News syndicates and private detective agencies**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The scope corresponds to the activities of "News syndicates" under 823, and "Detective agencies and credit bureaus" under 824 of the Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 9220 News agency activities

(Given examples)
Kyodo News, Jiji Press, newspaper branch offices (no printing services), private broadcasting station branch offices (no broadcasting equipment), detective agencies, credit survey agencies

Column Code	Row Code	Sector Name
8513-01		**Goods rental and leasing (except car rental)**
	8513-011	**Industrial equipment and machinery rental and leasing (except construction machinery)**
	8513-012	**Construction machine rental and leasing**
	8513-013	**Electronic computing equipment rental and leasing**
	8513-014	**Office machines rental and leasing (except electronic computing equipment)**
	8513-015	**Sports goods, recreation goods and other goods rental and leasing**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The scope corresponds to the activities of "General goods rental and leasing" under 791, "Industrial equipment and machinery rental" under792, "Office machinery rental" under 793, "Sports and recreation goods rental" under 795, and "Miscellaneous goods rental and leasing" under 799 of the Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 4550 Renting of construction or demolition equipment with operator

Class 6591 Financial leasing

Class 7121 Renting of agricultural machinery and equipment

Class 7122 Renting of construction and civil engineering machinery and equipment

Class 7123 Renting of office machinery and equipment

Class 7129 Renting of other machinery and equipment n.e.c.

Class 7130 Renting of personal and household goods n.e.c.

(Given examples)
Industrial equipment and machinery rental and leasing (except construction machinery): renting and leasing of agricultural machinery equipment, communication machinery and equipment, telephone exchange equipment, medical equipment and machines, mining machinery, metal manufacturing machines, metal processing machines, plastic molding and processing machinery, generators, measuring instruments and equipment, automatic vending machines (coin operated), showcases, cargo transporting machinery and facilities, containers, pallets, bowling machines and facilities

Construction machine rental and leasing: renting and leasing of construction machinery and equipment, civil engineering machinery and equipment, power shovels, construction cranes

Electronic computing equipment rental and leasing: renting and leasing of electronic computers, computer-related equipment

Office machines rental and leasing (except electronic computing equipment): renting and leasing of office machines and equipment, electronic copying machines, cash registers, filing system-related equipment

Sports goods, recreation goods and other goods rental and leasing: renting and leasing of sporting goods, skiing goods, skating goods, bicycles, athletic meeting gear, tents, yachts, motor boats, cine-film related equipment and tools, theater play related tools and devices, cine-film projectors, cine-films, costumes and apparels, videotapes, books, musical instruments, art goods, bed clothing, live plant, flower wreaths, medical welfare equipment

(Notes)
Activities of "General goods rental and leasing" under 791 of the Group Number of the Standard Industrial Classification for Japan are separately included in the activities of corresponding renting and leasing business by goods.

The renting of welfare equipment in nurse insurance are outputted from this sector via "8314-01 Nursing care (In-home)."

Column Code	Row Code	Sector Name
8514-01	**8514-011**	**Car rental and leasing**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities of "Automobile rental" under 794 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 6591 Financial leasing

Class 7111 Renting of land transport equipment

(Given examples)
Rent-a-car business, automobile leasing business

Column Code	Row Code	Sector Name
8515-10	**8515-101**	**Repair of motor vehicles**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to maintenance, repair and recycling activities of "Automobile repair services" under 77 of the Major Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 5020 Maintenance and repair of motor vehicles

Class 5040 Sale, maintenance and repair of motorcycles and related parts and accessories

(Notes)

1 Maintenance activities of motor bicycles and motor tricycles are included in this sector.

2 Recycling business of automobile tires shall be included in "2311-01 Tires and inner tubes".

3 Automobile inspection activities conducted by the government shall be included in "8111-01 Public administration (central) ★★".

Column Code	Row Code	Sector Name
8516-10	**8516-101**	**Repair of machine**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The scope corresponds to the activities of "Machine repair shops" under 781 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)

Class 7250 Maintenance and repair of office, accounting and computing machinery

(Given examples)
General machine repairs, construction machinery and mining machine repairs, electric machine repairs, industrial transportation vehicle repairs, optical equipment repairs

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Column Code	Row Code	Sector Name
8519-01	**8519-011**	**Building maintenance services**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities of "Building maintenance services" under 864 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 7493 Building-cleaning activities

(Given examples)
Building service business, building maintenance service, building cleaning service, floor polishing service, window glass cleaning service, chimney cleaning service, sterilizer service, housing disinfect service,

(Notes)
Sterilizer services for railways and vessels are included in this sector.

Column Code	Row Code	Sector Name
8519-02	**8519-021**	**Judicial, financial and accounting services**

(Ministry or agency in charge)
Ministry of Finance

(Definition, Scope)
The scope corresponds to the activities of "Lawyers' and paten attorneys' offices under 841, "Notaries public's and judicial scriveners' offices under 842, and "Certified public accountants' and auditors' offices" under 843 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 7411 Legal activities

Class 7412 Accounting, book-keeping and auditing activities; tax consultancy

(Given examples)
Legal offices, patent attorney offices, notary public, judicial scrivener office, public certified accountant office, tax consultant office

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Column Code	Row Code	Sector Name
8519-03	**8519-031**	**Civil engineering and construction services**

(Ministry or agency in charge)
Ministry of Land, Infrastructure and Transport

(Definition, Scope)
The scope corresponds to the activities of "Engineering and architectural services" under 845 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 7421 Architectural and engineering activities and related technical consultancy

(Given examples)
Engineering supervisory services, architectural design and engineering services, architectural consultant, land measurement services, geological survey services

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Column Code	Row Code	Sector Name
8519-04	**8519-041**	**Worker dispatching services**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities of "Worker dispatching services" under 8695 of the Industry Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 7491 Labor recruitment and provision of personnel

(Changes)
According to enactment (December 1, 1999) of the law "Revision of the law relating to appropriate secure of worker dispatching services, and maintaining work conditions of the dispatched workers", the scope of worker dispatching services have been enlarged.

(Note)

1 No provision of worker dispatch is possible for the following services.

(1) Port transport services

(2) Construction works

(3) Security services

(4) Medical related services

(5) Goods manufacturing services (excluding dispatch for replacing regular employees of receiving entities that are in childbirth leave, childcare leave and nursing care leave.)

2 This sector was separated and established in 1990 Tables from the sector "8519-09, -099 Other business services" appeared in 1985 Tables.

Column Code	Row Code	Sector Name
8519-09	**8519-099**	**Other business services**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The scope corresponds to the activities except for "Worker dispatching services" under 8695 of the Industry Number among those of "Commercial and engineering design services" under 846, "Miscellaneous professional services" under 849, "Stenographic, copying and duplicating services" under 861, "Commodity inspection services" under 862, "Surveyor certification" under 863, "Private employment services" under 865, "Guard services" under 866, "Business services, n.e.c." under 869 of the Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 7414 Business and management consultancy activities

Class 7421 Architectural and engineering activities and related technical consultancy

Class 7422 technical testing and analysis

Class 7492 Investigation and security activities

Class 7499 Other business activities n.e.c.

(Given examples)
Stenographer, address writer, copying service, micro-filming service, commodity inspection service, silk inspection office, mass measurement certifying services, environmental measurement services, metal and mineral analysis services, private job introduction services, security services, display related services, industrial facility cleaning services, non-destructive inspection services, plant engineering services, party entertaining services, tow truck services, LPG filling services, hot spring water supply services, designing services, management consultancy services, machine engineering services, administrative scriveners, real estate assessment services, land and building surveyors, presides, interpreters

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Column Code	Row Code	Sector Name
8611-01	**8611-011**	**Motion picture and video production, and distribution**

(Ministry or agency in charge)
Ministry of Internal Affairs and Communications

(Definition, Scope)
The scope corresponds to the activities of "Motion picture, video production and distribution" under 801, and "Motion picture and video services" under 802 of the Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 9211 Motion picture and video production and distribution

(Given examples)
Motion picture and video production (including production of television programs and commercial films), motion picture distribution, business arrangement services of motion picture players, motion picture film development, motion picture title writer, Rental studios

(Notes)

1 The production activities of recorded videotapes are included in "3919-02, -021 Information recording materials."

2 The activities of "Theatrical goods rental" under 7991 of the Industry Number of the Standard Industrial Classification for Japan are included in the sector "8513-015 Sports goods, recreation goods and other goods rental and leasing."

Column Code	Row Code	Sector Name
8611-02	**8611-021**	**Movie theaters**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities of "Motion picture theaters" under 761 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 9212 Motion picture projection

(Given examples)
Movie halls, movie theaters, outdoor movie theaters, movie theater rental and leasing services

Column Code	Row Code	Sector Name
8611-03	**8611-031**	**Theater and entertainment facilities**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities of "Legitimate theaters and performances, except otherwise classified" under 762 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 9214 Dramatic arts, music and other arts activities

(Given examples)
Theaters, orchestra attached to theaters, musical performer groups, musical dancing team groups, comical theaters, "sumo" rings, boxing rings, ballparks (for professional baseball games)

Column Code	Row Code	Sector Name
8611-04	**8611-041**	**Amusement and recreation facilities**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to the activities of "Amusement and recreation facilities" under 768 of the Group Number of the Standard Industrial Classification for Japan. The sector includes activities that offer amusement to the public.

(Corresponding ISIC)
Class 9249 Other recreational activities

(Given examples)
Pool, "igo" and "shogi" halls, mahjong halls, "pachinko" halls, bingo-game halls, toy-gun shooting halls, slot machine game halls, game centers

(Notes)
The sector "Dance halls" under 7691 of the Industry Number of the Standard Industrial Classification for Japan that was included in this sector in 1990 Tables was integrated in "8611-09, -099 Other amusement and recreation services."

Column Code	Row Code	Sector Name
8611-05	**8611-051**	**Stadiums and companies of bicycle, horse, motorcar and motorboat races**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to the activities of "Bicycle, horse, motorcar and motorboat race track operations" under 764, and "Bicycle, horse, motorcar and motorboat race companies" under 765 of the Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 9249 Other recreational activities

(Given examples)
Bicycle racing truck, horse racing ground, motorboat racing sea, bicycle racing establishment, horse racing establishment, Japan Motorcar Promotion Corporation

Column Code	Row Code	Sector Name
8611-06	**8611-061**	**Sport facility service, public gardens and amusement parks**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to the activities of "Sports facilities" under 766, and "Public gardens and amusement parks" under 767 of the Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 9219 Other entertainment activities n.e.c.

Class 9241 Sporting activities

Class 9249 Other recreational activities

(Given examples)
Sports facility provider services (not elsewhere classified), gymnasium, golf links, golf practice ranges, bowling alleys, tennis ground, batting and tennis practice ranges, swimming pools, ice-skating arena, parks, amusement parks

(Notes)
The sector name of "8611-06, -061 Athletic racing track, parks, and amusement parks" appeared in 1990 Tables was changed to "Sport facility service, public gardens and amusement parks" in 1995 tables.

Column Code	Row Code	Sector Name
8611-07	**8611-071**	**Theatrical companies**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to the activities of "Theatrical companies" under 763 of the Group Number of the Standard Industrial Classification for Japan. Such activities as following are included in the scope; entertainment providers of plays, artistic shows, music, public shows, and entertaining sports performed by themselves or on contract.

(Corresponding ISIC)
Class 9214 Dramatic arts, music and other arts activities

Class 9241 Sporting activities

(Given examples)
Theater play performer group, arts production business, music performer group, professional baseball players group, professional wrestling performer group

Column Code	Row Code	Sector Name
8611-09	**8611-099**	**Other amusement and recreation services**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to the activities of "Miscellaneous amusement and recreation services" under 769, and "Authors and artists" under 847 of the Group Number of the Standard Industrial Classification for Japan respectively. Activities of associated amusement-related services that are not elsewhere classified such as play guide, and of creation of artistic literature are included in this sector.

Further, this sector includes lottery selling services among those of "Miscellaneous related business for securities brokers and dealers" under 6829 of the Industry Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 9214 Dramatic arts, music and other arts activities

Class 9219 Other entertainment activities n.e.c.

(Given examples)
Dancing halls, marine service provider, playing fish boat service provider, dancing entertainer provider, play guide, horse racing ticket counter (off-site), bicycle racing ticket counter (off-site), fishing pond services, writers, artists

(Notes)
The sector "Dance halls" under 7691 of the Industry Number of the Standard Industrial Classification for Japan that was included in "8611-04, -041 Amusement facilities" in 1990 Tables was integrated in this sector in 1995 Tables.

Column Code	Row Code	Sector Name
8612-01	**8612-011**	**General eating and drinking places (except coffee shops)**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities of "Eating places" under 601, "Japanese noodle ("Soba" and "Udon") shops under 602, "Sushi shops" under 603, and "Miscellaneous general eating and drinking places" under 609 of the Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 5520 Restaurants, bars and canteens

(Notes)
Company canteens that are commissioned by external businesses are included in this sector.

Column Code	Row Code	Sector Name
8612-02	**8612-021**	**Coffee shops**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities of "Coffee shops" under 604 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 5520 Restaurants, bars and canteens

(Given examples)
Coffee shops, fruits parlors

Column Code	Row Code	Sector Name
8612-03	**8612-031**	**Eating and drinking places for pleasures**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities of "Other eating and drinking places" under 61 of the Major Group Number of

the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 5520 Restaurants, bars and canteens

(Given examples)
Japanese restaurants, cabaret, night clubs, drinking bars, beer halls

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Column Code	Row Code	Sector Name
8613-01	**8613-011**	**Hotel and other lodging places**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the lodging activities except for company dormitories and student dormitories among those of "Hotels" under 751, "Common lodging houses" under752, "Boarding houses" under 753, "Lodging facilities of companies and associations" under 7591, and "Lodging places, n.e.c." under 7599 of the Group and Industry Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 5510 Hotels; camping sites and other provision of short-stay accommodation

(Given examples)
Hotels, inns, national lodging facilities, motels, common lodging facilities, bed houses, mountain cottages, boarding houses, membership lodging facilities, mutual aid operated lodging facilities, recreational lodging houses, youth-hostels, common lodging houses

(Notes)

1 Souvenir shops located in inns and hotels are not included in this sector, but included in "6112-01, -011 Retail."

2 Company dormitories, bachelor's housings and student dormitories among the sector of "Lodging places, n.e.c." under 7599 of the Industry Number of the Standard Industrial Classification for Japan shall be included in "6422-01, -011 House rent (imputed house rent)."

Column Code	Row Code	Sector Name
8619-01	**8619-011**	**Cleaning, laundry and dyeing services**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities of "Laundries" under 721, and "Fulling and dyeing plants" under 722 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 9301 Washing and (dry-) cleaning of textile and fur products

(Given examples)
Cleaning services, intermediate for cleaning services, linen-supply services, rental diaper services, rental towel services, rental mop services, washing and spreading services, stain removal services, dyeing services, intermediate for dyeing services

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Column Code	Row Code	Sector Name
8619-02	**8619-021**	**Barbershops**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities of "Barbershops" under 723 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 9302 Hairdressing and other beauty treatment

Column Code	Row Code	Sector Name
8619-03	**8619-031**	**Beauty shops**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities of "Beauty parlors" under 724 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 9302 Hairdressing and other beauty treatment

(Given examples)
Beauty parlors, hair-dressers, face make-up services, manicure services, pedicure services, beauty salon, beauty docks

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Column Code	Row Code	Sector Name
8619-04	**8619-041**	**Public baths**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities of "Public bath-houses" under 725, and "Special bath-houses" under 726 of the Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 9309 Other service activities n.e.c.

(Given examples)
Public bath-house, massage brothel, hot-spring bath, sauna-bath house

(Notes)
The item of health centers shall be included in "8611-09, -099 Other personal services".

Column Code	Row Code	Sector Name
8619-05	**8619-051**	**Photographic studios**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to the activities of "Photographic studios" under 743 of the Group Number of the Standard Industrial Classification for Japan.

This sector covers the photographic activities with the other industry sectors activities such as news service and advertising service.

(Corresponding ISIC)
Class 7494 Photographic activities

(Given examples)
Photographic services, photographic studios, commercial photographic services, photographic development services, photographic printing services

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Column Code	Row Code	Sector Name
8619-06	**8619-061**	**Ceremonial occasions**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)
The scope corresponds to the activities of "Crematories and graveyard custodians" under 746, and "Ceremonial occasions" under 747 of the Group Number of the Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 9303 Funeral and related activities

Class 9309 Other service activities n.e.c.

(Given examples)
Funeral service providers, funeral ceremonial halls, graveyard custodians, mutual aid ceremonial cervices, wedding halls

(Notes)

1 The sector "8619-06, -061 Funeral services" and a part of "8619-09, -099 Other personal services" appeared in 1990 Tables were integrated in 1995 Tables.

2 The activities to carry the dead by hearse is included in "7122-01, -011 Road freight transport."

Column Code	Row Code	Sector Name
8619-07	**8619-071**	**Miscellaneous repairs, n.e.c.**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to the activities of "Upholstery and furniture repair shops" under 782, "Blacksmith shops" under 783, "Paper hangers" under 784, and "Repair services, n.e.c." under 789 of the Group Number of the Standard Industrial Classification for Japan respectively.

The activities are primarily intended for final demands, and furniture refurbishing and blacksmith services are included.

(Corresponding ISIC)
Class 5260 Repair of personal and household goods

(Given examples)
Furniture repair services, blacksmith services, paper refurbishing for wooden furniture, clock and watch repair services, footwear repairing service, musical instruments repair services, bicycle repair services

(Notes)

1 Industrial repairs such as machinery repairs, car repairs, ship repairs, railway cart repairs, and aircraft repairs shall be included in the corresponding industry sector.

2 The item of "bicycle tire repairs" shall be included in "8515-10, -101 Repair of motor vehicles."

Column Code	Row Code	Sector Name
8619-08	**8619-081**	**Places for private lessons**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to the activities of "Individual instruction places" under 848 of the Group Number of the

Standard Industrial Classification for Japan.

(Corresponding ISIC)
Class 8090 Adult and other education

Class 9241 Sporting activities

(Given examples)
Preparatory learning classes (not categorized as schools), fitness clubs, abacus practicing class, piano lesson classes, flower arrangement classes

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Column Code	Row Code	Sector Name
8619-09	**8619-099**	**Other personal services**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to the activities of "Horticultural services" under 015, "Domestic services, resident" under 741, "Domestic services, non-resident" under 742, "Garment sewing services and repairs" under 744, "Checkrooms" under 745, and "Domestic and personal services n.e.c." under 749 of the Major Group and Group Number of the Standard Industrial Classification for Japan respectively.

(Corresponding ISIC)
Class 0140 Agricultural and animal husbandry service activities, except veterinary activities

Class 5260 Repair of personal and household goods

Class 9309 Other service activities n.e.c.

Class 9500 Private households with employed persons

(Given examples)
Professional landscaping services, garden plants maintenance services, housemaids, clothes mending services, luggage deposit service, bicycle deposit service, contract food processing service, used cotton recycling services, marriage consultancy service,Tourist guide service (guide)

(Notes)
The items "Wedding ceremony halls" under 7472, and "Ceremonial occasion mutual aid society" under 7473 of the Industry Number of the Standard Industrial Classification for Japan respectively that were included in this sector in 1990 Tables are now classified in "8619-06, -061 Ceremonial occasions."

