# I. Overview of Japan's Economic Structure in 2010

### 1. Japan's economic structure in 2010 (market valuation)

The following are the characteristics of Japan's economic structure in 2010 as viewed in the 2010 Simple Updated Input-Output Table (across 53 sectors), which was constructed based on 2010 price evaluations (or market valuations; hereafter, they are referred to as "nominal values"):

#### (1) Gross supply and gross demand

The 2010 gross supply value (which matches the 2010 gross demand value) amounted to 989.3 trillion yen, in which the domestic production, representing the supply side, accounted for 914.4 trillion yen, with its composition ratio being 92.4%, and imports accounted for 74.9 trillion yen, with its composition ratio being 7.6%.

On the demand side, the intermediate demand value accounted for 448.8 trillion yen of the gross demand value, with its composition ratio being 45.4%, domestic final demand accounted for 466.6 trillion yen, with its composition ratio being 47.2%, and exports accounted for 73.9 trillion yen, with its composition ratio being 7.5%.

#### 1) Comparisons with 2009

The composition ratio of domestic production in relation to gross supply value decreased while that of imports increased.

The composition ratios of both intermediate demand value and imports in relation to gross demand value increased, while that of domestic final demand decreased (Table 1-1).

#### 2) Comparisons with 2005

The composition ratio of domestic production in relation to gross supply value decreased while that of imports increased.

The composition ratios of both intermediate demand value and imports in relation to gross demand value increased while that of domestic final demand decreased (Table 1-1).

### (2) Domestic final demand

On the demand side, dividing domestic final demand into consumption and investment shows that consumption accounted for 370.4 trillion yen, with its composition ratio being 37.4%, while investment accounted for 96.2 trillion yen, with its composition ratio being 9.7%.

### 1) Comparisons with 2009

The composition ratios of both consumption and investment in relation to gross demand value decreased (Table 1-1).

### 2) Comparisons with 2005

The composition ratio of consumption in relation to gross demand value increased while that of investments decreased (Table 1-1).

### (3) Intermediate inputs and gross value added

Dividing domestic production into intermediate inputs and gross value added shows that the intermediate inputs accounted for 448.8 trillion yen, with their composition ratio being 49.1%, while gross value added accounted for 465.6 trillion yen, with its composition ratio being 50.9%.

### 1) Comparisons with 2009

The composition ratio of intermediate inputs in relation to domestic production increased while that of gross value added decreased (Table 1-1).

### 2) Comparisons with 2005

The composition ratio of intermediate inputs in relation to domestic production increased, while that of gross value added decreased (Table 1-1).

Table 1-1. Flow of goods and services as viewed in the 2010 simple Updated input-output table (market value evaluation table)

Major item	Value by c	alendar year (	(billion yen)	Growt	h rate 1 to 2005	Growth rate compared to	Degree of contribution to	Compo	osition ra	tio (%)	Differe composit	nce in ion ratio	Difference in composition ratio compared
(Market valuation)	2005	2009	2010	(%	5)	2009 (%)	compared to	2005	2000	2010	compared	1 to 2005	to 2009
()	Basic table	Extended table	Simple table	2009	2010	2010	2009	2005	2009	2010	2009	2010	2010
Domestic production	947,702	876,669	914,357	-7.5	-3.5	4.3	4.0	92.9	93.1	92.4	0.2	-0.5	-0.7
Intermediate input	456.100	410.040	440 776		1.6	7.1		(48.1)	(47.8)	(49.1)	-0.3	0.9	1.3
= Intermediate demand	456,180	418,942	448,776	-8.2	-1.0	/.1	3.2	44.7	44.5	45.4	-0.2	0.6	0.9
Gross value added	491,522	457,727	465,581	-6.9	-5.3	1.7	0.8	(51.9)	(52.2)	(50.9)	0.3	-0.9	-1.3
Total final demand	564,006	522,925	540,524	-7.3	-4.2	3.4	1.9	55.3	55.5	54.6	0.2	-0.6	-0.9
Domestic final demand	490,237	462,888	466,630	-5.6	-4.8	0.8	0.4	48.1	49.1	47.2	1.1	-0.9	-2.0
Consumption	374,366	369,460	370,447	-1.3	-1.0	0.3	0.1	36.7	39.2	37.4	2.5	0.7	-1.8
Consumption expenditure outside households	16,803	15,552	15,994	-7.4	-4.8	2.8	0.0	1.6	1.7	1.6	0.0	0.0	0.0
Consumption expenditure (private)	280,873	274,989	275,409	-2.1	-1.9	0.2	0.0	27.5	29.2	27.8	1.7	0.3	-1.4
Consumption expenditure of general government	76,690	78,919	79,044	2.9	3.1	0.2	0.0	7.5	8.4	8.0	0.9	0.5	-0.4
Investment	115,871	93,427	96,183	-19.4	-17.0	2.9	0.3	11.4	9.9	9.7	-1.4	-1.6	-0.2
Capital formation (public)	23,818	21,560	21,911	-9.5	-8.0	1.6	0.0	2.3	2.3	2.2	0.0	-0.1	-0.1
Capital formation (private)	89,984	76,628	75,869	-14.8	-15.7	-1.0	-0.1	8.8	8.1	7.7	-0.7	-1.2	-0.5
Increase in stocks	2,069	-4,761	-1,597	-3.3	-1.8	0.7	0.3	0.2	- 0.5	- 0.2	-0.7	-0.4	0.3
Exports	73,769	60,038	73,894	-18.6	0.2	23.1	1.5	7.2	6.4	7.5	-0.9	0.2	1.1
Imports	72,483	65,198	74,943	-10.1	3.4	14.9	1.0	7.1	6.9	7.6	-0.2	0.5	0.7
Gross supply value = Gross demand value	1,020,185	941,867	989,300	-7.7	-3.0	5.0	5.0	100.0	100.0	100.0	-	_	-

\* Numbers in parentheses are composition ratios in relation to domestic production.

- Notes: 1. The 2005 basic table, which is used as a reference of comparison, is a recomposed 2005 Input-Output Table with a revision made to no longer categorize the provisional sector dealing with private transportation (e.g., passengers and freight) and to exclude the natural deterioration of infrastructure.
  - 2. Except for the purpose of conducting a time-series comparison, it is preferable to use Updated input-output tables, unless the latest table is available. Because the 2005 standard revision has started to come into effect following the 2009 Simple Table and the 2008 Updated Table, and the 2007 or prior tables were constructed based on the 2000 standard, the newer and older tables are not consistent with each other (for more details, see "Reference 2: overview of 2005 standard revision").

3. The terms "exports" and "imports" used in the Input-Output Table include customs duties, duty on imported goods, and adjustment categories in addition to ordinary trade, non-ordinary trade, and direct purchase.

4. Due to the rounding of figures, there are cases in which the sum of breakdowns does not match the total (the same applies to all the tables below).

### 2. Japan's economic structure in 2010 (2005 fixed price evaluation)

The following are trends of Japan's economic structure in 2010 (based on real value) as viewed in the 2010 Simple Updated Input-Output Table (across 53 sectors), which was based on 2005 fixed prices, (hereafter, referred to as "real value") replacing the 2010 nominal value using a deflator (all simple Updated input-output tables below are based on 2005 fixed prices and represent 53 sectors):

### (1) Structure of gross supply and gross demand

The 2010 gross supply value (which matches the 2010 gross demand value) amounted to 984.4 trillion yen, in which the domestic production, representing the supply side, accounted for 910.6 trillion yen, with its composition ratio being 92.5%, and imports accounted for 73.8 trillion yen, with their composition ratio being 7.5%.

On the demand side, the intermediate demand accounted for 433.3 trillion yen of the gross supply value, with its composition ratio being 44.0%, domestic final demand accounted for 470.5 trillion yen, with its composition ratio being 47.8%, and exports accounted for 80.6 trillion yen, with their composition ratio being 8.2%. (Table 2-1)

#### 1) Comparisons with 2009

The 2010 gross supply value (which matches the 2010 gross demand value) increased by 5.4% from 2009.

In the breakdown of the 2010 gross supply value, both domestic production (5.0% increase from 2009 and 4.6% increase in degree of contribution to growth rate) and imports (11.4% increase from 2009 and 0.8% increase in degree of contribution to growth rate) increased; in terms of composition ratio, domestic production decreased (by 0.4%) while imports increased (by 0.4%).