Column Code	Row Code	Sector Name
8900-00P	**8900-000P**	**Office supplies**

(Ministry or agency in charge)
Ministry of Economy, Trade and Industry

(Definition, Scope)
The number of articles are so many that fall in the category of office supplies. Their composition will not necessarily change drastically according to production activities, and therefore, these items are collectively included in this sector as a dummy sector from analysis viewpoints.

The scope of office supplies sector corresponds to those supplies that individual industry will input as office supplies generally and commonly, and that are included in "Stationery, paper products, stationery and photographic supplies" under 93 of the Major Group Number of the Standard Commodity Classification for Japan excluding parts and components.

Further, electronic desktop calculators (except programmable type), printing papers and scissors are not included in Commodity Classification Number 93, but shall be included in this sector.

(Given examples)
Paper filing threads, copying papers, sequential slip notebooks, hardboard papers, carbon copy papers, accounting notebooks, accounting slips, envelops, spread sheets, filing supplies, photo films, photo printing papers, office starch, tapes, strings, erasers, chalks, scissors, electronic desktop calculators, writing tools, stamp pads, seal stamp pad, staplers, hole punchers, paper clips

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Column Code	Row Code	Sector Name
9000-00	**9000-000**	**Activities not elsewhere classified**

(Ministry and agency in charge)
Ministry of Internal Affairs and Communications

(Definition, Scope)
The scope corresponds to the production activities of goods and services that are not elsewhere classified.

Further, this sector serves the purpose of booking accumulated errors in estimation of columns and rows sectors.

18 Final demand sectors

Column Code	Row Code	Sector Name
9110-00		**Consumption expenditure outside households (column)**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to so-called "enterprise expenditures" that are similar to consumption expenditures of household including expense account and entertainment expenses that are paid by companies or other entities.

For details, refer to the explanation given in row sectors 9110-010 through 9110-030 of Gross Value Added Sector.

(Notes)
This sector indicates the contents of goods and services relating to expenditures of the sectors "9110-010 Staying and daily allowance", "9110-020 Expense account" and "9110-030 Welfare expenses."

Column Code	Row Code	Sector Name
9121-00		**Consumption expenditure of households**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)

(1) The expenditure represents the amount of expenditure for household goods and services, deducted by the amount of sales of similar kinds (used articles and scrap), then added by net increase of gifts-in-kind received from overseas, and further added by residents' expenditure in overseas. The consumption expenditures referred to herein represent all expenditures except for those spent on land, house building and construction buildings. The whole of purchase amount of goods including the amount of unused goods be recorded consumption expenditures.

(2) There are two concepts about consumption expenditures for household in national accounts calculation; one is "residents' household and non-residents' household consumption in domestic market" (DOMESTIC concept); and the other is "consumption of residents' household both in domestic market and in overseas" (NATION concept.) In the I-O Tables, this sector is expressed in "NATION concept". And residents' household consumption in overseas and non-residents' household consumption in domestic market are shown in a separate column of "9412-00 (less) Imports (direct purchase)" and "9212-00 Exports (direct purchase)" respectively. This way of presentation has the following benefits.

1 Both concepts regarding household consumption make available in the national accounting.

2 The I-O Tables as a whole can be convertible to "DOMSTIC concept" basis. Further, refer to ""9412-00 (less) Imports (direct purchase)"and "9212-00 Exports (direct purchase)" for the conversion.

(3) Overseas gifts-in-kind (gifts that an individual receives from overseas) and overseas consumption expenditure (residents' consumption of goods and services in overseas) shall once be recorded in import columns, and then transferred to demand side column, consumption expenditure of household.

(4) Transactions of used goods are divided in a transaction within the household sector, and a transaction between sectors such as capital formation or government service producers.
In former case, trade amount of used goods is cancelled out, and only related trade margin and freight cost are recorded. In latter case, however, trade amount from a household is recorded as negative consumption expenditure of household. On the contrary, purchase amount of used goods that a household purchases from other sector shall be recognized as consumption expenditure of the household sector, and the same shall be recognized of its sales amount as negative expenditure of the selling sector.

(5) For medical services and care services, the amount shared by a household shall be recorded.

(6) Benefit-in-kind (commuting allowance) shall be included in consumption expenditure of households. Therefore, served meals arranged by enterprises and the Self Defense Force shall be treated as consumption directly by household. Further, served meals by jails shall be treated as government consumption of materials for food and beverage, and are not included in consumption expenditure of household.

(7) For foods and beverages provided by restaurants, hotels, amusement centers, and hospitals, materials of food and beverage are not consumed by household directly, but are recorded as expenses of industries of their entirety, and then become consumption expenditures of household via industry output.

(8) Repair and maintenance costs incurred in households relating to housings shall be purchased by households via housing lease.
For repairs which the nursing insurance is applied, the amount shared by a household shall be recorded.

(Notes)

For medical services, the aggregated sums of insurance benefits and so forth were recorded by 1990 I-O Tables. However, from 1995 Tables, the portion that is shared by a household is recorded, and other portions go to "9131-30

Individual consumption expenditures by central government".

Further, textbooks for schooling were recorded in"9131-30 Individual consumption expenditures by central government" from 1995 Tables.

Column Code	Row Code	Sector Name
9122-00		**Consumption expenditures of private non-profit institutions serving**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The expenditure represents costs that were borne by private non-profit entities among those that relate to goods and services supplied at price of no-economic significance. Namely, it equals to the amount of difference between the production value (appraised in necessary cost for production activities) of supplied services and the sales amount of the same at price of no-economic significance. Therefore, it is the production value generated by private non-profit service producers less output to other sectors.

(Changes)

1 The sector "Health and hygiene (non-profit) ★" included in 1995 Tables was integrated in industry sector, not in this sector any more.

2 The care service insurance business started in 2000 is to be included in a newly established sector of care service (home care service and nursing home care service.) Therefore, the portion of businesses that used to be included in social welfare (non-profit) in 1995 Tables but transferred to care service insurance business in 2000 shall be recorded in industry sector, not in this sector.

(Notes)

1 The "medical services ★" were treated as non-profit service producer for household in 1990 Tables. However, it was then treated as industry in 1995 Tables. Therefore, it is out of the scope of this sector.

2 The portion shared by public of served meals of schools was not input to this sector via school education in 1995 Tables, but input directly from "served meals of schools (private) ★".

3 The scope of private non-profit service producers for household corresponds to the following sectors.

Served meals of schools (private) ★, School education (private) ★, Social education (private) ★, Natural science research institutes (non-profit) ★, Social science research institutes (non-profit) ★, Social insurance business (non-profit) ★, Social welfare (non-profit) ★, Private non-profit entities for household (not elsewhere classified) ★

Column Code	Row Code	Sector Name
9131-10		**Collective consumption expenditure by central government**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The expenditure represents costs that were borne by the central government themselves that relate to collective services provided (diplomatic and national defense services) at price of no-economic significance. Namely, it equals to the amount of difference between the production value (appraised in necessary cost for production activities of collective services) of collective services provided by government service producers that are classified as the central government, and the sales amount of the same at price of no-economic significance. Therefore, it equals to self-consumed value of collective services by the central government.

(Changes)

1 In 1995 I-O Tables, the sectors recorded as collective consumption expenditures were "8111-01 Public administration (central) ★★", "8221-01 Research institutes for natural sciences (public) ★★", and "8221-02 Research institutes for cultural and social science (public) ★★". However, 2000 Tables would include "1119-04 School lunch (public) ★★", "8111-01 Public administration (central) ★★", "8211-01 School education (public) ★★", "8213-01 Social education (public) ★★", "8213-03 Other educational and training institutions (public) ★★", "8312-01 Health and hygiene (public) ★★", "8313-01 Social insurance (public) ★★", and "8313-03 Social welfare (public) ★★".

2 Depreciated fixed capital relating to government buildings that were recorded in this sector in 1995 Tables is now recorded in "9132-10 Collective consumption expenditures by central government (depreciated social capital)" with depreciated fixed capital relating to social capital that will be newly established.

(Notes)
The sector "Consumption expenditures (central)" appeared in 1990 Tables was divided into "Collective consumption expenditures (central)" and "Individual consumption expenditures (central)" in 1995 Tables.

Column Code	Row Code	Sector Name
9131-20		**Collective consumption expenditure by local government**

(Ministry or agency in charge)
Cabinet office

(Definition, Scope)
The expenditure represents costs that were borne by local governments themselves that relate to collective services provided (services provided for overall society such as diet, and police) at price of no-economic significance. Namely, it equals to the amount of difference between the production value (appraised in necessary cost for production activities of collective services) of collective services provided by local government service producers that are classified as the local government, and the sales amount of the same at price of no-economic significance. Therefore, it equals to self-consumed value of collective services by the local government.

(Changes)
1 In 1995 I-O Tables, the sectors recorded as collective consumption expenditures were "8112-01 Public administration (local) ★★","8221-01 Research institutes for natural sciences (public) ★★", and "8221-02 Research institutes for cultural and social science (public) ★★". However, 2000 Tables would include "5211-03 Sewage disposal ★★", "5212-01Waste disposal services (public) ★★", "7189-02 Port and water traffic control ★★", "7189-04 Airport and air traffic control (public) ★★", "8112-01 Public administration (local) ★★", "8221-01 Research institutes for natural sciences (public) ★★", and "8221-02 Research institutes for cultural and social science (public) ★★"

2 Depreciated fixed capital relating to government buildings that were recorded in this sector in 1995 Tables is now recorded in "9132-20 Collective consumption expenditures by local governments (depreciated social capital)" with depreciated fixed capital relating to social capital that will be newly established.

(Notes)
The sector "Consumption expenditures (local)" was split into "Collective consumption expenditures (local)" and "Individual consumption expenditures (local)" in 1995 Tables.

Column Code	Row Code	Sector Name
9131-30		**Individual consumption expenditure by central government**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The expenditure represents costs that were borne by the central government themselves that relate to individual goods and services provided (goods and services provided for an individual such as education, health and hygiene) at price of no-economic significance. Namely, it equals to the amount of difference between the production value (appraised in necessary cost for production activities of individual services) of individual services provided by the central government service producers that are classified as the central government, and the sales amount of the same at price of no-economic significance (self-consumed value of individual services by the central government) plus benefits-in-kind of school textbooks for households and insurance benefits for medical and nursing care services for households.

(Changes)
1 Benefits of nursing care insurance shall be recorded in this sector.

2 In 1995 I-O Tables, the sectors recorded as individual consumption expenditures were those that excluded "8111-01 Public administration (central) ★★", "8221-01 Research institutes for natural sciences (public) ★★", and "8221-02 Research institutes for cultural and social science (public) ★★". However, 2000 Tables would include "1119-04 School lunch (public) ★★", "8111-01 Public administration (central) ★★", "8211-01 School education (public) ★★", "8213-01 Social education (public) ★★", "8213-03 Other educational and training institutions (public) ★★", "8312-01 Health and hygiene (public) ★★", "8313-01 Social insurance (public) ★★", and "8313-03 Social welfare (public) ★★".

3 Depreciated fixed capital relating to government buildings that were recorded in this sector in 1995 Tables is now recorded in "9132-30 Individual consumption expenditures by central government (depreciated social capital)".

(Notes)
1 The sector "Consumption expenditures (central)" appeared in 1990 Tables was split into "Collective consumption expenditures (central)" and "Individual consumption expenditures (central)" in 1995 Tables.

2 Benefits-in-kind of school textbooks, and insurance benefits for medical services that used to be recorded in consumption expenditure for households are recorded in this sector from 1995 Tables.

3 The sector "Medical services (pubic) ★★" used to be treated as the government service producer in 1990 Tables. However, it has been treated as "Medical service (public)" of industry since 1995 Tables. Therefore, the item is not included in self-consumed value of this sector.

4 Insurance benefits for medical and nursing care services also include benefits from health insurance and mutual aid associations.

Column Code	Row Code	Sector Name
9131-40		**Individual consumption expenditure by local government**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The expenditure represents costs that were borne by local governments themselves that relate to individual goods and services provided (goods and services provided for an individual such as education, health and hygiene) at price of no-economic significance. Namely, it equals to the amount of difference between the production value (appraised in necessary cost for production activities of individual services) of individual services provided by local government service producers that are classified as the local government, and the sales amount of the same at price of no-economic significance (self-consumed value of individual services by the local government.)

(Changes)
1 In 1995 I-O Tables, the sectors recorded as individual consumption expenditures were those that excluded "8112-01 Public administration (local) ★★", "8221-01 Research institutes for natural sciences (public) ★★", and "8221-02 Research institutes for cultural and social science (public) ★★". However, 2000 Tables would include "1119-04 School lunch (public) ★★", "8112-01 Public administration (local) ★★", "8211-01 School education (public) ★★", "8213-01 Social education (public) ★★", "8213-03 Other educational and training institutions (public) ★★", "8312-01 Health and hygiene (public) ★★", "8313-01 Social insurance (public) ★★", and "8313-03 Social welfare (public) ★★".

2 Depreciated fixed capital relating to government buildings that were recorded in this sector in 1995 Tables is now recorded in "9132-40 Individual consumption expenditures by local government (depreciated social capital)".

(Notes)
1 The sector "Consumption expenditures (local)" was split into "Collective consumption expenditures (local)" and "Individual consumption expenditures (local)" in 1995 Tables.

2 The public share of served meals of schools was not output to consumption by local governments via school lunch, but output directly from "1119-04 School lunch (public) ★★".

3 The sector "Medical services (pubic) ★★" used to be treated as the government service producer in 1990 Tables. However, it has been treated as "Medical service (public)" of industry since 1995 Tables. Therefore, the item is not included in self-consumed value of this sector.

Column Code	Row Code	Sector Name
9132-10		**Collective consumption expenditure by central government (social fixed capital depreciation)**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to depreciated fixed capital relating to collective services provided by the central government at no-economic significance (the scope of "9131-10 Collective consumption expenditure (central).

The scope of fixed capital subject to "collective consumption expenditure by central government (depreciated social capital)" that is newly added are as follows: "roads, ports, aeronautics, sewerage, waste treatment, urban parks, natural parks, river improvement, agriculture (irrigation facility), forestry (forest path), fisheries"

(Changes)
Both depreciated fixed capital relating to government buildings that used to be recorded in "collective consumption expenditure by central government" in 1995 Tables, and depreciated fixed capital relating to social capital that will be newly established are included in this sector.

Column Code	Row Code	Sector Name
9132-20		**Collective consumption expenditure (social fixed capital depreciation)**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to depreciated fixed capital relating to collective services provided by the local government at no-economic significance (the scope of "9131-20 Collective consumption expenditure (local)").

The scope of fixed capital subject to "collective consumption expenditure by local government (depreciated social capital)" that is newly added are as follows: "roads, ports, aeronautics, sewerage, waste treatment, urban parks, natural parks, river improvement, agriculture (irrigation facility), forestry (forest path), fisheries"

(Changes)
Both depreciated fixed capital relating to government buildings that used to be recorded in "collective consumption expenditure by local government" in 1995 Tables, and depreciated fixed capital relating to social capital that will be newly established are included in this sector.

Column Code	Row Code	Sector Name
9132-30		**Individual consumption expenditure by central government (social fixed capital depreciation)**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to depreciated fixed capital relating to individual goods and services provided by the central government at no-economic significance (the scope of "9131-30 Individual consumption expenditure (central)").

(Changes)
Depreciated fixed capital relating government buildings that were recorded in "individual consumption expenditure by central government" in 1995 Tables are now included in this sector.

Column Code	Row Code	Sector Name
9132-40		**Individual consumption expenditure by local government (social fixed capital depreciation)**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to depreciated fixed capital relating to individual goods and services provided by the local government at no-economic significance (the scope of "9131-40 Individual consumption expenditure (local).

(Changes)
Depreciated fixed capital relating government buildings that were recorded in "individual consumption expenditure by local government" in 1995 Tables are now included in this sector.

Column Code	Row Code	Sector Name
9141-00		**Gross domestic fixed capital formation (public)**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)

1 The sector comprises of domestic acquisition of fixed assets (purchase and transfer of fixed assets) such as buildings, machines, and devices by government service producers and public enterprises including direct expenses needed for the acquisition such as cost of capital objects, installation cost, freight margin, trade-in margin of used assets and so forth.

The scope is limited to assets that are produced through manufacturing process. Therefore, non-produced assets such as patent rights and goodwill are not included in the scope. Land is non-produced asset and is, therefore, not included in fixed asset formation. However, land preparation and improvement work costs excluding land purchase price are recorded in this sector.

2 The scope of fixed assets stipulated are the ones of more than ¥100,000 in value on unit purchase price basis with life of more than one year. In case, however, that an article of less than ¥100,000 were purchased in a package at business inauguration or for expanding activities, such assets may be recorded as capital formation. Later supplemental purchase of those shall not be treated as capital formation but as regular transaction.

3 Regular maintenance and repair works are not categorized as capital formation. However, incidental large-scale repair and improvement works by that the asset life is extended shall primarily be recorded as capital formation. Rails of railways and tramways, power transmission and distribution facilities, signaling facilities, telecommunication cables, and replacement work of power transmission and distribution facilities shall be recorded as capital formation.

4 Assets requiring long production period (long-term products) shall be recorded as inventory until the users obtain their titles. Regarding self-accounts (capital production of self-use), progressed portion of works, even if they are works-in-process, shall be recorded as capital formation because the user owns the works. Construction-in-process is, however, recorded as capital formation for the progressed portion even if the titles are not yet transferred.

Livestock for working, breeding, milking, racing and wool-fabricating that provide capital services shall be recorded in capital formation according to their degree of growth. However, the portion of degree of growth shall be recorded as inventory when the livestock are specifically grown by producers for sale. Plants such as fruit trees, mulberry, and tea trees that provide capital services are recorded in self-accounts, booking the portion of degree of growth as capital formation.

5 Regarding capital formation either by direct booking or by indirect booking through constructions for goods attached to constructions and vessels (hereinafter called "constructions"), the goods that payment thereof are made by contractors and the cost thereof are included in their production value shall be indirectly booked as capital formation via constructions. If payment mode is unclear, goods that can function by themselves shall be treated as capital formation. Goods that cannot function without being combined with constructions shall be treated as indirect capital formation via constructions.

6 Expenditure needed for acquiring fixed assets primarily for military use shall not be recorded in gross fixed assets capital formation, but recorded in "8111-01 Public administration (central) ★★" as an intermediate expenditure. However, such fixed assets (buildings and office equipment of airport, dock, roads, and hospitals) that can be acquired by private sector users for production purpose , that types of usage thereof by military are same as those by private sectors, and that can be identifiable from military usage shall be recorded as gross fixed capital formation.

Column Code	Row Code	Sector Name
9142-00		**Gross domestic fixed capital formation (private)**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The scope corresponds to the domestic acquisition of fixed assets (purchase and transfer of fixed assets) such as buildings, machinery and devices. The scope of "Gross domestic fixed capital formation (private)" is same as that of "9141-00 Domestic gross fixed capital formation (public)". Main bodies to exercise capital formation are industries (excluding public enterprises), non-profit private service producers for households and households. Further, only capital formation that households exercise are acquisition of housing buildings and construction buildings as well as site preparation and improvement work on lands.