In the breakdown of the 2010 gross demand value, the intermediate demand value (6.4% increase from 2009 and 2.8% increase in degree of contribution to growth rate), domestic final demand (1.9% increase from 2009 and 0.9% increase in degree of contribution to growth rate), and exports (24.3% increase from 2009 and 1.7% increase in degree of contribution to growth rate) all increased; in terms of composition ratio, intermediate demand value and imports increased (by 0.4 and 1.2 points, respectively) while domestic final demand decreased (by 1.7 points) (Table 2-1).

### 2) Comparisons with 2005

The 2010 gross supply value (which matches the 2010 gross demand value) decreased by 3.5% from 2005.

In the breakdown of the 2010 gross supply value, domestic production decreased (by 3.9%) while imports increased (by 1.9%); in terms of composition ratio, domestic production decreased (by 0.4 points) while imports increased (by 0.4 points).

In the breakdown of the 2010 gross demand, the intermediate demand and domestic final demand decreased (by 5.0 and 4.0%, respectively) while imports increased (by 9.3%). In terms of composition ratio, the intermediate demand and domestic final demand decreased (by 0.7 and 0.3 points, respectively) while imports increased (by 1.0 point) (Table 2-1).

Major item	Value by c	calendar year	(billion yen)	Growt	h rate 1 to 2005	Growth rate compared to	Degree of contribution to	Compo	osition rat	tio (%)	Differe composi	nce in tion ratio	Difference in composition ratio compared
(Fixed price evaluation)	2005	2009	2010	(%	<b>b</b> )	2009 (%)	growth rate compared to	2005	2000	2010	compared	d to 2005	to 2009
(Theo price evaluation)	Basic table	Extended table	Simple table	2009	2010	2010	2009	2005	2009	2010	2009	2010	2010
Domestic production	947,702	867,588	910,585	-8.5	-3.9	5.0	4.6	92.9	92.9	92.5	0.0	-0.4	-0.4
Intermediate input	456 190	407.147	422 201	10.7	5.0	6.1	20	(48.1)	(46.9)	(47.6)	-1.2	-0.6	0.7
= Intermediate demand	430,180	407,147	455,501	-10.7	-5.0	0.4	2.0	44.7	43.6	44.0	-1.1	-0.7	0.4
Gross value added	491,522	460,441	477,283	-6.3	-2.9	3.7	1.8	(51.9)	(53.1)	(52.4)	1.2	0.6	-0.7
Total final demand	564,006	526,721	551,118	-6.6	-2.3	4.6	2.6	55.3	56.4	56.0	1.1	0.7	-0.4
Domestic final demand	490,237	461,877	470,513	-5.8	-4.0	1.9	0.9	48.1	49.5	47.8	1.4	-0.3	-1.7
Consumption	374,366	368,884	374,501	-1.5	0.0	1.5	0.6	36.7	39.5	38.0	2.8	1.3	-1.5
Consumption expenditure outside households	16,803	15,813	16,277	-5.9	-3.1	2.9	0.0	1.6	1.7	1.7	0.0	0.0	0.0
Consumption expenditure (private)	280,873	276,485	281,707	-1.6	0.3	1.9	0.6	27.5	29.6	28.6	2.1	1.1	-1.0
Consumption expenditure of general government	76,690	76,586	76,517	-0.1	-0.2	-0.1	0.0	7.5	8.2	7.8	0.7	0.3	-0.4
Investment	115,871	92,992	96,012	-19.7	-17.1	3.2	0.3	11.4	10.0	9.8	-1.4	-1.6	-0.2
Capital formation (public)	23,818	20,775	21,146	-12.8	-11.2	1.8	0.0	2.3	2.2	2.1	-0.1	-0.2	-0.1
Capital formation (private)	89,984	76,688	76,327	-14.8	-15.2	-0.5	0.0	8.8	8.2	7.8	-0.6	-1.1	-0.5
Increase in stocks	2,069	-4,471	-1,460	-3.2	-1.7	0.7	0.3	0.2	- 0.5	- 0.1	-0.7	-0.4	0.3
Exports	73,769	64,845	80,604	-12.1	9.3	24.3	1.7	7.2	6.9	8.2	-0.3	1.0	1.2
Imports	72,483	66,281	73,835	-8.6	1.9	11.4	0.8	7.1 ו	7.1	7.5	0.0	0.4	0.4
Gross supply value = Gross demand value	1,020,185	933,868	984,419	-8.5	-3.5	5.4	5.4	100.0	100.0	100.0	-	_	-

 Table 2-1. Flow of goods and services as viewed in the 2010 simple Updated input-output table

 (fixed price evaluation table)

\* The figures in parentheses are composition ratios in relation to domestic production.

#### (2) Structure of domestic production

The 2010 domestic production amounted to 910.6 trillion yen, in which goods accounted for 360.7 trillion yen (39.6% in composition ratio) and services accounted for 549.9 trillion yen (60.4% in composition ratio) (Table 2-2).

#### 1) Comparisons with 2009

The 2010 domestic production increased by 5.0% from 2009.

Dividing the domestic production into goods and services reveals that goods increased by 12.6% from 2009 (4.7% increase in degree of contribution to growth rate) and services also increased by 0.5% (0.3% increase in degree of contribution to growth rate). Among goods sectors, "primary products" increased by 0.1% (0.0% in degree of contribution to growth rate) and "manufactured products" increased by 15.8% (4.7% increase in degree of contribution to growth rate) while construction decreased by 0.2% (0.0% decrease in degree of contribution to growth rate). In the breakdown of "manufactured products," the "raw material products" increased by 14.7% (1.5% increase in degree of contribution to growth rate), and "other products" increased by 24.2% (3.0% increase in degree of contribution to growth rate).

With regard to service sectors, while "finance and real estate" decreased by 4.5% (0.6% decrease in degree of contribution to growth rate), "commerce" increased by 4.0% (0.4% increase in degree of contribution to growth rate), "transport / information and communications" increased by 1.4% (0.1% increase in degree of contribution to growth rate), "public services" increased by 1.5% (0.2% increase in degree of contribution to growth rate), and "other services" increased by 0.4% (0.1% increase in degree of contribution to growth rate).

In terms of composition ratio, goods increased (by 2.7 points) while services decreased (by 2.7 points). Among goods sectors, "primary products" and "construction" decreased (by 0.1 and 0.3 points, respectively) while "manufactured products" increased (by 3.1 points). The breakdown of

"manufactured products" revealed that the "raw material products" and the "processed and assembled products" increased (by 0.9 and 2.2 points, respectively) while other products decreased (by 0.1 points).

In service sectors, "commerce" (0.1 point decrease), "finance and real estate" (1.1 point decrease), "transport / information and communications" (0.3 point decrease), "public services" (0.5 point decrease), and "other services" (0.6 point decrease) all decreased (Table 2-2).

	Domestic p	production (b	illion yen)	G	rowth rate (%	ó)	Degree of contribution to growth rate compared to	Comp	osition ratio	(%)	Difference in composition ratio compared to 2005	Difference in composition ratio compared to 2009
	2005	2009	2010	2009 vs. 2005	2010 vs. 2005	2010 vs. 2009	2009	2005	2009	2010	2010	2010
Total	947,702	867,588	910,585	-8.5	-3.9	5.0	5.0	100.0	100.0	100.0	-	-
IGoods	382,952	320,357	360,721	-16.3	-5.8	12.6	4.7	40.4	36.9	39.6	-0.8	2.7
Primary products	14,163	13,545	13,555	-4.4	-4.3	0.1	0.0	1.5	1.6	1.5	0.0	-0.1
Manufacturing products	305,552	255,465	295,900	-16.4	-3.2	15.8	4.7	32.2	29.4	32.5	0.3	3.1
Raw material products	109,209	87,014	99,769	-20.3	-8.6	14.7	1.5	11.5	10.0	11.0	-0.6	0.9
Processed and assembled products	130,173	106,276	131,972	-18.4	1.4	24.2	3.0	13.7	12.2	14.5	0.8	2.2
Other products	66,170	62,175	64,159	-6.0	-3.0	3.2	0.2	7.0	7.2	7.0	0.1	-0.1
Construction	63,237	51,347	51,265	-18.8	-18.9	-0.2	0.0	6.7	5.9	5.6	-1.0	-0.3
Services	564,750	547,231	549,864	-3.1	-2.6	0.5	0.3	59.6	63.1	60.4	0.8	-2.7
Commerce	106,275	90,406	93,998	-14.9	-11.6	4.0	0.4	11.2	10.4	10.3	-0.9	-0.1
Finance and real estate	107,793	106,018	101,228	-1.6	-6.1	-4.5	-0.6	11.4	12.2	11.1	-0.3	-1.1
Transport and information and communications	86,716	90,523	91,822	4.4	5.9	1.4	0.1	9.2	10.4	10.1	0.9	-0.3
Public services	142,710	141,975	144,037	-0.5	0.9	1.5	0.2	15.1	16.4	15.8	0.8	-0.5
Other services	121,257	118,308	118,778	-2.4	-2.0	0.4	0.1	12.8	13.6	13.0	0.2	-0.6

Table 2-2. Domestic production

Note 1: 53 sectors of goods and services (the same applies to all the tables below).

1) Goods: Primary products: agriculture, forestry and fishery; mining; coal mining, crude petroleum and natural gas

Raw material products: textile products; timber, wooden products and furniture; other pulp, paper and processed paper products; chemical basic products; synthetic resins; petroleum and coal products plastic products; ceramic, stone and clay products; iron and steel; non-ferrous metals; metal products; reuse and recycling

Processed and assembled products: general machinery; machinery for office and service industry; electrical devices and parts; other electrical machinery; household electric appliances; household electronics equipment; electronic computing equipment and its accessories; electronic components; passenger motor cars; other cars; motor vehicle parts and accessories; other transport equipment; precision instruments Other products: beverages and foods; wearing apparel and other textile products; printing, plate making and book binding; final chemical products; medicaments; miscellaneous manufacturing products

Construction: construction

#### 2) Services: Commerce: commerce

Finance and real estate: finance and insurance; real estate; house rent (imputed house rent)

Transport and information and communications: transport and other information and communications; information services

Public services: electricity, gas and heat supply; water supply and waste disposal business; public administration; education and research; medical service, health, social security and nursing care

Other services: advertising services; goods rental and leasing services; other business services; personal services; others

Note 2: Years 2005, 2009, and 2010 refer to the 2005 input-output table, 2009 Updated input-output table, and 2010 simple Updated input-output table, respectively (the same applies to all the tables below).

Among goods sectors, growth rates decreased in a few sectors, such as "machinery for office and service industry" (e.g., other office machines and amusement machinery), "apparel and other textile products" (e.g., knitted apparel and bedding), and "reuse and recycling." However, growth rates increased in most sectors, including "iron and steel products" (e.g., special steel pipes and tubes, and steel cables), "other vehicles" (e.g., trucks and buses), and "general machinery" (e.g., industrial robots, and vacuum equipment and their components).

In the service sectors, growth rates increased in sectors such as "electricity," "other information and communications" (e.g., Internet based services and cable broadcasting), "commerce" (e.g., wholesale and retail). On the other hand, growth rates decreased in other sectors, including "finance and insurance" (e.g., private financial services (imputed interest and handling fees)), "goods rental and leasing services" (industrial machinery and appliances (e.g., industrial equipment and machinery rental and leasing (except construction machinery), rental and leasing, and construction machine rental and leasing)), and "house rent (imputed house rent)" (Figure 2-1).

Regarding the degree of contribution to growth rates, goods sectors, such as "iron and steel" (e.g., crude steel (converters) and special hot-rolled steel), "motor vehicle parts and accessories" (e.g., motor vehicle parts, and internal combustion engines for motor vehicles and their parts), and "general machinery" (e.g., metal machine tools, semiconductor production equipment), contributed to increased growth rates. Other sectors, including "machinery for office and service industry" (e.g., amusement machinery and other office machines), "wearing apparel and other textile products" (e.g., woven fabric apparel and knitted apparel), and "construction" (e.g., public construction of roads, rivers, drainage, and others), contributed to decreased growth rates.

Among service sectors, "commerce" (e.g., wholesale and retail), "other information communications" (e.g., mobile telecommunication and internet based services), and "electricity" contributed to increased growth rates. "Finance and insurance" (e.g., private financial service (imputed interest and commission)), "house rent (imputed house rent)," and "education and research" (e.g., intra-enterprise research and development, and other educational and training institutions (profit-making)) contributed to decreased growth rates (Figure 2-2).



Figure. 2-1. Growth rates of domestic production by sector (in comparison with 2009)



Figure 2-2. Degree of contribution to growth rates of domestic production by sector (in comparison with 2009)

2) Comparisons with 2005

The 2010 domestic production decreased by 3.9% from 2005.

Categorizing domestic production into goods and services reveals that the value of goods and services decreased by 5.8% and 2.6%, respectively, from 2005.

Among goods sectors, the value of "primary products" (4.3% decrease), "manufactured products" (3.2% decrease), and "construction" (18.9% decrease) all decreased from 2005. The breakdown of the "manufactured products," revealed that the value of "processed and assembled products" increased (by 1.4%) while that of both "raw material products" and "other products" decreased (by 8.6 and 3.0%, respectively).

With regard to services, the value of "commerce" (11.6% decrease), "finance / real estate" (6.1% decrease), and "other services" (2.0% decrease) decreased from 2005, while that of "transport / information and communications" and "public services" increased (by 5.9 and 0.9%, respectively).

The 2010 composition ratio of goods decreased (by 0.8 points) from 2005 while that of services increased (by 0.8 points).

Among goods sectors, the composition ratio of "manufactured products" increased (by 0.3 points from 2005) while that of "primary products" and "construction" decreased (by 0.0 and 1.0 points, respectively). A breakdown of "manufactured products" reveals that "raw material products" decreased (by 0.6 points) while "processed and assembled products" and "other products" increased (by 0.8 and 0.1 points, respectively).

Among service sectors, the composition ratios of "commerce" and "finance/real estate" decreased (by 0.9 and 0.3 points, respectively, from 2005) while that of "transport / information and

communications" (0.9 point increase), "public service" (0.8 point increase), and "other services" (0.2 point increase) increased (Table 2-2).

Among goods sectors, growth rates increased in a few sectors, such as "household electronics equipment" (e.g., radio and television sets, and other communication equipment), "electronic computing equipment and accessories" (e.g., personal computers and accessories for electronic computing equipment), and "medicaments," while growth rates decreased in most sectors, including "apparel and other textile products" (e.g., bedding and other ready-made textile products), "mining" (e.g., iron ores and crushed stones), and "timber, wooden products and furniture" (e.g., metallic furniture and fixture, and wooden furniture and fixture) (Figure 2-3).



Figure 2-3. Growth rates of domestic production values (goods) by sector (in comparison with 2005)

In service sectors, growth rates increased in "other information and communications" (e.g., internet based services and cable broadcasting), "other business services" (e.g., worker dispatching services and building maintenance services), and "electricity" (e.g., electricity and private power generation). However, growth rates decreased in such sectors as "goods rental and leasing services" (e.g., industrial equipment and machinery rental and leasing (except construction machinery), and car rental and leasing), "finance and insurance" (e.g., private financial service (commission), and public financial service (commission)), "gas and heat supply" (e.g., gas supply, and steam and hot water supply) (Figure 2-4).



Figure 2-4. Growth rates of domestic production (services) by sector (in comparison with 2005)

In terms of degree of contribution to growth rates by goods sector, a few sectors, such as "electronic components" (e.g., integrated circuits and liquid crystal elements), "household electronics equipment" (e.g., radio and television sets, and video recording and playback equipment), and "medicaments," contributed to increased growth rates. However, most sectors, including "construction" (e.g., residential construction non-wooden, and non-residential construction [non-wooden]), "general machinery" (e.g., metal molds and semiconductor production equipment), "timber, wooden products and furniture" (e.g., wooden furniture and fixtures, and metallic furniture and fixtures), contributed to decreased growth rates (Figure 2-5).



Figure 2-5. Degree of contribution to growth rates of domestic production (goods) by sector (in comparison with 2005)

In the service sectors, "other information and communications" (e.g., mobile telecommunication and internet based services), "other business services" (e.g., worker dispatching services and building maintenance services), "medical services, health, social security, and nursing care" (e.g., medical services [medical corporations, etc.], and medical services [non-profit foundations, etc.]) contributed to increased growth rates. "Commerce" (wholesale), "finance and insurance" (e.g., private financial services [imputed interest and commission]), and "personal services" (e.g., accommodation, and eating and drinking places for pleasure") contributed to reduced growth rates (Figure 2-6).



Figure 2-6. Degree of contribution to growth rates of domestic production (services) by sector (in comparison with 2005)

### (3) Input structure

1) Amounts and ratios of intermediate inputs

The 2010 intermediate inputs amounted to 433.3 trillion yen across all industries, and its intermediate input ratio (= intermediate input value / domestic production value) was 47.6%.