Column Code	Row Code	Sector Name
9510-10		**Increase in producer's stocks of finished goods**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The sector shows volume increases or decreases of product inventory by producers defined as products before sold or shipped (including sales of as-purchased articles, but excluding construction buildings) that are appraised by annually averaged market prices.

(Notes)
One-time productions such as livestock grown for butchery and growing trees for timbers (not included in fixed capital formation) that used to be included in this sector in 1990 Tables are now included in "9150-20 Increase in semi-finished goods and work-in-progress" for the portion of degree of growth.

Column Code	Row Code	Sector Name
9150-20		**Increase in semi-finished goods and work-in-progress**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
The sector shows volume increases or decreases of semi-finished products or products of work-in-progress that are appraised by assumed annual averaged market prices.

Such products are defined as products that are partially processed, assembled, or on growing by goods production industries, and that are unable to be sold, shipped or delivered to other businesses without additional processing (excluding self-accounts and construction work-in-progress.)

(Notes)
The grown portion of one-time productions such as livestock grown for butchery and growing trees for timbers (not included in fixed capital formation) shall be included in this sector. Also increase of the goods that are owned by producers (professional producers) that grow and deliver goods even if classified as fixed capital formation shall be included in this sector.

Column Code	Row Code	Sector Name
9150-30		**Increase in dealer's stocks of goods**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
This represents goods acquired by producers that are classified as wholesalers or retailers and their volume increases or decreases appraised by annual average market price.

(Notes)
Other business sectors than those classified as wholesalers or retailers are not outputting to this sector. However, the national petroleum reserve (by Japan National Oil Corporation) shall be exceptionally treated as dealer inventories.

Column Code	Row Code	Sector Name
9150-40		**Increase in stocks of raw materials and supplies**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
This represents volume increases or decreases of raw materials appraised by annual average market prices. Row materials are referred to one of the followings.

1 All of raw materials, resources, parts and components and/or stocks that are acquired for processing, manufacturing, assembling or repairing of commodity goods, or for construction works

2 Coals, petroleum and other fuels that are purchased for consumption

3 Fertilizers, agricultural chemicals, seeds, feeds and similar kinds for agricultural producers

4 Non-endurable containers, packing materials at packaging plants, stationery and other stocks that are purchased

5 Others

(Notes)

1 Production volume of government service producers shall be estimated by aggregating expenses needed for these activities. Intermediate input expenditures, however, are recorded in such that new purchases of goods and

services in current accounts deducting net sales amount of used goods and scrap of same kinds as intermediate consumption for production volume estimation. The output goes to consumption expenditures either by the central government or local governments after deducting sales amount to other sectors (tuition fees of public schools, for example.)

Therefore, the calculated amount that are considered as materials inventory of government service producers in terms of industry comparison are actually recorded in the consumption expenditure by central government and in the consumption expenditure by local governments. They are not included in the increase in stocks of raw materials and supplies.

2 Non-profit service producers for households are also treated in the similar manner as government service producers are.

Column Code Row Code Sector Name
9211-10 **Exports (ordinary trade)**

(Ministry or agency in charge)
Ministry of Internal Affairs and Communications

(Definition, Scope)
The sector is stipulated and defined as "transactions of goods between residents and non-residents" and the scope corresponds to the goods recorded in the trade statistics compiled by the Ministry of Finance.

However, re-exported or re-imported items are excluded from viewpoints of recording net export value. Further, only trade margins shall be recorded for paintings (originals), antiques (with more than one hundred years history after creation) in the same way as domestic articles are treated.

Further, the followings are outside of export statistics and not able to be captured as data. Therefore, the followings are excluded from the scope.

1 Small cargo (less than ¥200,000 in value per cargo)

2 Samples and gifts

3 Cargoes relating to military forces stationed and U.N. military force

4 Exhibition goods for expositions and trade fairs

5 Cargoes treated as special statistics items

Appraisal of "export (ordinary trade)" is made on FOB (Free-on-board) price basis.

(Given examples)
Articles handled in trade statistics (partially excepted)

(Notes)
Articles recorded in the sector "9211-10 Exports (ordinary trade)" are appraised on FOB basis. Therefore, values deducting trade margins incurred from plants to vessels, and domestic freight cost from FOB prices shall be recorded when export items are recorded in the Input-Output Table at Producers' Price.

Column Code Row Code Sector Name
9211-20 **Exports (special trade)**

(Ministry or agency in charge)
Ministry of Internal Affairs and Communications

(Definition, Scope)
The sector scope corresponds to "transactions of services between residents and non-residents, and goods that are not recorded in ordinary trade."

Services balance that records payment and receipt of service costs between residents and non-residents among the Balance of Payments compiled by the Bank of Japan, Services balance coincides with the sector value if the followings are deducted.

1 Scope of estimation of "Exports (direct purchase)" (Individual consumption during sightseeing, by diplomatic mission members, individual spending by military personnel of foreign military force stationed in Japan)

2 Construction services
However, regarding cargo freight and insurance, activities by Japanese transport (insurance) corporations (namely, cargo freight and net insurance premium received as revenues) are all recorded in "9112-20 Exports (special trade)" as cargo freight and cargo insurance, regardless of exporting or importing cargoes or regardless of resident or non-resident payers.
Relations between Balance of Payments and I-O Tables are as per separate table.

(Given examples)
Cargo freight, passenger freight, port expenses, consumption of goods and services on business trip, international phone call, cargo insurance, agent commission, securities trading commission, advertisement expenses, films and tapes rental fees, other service-related transactions by private sector

(Notes)
Consumption of goods and services on sightseeing trips shall be included in "export (direct purchase)."

	Balance of Payments				I-O Tables	
	Cargo freight		Cargo insurance		Freight and insurance	
	Export	Import	Export	Import	Export	Import
Activities by Japanese transport (insurance) companies Relating to exports						
Paid by exporters (residents)	○		○		○	
Paid by importers (non-residents)	○		○		○	
Relating to imports Paid by exporters (residents)					○	
Paid by importers (non-residents)					○	
Multinational transport between three countries	○		○		○	
Activities by foreign transport (insurance) companies						
Relating to exports Paid by exporters (residents)						
Paid by importers (non-residents) Relating to imports						
Paid by exporters (residents)		○		○		
Paid by importers (non-residents)		○		○		

Column Code Row Code Sector Name
9212-00 **Exports (direct purchase)**

(Ministry or agency in charge)
Ministry of Internal Affairs and Communications

(Definition, Scope)
The scope corresponds to "direct transactions of goods and services in domestic market by non-resident households."

Other final demand sectors than "9121-00 Consumption expenditure of households" are described on domestic concept. However, consumption expenditures of households are defined based on national concept. Therefore, a sector that adjusts two different concepts is needed converting it to domestic concept that I-O Tables stand on.

Should a sector be established that converts from nation consumption expenditure by households to domestic consumption expenditure by households, the total sum of final demands becomes equal to total sum of domestic expenditure. Thus, domestic concept can be maintained with I-O Tables.

The sector "Export (direct purchase)" plays such roles and is important sector.

(Given examples)
Consumption by tourists, consumption of travelers visiting relatives and friends, individual spending by diplomatic mission members, individual spending by military personnel stationed in Japan

(Notes)
Conversion equation to convert "9121-00 Consumption expenditure of households" to domestic concept

Consumption expenditure of households (domestic concept) = Consumption expenditure of households (national concept) + Exports (direct purchase) – Imports (direct purchase)

Column Code Row Code Sector Name
9213-00 **Balancing sector**

(Ministry or agency in charge)
Ministry of Internal Affairs and Communications

(Definition, Scope)
Consumption taxes relating to domestic transactions of export goods to be dealt via export businesses shall be recorded in this sector.

Export articles are exempted from consumption taxes. However, consumption taxes are levied on export goods in domestic trading processes. Exporters are, therefore, entitled to be reimbursed for paid consumption taxes.

Domestic production values of such commodities include these reimbursing amount, but export values are recorded deducting the portion of these reimbursing amount. This sector records the reimbursing portion.

Column Code	Row Code	Sector Name
9411-10		**(less) Imports (ordinary trade)**

(Ministry or agency in charge)
Ministry of Internal Affairs and Communications

(Definition, Scope)
The sector is stipulated and defined as "transactions of goods between residents and non-residents" and the scope corresponds to the goods recorded on trade statistics that are compiled by the Ministry of Finance.

However, re-exported or re-imported items are excluded from viewpoints of recording net import value. Further, only trade margins shall be recorded for paintings (originals) and antiques (with more than one hundred years history after creation) in the same way as domestic articles are treated.

Further, the followings are outside of ordinary trade statistics and not able to be captured as data. Therefore, the followings are excluded from the scope.

1 Small cargo (less than ¥200,000 in value per cargo)

2 Samples and gifts

3 Cargoes relating to military forces stationed and U.N. military force

4 Exhibition goods for expositions and trade fairs

5 Cargoes treated as special statistics items

Appraisal of "(less) import (ordinary trade)" is made on CIF price basis.

(Given examples)
Articles handled in trade statistics (partially exempted)

Column Code	Row Code	Sector Name
9411-20		**(less) Imports (special trade)**

(Ministry or agency in charge)
Ministry of Internal Affairs and Communications

(Definition, Scope)
The sector scope corresponds to "transactions of services between residents and non-residents, and goods that are not recorded in ordinary trade."

Services balance that records payment and receipt of service costs between residents and non-residents among the Balance of Payments compiled by the Bank of Japan coincides with the sector value if the followings are deducted.

1 Scope of estimation of "Imports (direct purchase)"

(Individual consumption during sightseeing trip, Individual consumption by diplomatic mission members, individual spending by military personnel of foreign military force stationed in Japan)

2 Construction services

However, regarding cargo freight and insurance, activities by Japanese transport (insurance) corporations (namely, cargo freight and net insurance premium received as revenues) are all recorded in "9112-20 Exports (special trade)" as cargo freight and cargo insurance, regardless of exporting or importing cargoes or regardless of resident or non-resident payers.

Relations between Balance of Payments and I-O Tables are as per separate table of "Export (special trade)."

(Given examples)
Cargo freight, passenger freight, port expenses, consumption of goods and services on business trip, international phone call, cargo insurance, agent commission, securities trading commission, advertisement expenses, films and tapes rental fees, other service-related transactions by private sector

(Notes)

1 Import articles in the ordinary trade in I-O Tables are appraised on CIF prices. Therefore, booking import of cargo freight and cargo insurance in special trade causes duplicated booking. Therefore, "import (special trade)" of freight and insurance of the I-O Tables cannot be existing on the aforementioned table.

2 Consumption of goods and services on sightseeing trips shall be included in "(less) import (direct purchase)."

Column Code	Row Code	Sector Name
9412-00		**(less) Imports (direct purchase)**

(Ministry or agency in charge)
Ministry of Internal Affairs and Communications

(Definition, Scope)
The scope corresponds to "direct transactions of goods and services in overseas market by resident households."

Other final demand sectors than "9121-00 Consumption expenditure of households" are described on domestic concept. However, consumption expenditures of households are defined based on national concept. Therefore, a sector that adjusts two different concepts is needed converting it to domestic concept that I-O Tables stand on.

Should a sector be established that converts from nation consumption expenditure by households to domestic consumption expenditure by households, the total sum of final demands becomes equal to total sum of domestic expenditure. Thus, domestic concept can be maintained with I-O Tables.

The sector "Import (direct purchase)" plays such roles and is important sector.

(Given examples)
Consumption by tourists, consumption of travelers visiting relatives and friends, individual spending by diplomatic mission members

(Notes)
Conversion equation to convert "9121-00 Consumption expenditure of households" to domestic concept

Consumption expenditure of households (domestic concept) = Consumption expenditure of households (national concept) + Exports (direct purchase) – Imports (direct purchase)

Column Code	Row Code	Sector Name
9413-00		**(less) Custom duties**

(Ministry or agency in charge)
Ministry of Internal Affairs and Communications

(Definition, Scope)
Import articles are levied of customs duties from trade policy considerations based on Customs Tariff Table. This works for squeezing price gaps between inexpensive import products and expensive domestic products by appraising import products at the same price level of domestic products. Further, transaction prices at each demand sectors are clarified by recording in "custom duties" column in parallel with "import" column.

Refunds is recorded in its total sum and treated as current subsidies for sectors that receive the reimbursement.

Regarding vessels that are re-imported, the transactions are recorded as cancellation of imports and therefore no customs duties are recorded.

Cine-film rental fees are also recorded as services in special trade. Therefore, they are deducted from ordinary trade and no customs duties are recorded.

(Notes)
Transaction prices of import articles in each sector of I-O Tables are recorded in the amount of (ordinary trade + customs duty + import commodity tax.

Column Code	Row Code	Sector Name
9414-00		**(less) Commodity tax on imported goods**

(Ministry or agency in charge)
Ministry of Internal Affairs and Communications

(Definition, Scope)
Imported goods are levied of consumption tax as inland tax same as the case of domestic goods, alcohol tax, tobacco tax, gasoline tax, local road tax, petroleum gas tax and petroleum gas (hereinafter called as "import commodity tax") on customs clearance in addition to customs duty.

Import goods commodity tax serves for appraising them at the same level of domestic goods and for clarifying related transaction prices for each demand sectors. Therefore, this column sector is established in the same way as the column sector "9413-00 (less) Custom duties."

(Given examples)
Alcohol tax, tobacco tax, gasoline tax, local road tax, petroleum gas tax, petroleum tax and consumption tax on imported goods

19 Gross value added sectors

Column Code	Row Code	Sector Name
	9110-010	**Lodging expenses and daily allowances**
	9110-020	**Social expenses**
	9110-030	**Welfare expenses**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
Consumption expenditure outside households is so-called "corporate consumption" and the scope corresponds to expenditures paid by corporations and other entities such as expense accounts and entertainment expenses similar to those paid by households, including welfare expenses (excluding the ones that are recorded in other gross value added sectors), expense accounts and entertainment expenses as well as trip expenses paid but excluding transport fares (primarily staying and daily allowances.)

1 Staying and daily allowance

This corresponds to daily allowance payable to directors or employees of expenses needed for trips of business management and of sales and for trips of transfer, staying charges and preparation allowance for transfer, transfer allowance and nursing allowance.

2 Expense accounts

The expenses refer to such expenses of entertaining, inviting, soliciting, giving fits to customers, suppliers and other business related persons or similar actions. This does not include expenses for employees.

However, expenses for year-end and year-beginning parties for directors or managers, expenses entertaining finance personnel, and party expenses after department meetings are included in expense accounts as exceptions.

3 Welfare expenses

They consist of shared value of welfare facilities (expenses needed for facilities of welfare excluding dining facility for served foods), health, hygiene and medical service expenses (expenses needed for medical services for employees such as expenses for goods and services to maintain operations of related facilities), and recreational and sports-related expenses (expenses needed for employees' and their families' recreational activities as well as related expenses for those facilities.)

Further, personnel cost for employees that corporations directly hire to operate welfare facilities, depreciation cost thereof and indirect taxes are not included in this sector, but are included in "9311-000 through 9313-000 employers income sectors", "9402-000 capital depreciation reserve" and "9404-000 indirect taxes (excluding customs duties and imported goods commodity taxes)" respectively.

(Notes)
1 Activities relating to lodging and recreational facilities that corporations provide for their employees are included in "8613-01 Hotels and other lodging facilities", and similarly activities relating to staying lodges, company housings for bachelors, and for students are included in "6422-01 house rent (imputed house rent)".

Further, costs of food materials or corporate spending that supplements expenses for outsourcing among employees' canteen expenses shall be included in employers income ("9313-000 Other salaries and allowances") as a sort of "salaries-in-kind". Therefore, employee's share as well as corporate share shall be treated in the way that "9121-00 Consumption expenditure of households" shall input individual foods materials or "general restaurants".

2 The sum of consumption expenditure outside households in column sector (column production value) coincides with the sum (sum of row production values) of "9110-010 Staying and daily allowance", "9110-020 Expense accounts" and "9110-030 Welfare expenses."

Column Code	Row Code	Sector Name
	9311-000	**Wages and salaries**
	9312-000	**Contribution of employers to social insurance**
	9313-000	**Other payments and allowances**

(Ministry or agency in charge)
Ministry of Health, Labour and Welfare

(Definition, Scope)

(1) Scope of employees' income

Employee's income refers to all income of cash and in kind that are paid as compensation to work to the employed by private sectors and governments domestically. The incomes referred herein are recorded on employer's payment basis, and not on employee's receipt basis. Further, salaries shall be recorded as employees' income in the specified payment period of relevant entities regardless whether the said wages and salaries are paid on time or delayed in order to capture and recognize correctly due income for due period (accrual basis.) Furthermore, employees' income are recognized on domestic concept, and therefore, employees' income incurred domestically is the employees' income regardless whether an employee is resident or non-resident.

The scope of employees' income covers incomes (wages and salaries, social insurance premium (employer's share), and other compensation and allowances) of directors on payroll, regular workers, temporary and day-workers. Incomes of self-support owners are included in business surplus.

(2) Contents of items included in employees' income

Employees' income includes every and all items that can be considered as rewards to works done by employees. In addition, a system of national accounts is taken into consideration, driving at the following items that consist of employees' income.

1 Wages and salaries

1) Wages for regular workers, Wages for temporary and day-workers
This refers to pay amount of an employer before deducting taxes and social insurance premium (employer share). This also includes marriage and condolence money that are obligatorily specified in employees policy manuals, or labor agreements, and tips that are re-divided by an employer after collection.

When marriage and condolence money are specified in employees manuals or labor agreement, it is included in employees' income. Items under "Marriage and condolence money" are following:

Happy money for marriage
Happy money for childbirth
Happy money for school initiation
Condolence money for death
Sadness money for injury
Sadness money for casualties

There are two kinds of "tips"; the one that a guest gives directly to an employee; the other that a tip from a guest is divided by an employer to an employee. A tip due to an employee is basically cash given by a guest other than a specified amount of charges and is a continued revenue source. Therefore, aforementioned two kinds of tips can both be considered as employees' income. However, the latter was only included in the income, and the former has been considered as a cash transfer from a guest to an employee.
The compensation for national diet representatives and for local diet representatives (Annual allowance for diet representatives) is treated as the wages for regular workers.

2) Compensation of directors
This refers to the amount payable to corporate directors as corporate expense cost.
This does not include bonuses for directors that are payable from corporate profit.

2 Social insurance premium (employer share)

1) Government health insurance (including day-worker insured under special provision)

2) Pension insurance

3) Workers' casualties compensation insurance

4) Employment insurance

5) Seamen's insurance

6) National public service personnel mutual aid association, and federation

7) Pension fund association for local government officials, and federation

8) The mutual aid association of local diet representatives

9) The mutual aid association of private school personnel

10) The mutual aid association of agriculture, forestry and fisheries corporation personnel

11) Union health insurance (private)

12) Union health insurance (local governments)

13) Children's allowance (private)

14) Children's allowance (public service personnel)

15) Pension fund for coal and mining

16) National pension fund

17) Casualties compensation fund for local government officials

18) Firemen's mutual fund for compensation for casualties on public service

The health insurance system includes the premium of medical amount and nursing amount.

In addition, benefits of casualties' compensation and casualties' compensation on public service for central and local governments officials shall be added to social insurance premium (employer share.)

3 Other compensations and allowances

1) Retirement pension and retirement money
The retirement money refers to the accumulated amount contributed by employers under the contributory funded defined benefit retirement pension plan. Therefore, the accumulated amount that an employer contributed, and the retirement money that a retiree receives are different.
The retirement money refers to the accumulated amount contributed by employers based on a mutual aid retirement money agreement, and the amount that the employer actually paid other than the said system.