Breaking down industries into goods and service industries reveals that intermediate inputs exerted by goods industries accounted for 230.0 trillion yen, and those by service industries accounted for 203.3 trillion yen, and that the ratio of intermediate inputs by goods industries accounted for 63.8% while that by the service industries accounted for 37.0% (Table 2-3).

In addition, intermediate inputs of goods accounted for 24.4% while those of services accounted for 23.2% in relation to entire industries (47.6%). Dividing industries into those related to goods and services reveals that the goods industries allocated 45.5 and 18.3% of their intermediate inputs (63.8% total) for goods and services, respectively, while the service industries allocated 10.6 and 26.4% of their intermediate inputs (37.0% total) for goods and services, respectively (Table 2-4).

Furthermore, of the 23.2% of the intermediate input ratio being allocated for services, 4.4% was allocated for "other business services," 3.2% was allocated for "commerce," and 2.7% was allocated for "finance and insurance" in the order of high to low rates (Figure 2-7).

### i) Comparisons with 2009

The 2010 intermediate input across all industries increased by 6.4% from 2009 (Table 2-1) and the intermediate input ratio increased by 0.7 points year-on-year.

Dividing industries into goods and service industries, the intermediate input by the goods industries decreased by 1.6 points from 2009 while that by service industries increased by 0.9 points.

Among goods sectors, "primary products" increased (by 1.1 points from 2009) while "manufactured products" (2.6 point decrease) and "construction" (0.0 point decrease) decreased.

Among service sectors, "commerce" (0.0 point decrease from 2009) and "public services" (0.1 point decrease) decreased, while "finance and real estate" (0.5 point increase), "transport / information and communications" (2.7 points increase), and "other services" (1.0 point increase) increased (Table 2-3).

		Total (All	industries	)											
			Goods in	dustries						Service inc	lustries				
				Primary products	M anufacti	Raw material	Processed and assembled products	Other products	Construction		Commerce	Finance and real estate	Transport and information and communications	Public services	Other services
Domestic production (billion yen)	2005 2009 2010	947,702 867,588 910,585	382,952 320,357 360,721	14,163 13,545 13,555	305,552 255,465 295,900	109,209 87,014 99,769	130,173 106,276 131,972	66,170 62,175 64,159	63,237 51,347 51,265	564,750 547,231 549,864	106,275 90,406 93,998	107,793 106,018 101,228	86,716 90,523 91,822	142,710 141,975 144,037	121,257 118,308 118,778
Intermediate input (billion yen)	2005 2009 2010	456,180 407,147 433,301	253,768 209,487 229,979	6,778 6,185 6,340	212,946 176,495 196,876	76,472 62,944 66,504	95,975 75,965 91,736	40,499 37,587 38,636	34,044 26,807 26,763	202,411 197,660 203,322	33,463 29,755 30,909	24,722 23,898 23,352	35,326 37,572 40,629	54,960 55,990 56,601	53,940 50,444 51,832
Gross value added (billion yen)	2005 2009 2010	491,522 460,441 477,283	129,184 110,870 130,742	7,385 7,360 7,216	92,606 78,969 99,025	32,737 24,071 33,265	34,198 30,311 40,235	25,671 24,588 25,524	29,193 24,541 24,501	362,339 349,571 346,541	72,811 60,651 63,089	83,070 82,120 77,877	51,390 52,950 51,194	87,750 85,985 87,436	67,317 67,864 66,946
Ratio of	2005 2009 Difference from 2005	48.1 46.9 -1.2	66.3 65.4 -0.9	47.9 45.7 -2.2	69.7 69.1 -0.6	70.0 72.3 2.3	73.7 71.5 -2.3	61.2 60.5 -0.7	53.8 52.2 -1.6	35.8 36.1 0.3	31.5 32.9 1.4	22.9 22.5 -0.4	40.7 41.5 0.8	38.5 39.4 0.9	44.5 42.6 -1.8
(%)	2010 Difference from 2005 Difference from 2009	$\frac{47.6}{-0.6}$	<u>63.8</u> <u>-2.5</u> -1.6		<u>-66.5</u> - <u>3.2</u> -2.6	<u>66.7</u> -3.4 -5.7	$-\frac{69.5}{-4.2}$	<u>-60.2</u> - <u>1.0</u> -0.2	<u>52.2</u> - <u>1.6</u> 0.0	$\frac{37.0}{1.1}$	$-\frac{32.9}{-\frac{1.4}{0.0}}$	$\frac{23.1}{0.1}$	$\frac{44.2}{3.5}$	<u>39.3</u> <u>0.8</u> -0.1	<u>43.6</u> <u>-0.8</u> <u>1.0</u>
Gross value added	2005 2009 Difference from 2005	51.9 -53.1 1.2	33.7 <u>34.6</u> 0.9	52.1 54.3 2.2	30.3 30.9 0.6	30.0 27.7 -2.3	26.3 - 28.5 2.3	38.8 39.5 0.7	46.2 47.8 1.6	64.2 63.9 -0.3	68.5 67.1 -1.4	77.1 77.5 0.4	59.3 58.5 -0.8	61.5 60.6 -0.9	55.5 57.4 1.8
(%)	2010 Difference from 2005 Difference from 2009	<u>52.4</u> 0.6 -0.7	36.2 2.5 1.6	53.2 1.1 -1.1	33.5 3.2 2.6	33.3 3.4 5.7		<u>39.8</u> <u>1.0</u> 0.2	47.8 1.6 0.0	63.0 -1.1 -0.9	67.1 -1.4 0.0		55.8 -3.5 -2.7	<u>-0.8</u> 0.1	<u>56.4</u> 0.8 -1.0

Table 2-3. Input structure

Notes: 1. Intermediate input ratio = intermediate input value / domestic production value; rate of gross value added = gross value added / domestic production value

2. Goods and service sectors are listed in the upper row.

Across all industries, the ratio of intermediate inputs being allocated for goods increased by 1.7 points from 2009 while that for services decreased by 1.1 points.

Dividing industries into goods and service industries reveals that the ratio of intermediate inputs by goods industries allocated for goods increased (by 0.8 points from 2009) while that allocated for services decreased (by 2.5 points), and that the ratio of intermediate inputs by service industries allocated for both goods and services increased (by 0.8 and 0.1 points, respectively) (Table 2-4).

			Total (All	industries	)											
				Goods in	dustries						Service inc	lustries				
					Drimorry	Manufact	uring produ	cts					Finance	Transport and	Dublia	Other
					products		Raw material products	Processed and assembled products	Other products	Construction		Commerce	and real estate	information and communications	services	services
		Total	48.1	66.3	47.9	69.7	70.0	73.7	61.2	53.8	35.8	31.5	22.9	40.7	38.5	44.5
	2005	Goods	24.7	46.2	32.1	50.1	53.0	53.5	38.7	30.3	10.1	4.6	4.3	8.2	15.6	14.8
		Services	23.5	20.1	15.8	19.6	17.0	20.2	22.5	23.5	25.8	26.8	18.7	32.5	22.9	29.6
		Total	46.9	65.4	45.7	69.1	72.3	71.5	60.5	52.2	36.1	32.9	22.5	41.5	39.4	42.6
()	2009	Goods	22.7	44.7	30.8	48.7	53.6	51.2	37.5	28.2	9.9	4.5	4.1	7.3	15.8	14.0
t (%		Services	24.2	20.7	14.9	20.4	18.7	20.3	22.9	24.1	26.3	28.4	18.5	34.2	23.7	28.6
ndu	Difference	Total	-1.2	-0.9	-2.2	-0.6	2.3	-2.3	-0.7	-1.6	0.3	1.4	-0.4	0.8	0.9	-1.8
ite i	from 2005	Goods	-1.9	-1.5	-1.3	-1.4	0.7	-2.3	-1.1	-2.2	-0.2	-0.1	-0.2	-0.9	0.2	-0.8
sdia	110111 2005	Services	0.7	0.6	-0.9	0.8	1.7	0.0	0.4	0.5	0.5	1.5	-0.2	1.7	0.7	-1.0
me		Total	47.6	63.8	46.8	66.5	66.7	69.5	60.2	52.2	37.0	32.9	23.1	44.2	39.3	43.6
inte	2010	Goods	24.4	45.5	32.2	48.8	51.7	51.8	38.3	29.6	10.6	4.9	4.6	7.6	16.7	15.3
of		Services	23.2	18.3	14.6	17.7	15.0	17.7	21.9	22.6	26.4	28.0	18.5	36.7	22.6	28.3
atio	Difference	Total	-0.6	-2.5	-1.1	-3.2	-3.4	-4.2	-1.0	-1.6	1.1	1.4	0.1	3.5	0.8	-0.8
R	from 2005	Goods	-0.2	-0.7	0.1	-1.3	-1.3	-1.7	-0.4	-0.7	0.6	0.3	0.3	-0.6	1.1	0.5
	110111 2005	Services	-0.3	-1.8	-1.2	-1.9	-2.1	-2.5	-0.6	-0.9	0.6	1.1	-0.2	4.2	-0.4	-1.3
	Difference	Total	0.7	-1.6	1.1	-2.6	-5.7	-2.0	-0.2	0.0	0.9	0.0	0.5	2.7	-0.1	1.0
	from 2009	Goods	1.7	0.8	1.4	0.1	-2.0	0.6	0.7	1.5	0.8	0.4	0.5	0.3	1.0	1.3
	110111 2007	Services	-1.1	-2.5	-0.3	-2.7	-3.7	-2.5	-1.0	-1.5	0.1	-0.4	0.0	2.4	-1.1	-0.3

Table 2-4. Ratios of intermediate inputs by goods and services

Notes: 1. Intermediate input ratio = intermediate input value / domestic production value

2. Goods and service sectors are listed in the upper row; intermediate input ratios by goods and services are listed in the left column.

Among sectors, the intermediate input ratio accounted for by services decreased in "other business services," "commerce," "finance and insurance," "transport," "other information and communications," and "education and research" (Figure 2-7).





\* "Others" summed up sectors with their intermediate rates changed no more than 0.1 points ("gas and heat supply," "water supply and waste disposal business," "real estate," "house rent (imputed house rent)," "public administration," "medical service, health, social security and nursing care," "advertising services," "goods rental and leasing services," "personal services," and "others").

ii) Comparisons with 2005

The intermediate inputs decreased by 5.0% from 2005 (Table 2-1), and the intermediate input rate decreased by 0.6 points.

The ratio of intermediate inputs by goods industries decreased by 2.5 points from 2005

while that by service industries increased by 1.1 points.

Among goods sectors, the 2010 intermediate inputs decreased in "primary products" (by 1.1 points from 2005), "manufactured products" (by 3.2 points), and "construction" (by 1.6 points).

In the service sectors, the 2010 intermediate inputs decreased in "other services" (by 0.8 points from 2005) while they increased in "commerce" (by 1.4 points), "finance and real estate" (by 0.1 points), "transport / information and communications" (by 3.5 points), and "public services" (by 0.8 points) (Table 2-3).

Looking at the ratio of goods and services in terms of ratios of intermediate inputs allocated for them across all industries, the rate for goods decreased by 0.2 points from 2005 and the rate for services also decreased by 0.3 points.

Dividing industries into goods and service industries reveals that the ratios of intermediate inputs by goods industries allocated for goods (0.7 point decrease from 2005) and services (1.8 point decrease) both decreased, and that the ratios of intermediate inputs by service industries allocated for goods (0.6 point increase) and services (0.6 point increase) both increased (Table 2-4).

Breaking down the intermediate input ratio accounted for by services by sector shows that the rate decreased in "commerce," "finance and insurance," and "transport," while the rate increased in "other business services," "other information and communications," and "electricity" (Figure 2-7).

### 2) Gross value added and the rate of gross value added

The 2010 gross value added was 477.3 trillion yen and the rate of gross value added (= gross value added / domestic production) was 52.4% across all industries.

Dividing industries into goods and service industries reveals that the gross value added for goods industries was 130.7 trillion yen while that for service industries was 346.5 trillion yen, and that the rate of gross value added for goods industries was 36.2% while that for service industries was 63.0% (Table 2-3).

i) Comparisons with 2009

The 2010 gross value added increased by 3.7% from 2009 (Table 2-1) and the rate of gross value added decreased by 0.7 points.

In addition, dividing industries into goods and service sectors reveals that the rate of gross value added for goods industries increased by 1.6 points from 2009 while that for service industries decreased by 0.9 points (Table 2-3).

#### ii) Comparisons with 2005

The 2010 gross value added decreased by 2.9% from 2005 (Table 2-1) and the rate of gross value added increased by 0.6 points.

In addition, dividing industries into goods and service sectors, the rate of gross value added for goods industries increased by 2.5 points from 2005 while that for service industries decreased by 1.1 points (Table 2-3).

### (4) Structure of domestic final demand

The 2010 domestic final demand amounted to 470.5 trillion yen.

Dividing domestic final demand into consumption and investment, consumption accounted for 374.5 trillion yen while investment accounted for 96.0 trillion yen, and their composition ratios in relation to the domestic final demand were 79.6% for consumption and 20.4% for investment. A further breakdown of domestic final demand reveals that "private consumption expenditure" accounted for the largest proportion (59.9%), followed by "consumption expenditure of general government" (16.3%) and "private capital formation" (16.2%) (Table 2-5).

### 1) Comparisons with 2009

The 2010 domestic final demand increased by 1.9% from 2009.

Dividing it into consumption and investment reveals that both consumption and investment increased, by 1.5% (1.2% increase in degree of contribution to growth rate) and 3.2% (0.7% increase in degree of contribution to growth rate) respectively from 2009. In addition, a breakdown of domestic final demand reveals that regarding consumption, "consumption expenditure outside households" (2.9% increase from 2009; 0.1% increase in degree of contribution to growth rate) and "private consumption expenditure" (1.9% increase from 2009; 1.1% increase in degree of contribution to growth rate) increased, while "consumption expenditure of general government" decreased (by 0.1%; 0.0% increase in degree of contribution to growth rate). Regarding investment, "public capital formation" increased by 1.8% (0.1% increase in degree of contribution to growth rate) to growth rate).

Examining composition ratios of consumption and investment in relation to domestic final demand reveals that consumption decreased (by 0.3 points from 2009) and investment increased (by 0.3 points). The breakdown of domestic final demand revealed that regarding consumption, "consumption expenditure of general government" decreased (by 0.3 points) while "consumption expenditure outside households" and "private consumption expenditure" stayed nearly level (Table 2-5). Regarding investment, "private capital formation" decreased (by 0.4 points), "increase in stocks" increased (by 0.7 points), and "public capital formation" stayed nearly level (Table 2-5).

	Demand	value (bill	ion yen)	Gro	owth rate (	(%)	Degree of contribution to growth rate (%)	Compo	osition rati	io (%)	Difference in composition ratio compared to 2005	Difference in composition ratio compared to 2009
	2005	2009	2010	2009 vs. 2005	2010 vs. 2005	2010 vs. 2009	2010 vs. 2009	2005	2009	2010	2010	2010
Domestic final demand	490,237	461,877	470,513	-5.8	-4.0	1.9	1.9	100.0	100.0	100.0	-	-
Consumption	374,366	368,884	374,501	-1.5	0.0	1.5	1.2	76.4	79.9	79.6	3.2	-0.3
Consumption expenditure outside households (row)	16,803	15,813	16,277	-5.9	-3.1	2.9	0.1	3.4	3.4	3.5	0.0	0.0
Consumption expenditure (private)	280,873	276,485	281,707	-1.6	0.3	1.9	1.1	57.3	59.9	59.9	2.6	0.0
Consumption expenditure of general government	76,690	76,586	76,517	-0.1	-0.2	-0.1	0.0	15.6	16.6	16.3	0.6	-0.3
Investment	115,871	92,992	96,012	-19.7	-17.1	3.2	0.7	23.6	20.1	20.4	-3.2	0.3
Capital formation (public)	23,818	20,775	21,146	-12.8	-11.2	1.8	0.1	4.9	4.5	4.5	-0.4	0.0
Capital formation (private)	89,984	76,688	76,327	-14.8	-15.2	-0.5	-0.1	18.4	16.6	16.2	-2.1	-0.4
Increase in stocks	2,069	-4,471	-1,460		[		0.7	0.4	-1.0	-0.3	-0.7	0.7

Table 2-5. Domestic final demand

2) Comparisons with 2005

The 2010 domestic final demand decreased by 4.0% from 2005.

Dividing it into consumption and investment reveals that consumption increased (by 0.0% from 2005) while investment decreased (by 17.1%). In addition, a breakdown of domestic final demand reveals that regarding consumption, "consumption expenditure outside households" and "consumption expenditure of general government" decreased (by 3.1 and 0.2%, respectively) while "private consumption expenditure" increased (by 0.3%). Regarding investment, both "public capital formation" and "private capital formation" decreased (by 11.2 and 15.2%, respectively).