2) Wage-in-kind
This refers to the cost borne by employers when served meals, commuting pass and corporate products are provided.

3) Housing rent difference
When an employee lives in a corporate supported housing, the difference between the market rent charge and the rent that the employee pays is deemed as wage-in-kind.

4) Added benefits of social insurance
This refers to an employer's cost that corresponds to the added benefit payable to an employee on top of the legal benefit of the social insurance. Workmen's injury

insurance and health insurance are the examples.

5) Expenses for assets building
This refers to an employer's cost for the benefit of an employee.

Contribution to private insurance plans

Cost of helping employee's housing ownership

Contribution to savings plan for assets building and benefits therefrom

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Column Code Row Code Sector Name

9401-000 Operating surplus

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)

1 The scope corresponds to the value of gross value added deducted by consumption expenditure outside households, employees' income, capital depreciation reserve, and pure indirect taxes (indirect taxes minus subsidies.) Contents of business surplus consist of business profits of each industry sector, and interest payable. Other revenues such as interest receivable and dividends receivable are not included in this case. However, this is because that each sector is defined as production activity unit, and that revenues thereof are imputed to originating industry.

Further, talking about interest payable, business surplus reduces by degree of imputed services rendered by financial institutions because financial institutions render the imputed financial services (imputed interest = interest receivable – interest payable) that are proportionate to the amount financed (figure below.)

2 Income of an individual business or a family employee without pay shall be recorded as business surplus, not as employees' income.

3 Since it is defined in such that production values of government service producers and non-profit private service producers for households are equal to production costs (total sum of expenditures), no business surplus is created, but it is only created in industries.

(Notes)

1 With introduction of consumption tax on April 1, 1989, the following items were included in this sector in 1990 I-O Tables.

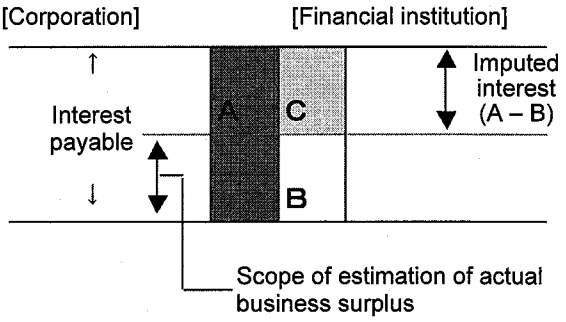
(1) Tax paid

(2) Consumption tax relating to procurement of capital investment (subject to tax exemption)

(3) Consumption tax relating to domestic transactions of export goods via exporters

However, in 1995 Tables, the aforementioned (1) was included in "9404-000 Indirect taxes (excluding customs duties and import goods commodity tax), and aforementioned (2) and (3) remained the same with 1990 Tables.

2 From 1990 Tables, all the goods leasing businesses were estimated on ownership principle. Therefore, net rental fees (gross rental charge actually paid reduced by maintenance and repair cost and depreciation of the goods) of the goods on lease were recorded in the sector that owns the goods as business surplus.



	A	B
Financial institution	Receipt	Payment
Corporation	Payment	Receipt

Column Code Row Code Sector Name

9402-000 Depreciation of fixed capital

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
Values of fixed capital will be consumed during production processes. This is the cost in reserve to supplement the depreciated portion of the values, and it covers depreciation and incidental capital loss. Depreciation reserve is to prepare for normal wear and tea as well as for damages of fixed capital. Incidental capital loss reserve is for incidental looses like accidents.

The scope of fixed capital subject to capital depreciation reserve is the same range of that of "domestic gross fixed capital formation."

(Notes)

1 Estimation by sectors of capital depreciation reserve was primarily made on users principle until 1985 Tables. Therefore, capital depreciation reserve for borrowing assets was included in the calculation, whereas that of lending assets was excluded. In 1990 Tables, treatment of goods leasing activities was standardized to ownership principle. Accordingly, all the capital depreciation reserve has been recorded in owners' industry sectors.

2 However, three sectors of "8513-01 Electronic computing equipment rental and leasing", "8513-02 Office machines

rental and leasing (except electronic computing equipment)" and "8514-01 Car rental and leasing" as well as "6411-02 Real estate rental service" were estimated on users principle even in 1985 Tables, and capital depreciation reserve thereof were recorded in owner industries.

Column Code	Row Code	Sector Name
	9403-000	**Depreciation of fixed capital (social fixed capital depreciation)**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)
This represents reserved costs to supplement depreciated portion of fixed capital values such as government owned roads, constructions like dams and bunkers, and buildings (social capital.) The scope covers depreciation and incidental capital loss same as "9402-000 Capital depreciation reserve." The scope of fixed capital subject to this sector are "roads, ports, aeronautics, sewerage, waste treatment, urban parks, natural parks, river improvement, agriculture (irrigation), forestry (forest paths), fisheries, school facilities and social education facilities" in addition to "government buildings."

(Changes)
Capital depreciation reserve relating to government buildings that were included in
"9402-000 Capital depreciation reserve" in 1995 Tables are now included in this sector.

Column Code	Row Code	Sector Name
	9404-000	**Indirect taxes (except custom duties and commodity taxes on imported goods)**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)

1 Indirect taxes are duties and outside duty burden to be levied on production, sales, purchase and/or usage of goods and services. These are not income but recognized as expenses by the Taxation Law and are to burden by final purchasers. Further, outside tax revenues that are not classified as operating income of the government but levied for financial purposes are also included in indirect taxes. However, "customs duties" and "imported goods commodity tax" are not included in direct taxes but recorded as exemption items for the final demands.

2 Consumption tax, alcohol tax, tobacco tax, gasoline tax, and car weight tax fall in the government tax category. Corporate tax, tobacco tax (local), special local consumption tax, and fixed asset tax fall in the local government tax category. Some payments and revenue from profit operations fall in outside taxation item category and the total amount is treated as indirect taxes.

3 Fixed asset taxes are not only levied on factory lands and depreciative assets but also on housing and housing lands. Total amount of fixed asset taxes are treated as indirect taxes.

Namely, housings are all supplied by industries in terms of system of national accounts and I-O Tables, and housings, even though they are owned by individuals for living, are nominally rented from the sector "6422-01 House rent (imputed house rent)" and their rents are recorded as imputed rent. Therefore, fixed asset taxes levied on self-owned housings shall be treated as indirect taxes same as taxation on corporations. Real estate acquisition tax and urban planning tax are treated as indirect taxes with the same reason.

4 For special local consumption taxies, taxpayers are the persons who play, eat, drink and lodge. Tax collection method is that restaurant managers collect taxes from taxpayers on behalf of local governments and pay to the government. Guests of hotels normally recognize that they are paying staying charges including tax on top of staying fee and service charge. Therefore, expenses for playing, eating, drinking and lodging are included in the final consumption expenditure with taxes in the system of national account and I-O Tables. Hotels and restaurants shall book sales including tax and special local consumption tax shall go to indirect tax of its entity born by row sectors.

5 Some portion of car tax (50% of tax amount for convenience) are born by households, and another 50% goes to indirect taxes.

(Notes)
Consumption taxes that were introduced on April 1, 1989 paid by industries were included in "9401-000 Business surplus" in 1990 Tables. Now they have been included in this sector since 1995 Tables.

Column Code	Row Code	Sector Name
	9405-000	**(less) Current subsidies**

(Ministry or agency in charge)
Cabinet Office

(Definition, Scope)

1 Current subsidies are the grants that are provided by government service producers to industries according to government policy objectives such as promotion of an industry or lowering market price of a product. Recipient of subsidies treat these grants as revenue. Government transfer to make up operation losses of public enterprises shall also be included in the current subsidies. The scope

is same as the scope of subsidies in the national accounts system. Non-profit private service producers for households and government service producers are in no way receiving current subsidies.

2 Naming of current subsidies is not always "current subsidies" but depends by legal or budgetary reason, such as supplement money, share money, encouragement money, grants, supporting money, benefits. Transfer from general accounts of food management special account shall be deemed as current subsidies.

CHAPTER VI

STRUCTURE OF THE JAPANESE ECONOMY AS INFERRED FROM THE 2000 INPUT-OUTPUT TABLES

1. Total Supply and Growth

Total supply of Domestic production and Imports reached 1013.048 trillion yen, of which domestic production was 958.887 trillion yen (94.7% of the total supply value) and imports was 54.161 trillion yen (5.3% of the total supply value).

In terms of the composition of Total supply, from 1995 to 2000, Domestic production decreased by 0.8 points while Imports increased by 0.8 points.

With respect to growth from 1995 levels, Total supply increased by 3.3%, Domestic production increased by 2.3%, and Imports showed double-digit growth of 23.9%.

Chart 6-1 Composition of the total supply

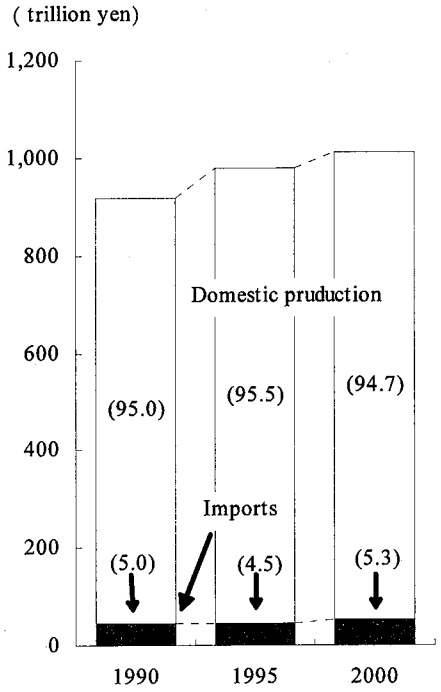


Chart 6-2 Growth of the total Supply

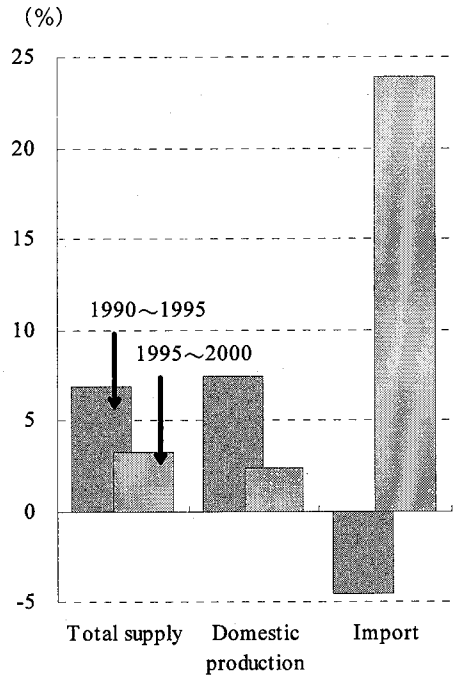


Table 6-1 Composition and growth of the total supply

	Value (billion yen)			Distrbution ratio (%)			Growth rate (%)	
	1990	1995	2000	1990	1995	2000	1990～1995	1995～2000
Total supply	918,045.5	980,824.3	1,013,047.6	100.0	100.0	100.0	6.8	3.3
Domestic production	872,212.2	937,100.6	958,886.5	95.0	95.5	94.7	7.4	2.3
Import	45,833.3	43,723.6	54,161.2	5.0	4.5	5.3	△ 4.6	23.9

Notes: [1] The table derives from 32 sectors table.

[2] The total figures don't always correspond with sum amount of details rounded.

[3] The distribution ratio and growth rate in the table are calculated on a million yen basis.

2. Domestic Production Trend (Average Annual Growth Rate)

Domestic production for the year 2000 increased to 958.887 trillion yen, 2.3% higher than 1995 figures. This increase translates to an average annual growth rate of 0.5% for the five years from 1995 to 2000.

In terms of the historical development of the average annual growth rate, growth from 1985 to 1990 showed a relatively high rate of 5.1%, but slowed to 1.4% from 1990 to 1995. Growth from 1995 to 2000 dwindled to 0.5%.

Chart 6-3 Domestic production trend

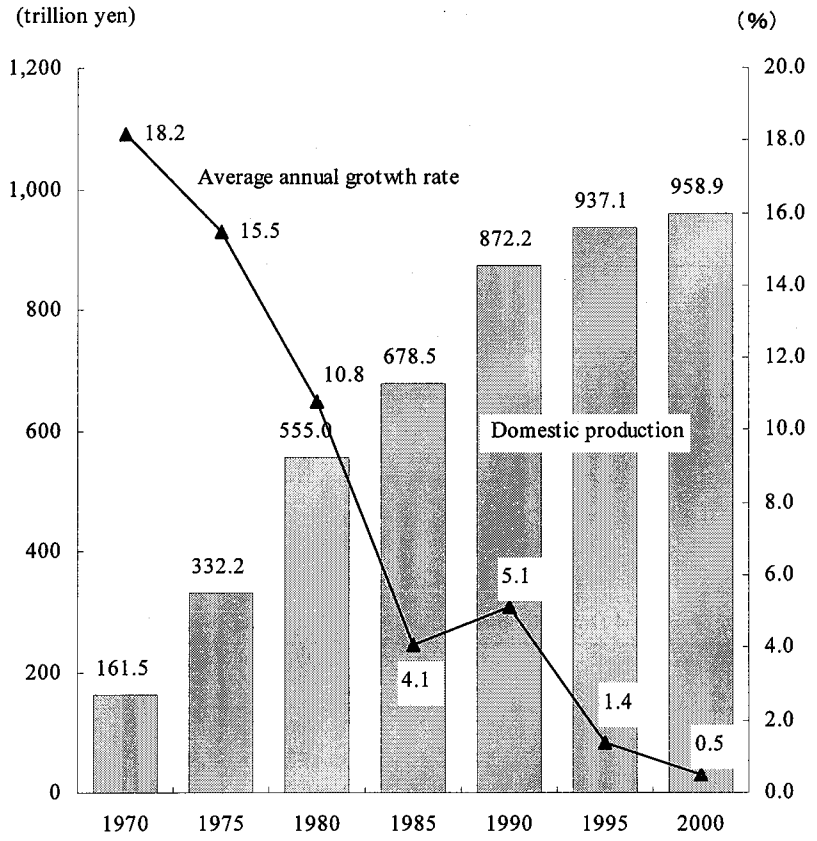


Table 6-2 Domestic production trend

Domestic production (billion yen)						
1970	1975	1980	1985	1990	1995	2000
161,517.7	332,230.8	555,040.8	678,544.1	872,212.2	937,100.6	958,886.5

Table 6-3 Annual change of domestic production

Average annual growth rate (%)						
1965～1970	1970～1975	1975～1980	1980～1985	1985～1990	1990～1995	1995～2000
18.2	15.5	10.8	4.1	5.1	1.4	0.5

3. Domestic Production by Industry

On the preparation of Domestic production in the 2000 by 13 sector, the manufacturing sector had the highest ratio (32.1%), followed, in sequence, by Services (22.9%), Commerce (10.1%), and Construction (8.1%). In terms of primary, secondary, and tertiary industries, the ratio for tertiary industry was 56.1%, followed by secondary industry (42.4%) and primary industry (1.5%).

As for production trends by sector, the sectors seeing increased from 1995 to 2000 were Services (2.5 points), Public administration (1.0 point), Communications and broadcasting (0.7 points), and Finance/insurance (0.1 points). Decreasing sectors included Manufacturing (1.5 points), Construction (1.3 points), Commerce (0.8 points), and Transport (0.3 points).

Chart 6-4 Domestic production by industrial classification

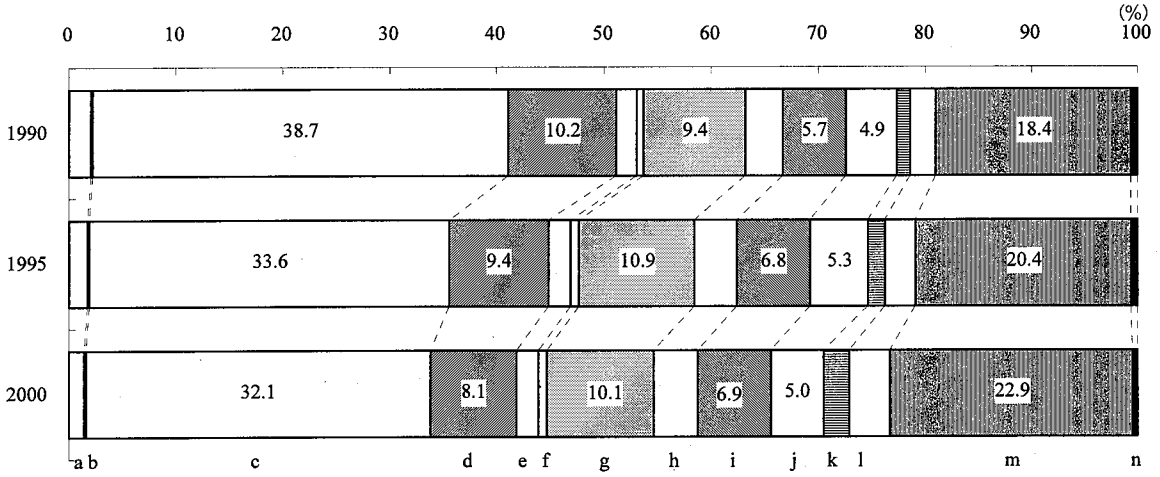


Table 6-4 Domestic production by industrial classification

	Domestic production (billion yen)			Distribution ratio (%)		
	1990	1995	2000	1990	1995	2000
Total	872,212.2	937,100.6	958,886.5	100.0	100.0	100.0
a Agriculture,forestry and fishery	17,795.3	15,817.8	14,369.7	2.0	1.7	1.5
b Mining	2,156.4	1,659.5	1,378.7	0.2	0.2	0.1
c Manufacturing	337,914.6	314,558.5	308,161.2	38.7	33.6	32.1
d Construction	89,198.9	88,149.3	77,310.5	10.2	9.4	8.1
Electric power,gas and water supply	21,513.9	26,463.5	27,004.4	2.5	2.8	2.8
e (Electricity, gas and heat supply)	(15,318.0)	(18,810.0)	(19,288.2)	(1.8)	(2.0)	(2.0)
f (Water supply and waste management services)	(6,195.9)	(7,653.5)	(7,716.2)	(0.7)	(0.8)	(0.8)
g Commerce	82,414.4	102,321.6	96,947.6	9.4	10.9	10.1
h Finance and insurance	31,251.5	36,334.6	38,149.5	3.6	3.9	4.0
i Real estate	50,116.1	64,185.2	65,852.7	5.7	6.8	6.9
j Transport	42,580.4	50,113.8	47,906.9	4.9	5.3	5.0
k Communication and broadcasting	10,974.6	14,762.8	22,139.5	1.3	1.6	2.3
l Public administration	20,409.5	26,217.0	36,225.9	2.3	2.8	3.8
m Services	160,073.6	190,999.6	219,227.6	18.4	20.4	22.9
n Activities not elsewhere classified	5,812.9	5,517.6	4,212.3	0.7	0.6	0.4
(Ref.) Primary industries	17,795.3	15,817.8	14,369.7	2.0	1.7	1.5
(Ref.) Secondary industries	444,587.9	423,177.3	406,138.6	51.0	45.2	42.4
(Ref.) Tertiary industries	409,829.0	498,105.5	538,378.2	47.0	53.2	56.1

Notes: Primary industries : a
Secondary industries: b, c, d, e
Tertiary industries : f, g, h, i, j, k, l, m, n

4. Growth of Domestic Production by Industry

The 32-sector classification table indicates that the industries achieving domestic production growth from 1995 to 2000 were Communications and broadcasting (50.0%), Public administration (38.2%), Petroleum and coal products (23.7%), and Business services (21.6%), among others. Growth in Communications and broadcasting was conspicuous.