Examining composition ratios of consumption and investment in relation to domestic final demand reveals that consumption increased (by 3.2 points from 2005) while investment decreased (by 3.2 points). In addition, a breakdown of domestic final demand reveals that regarding consumption, "private consumption expenditure" and "consumption expenditure of general government" increased (by 2.6 and 0.6 points, respectively) while "consumption expenditure outside households" stayed nearly level. Regarding investment, "public capital formation," "private capital formation," and "increase in stocks," all decreased (by 0.4, 2.1, and 0.7 points, respectively) (Table 2-5).

### (5) Structure of exports

The 2010 exports amounted to 80.6 trillion yen, and composition ratios were 78.6% for goods and 21.4% for services (Table 2-6).

In addition, the 2010 export ratio (= export value / domestic production) was 8.9% across all industries. Breaking down the export ratio, goods accounted for 17.6% and services accounted for 3.1% (Figure 2-9).

With respect to goods, "processed and assembled products" had the highest export ratio, which consists of sectors represented by "passenger motor vehicles," "electronic computing equipment and accessories," and "other electrical machinery" (Figure 2-10).

#### 1) Comparisons with 2009

The 2010 export value increased by 24.3% from 2009. The breakdown of exports revealed that both goods and services increased by 27.8 and 12.9%, respectively (with their degree of contribution to growth rates increased by 21.3 and 3.0%, respectively).

Further examination of the breakdown showed that while all goods sectors increased in value, in service sectors, "finance and real estate" and "public services" decreased in value by 18.8 and 7.2%, respectively (their degree of contribution to growth rates decreased by 0.2 and 0.1%, respectively).

In terms of composition ratios, goods increased by 2.2 points from 2009 while services decreased by 2.2 points.

Regarding goods sectors, "primary products" decreased (by 0.0 points from 2009) while "manufactured products" increased (by 2.2 points). Furthermore, a breakdown of these sectors reveals that "raw material type" and "other products" decreased (by 0.5 and 3.7 points) while "processed and assembled products" increased (by 3.7 points).

All service sectors decreased in terms of composition ratio (Table 2-6).

		Expo	orts (billion	yen)	Gro	owth rate (	%)	Degree of contribution to	Compo	sition rat	io (%)	Difference in composition ratio	Difference in composition ratio
								growth rate (%)				compared with 2005	compared with 2009
		2005	2009	2010	2009 vs. 2005	2010 vs. 2005	2010 vs. 2009	2010 vs. 2009	2005	2009	2010	2010	2010
Total		73,769	64,845	80,604	-12.1	9.3	24.3	24.3	100.0	100.0	100.0		-
G	ods	56,343	49,591	63,390	-12.0	12.5	27.8	21.3	76.4	76.5	78.6	2.3	2.2
	Primary products	94	90	99	-4.2	6.0	10.7	0.0	0.1	0.1	0.1	0.0	0.0
i	Manufacturing products	56,249	49,501	63,290	-12.0	12.5	27.9	21.3	76.3	76.3	78.5	2.3	2.2
I.	Raw material products	11,546	11,917	13,938	3.2	20.7	17.0	3.1	15.7	18.4	17.3	1.6	-1.1
ļ	Processed and assembled products	41,259	34,261	45,596	-17.0	10.5	33.1	17.5	55.9	52.8	56.6	0.6	3.7
1	Other products	3,444	3,324	3,757	-3.5	9.1	13.0	0.7	4.7	5.1	4.7	0.0	-0.5
i_	Construction				-					-			-
Se	ervices	17,426	15,254	17,215	-12.5	-1.2	12.9	3.0	23.6	23.5	21.4	-2.3	-2.2
!	Commerce	8,621	7,302	8,875	-15.3	3.0	21.6	2.4	11.7	11.3	11.0	-0.7	-0.2
	Finance and real estate	674	527	428	-21.8	-36.5	-18.8	-0.2	0.9	0.8	0.5	-0.4	-0.3
i.	Transport and information and communications	6,003	5,062	5,396	-15.7	-10.1	6.6	0.5	8.1	7.8	6.7	-1.4	-1.1
I.	Public services	449	461	428	2.7	-4.7	-7.2	-0.1	0.6	0.7	0.5	-0.1	-0.2
I	Other services	1,680	1,903	2,088	13.3	24.3	9.7	0.3	2.3	2.9	2.6	0.3	-0.3

Table 2-6. Export values

Looking at I-O table sectors in terms of degree of contribution to growth rates, "general machinery" (e.g., semiconductor production equipment, and machinery and equipment for construction and mining), "passenger motor vehicles," and "electronic components" (e.g., integrated circuits and liquid crystal element) contributed to higher growth rates, while "reuse and recycling," "medicaments," and "agriculture, forestry and fishery" (e.g., marine culture, and inland water fisheries and culture) contributed to diminished growth rates (Figure 2-8).

Figure 2-8. Degree of contribution to growth of export values (goods) by sector (in comparison with 2009)



The 2010 export ratio increased by 1.4 points from 2009. Dividing the exports into goods and services, both classes increased in terms of ratios. Among goods sectors, "primary products" and "manufactured products" both increased in terms of ratios.

Breaking down the "manufactured products" sector reveals that all subsectors—"raw material type," "processed and assembled products," and "other products"—increased in terms of ratios (Figure 2-9).





A further breakdown of the "processed and assembled products" subsection, which had the highest export ratio in the "manufactured products" section, reveals that "passenger motor vehicles," "other electrical machinery" (e.g., other electrical devices and parts, and electric measuring instruments), and "general machinery" (e.g., casting equipment and industrial robots) had among the highest increase in export ratios (Figure 2-10).



Figure 2-10. Export ratio by sector (processed and assembled products)

2) Comparisons with 2005

The 2010 export value increased by 9.3% from 2005. Dividing export values into those involving goods and services shows that goods increased (by 12.5%) while services decreased (by 1.2%). A further breakdown reveals that export values of all I-O table sectors increased; on the other hand, in service sectors, while "commerce" and "other services" increased (by 3.0 and 24.3%, respectively), all other sectors decreased in value.

In terms of composition ratios, goods exports increased (by 2.3 points from 2005) while service exports decreased (by 2.3 points).

Among goods sectors, the ratio of "primary products" decreased (by 0.0 points from 2005) while that of "manufactured products" increased (by 2.3 points). A further breakdown of the "primary products" sector reveals that "raw material products" and "processed and assembled products" increased (by 1.6 and 0.6 points, respectively) while "other products" decreased (by 0.0 points).

In services, while the ratio of "other services" increased (by 0.3 points from 2005), those of the following sectors decreased: "commerce" (by 0.7 points), "finance and real estate" (by 0.4 points), "transport / information and communications" (by 1.4 points), and "public services" (by 0.1%) (Table 2-6).

Regarding goods, degrees of contribution to growth rates were examined by sector; the following sectors contributed to positive growth rates of export values (goods): "electronic components" (e.g., integrated circuits and liquid crystal elements), "iron and steel" (e.g., special hot-rolled steel and ordinary steel strip), and "passenger motor vehicles." On the other hand, the following sectors contributed to negative growth rates of export values (goods): "other vehicles" (e.g., two-wheel motor vehicles), "machinery for office and service industry" (e.g., copy machines and other office machines), and "textile products" (e.g., cotton and staple fiber fabrics, including fabrics of synthetic

spun fibers, and silk and artificial silk fabrics, including fabrics of synthetic filament fibers) (Figure 2-11).





The 2010 export ratio increased by 1.1 points from 2005.

Breaking down the export ratio by goods and services, the ratio of goods increased while that of services stayed nearly level.

Regarding goods sectors, ratios of both "primary products" and "manufactured products" increased.

A breakdown of the "manufactured products" sector reveals that the ratios of all three subsectors, "raw material products," "processed and assembled products," and "other products" increased (Figure 2-9).

A further breakdown of "processed and assembled products," which accounted for the highest export ratio in the "manufactured products," sector reveals that the following goods had decreased export ratios: "electronic computing equipment and accessories" (e.g., personal computers and other electronic computing equipment), "household electronics equipment" (e.g., radio and television sets, and other communication equipment), and "machinery for office and service industry" (e.g., copy machines and vending machines). However, the following goods had increased export ratios: "other vehicles" (e.g., trucks and buses), "other electrical machinery" (e.g., other electrical devices and parts, and electric measuring instruments), and "passenger motor vehicles" (Figure 2-10).

### (6) Structure of imports

The 2010 imports amounted to 73.8 trillion yen. The composition ratio of goods was 86.0% while that of services was 14.0% (Table 2-7).

The 2010 import ratio (= import value / domestic demand [domestic production + import value – export value]) across all industries was 8.2%. Considering goods and services separately, the import ratio of goods accounted for 17.6% and that of services accounted for 1.9% (Figure 2-13).

In addition, with respect to import ratios of goods, a breakdown of "manufactured products" indicates that high ratio values are associated with "apparel and other textile products," "electronic computing equipment and accessories," and "precision instruments" (Figure 2-14).

#### 1) Comparisons with 2009

The 2010 import ratio increased by 11.4% from 2009. Separating goods and services, the import ratio for goods increased by 13.3% (11.3% increase in degree of contribution to growth rate) while that for services increased by 0.7% (0.1% increase in degree of contribution to growth rate).

In addition, a breakdown of import ratios reveals that they increased in all goods sectors; on the other hand, in service sectors, the ratios increased only in "finance and real estate" by 15.0% (0.2% increase in degree of contribution to growth rate) and "other services" by 5.7% (0.3% increase in degree of contribution to growth rate).

In terms of composition ratio, the import ratio for goods increased (by 1.5 points from 2009) while that for services decreased (by 1.5 points).

Examining goods by sector reveals that the import ratio of "primary products" decreased (by 1.3% from 2009) while that of "manufactured products" increased (by 2.7 points). In addition, the breakdown of "manufactured products" showed that the import ratio of "other products" decreased (by 1.3 points) while that of "processed and assembled products" increased (by 3.2 points).

Regarding service sectors, import ratios decreased in "commerce" (by 0.3%), "transport / information and communications" (by 0.8 points), "public services" (by 0.2 points), and "other services" (by 0.3 points); on the other hand, "finance and real estate" did not change (Table 2-7).

	Import v	alue (billi	on yen)	Gro	owth rate (	(%)	Degree of contribution to growth rate (%)	Comp	osition rati	0 (%)	Difference in composition ratio compared to 2005	Difference in composition ration compared to 2009
	2005	2009	2010	2009 vs. 2005	2010 vs. 2005	2010 vs. 2009	2010 vs. 2009	2005	2009	2010	2010	2010
Total	72,483	66,281	73,835	-8.6	1.9	11.4	11.4	100.0	100.0	100.0	-	-
Goods	61,637	56,047	63,525	-9.1	3.1	13.3	11.3	85.0	84.6	86.0	1.0	1.5
Primary products	17,602	15,590	16,428	-11.4	-6.7	5.4	1.3	24.3	23.5	22.3	-2.0	-1.3
Manufacturing products	44,035	40,457	47,097	-8.1	7.0	16.4	10.0	60.8	61.0	63.8	3.0	2.7
Raw material products	12,740	10,249	12,043	-19.6	-5.5	17.5	2.7	17.6	15.5	16.3	-1.3	0.8
Processed and assembled products	17,759	17,508	21,887	-1.4	23.2	25.0	6.6	24.5	26.4	29.6	5.1	3.2
Other products	13,536	12,701	13,167	-6.2	-2.7	3.7	0.7	18.7	19.2	17.8	-0.8	-1.3
Construction				-		[						r
Services	10,846	10,233	10,309	-5.6	-4.9	0.7	0.1	15.0	15.4	14.0	-1.0	-1.5
Commerce	705	1,060	974	50.4	38.3	-8.0	-0.1	1.0	1.6	1.3	0.3	-0.3
Finance and real estate	501	765	880	52.9	75.8	15.0	0.2	0.7	1.2	1.2	0.5	0.0
Transport and information and communications	4,381	3,939	3,821	-10.1	-12.8	-3.0	-0.2	6.0	5.9	5.2	-0.9	-0.8
Public services	680	771	725	13.4	6.6	-6.0	-0.1	0.9	1.2	1.0	0.0	-0.2
Other services	4,579	3,698	3,908	-19.2	-14.7	5.7	0.3	6.3	5.6	5.3	-1.0	-0.3

Table 2-7. Import values

Regarding goods industries in terms of their degree of contribution to growth rates of import values, the following sectors contributed to increased growth rates: "household electronics equipment" (e.g., radio and television sets, and radio communication equipment except cellular phones), "electronic computing equipment and accessories" (e.g., personal computers, and accessories of electronic computing equipment), and "electronic components" (e.g., integrated circuits and semiconductor devices); in contrast, the following sectors contributed to decreased growth rates: "petroleum and coal products" (e.g., naphtha and jet fuel oils), "apparel and other textile products" (e.g., other textile products and woven fabric apparel), and "machinery for office and service industry" (amusement machinery) (Figure 2-12).





The 2010 import ratio increased by 0.6 points from 2009.

Separating imports into goods and services reveals that the import ratio of goods increased while that of services stayed nearly level from 2009.

Regarding goods sectors, the import ratios of both "primary products" and "manufactured products" increased.

The breakdown of "manufactured products" showed that import ratios of "raw material products," "other products," and "processed and assembled products" all increased (Figure 2-13).



Figure 2-13. Change in import ratios over time in relation to goods and services

A breakdown of "manufactured products" reveals that import ratios increased in the following sectors: "communication equipment and their accessories" (e.g., video recording and playback equipment, and radio and television sets), "non-ferrous metals" (e.g., other non-ferrous metals and metal products), and "timber, wooden products and furniture" (e.g., timber and wooden products for construction). On the other hand, import ratios decreased in the following sectors: "household electric appliances" (e.g., household air conditioners and household electric appliances except air-conditioners), "other vehicles" (e.g., trucks, buses and other vehicles), "electronic components" (e.g., magnetic tapes and discs, and liquid crystal elements) (Figure 2-14).

Figure 2-14. Change in import ratios (manufactured products) over time



2) Comparisons with 2005

The 2010 import value increased by 1.9% from 2005. Separating imports into goods and services reveals that import value for goods increased (by 3.1%) while that for services decreased (by 4.9%).

Among goods sectors, the value of "primary products" decreased (by 6.7% from 2007) while that of "manufactured products" increased (by 7.0%). The breakdown of "manufactured products" shows that the values of "raw material products" and "other products" decreased (by 5.5 and 2.7%, respectively) while that of "processed and assembled products" largely increased (by 23.2%). Among service sectors, values of "commerce," "finance and real estate," and "public services" increased (by 38.3, 75.8, and 6.6%, respectively) while those of "transport / information and communications" and "other services" decreased (by 12.8 and 14.7%).

The composition ratio of goods increased (by 1.0 point from 2005) while that of services decreased (by 1.0 point).

Among goods sectors, the composition ratio of "manufactured products" increased (by 3.0 points from 2005) while that of "primary products" decreased (by 2.0 points). In addition the breakdown of "manufactured products" revealed that composition ratios of "raw material products" and "other products" decreased (by 1.3 and 0.8 points) while that of "processed and assembled products" increased (by 5.1 points).

Among service sectors, composition ratios of "transport / information and communications" and "other services" decreased (by 0.9 and 1.0 points, respectively, from 2005) while those of "commerce," "finance and real estate," and "public services" increased (by 0.3, 0.5, and 0.0 points, respectively) (Table 2-7).

Regarding goods industries in terms of their degree of contribution to growth rates of import values, the following sectors contributed to increased growth rates: "household electronics equipment" (e.g., radio and television sets, and cellular phones), "electronic computing equipment and accessories" (e.g., personal computers and accessories for electronic computing equipment), and "electronic components" (e.g., integrated circuits and semiconductor devices). In contrast, the following sectors contributed to decreased growth rates: "coal mining, crude petroleum and natural gas" (crude petroleum), "petroleum and coal products" (e.g., naphtha and jet fuel oils), "beverages and foods" (e.g., frozen fish and shellfish, and tobacco) (Figure 2-15).



Figure 2-15. Degree of contribution to growth rate of the 2010 import value among various I-O table sectors (in comparison with 2005)

The 2010 import ratio increased by 0.5 points from 2005.

Classifying imports into goods and services reveals that the import ratio of goods increased while that of services stayed nearly level.

Among goods sectors, the import ratio of "primary products" decreased while that of "manufactured products" increased.

A breakdown of "manufactured products" shows that import ratios increased in all of "raw material products," "processed and assembled products," and "other products" (Figure 2-13).