On the other hand, domestic production decreased in sectors such as Textile products (-36.5%), Mining (-16.9%), Pulp, paper, and wooden products (-16.5%), and Iron and steel (-14.6%).

From 1990 to 1995, domestic production increased in 14 sectors and declined in 18 sectors; from 1995 to 2000, domestic production increased in 18 sectors and decreased in 14 sectors. The sectors showing growth outnumber declining sectors.

Chart 6-5 Growth of Domestic production by industrial classification

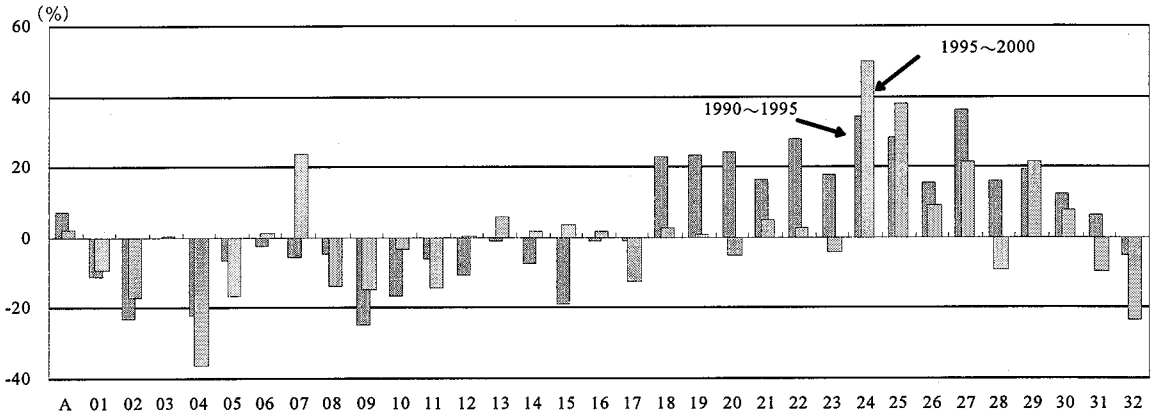


Table 6-5 Growth of Domestic production by industrial classification

	Domestic production (billion yen)			Growth rate (%)	
	1990	1995	2000	1990～1995	1995～2000
A Total	872,212.2	937,100.6	958,886.5	7.4	2.3
01 Agriculture, forestry and fishery	17,795.3	15,817.8	14,369.7	△ 11.1	△ 9.2
02 Mining	2,156.4	1,659.5	1,378.7	△ 23.0	△ 16.9
03 Foods	38,906.0	38,856.5	38,924.6	△ 0.1	0.2
04 Textile products	14,333.7	11,164.5	7,093.6	△ 22.1	△ 36.5
05 Pulp, paper and wooden products	19,062.7	17,800.1	14,861.9	△ 6.6	△ 16.5
06 Chemical products	26,383.1	25,778.2	26,102.5	△ 2.3	1.3
07 Petroleum and coal products	11,087.6	10,492.8	12,983.4	△ 5.4	23.7
08 Ceramic, stone and clay products	10,193.6	9,696.1	8,369.1	△ 4.9	△ 13.7
09 Iron and steel	26,679.2	20,093.3	17,159.5	△ 24.7	△ 14.6
10 Non-ferrous metals	7,614.6	6,343.1	6,137.8	△ 16.7	△ 3.2
11 Metal products	16,748.0	15,707.7	13,452.4	△ 6.2	△ 14.4
12 General machinery	31,839.0	28,475.0	28,586.7	△ 10.6	0.4
13 Electrical machinery	50,826.5	50,385.5	53,402.8	△ 0.9	6.0
14 Transportation equipment	45,195.9	41,855.8	42,667.5	△ 7.4	1.9
15 Precision instruments	4,692.0	3,810.7	3,938.9	△ 18.8	3.4
16 Miscellaneous manufacturing products	32,438.3	32,062.1	32,638.4	△ 1.2	1.8
17 Construction	89,198.9	88,149.3	77,310.5	△ 1.2	△ 12.3
18 Electricity, gas and heat supply	15,318.0	18,810.0	19,288.2	22.8	2.5
19 Water supply and waste management services	6,195.9	7,653.5	7,716.2	23.5	0.8
20 Commerce	82,414.4	102,321.6	96,947.6	24.2	△ 5.3
21 Financial and insurance	31,251.5	36,334.6	38,149.5	16.3	5.0
22 Real estate	50,116.1	64,185.2	65,852.7	28.1	2.6
23 Transport	42,580.4	50,113.8	47,906.9	17.7	△ 4.4
24 Communication and broadcasting	10,974.6	14,762.8	22,139.5	34.5	50.0
25 Public administration	20,409.5	26,217.0	36,225.9	28.5	38.2
26 Education and research	28,727.1	33,247.0	36,293.9	15.7	9.2
27 Medical service, health and social security and nursing care	26,641.3	36,229.4	44,006.0	36.0	21.5
28 Other public services	4,017.7	4,658.7	4,232.3	16.0	△ 9.2
29 Business services	52,503.7	62,691.3	76,246.0	19.4	21.6
30 Personal services	48,183.8	54,173.3	58,449.4	12.4	7.9
31 Office supplies	1,914.6	2,037.0	1,842.2	6.4	△ 9.6
32 Activities not elsewhere classified	5,812.9	5,517.6	4,212.3	△ 5.1	△ 23.7

5. Intermediate Inputs and Gross Value Added

As inferred from the 958.887 trillion yen worth of domestic production in 2000, the intermediate input of goods and services such as raw materials, fuels and others required for production, accounted for 439.405 trillion yen (45.8%), while the gross value added, which increased through production activities, amounted to 519.482 trillion yen (54.2%).

From 1990, the input ratio for intermediate input for 1995 fell by 2.7 points; from 1995, the input ratio for Intermediate input for 2000 fell by 0.3%. The ratio of Gross value added for 2000 rose by 0.3 points from that for 1995.

Chart 6-6 Intermediate inputs and Gross value added

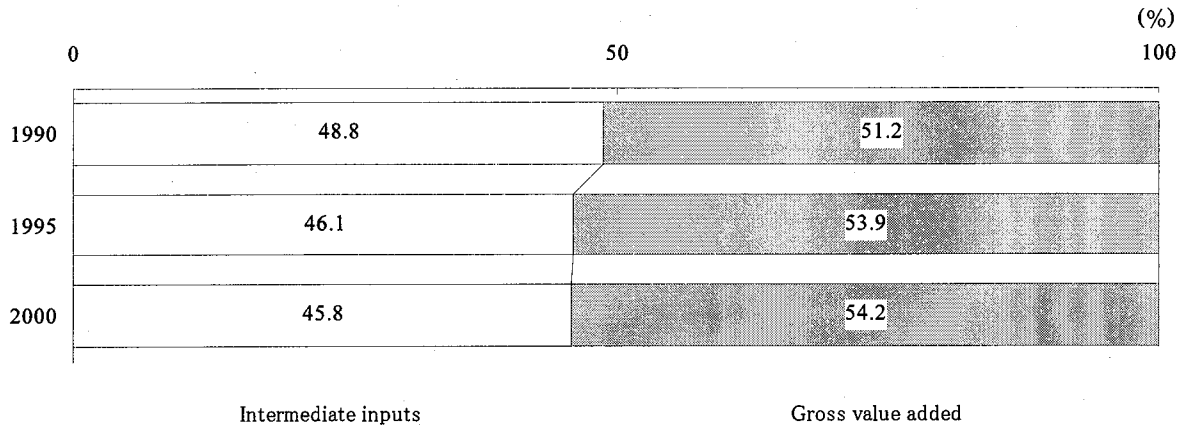


Table 6-6 Intermediate inputs and Gross value added

	Value (billion yen)			Distribution ratio (%)			Growth rate (%)	
	1990	1995	2000	1990	1995	2000	1990～1995	1995～2000
Domestic production	872,212.2	937,100.6	958,886.5	100.0	100.0	100.0	7.4	2.3
Intermediate inputs	426,055.3	431,854.7	439,404.6	48.8	46.1	45.8	1.4	1.7
Gross value added	446,157.0	505,246.0	519,481.9	51.2	53.9	54.2	13.2	2.8

6. Intermediate Input Ratios by Industry

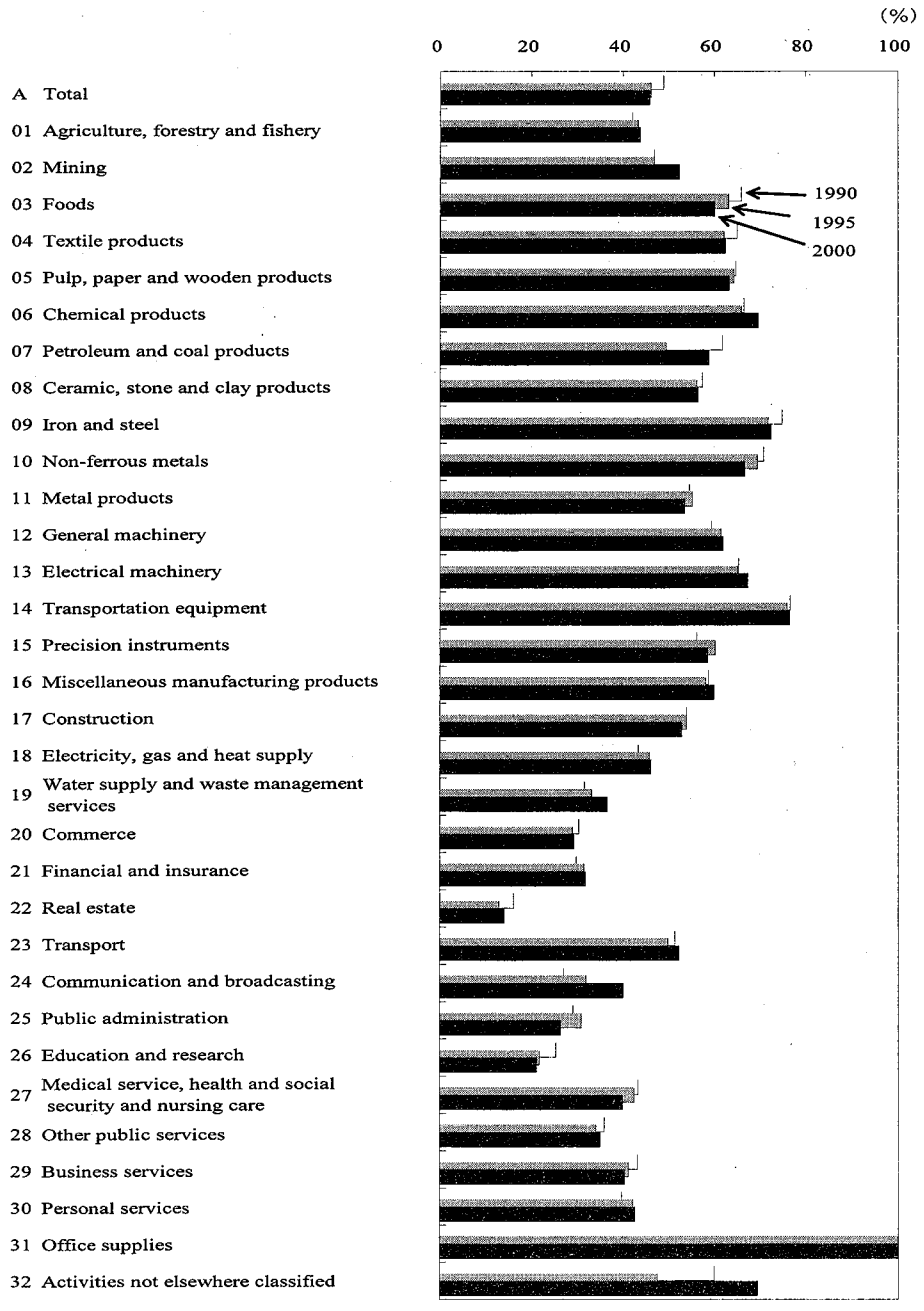
As categorized in the 32-sector classification table, the intermediate input ratio by industry to domestic production in 2000 showed high trends for the manufacturing sector, including Transportation equipment (76.6%), Iron and steel (72.5%), and Chemical products (69.6%). At 52.8%, 52.4%, and 52.2%, respectively, for the sectors other than Manufacturing, Construction, Mining, and Transportation also showed high trends.

However, Real estate, and Education and research trended low at 14.0% and 21.1%, respectively.

With respect to changes in the intermediate input ratio for the respective industrial sector from 1995 to 2000, declines were observed in 10 sectors, including Public administration (by 4.5 points, from 30.8% to 26.3%), Foods (by 3.1 points, from 63.1% to 60.0%), Non-ferrous metals (by 2.8 points, from 69.5% to 66.7%), and Medical services, and Health and social insurance (by 2.5 points, from 42.4% to 39.9%), among others.

On the other hand, significant increases were observed in Communications and broadcasting (by 8.1 points, from 31.9% to 40.0%) as well as in Petroleum and coal products (by 9.4 points, from 49.5% to 58.9%) and Water supply and waste disposal services (by 3.6 points, from 33.0% to 36.6%).

Chart 6-7 Intermediate input ratios by Industrial classification



(%)

	1990	1995	2000
A Total	48.8	46.1	45.8
01 Agriculture, forestry and fishery	42.1	43.3	43.8
02 Mining	46.9	46.9	52.4
03 Foods	66.0	63.1	60.0
04 Textile products	65.1	62.2	62.4
05 Pulp, paper and wooden products	64.8	64.4	63.3
06 Chemical products	66.5	66.0	69.6
07 Petroleum and coal products	61.7	49.5	58.9
08 Ceramic, stone and clay products	57.4	56.2	56.5
09 Iron and steel	74.9	71.8	72.5
10 Non-ferrous metals	70.9	69.5	66.7
11 Metal products	54.6	55.2	53.5
12 General machinery	59.4	61.4	61.9
13 Electrical machinery	65.3	65.1	67.3
14 Transportation equipment	76.6	76.0	76.6
15 Precision instruments	56.2	60.2	58.6
16 Miscellaneous manufacturing products	58.7	58.1	59.9
17 Construction	53.9	53.9	52.8
18 Electricity, gas and heat supply	43.3	45.8	46.1
19 Water supply and waste management services	31.5	33.0	36.6
20 Commerce	30.3	28.9	29.2
21 Financial and insurance	29.7	31.4	31.8
22 Real estate	16.1	12.9	14.0
23 Transport	51.3	49.8	52.2
24 Communication and broadcasting	27.0	31.9	40.0
25 Public administration	29.0	30.8	26.3
26 Education and research	25.3	21.7	21.1
27 Medical service, health and social security and nursing care	43.2	42.4	39.9
28 Other public services	35.9	34.1	35.0
29 Business services	43.1	41.2	40.3
30 Personal services	39.6	42.2	42.6
31 Office supplies	100.0	100.0	100.0
32 Activities not elsewhere classified	59.9	47.5	69.5

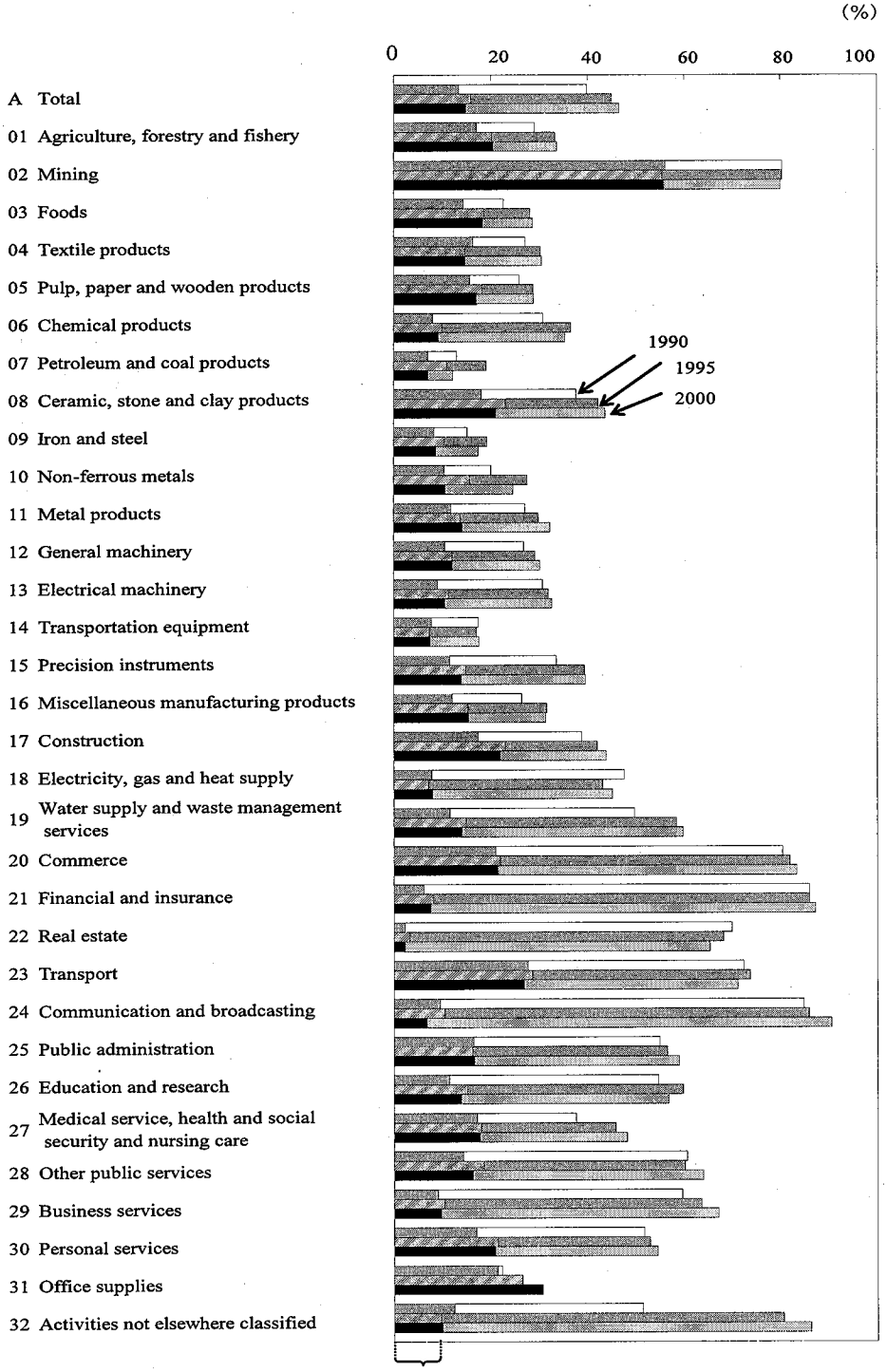
7. Composition of Intermediate Inputs

The breakdown values for intermediate input amounting to 439.405 trillion yen were 235.148 trillion yen (53.5%) for goods and 204.257 trillion yen (46.5%) for services. The input ratio for goods exceeds that for services.

The input ratio in 2000 for "Services" increased from 1995. High ratios of input to services were observed in sectors such as Communications and broadcasting, Finance and insurance, and Commerce. On the whole, the ratios for service inputs were low in manufacturing sectors such as Petroleum and coal products, Transportation equipment, and Iron and steel.

Ratios for service inputs, which are high for Commerce and Transport, declined in many industrial sectors from the 1995 ratios.

Chart 6-8 Composition of Intermediate inputs



(%)

	1990	1995	2000
A Total	39.8	44.9	46.5
01 Agriculture, forestry and fishery	29.0	33.2	33.5
02 Mining	80.4	80.4	80.1
03 Foods	22.7	28.0	28.6
04 Textile products	27.1	30.2	30.5
05 Pulp, paper and wooden products	25.8	28.7	28.8
06 Chemical products	30.8	36.5	35.3
07 Petroleum and coal products	13.0	19.1	12.3
08 Ceramic, stone and clay products	37.6	42.2	43.6
09 Iron and steel	15.2	19.2	17.4
10 Non-ferrous metals	20.1	27.6	24.5
11 Metal products	27.0	29.8	32.2
12 General machinery	26.8	29.1	30.1
13 Electrical machinery	30.7	31.8	32.6
14 Transportation equipment	17.4	17.1	17.5
15 Precision instruments	33.4	39.3	39.5
16 Miscellaneous manufacturing products	26.3	31.5	31.3
17 Construction	38.7	41.9	43.8
18 Electricity, gas and heat supply	47.5	43.0	45.1
19 Water supply and waste management services	49.6	58.3	59.7
20 Commerce	80.4	81.9	83.4
21 Financial and insurance	86.0	86.0	87.2
22 Real estate	69.9	68.1	65.3
23 Transport	72.4	73.7	71.1
24 Communication and broadcasting	84.8	85.8	90.5
25 Public administration	54.8	56.4	58.8
26 Education and research	54.6	59.7	56.7
27 Medical service, health and social security and nursing care	37.4	45.7	48.0
28 Other public services	60.6	60.0	63.9
29 Business services	59.5	63.5	67.1
30 Personal services	51.6	52.8	54.4
31 Office supplies	22.2	26.4	30.6
32 Activities not elsewhere classified	51.3	80.6	86.3

Input ratio of total amount of commerce and transport

8. Composition and Growth Rates of Gross Value Added

The amount of gross value added for 2000 was 519.482 trillion yen. This figure breaks down into 275.589 trillion yen for Compensation of employees (53.1%), 96.524 trillion yen for Operating surplus (18.6%), 93.350 trillion yen for Depreciation of fixed capital (18.0%), 40.039 trillion yen for Indirect taxes (7.7%), 19.171 trillion yen for Consumption expenditures outside households (3.7%), and -5.1915 trillion yen for Ordinary subsidies (deduction) (-1.0%).

Component ratios in Compensation of employees and Operating surplus declined from 1995.

The growth rate for Gross value added increased by 2.8% from 1995. Gross value added exhibiting increasing growth rates includes Depreciation of fixed capital (15.5%), Indirect taxes (9.8%), and Compensation of employee (0.9%). Consumption expenditures outside households and Operating surplus have showed decreasing trends of 1.3% and 3.2%, respectively.

Chart 6-9 Composition of Gross value added

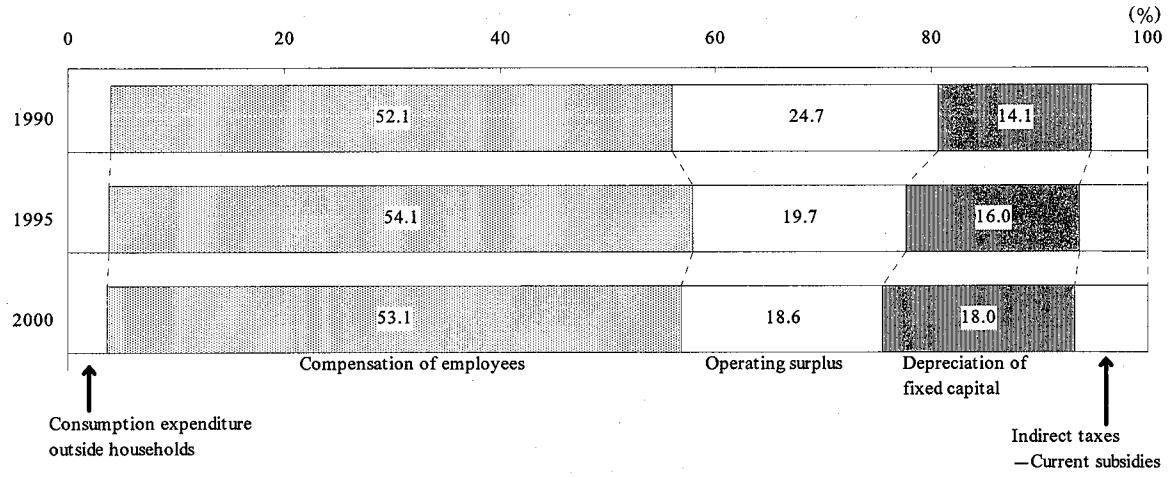


Chart 6-10 Growth of Gross value added

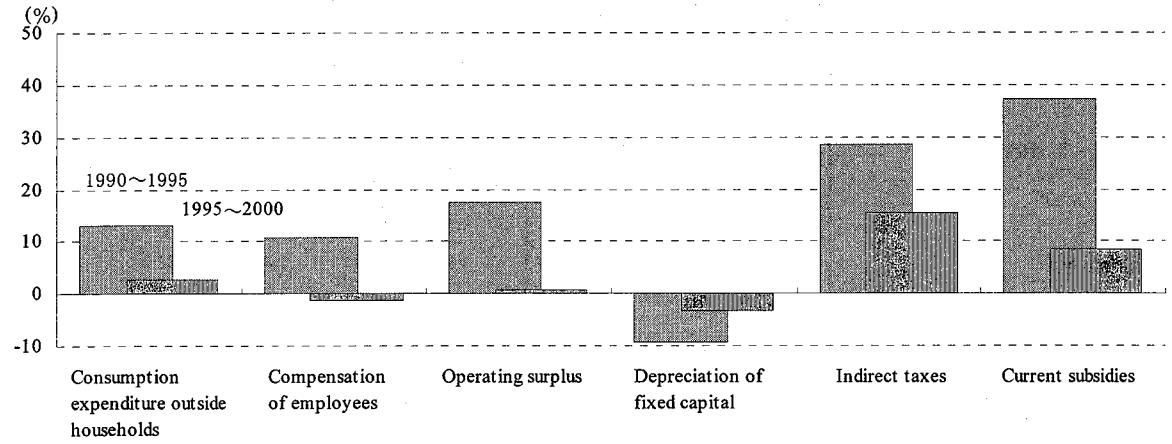


Table 6-7 Composition and rate of Gross value added

	Value (billion yen)			Distribution ratio (%)			Growth rate (%)	
	1990	1995	2000	1990	1995	2000	1990～1995	1995～2000
Total of gross value added	446,157.0	505,246.0	519,481.9	100.0	100.0	100.0	13.2	2.8
Consumption expenditure outside households	17,548.2	19,419.4	19,171.2	3.9	3.8	3.7	10.7	△ 1.3
Compensation of employees	232,283.0	273,160.5	275,589.1	52.1	54.1	53.1	17.6	0.9
Operating surplus	110,090.7	99,706.2	96,523.7	24.7	19.7	18.6	△ 9.4	△ 3.2
Depreciation of fixed capital	62,819.9	80,800.7	93,350.0	14.1	16.0	18.0	28.6	15.5
Indirect taxes	28,045.7	36,469.6	40,039.3	6.3	7.2	7.7	30.0	9.8
(less) Current subsidies	△4,630.6	△4,310.4	△5,191.5	△ 1.0	△ 0.9	△ 1.0	△ 6.9	20.4

9. Composition of Imports by Commodity

By Commodity classification in the 32-sector classification table in 2000, the composition of imports for Electrical machinery had the highest ratio (16.2%) followed, in sequence, by Mining (16.0%), Foods (9.1%), and Textile products (5.8%) among the agriculture, forestry and fishery, mining and manufacturing sectors.

As compared to 1995, the import ratios for Food, Agriculture, forestry and fishery as well as Pulp, paper and wooden products decreased, while, the ratio for Electrical machinery, Mining and General machinery increased.

The growth rates from 1995 for Mining (-24.6%), Agriculture, forestry and fishery (-10.8%) decreased. The other sectors increased. Especially, the rates for Electrical machinery (80.0%), General machinery (75.2%), Petroleum and coal products (62.8%) and Precision instruments (57.6%) increased more than 50%.

Chart 6-11 Composition of Imports by Commodity classification

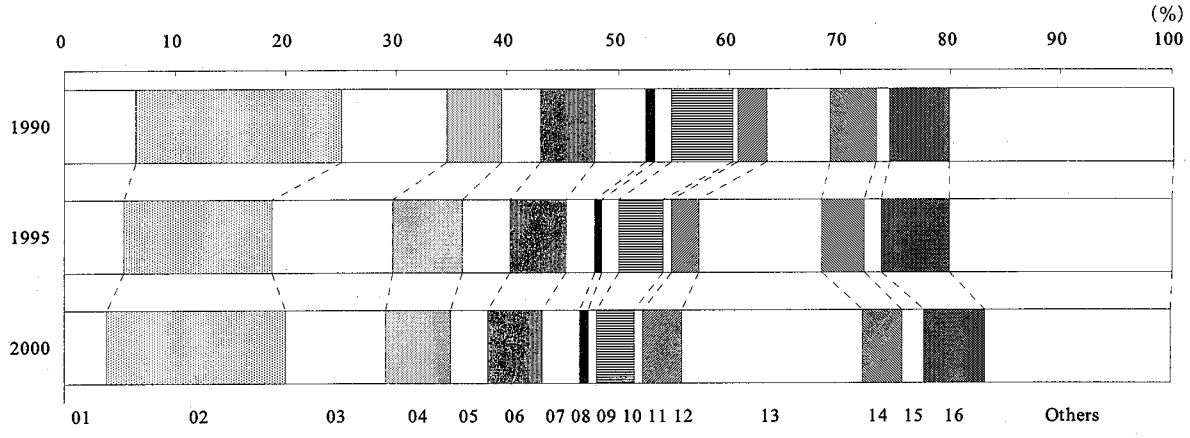


Table 6-8 Composition and Growth of Imports by Commodity classification

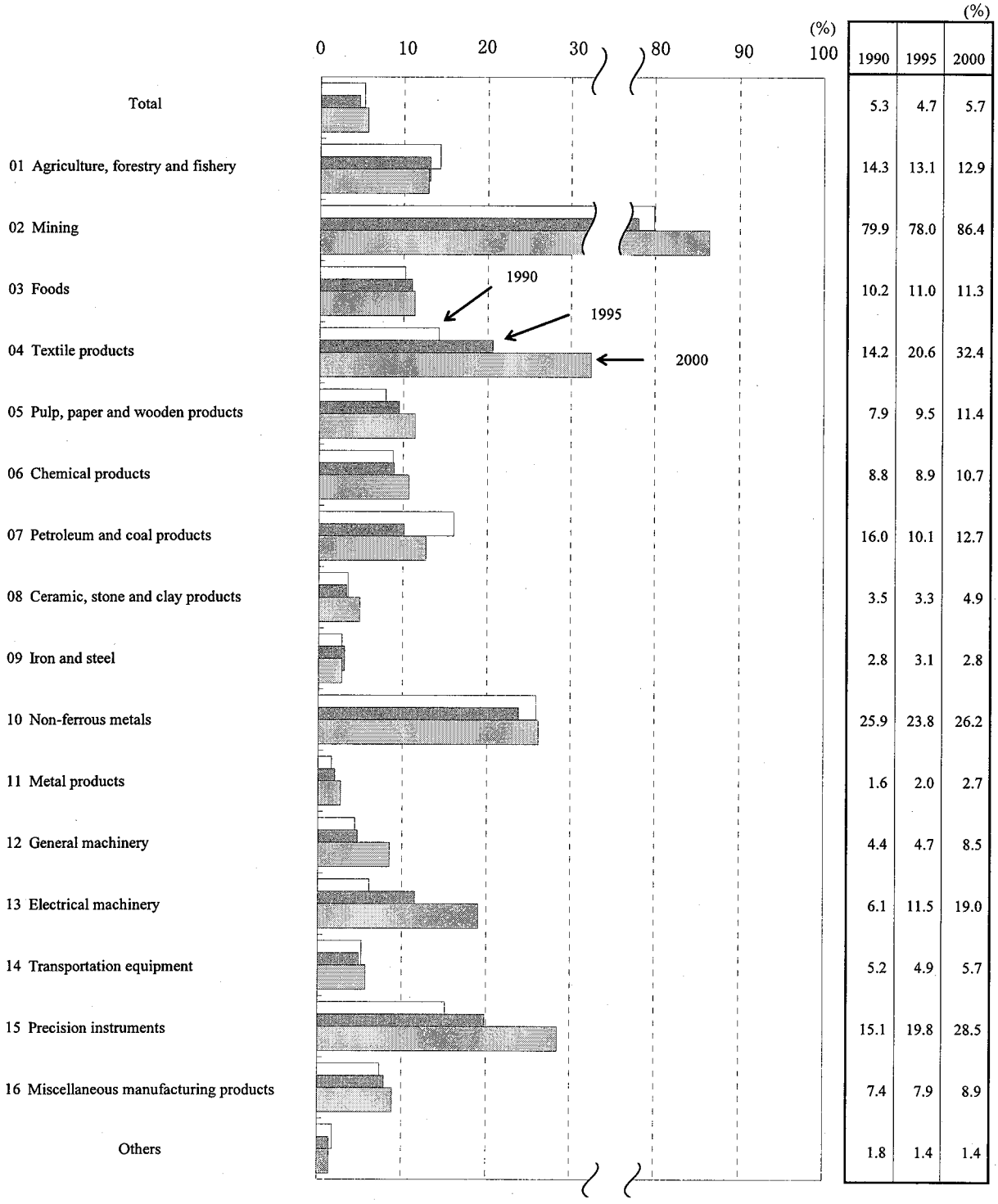
	Value (billion yen)			Distribution ratio (%)			Growth rate (%)	
	1990	1995	2000	1990	1995	2000	1990～1995	1995～2000
Total	45,833.3	43,723.6	54,161.2	100.0	100.0	100.0	△ 4.6	23.9
01 Agriculture, forestry and fishery	2,962.5	2,376.0	2,118.6	6.5	5.4	3.9	△ 19.8	△ 10.8
02 Mining	8,507.9	5,839.2	8,669.1	18.6	13.4	16.0	△ 31.4	48.5
03 Foods	4,375.7	4,769.6	4,948.5	9.5	10.9	9.1	9.0	3.8
04 Textile products	2,248.5	2,747.6	3,118.0	4.9	6.3	5.8	22.2	13.5
05 Pulp, paper and wooden products	1,597.9	1,847.9	1,868.2	3.5	4.2	3.4	15.6	1.1
06 Chemical products	2,308.2	2,238.0	2,702.5	5.0	5.1	5.0	△ 3.0	20.8
07 Petroleum and coal products	2,068.0	1,138.9	1,854.5	4.5	2.6	3.4	△ 44.9	62.8
08 Ceramic, stone and clay products	355.3	317.4	397.2	0.8	0.7	0.7	△ 10.7	25.1
09 Iron and steel	727.7	598.6	451.3	1.6	1.4	0.8	△ 17.7	△ 24.6
10 Non-ferrous metals	2,475.1	1,798.2	1,858.0	5.4	4.1	3.4	△ 27.3	3.3
11 Metal products	261.8	309.3	364.5	0.6	0.7	0.7	18.2	17.9
12 General machinery	1,203.2	1,110.3	1,945.6	2.6	2.5	3.6	△ 7.7	75.2
13 Electrical machinery	2,567.4	4,851.1	8,772.6	5.6	11.1	16.2	88.9	80.8
14 Transportation equipment	1,865.1	1,673.4	1,875.2	4.1	3.8	3.5	△ 10.3	12.1
15 Precision instruments	589.4	683.9	1,077.8	1.3	1.6	2.0	16.0	57.6
16 Miscellaneous manufacturing products	2,459.1	2,646.7	3,041.9	5.4	6.1	5.6	7.6	14.9
Others	9,260.5	8,777.7	9,097.6	20.2	20.1	16.8	△ 5.2	3.6

10. Commodity Import Ratios of Domestic Demand

As categorized in the 32-sector classification table, the commodity import ratios of domestic demand in 2000 showed the highest at 86.4% for Mining followed, in sequence, by 32.4% for Textile products, 28.5% for Precision instruments and 26.2% for Non-ferrous metal.

As compared to1995, Agriculture, forestry and fishery as well as Mining slightly decreased, while the other sectors increased. The import ratios for Textile products (by 11.8 points, from 20.6% to 32.4%) and Mining (by 8.4 points, from 78.0% to 86.4%) particularly increased.

Chart 6-12 Commodity import ratios of Domestic demand



	1990	1995	2000
Total	5.3	4.7	5.7
01 Agriculture, forestry and fishery	14.3	13.1	12.9
02 Mining	79.9	78.0	86.4
03 Foods	10.2	11.0	11.3
04 Textile products	14.2	20.6	32.4
05 Pulp, paper and wooden products	7.9	9.5	11.4
06 Chemical products	8.8	8.9	10.7
07 Petroleum and coal products	16.0	10.1	12.7
08 Ceramic, stone and clay products	3.5	3.3	4.9
09 Iron and steel	2.8	3.1	2.8
10 Non-ferrous metals	25.9	23.8	26.2
11 Metal products	1.6	2.0	2.7
12 General machinery	4.4	4.7	8.5
13 Electrical machinery	6.1	11.5	19.0
14 Transportation equipment	5.2	4.9	5.7
15 Precision instruments	15.1	19.8	28.5
16 Miscellaneous manufacturing products	7.4	7.9	8.9
Others	1.8	1.4	1.4

11. Composition and Growth of Total Demand

Total demand for 2000 is 1013.48 trillion yen with the breakdown figures as 439.405 trillion yen (43.4%) for Intermediate demand, 516.16 trillion yen (51.0%) for Domestic final demand and 57.49 trillion yen (5.7%).

As compared to 1995, Intermediate demand and Domestic final demand fell by 0.6 points and 0.2 points, while Exports have rose by 0.9 points.

With respect to growth from 1995 levels, Total demand increased by 3.3%, Intermediate demand increased by 1.7%, Domestic final demand increased by 2.8% and Exports showed double-digit growth of 22.8%.

Chart 6-13 Composition of Total demand

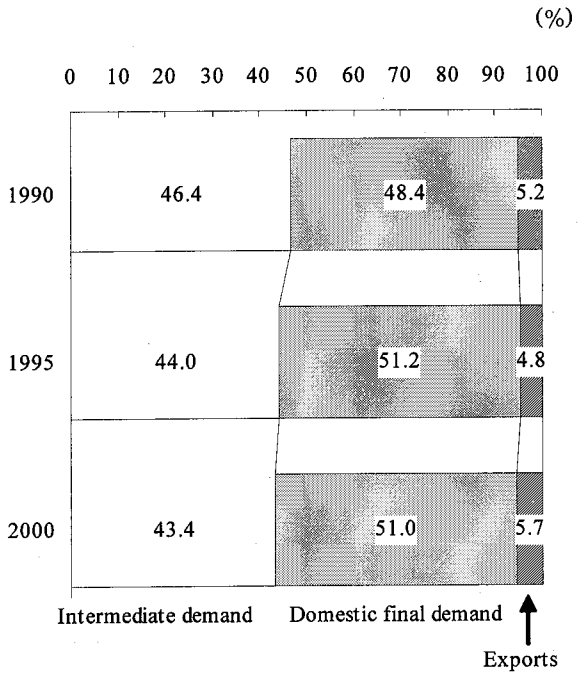


Chart 6-14 Growth of Total demand

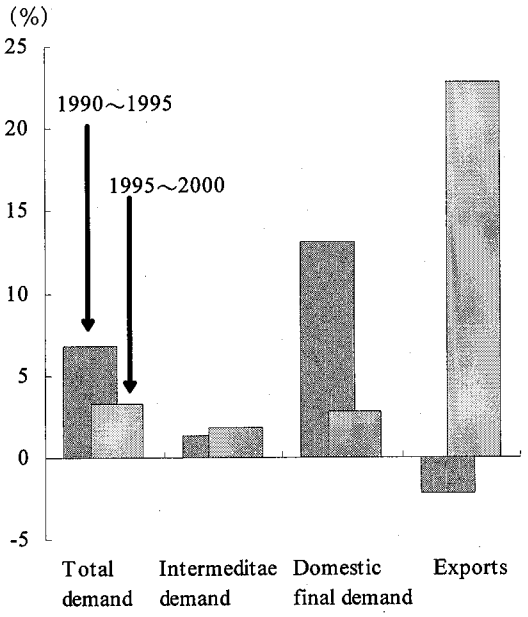


Table 6-9 Composition and Growth of Total demand

	Value (billion yen)			Distribution ratio (%)			Growth rate (%)	
	1990	1995	2000	1990	1995	2000	1990～1995	1995～2000
Total demand	918,045.5	980,824.3	1,013,047.6	100.0	100.0	100.0	6.8	3.3
Intermediate demand	426,055.3	431,854.7	439,404.6	46.4	44.0	43.4	1.4	1.7
Final demand	491,990.3	548,969.6	573,643.1	53.6	56.0	56.6	11.6	4.5
Domestic final demand	444,108.5	502,160.5	516,156.4	48.4	51.2	51.0	13.1	2.8
Exports	47,881.8	46,809.1	57,486.7	5.2	4.8	5.7	△ 2.2	22.8
(Ref.) Domestic demand	870,163.8	934,015.2	955,560.9	94.8	95.2	94.3	7.3	2.3

12. Composition and Growth of Final Demand

The amount of final demand for 2000 was 573.643 trillion yen. This figure breaks down into 280.99 trillion yen for Consumption expenditure (private) (49.0%), 130.12 trillion yen for Gross domestic fixed capital formation (22.7%), Consumption expenditure of general government (14.9%), 57.49 trillion yen for Exports (10.0%), 19.17 trillion yen for Consumption expenditure outside households (3.3%) and 0.28 trillion yen for Increase in stocks (0.0%).

As compared to 1995, the distribution ratios of Consumption expenditure of general government (by 2.3 points, form 12.6% to 14.9%) and exports (by 1.5points, from 8.5% to 10.0%) rose respectively.

With respect to the growth rate from 1995, final demand increased by 4.5%. Consumption expenditure of general government, Exports and Consumption expenditure(private) increased by 23.9%, 22.8% and 3.4%, while Increase in stocks, Gross domestic fixed capital formation and Consumption expenditure outside households decreased by -86.6%, -6.9% and -1.3% respectively.

Chart 6-15 Composition of Final demand

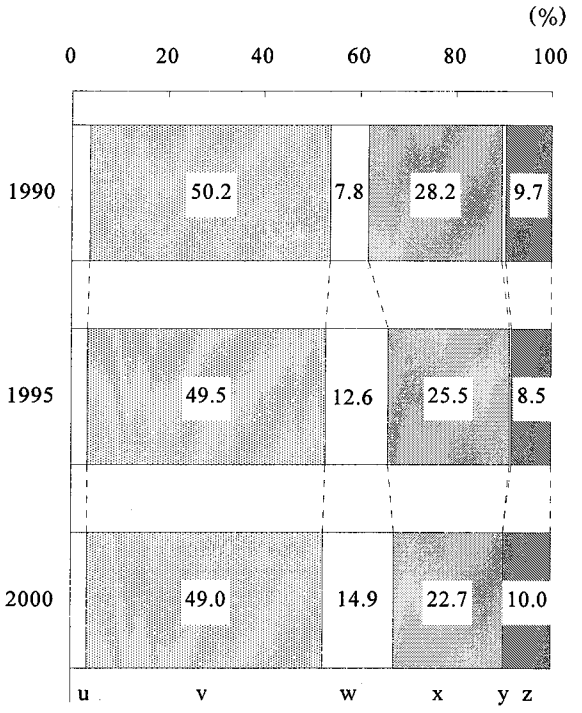


Chart 6-16 Growth of Final demand

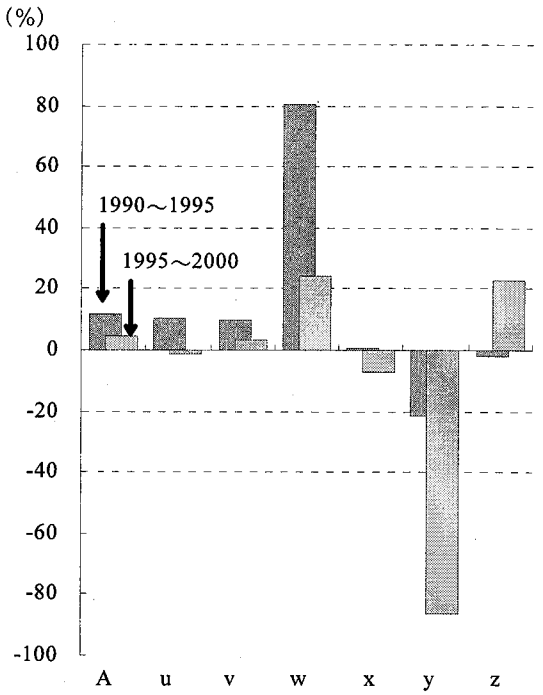


Table 6-10 Composition and Growth of Final demand

	Value (billion yen)			Distribution ratio (%)			Growth rate (%)	
	1990	1995	2000	1990	1995	2000	1990～1995	1995～2000
A Total final demand	491,990.3	548,969.6	573,643.1	100.0	100.0	100.0	11.6	4.5
u Consumption expenditure outside households	17,548.2	19,419.4	19,171.2	3.6	3.5	3.3	10.7	△ 1.3
v Consumption expenditure (private)	246,911.1	271,795.8	280,990.2	50.2	49.5	49.0	10.1	3.4
w Consumption expenditure of general government	38,302.1	69,162.7	85,706.2	7.8	12.6	14.9	80.6	23.9
x Gross domestic fixed capital formation	138,727.0	139,721.7	130,012.1	28.2	25.5	22.7	0.7	△ 6.9
y Increase in stocks	2,620.2	2,061.0	276.7	0.5	0.4	0.0	△ 21.3	△ 86.6
z Exports	47,881.8	46,809.1	57,486.7	9.7	8.5	10.0	△ 2.2	22.8

13. Composition and Growth of Exports by Commodity

As categorized in the 32-sector classification table, the compositions of exports by commodity classification in 2000 were 27.8% for Electrical machinery followed by 20.5% for Transportation equipment and 13.1% for General machinery. These three industries account for 60.0% of the whole commodity export industry.

As compared to 1995, the exports of Transportation equipment, Non-ferrous metals and Electrical machinery rose by 1.0 point (from 19.5% to 20.5%), 0.3 points (form 1.3% to 1.6%) and 0.2 points (form 27.6% to 27.8%), while the Mining fell by 0.7 points (from 3.3% to 2.6%).

The overall growth rate has increased by 22.8%. The machinery sectors such as Electrical machinery (15.97 trillion yen), Transportation equipment (11.77 trillion yen) and General machinery (7.51 trillion yen) have contributed largely. The growth rates for Agriculture, forestry and fishery (74.9%), Non-ferrous metals (53.0%) and Other industrial products (32.6%) have increased substantially.

Chart 6-17 Growth of Exports by Commodity classification

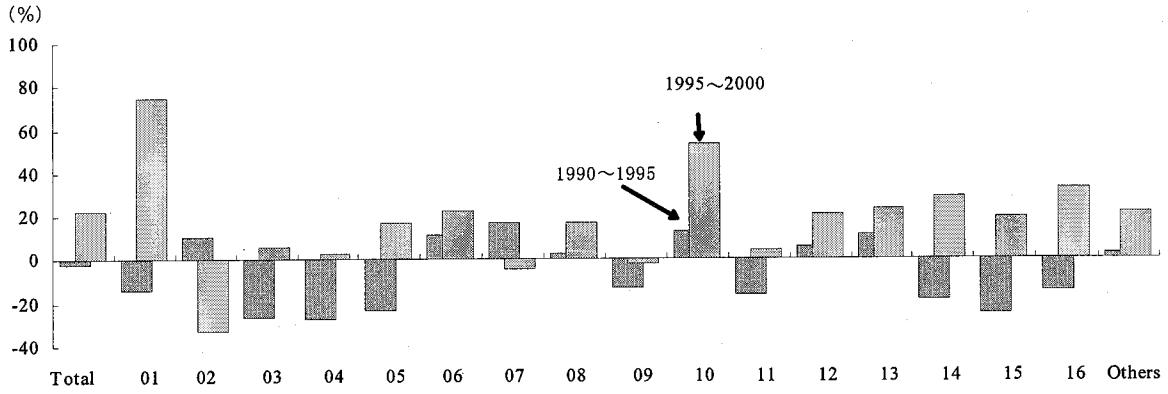


Table 6-11 Composition and Growth of Exports by Commodity classification

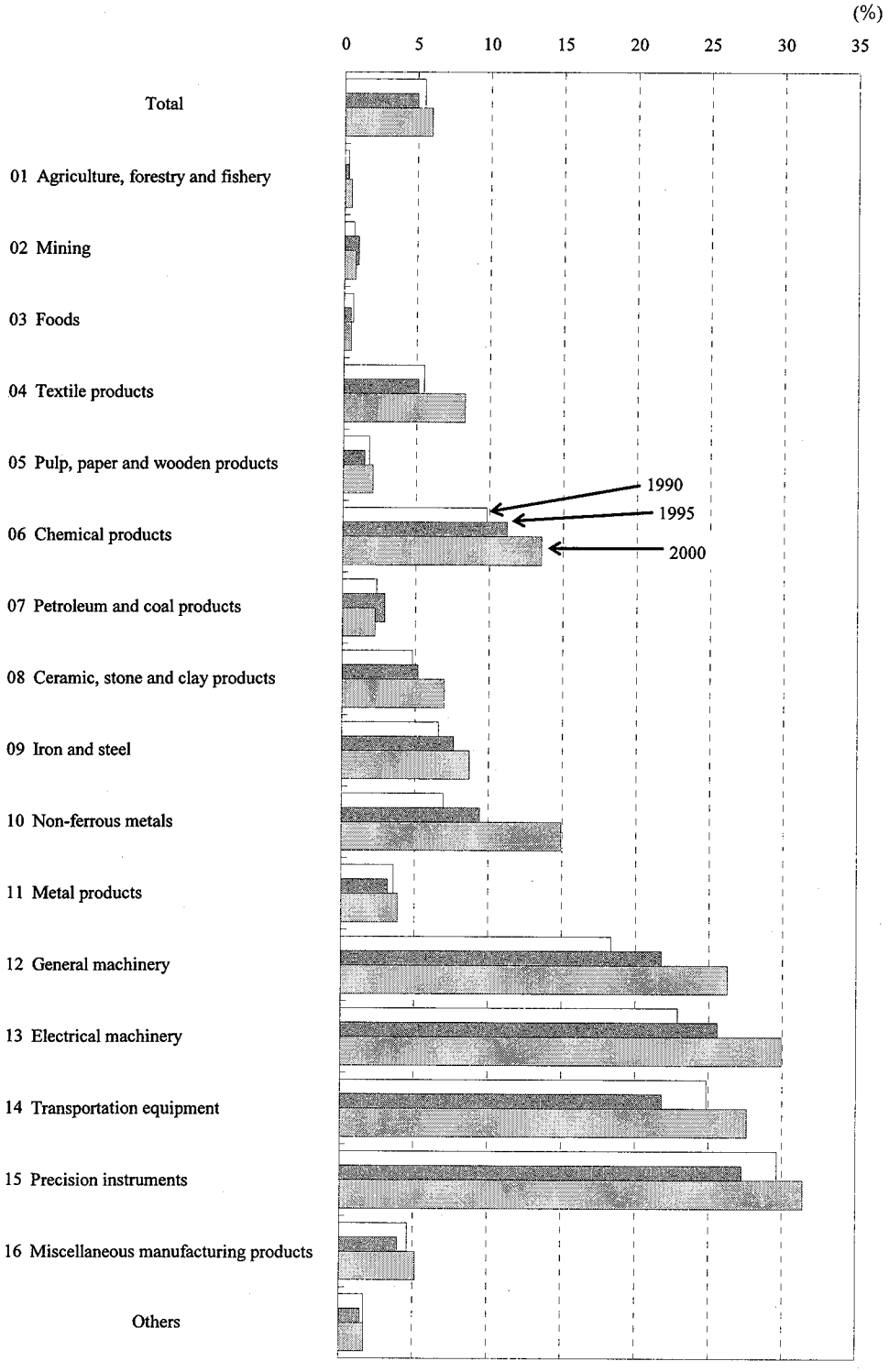
	Value (billion yen)			Distribution ratio (%)			Growth rate (%)	
	1990	1995	2000	1990	1995	2000	1990～1995	1995～2000
Total	47,881.8	46,809.1	57,486.7	100.0	100.0	100.0	△ 2.2	22.8
01 Agriculture, forestry and fishery	47.8	41.2	72.0	0.1	0.1	0.1	△ 13.9	74.9
02 Mining	14.8	16.4	10.9	0.0	0.0	0.0	10.4	△ 33.2
03 Foods	244.5	178.9	189.9	0.5	0.4	0.3	△ 26.8	6.1
04 Textile products	789.2	572.4	588.6	1.6	1.2	1.0	△ 27.5	2.8
05 Pulp, paper and wooden products	336.2	257.6	301.3	0.7	0.6	0.5	△ 23.4	17.0
06 Chemical products	2,587.8	2,877.4	3,528.2	5.4	6.1	6.1	11.2	22.6
07 Petroleum and coal products	259.0	303.3	289.4	0.5	0.6	0.5	17.1	△ 4.6
08 Ceramic, stone and clay products	489.1	501.8	585.0	1.0	1.1	1.0	2.6	16.6
09 Iron and steel	1,760.8	1,527.9	1,491.6	3.7	3.3	2.6	△ 13.2	△ 2.4
10 Non-ferrous metals	527.7	596.9	913.5	1.1	1.3	1.6	13.1	53.0
11 Metal products	598.3	499.9	519.9	1.2	1.1	0.9	△ 16.4	4.0
12 General machinery	5,842.6	6,199.9	7,508.1	12.2	13.2	13.1	6.1	21.1
13 Electrical machinery	11,626.9	12,923.9	15,971.8	24.3	27.6	27.8	11.2	23.6
14 Transportation equipment	11,231.8	9,135.9	11,772.3	23.5	19.5	20.5	△ 18.7	28.9
15 Precision instruments	1,390.8	1,039.1	1,236.7	2.9	2.2	2.2	△ 25.3	19.0
16 Miscellaneous manufacturing products	1,497.1	1,274.9	1,690.1	3.1	2.7	2.9	△ 14.8	32.6
Others	8,637.4	8,861.7	10,817.4	18.0	18.9	18.8	2.6	22.1

14. Commodity Export Ratios of Domestic Products

As categorized in the 32-sector classification table, the commodity export ratios of domestic production in 2000 shows the highest increase of 31.4% for the Precision instruments followed, in sequence, by 29.9% for Electrical machinery, 27.6% for Transportation equipment and 26.3% for General machinery.

As compared to 1995, Transportation equipment and General machinery rose by 5.8 points (from 21.8% to 27.6%) and 4.5 points (from 9.4% to 14.9%). All sectors which exclude Petroleum and coal products (fell by 0.7 points), Mining (fell by 0.2 points) and Foods (0.0%) rose respectively.

Chart 6-18 Commodity export ratios of Domestic products



(%)

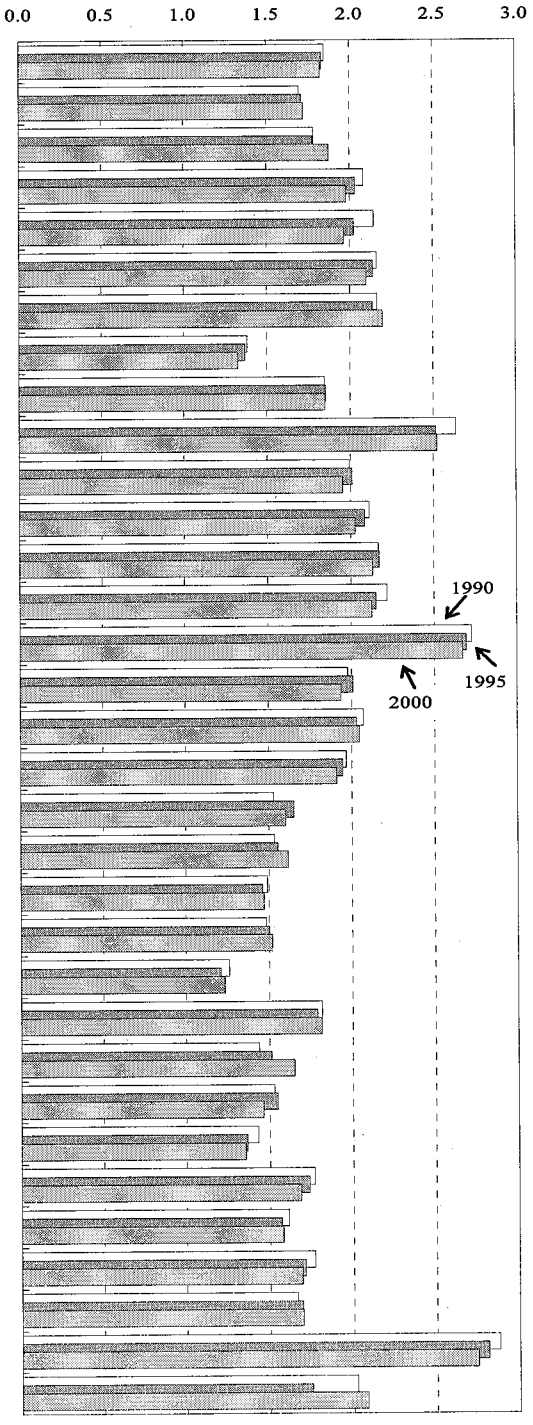
	1990	1995	2000
Total	5.5	5.0	6.0
01 Agriculture, forestry and fishery	0.3	0.3	0.5
02 Mining	0.7	1.0	0.8
03 Foods	0.6	0.5	0.5
04 Textile products	5.5	5.1	8.3
05 Pulp, paper and wooden products	1.8	1.4	2.0
06 Chemical products	9.8	11.2	13.5
07 Petroleum and coal products	2.3	2.9	2.2
08 Ceramic, stone and clay products	4.8	5.2	7.0
09 Iron and steel	6.6	7.6	8.7
10 Non-ferrous metals	6.9	9.4	14.9
11 Metal products	3.6	3.2	3.8
12 General machinery	18.4	21.8	26.3
13 Electrical machinery	22.9	25.6	29.9
14 Transportation equipment	24.9	21.8	27.6
15 Precision instruments	29.6	27.3	31.4
16 Miscellaneous manufacturing products	4.6	4.0	5.2
Others	1.7	1.5	1.7

15. Intensity of Products Impact

As inferred form 2000 inverse coefficient matrix in the 32 sectors classification table, a unit of increase in demand has produced 1.8240 times the impact on the average of all industry (expect for Office supplies and Activities not elsewhere classified). As compared by industries, those sectors which received higher impact than the average are Transportation equipment (2.6708 times), Iron and steel (2.5208 times), Chemical products (2.1987 time) and Construction (1.9088 times).

As compared to 1990 and 1995, the intensity of products impact tends to decrease (1990: 1.8484 →1995:1.8321→ 2000:1.8240). As compared to 1995 by industries, while the intensity of the products impact for 18 sectors such as Public administration, Precision instruments and Non-ferrous metals, etc. have decreased, 14 sectors such as Communication and broadcasting, Mining and Chemical products have increased.

Chart 6-19 Intensity of Products impact



		1990	1995	2000
	Total	1.8484	1.8321	1.8240
01	Agriculture, forestry and fishery	1.6968	1.7125	1.7223
02	Mining	1.7833	1.7793	1.8744
03	Foods	2.0846	2.0345	1.9794
04	Textile products	2.1449	2.0251	1.9668
05	Pulp, paper and wooden products	2.1602	2.1398	2.0988
06	Chemical products	2.1655	2.1367	2.1987
07	Petroleum and coal products	1.3820	1.3694	1.3251
08	Ceramic, stone and clay products	1.8465	1.8523	1.8492
09	Iron and steel	2.6346	2.5147	2.5208
10	Non-ferrous metals	1.9921	2.0105	1.9527
11	Metal products	2.1132	2.0828	2.0274
12	General machinery	2.1669	2.1700	2.1312
13	Electrical machinery	2.2176	2.1523	2.1255
14	Transportation equipment	2.7247	2.6924	2.6708
15	Precision instruments	1.9770	2.0084	1.9376
16	Miscellaneous manufacturing products	2.0710	2.0298	2.0461
17	Construction	1.9679	1.9463	1.9088
18	Electricity, gas and heat supply	1.5292	1.6500	1.6017
19	Water supply and waste management services	1.5337	1.5540	1.6152
20	Commerce	1.4894	1.4605	1.4714
21	Financial and insurance	1.4821	1.5024	1.5188
22	Real estate	1.2606	1.2104	1.2336
23	Transport	1.8173	1.7899	1.8142
24	Communication and broadcasting	1.4381	1.5123	1.6510
25	Public administration	1.5297	1.5484	1.4637
26	Education and research	1.4308	1.3639	1.3546
27	Medical service, health and social security and nursing care	1.7680	1.7381	1.6883
28	Other public services	1.6116	1.5690	1.5800
29	Business services	1.7689	1.7131	1.6929
30	Personal services	1.6639	1.6944	1.6973
31	Office supplies	2.8775	2.8135	2.7494
32	Activities not elsewhere classified	2.0220	1.7517	2.0834

16. Final Demand and Induced Domestic Production

The Domestic products as induced by the final demand may be traced back to the Domestic products inducement ratios of the respective sector, such as Consumption expenditure (private) which has taken up 45.9%, followed by Gross domestic fixed capital formation (24.9%) and Exports (12.2%). As compared to 1995, the Domestic products inducement distribution ratios attributable to Consumption expenditure of general government and Exports increased.

As seen from the sector of final demand perspective, in so far as the impact of the induced domestic products attributable to a unit of change in the final demand is concerned, Export exerts the greatest influence of 2.0316 times followed by Gross domestic fixed capital formation (1.8351 times), Consumption expenditure outside households (1.6348 times) and Consumption expenditure (private) (1.5633 times). As compared to 1995, the Domestic products inducement coefficients for all items have decreased substantially.

Chart 6-20 Domestic production inducement Distribution ratios by Individual final demand items

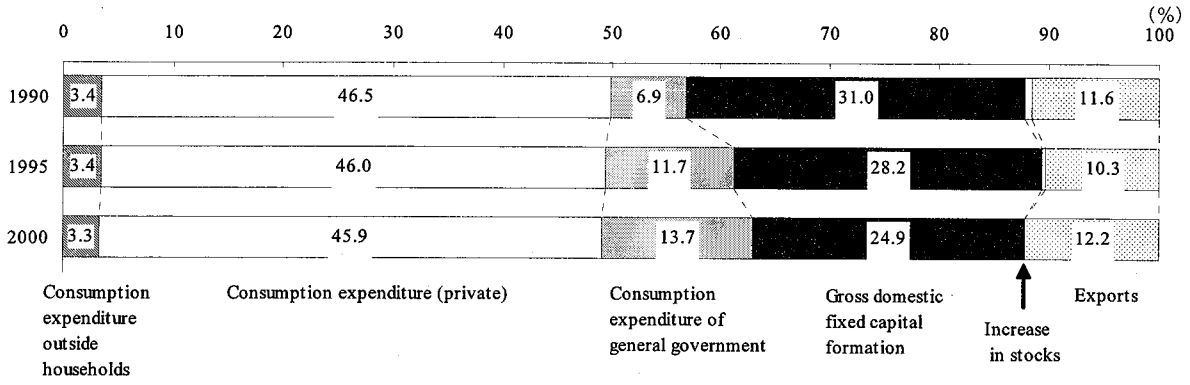


Chart 6-21 Domestic Production Inducement Coefficients by Individual final demand items

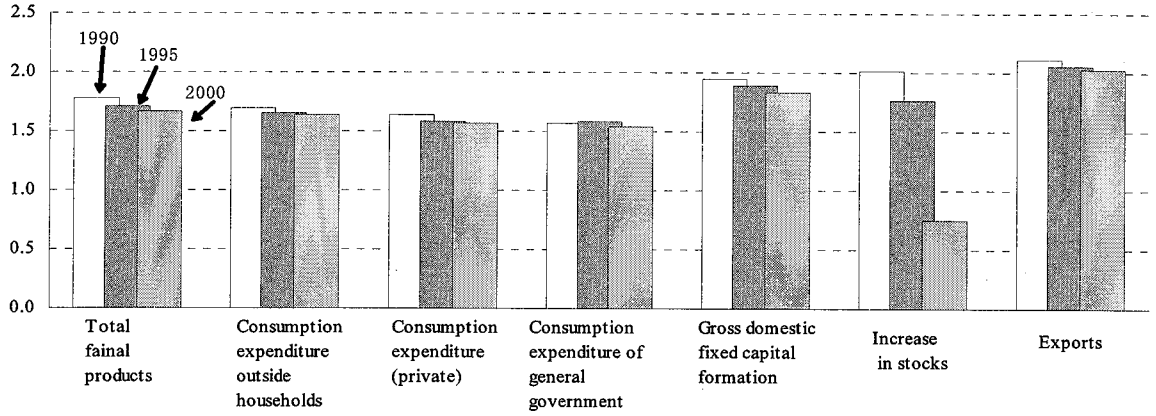


Table 6-12 Domestic Production induced, Domestic production inducement distribution ratios and Domestic production inducement coefficients by Individual final demand items

	Domestic Production Induced (billion yen)			Dpmestic Production Inducement Distribution Ratio (%)			Domestic Production Inducement Coefficients		
	1990	1995	2000	1990	1995	2000	1990	1995	2000
Total Final demand	872,212.2	937,100.6	958,886.5	100.0	100.0	100.0	1.7728	1.7070	1.6716
Consumption expenditure outside households	29,727.4	32,014.5	31,341.6	3.4	3.4	3.3	1.6940	1.6486	1.6348
Consumption expenditure (private)	405,434.5	430,832.9	440,127.9	46.5	46.0	45.9	1.6420	1.5851	1.5663
Consumption expenditure of general government	60,251.7	109,921.9	131,839.4	6.9	11.7	13.7	1.5731	1.5893	1.5383
Gross domestic fixed capital formation	270,178.9	264,564.5	238,582.6	31.0	28.2	24.9	1.9476	1.8935	1.8351
Increase in stocks	5,260.9	3,628.6	206.3	0.6	0.4	0.0	2.0079	1.7606	0.7455
Exports	101,358.8	96,138.3	116,788.7	11.6	10.3	12.2	2.1169	2.0538	2.0316

17. Final Demand and Induced Gross Value added

The gross value added of 519.48 trillion yen as induced by domestic products may be traced back to the respective composition such as Private consumption expenditure which accounts for 49.3%, followed by Gross domestic fixed capital formation (21.9%), Consumption expenditure of general government (15.6%) and exports (9.8%) respectively.

As compared to 1995, the inducement impact of Consumption expenditure of general government and Exports on the gross value added has increased.

As seen from the sector of final demand perspective except for Increase in stocks which Impact inducement is row, in so far as the impact of the induced gross value added attributable to a unit of change in the final demand is concerned, Consumption expenditure of general government exerts the greatest influence of 0.9464 times followed by Consumption expenditure (private) at 0.9118 times. Items related consumption display a high degree of impact. Besides, as compared to 1995, the gross value added inducement coefficients for all other items except for Increase in stocks have decreased substantially.

Chart 6-22 Gross value added inducement ratio by Individual Final demand items

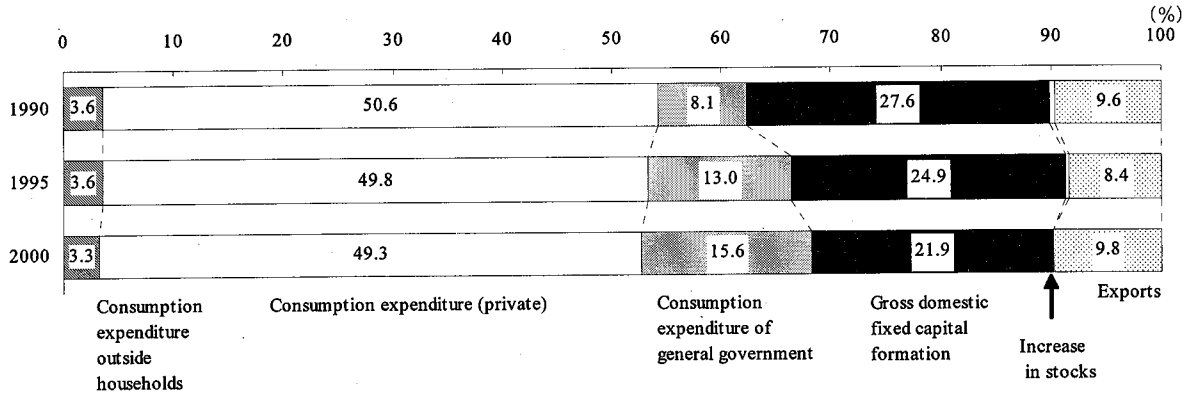


Chart 6-23 Gross value added Inducement coefficients by the Final demand items

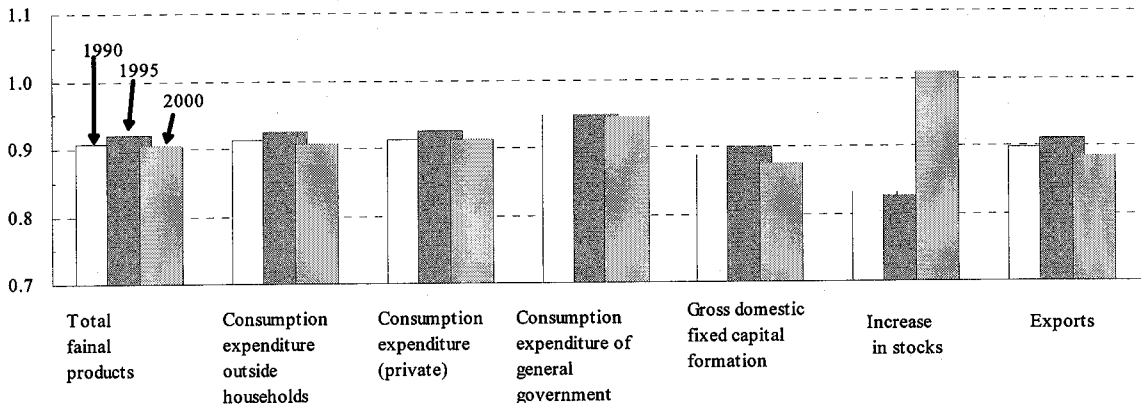


Table 6-13 Gross value added induced, Gross value added inducement distribution ratios and Gross value added inducement coefficients by Individual final demand items

	Gross Value Added Induced (billion yen)			Gross Value Added Inducement Distribution Ratio (%)			Gross Value Added Inducement Coefficient		
	1990	1995	2000	1990	1995	2000	1990	1995	2000
Total Final demand	446,157.0	505,246.0	519,481.9	100.0	100.0	100.0	0.9068	0.9204	0.9056
Consumption expenditure outside households	16,025.8	17,948.5	17,388.3	3.6	3.6	3.3	0.9132	0.9243	0.9070
Consumption expenditure (private)	225,569.1	251,587.1	256,194.7	50.6	49.8	49.3	0.9136	0.9256	0.9118
Consumption expenditure of general government	36,338.2	65,567.1	81,113.8	8.1	13.0	15.6	0.9487	0.9480	0.9464
Gross domestic fixed capital formation	123,121.9	125,811.4	113,609.0	27.6	24.9	21.9	0.8875	0.9004	0.8738
Increase in stocks	2,179.0	1,702.8	279.2	0.5	0.3	0.1	0.8316	0.8262	1.0092
Exports	42,923.1	42,628.9	50,896.9	9.6	8.4	9.8	0.8964	0.9107	0.8854

18. Final Demand and Induced Imports

The value of Imports of 54.16 trillion yen as induced by the final demand may be traced back to the Imports inducement distribution ratios of the respective sector, such as Consumption expenditure (private) which has taken up 45.8%, followed by Gross domestic fixed capital formation (30.3%) and Exports (12.2%). As compared to 1995, the Imports inducement distribution ratios attributable to Consumption expenditure of general government and Exports increased.

The impact of the Imports inducement coefficients attributable to a unit of change in the final demand may by traced back to such sectors as Gross domestic fixed capital formation (0.1262 times) and Consumption expenditure (private) (0.0882 times).

Chart 6-24 Import inducement distribution ratios by Individual final demand items

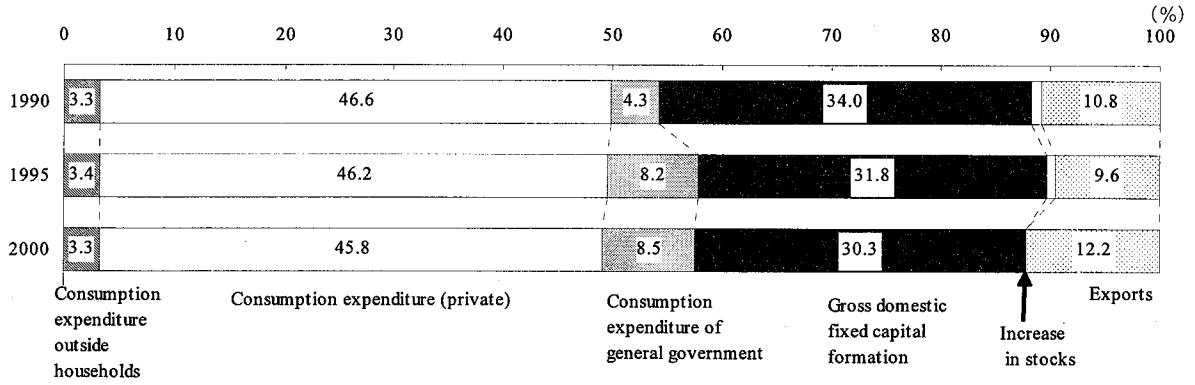


Chart 6-25 Imports inducement coefficients by Individual final demand items

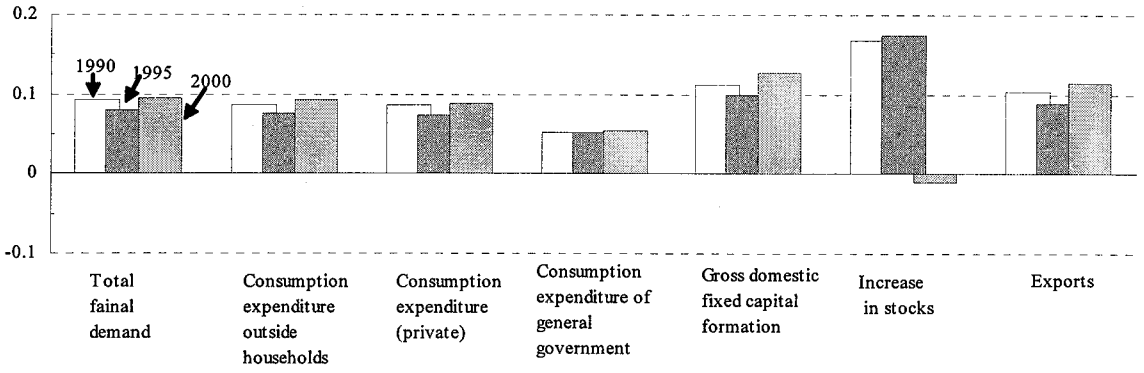


Table 6-14 Import induced, Import inducement distribution ratios and Imports inducement coefficients by Individual final demand items

	Imports Induced (billion yen)			Imports Inducement distribution Ratio (%)			Imports Inducement Coefficient		
	1990	1995	2000	1990	1995	2000	1990	1995	2000
Total Final demand	45,833.3	43,723.6	54,161.2	100.0	100.0	100.0	0.0932	0.0796	0.0944
Consumption expenditure outside households	1,522.5	1,470.9	1,782.9	3.3	3.4	3.3	0.0868	0.0757	0.0930
Consumption expenditure (private)	21,342.0	20,208.6	24,795.6	46.6	46.2	45.8	0.0864	0.0744	0.0882
Consumption expenditure of general government	1,963.9	3,595.5	4,592.4	4.3	8.2	8.5	0.0513	0.0520	0.0536
Gross domestic fixed capital formation	15,605.1	13,910.3	16,403.0	34.0	31.8	30.3	0.1125	0.0996	0.1262
Increase in stocks	441.2	358.1	△ 2.5	1.0	0.8	△ 0.0	0.1684	0.1738	△ 0.0092
Exports	4,958.6	4,180.2	6,589.9	10.8	9.6	12.2	0.1036	0.0893	0.1146