Within "manufactured products," import ratios increased in the following sectors: "other electrical machinery" (e.g., other electrical devices and parts, and electric measuring instruments), "apparel and other textile products" (e.g., bedding and other ready-made textile products), "household electronics equipment" (e.g., wired communication equipment and cellular phones). In contrast, import ratios decreased in the following sectors: "petroleum and coal products" (e.g., jet fuel oils, and heavy oil B and C), "passenger motor vehicles," and "other transport equipment" (bicycles and repair of aircrafts) (Figure 2-14).

### (7) Changes in price structure

A deflator, calculated using nominal or real values, is a measure of price changes with respect to a reference year; its value becomes greater than 1 when a price becomes higher than the reference year price, and its value becomes less than 1 when a price becomes lower than the reference year price. Referring to the major economic items of 2010, the domestic production deflator was 1.0041, export deflator was 0.9168, import deflator was 1.0150, and gross domestic supply deflator was 1.0128 (Table 2-8).

	Nomina	al value	Real	value	Daf	ator			
	(billion	n yen)	(billio	n yen)	Den	ator	Differrence	e from 2005	Difference from 2009
	2009	2010	2009	2010	2009	2010	2009	2010	2010
Domestic production	876,669	914,357	867,588	910,585	1.0105	1.0041	0.0105	0.0041	-0.0063
Exports	60,038	73,894	64,845	80,604	0.9259	0.9168	-0.0741	-0.0832	-0.0091
Imports	65,198	74,943	66,281	73,835	0.9837	1.0150	-0.0163	0.0150	0.0313
Gross	881,8291	915,406	869,024	903,815	1.0147	1.0128	0.0147	0.0128	-0.0019

Table 2-8. Deflators

Note: Gross domestic supply = domestic production + imports - exports

#### 1) Comparisons with 2009

i) Domestic production deflator

The 2010 domestic production deflator decreased by 0.0063 points from 2009.

Classifying the domestic production into goods and services, the deflator related to goods decreased (by 0.0091 points from 2009) and that related to services also decreased (by 0.0059 points).

Among I-O table sectors, the domestic production deflator related to "primary production" increased (by 0.0065 points from 2009) while that related to "manufactured products" and "construction" decreased (by 0.00110 and 0.0004 points).

A breakdown of "manufactured products" reveals that the domestic production deflator related to "raw material products" increased (by 0.0192 points from 2009) while that related to "processed and assembled products" and "other products" decreased (by 0.0226 and 0.0243 points, respectively) (Table 2-9).

Among sectors, the domestic production deflator related to "household electric appliances," "household electronics equipment," and "gas and heat supply" greatly decreased.

### ii) Export deflator

The 2010 export deflator decreased by 0.0091 points from 2009.

Classifying the exports into goods and services, the export deflator associated with goods decreased (by 0.0181 points from 2009) while that associated with services increased (by 0.0285 points).

Among I-O table sectors, the export deflator related to "primary products" increased (by 0.0814 points from 2009) while that related to "manufactured products" decreased (by 0.0182 points).

A breakdown of "manufactured products" shows that the export deflator related to "raw material products" and "other products" increased (by 0.0426 and 0.0230 points, respectively, from 2009) while that related to "processed and assembled products" decreased (by 0.0365) (Table 2-9).

Among I-O table sectors, the export deflator associated with "household electric appliances," "coal mining, crude petroleum and natural gas," and "other electrical machinery" greatly decreased.

iii) Import deflator

The 2010 import deflator increased by 0.0313 points from 2009.

Dividing imports into goods and services reveals that the export deflator related to goods increased (by 0.0368 points from 2009) while that related to services decreased (by 0.0030 points).

Among goods sectors, the import deflator related to "primary products" increased (by 0.1791 points from 2009) while that related to "manufactured products" decreased (by 0.0074 points).

A breakdown of "manufactured products" shows that the import deflator related to "raw material products" increased (by 0.0804 points from 2009) while that related to "processed and assembled products" and "other products" decreased (by 0.0457 and 0.0027 points, respectively) (Table 2-9).

Among goods sectors, the import deflator related to "petroleum and coal products," "mining," and "coal mining, crude petroleum and natural gas" showed great increases.

iv) Gross domestic supply deflator

The 2010 gross domestic deflator decreased by 0.0019 points from 2009.

Dividing imports into goods and services reveals that the gross domestic deflator associated with goods increased (by 0.0031 points from 2009) while that associated with services decreased (by 0.0068 points).

Among goods sectors, the gross domestic deflator related to "primary products" increased (by 0.1029 points from 2009) while that related to "manufactured products" and "construction" decreased (by 0.0063 and 0.0004 points, respectively)

The breakdown of "manufactured products" showed that the gross domestic deflator related to "raw material products" increased (by 0.0235 points from 2009) while that related to "processed and assembled products" and "other products" decreased (by 0.0197 and 0.0228 points, respectively) (Table 2-9).

Among goods sectors, the gross domestic deflator related to "household electric appliances," "household electronics equipment," and "gas and heat supply" greatly decreased.

		2010 value	s (difference from	n 2005 base valu	e [1.0000])	2010 value	s (difference from	2009 base valu	ie [1.0000])
		Domestic production	Exports	Imports	Gross domestic supply	Domestic production	Exports	Imports	Gross domestic supply
То	tal	0.0041	-0.0832	0.0150	0.0128	-0.0063	-0.0091	0.0313	-0.0019
Go	ods	0.0205	-0.1028	0.0216	0.0424	-0.0091	-0.0181	0.0368	0.0031
	Primary products	0.0078	0.0273	0.3149	0.1766	0.0065	0.0814	0.1791	0.1029
	Manufacturing products	0.0165	-0.1030	-0.0807	0.0272	-0.0110	-0.0182	-0.0074	-0.0063
	Raw material products	0.1427	0.0161	0.0980	0.1552	0.0192	0.0426	0.0804	0.0235
	Processed and assembled products	-0.0664	-0.1498	-0.2278	-0.0639	-0.0226	-0.0365	-0.0457	-0.0197
	Other products	-0.0091	0.0232	0.0003	-0.0091	-0.0243	0.0230	-0.0027	-0.0228
	Construction	0.0471	_	-	0.0471	-0.0004	-1	-	-0.0004
Se	rvices	-0.0066	-0.0112	-0.0256	-0.0068	-0.0059	0.0285	-0.0030	-0.0068

Table 2-9. Changes in deflator values in relation to economic items

2) Comparisons with 2005

i) Domestic production deflator

The 2010 domestic production deflator increased by 0.0041 points from 2005.

Dividing the domestic production into goods and services shows that the domestic production deflator related to goods increased (by 0.0205 points from 2005) while that related to services decreased (by 0.0066 points).

Among goods sectors, the domestic production deflator related to "primary production," "manufactured products," and "construction" all increased (by 0.0078, 0.0165, and 0.0471, points respectively, from 2005).

A breakdown of "manufactured products" reveals that the domestic production deflator associated with "raw material products" increased (by 0.1427 points from 2005) while that associated with "processed and assembled products" and "other products" decreased (by 0.0664 and 0.0091 points, respectively) (Table 2-9).

Among I-O table sectors, the domestic production deflator related to "non-ferrous metal products," "reuse and recycling," and "gas and heat supply" greatly increased.

### ii) Export deflator

The 2010 export deflator decreased by 0.0832 points from 2005.

Dividing exports into goods and services reveals that the export deflator related to both goods and serviced decreased (by 0.1028 and 0.0112 points from 2005).

Among goods sectors, the export deflator associated with "primary products" increased (by 0.0273 points from 2005) while that associated with "manufactured products" decreased (by 0.1030 points).

A breakdown of "manufactured products" shows that the export deflator associated with "raw material products" and "other products" increased (by 0.0161 and 0.0232 points from 2005) while that associated with "processed and assembled products" decreased (by 0.1498 points) (Table 2-9).

Among goods sectors, the export deflator associated with "household electronics equipment," "electronic computing equipment and their accessories," and "printing, plate making and book binding" decreased greatly.

### iii) Import deflator

The 2010 import deflator increased by 0.0150 points from 2005.

Dividing imports into goods and services reveals that the import deflator related to goods increased (by 0.0216 points from 2005) while that related to services decreased (by 0.0256 points).

Among goods sectors, the import deflator associated with "primary products" increased (by 0.3149 points from 2005) while that associated with "manufactured products" decreased (by 0.0807 points).

A breakdown of "manufactured products" shows that the import deflator related to "raw material products" and "other products" increased (by 0.0980 and 0.0003 points, respectively,

from 2005) while that related to "processed and assembled products" decreased (by 0.2278 points) (Table 2-9).

Among I-O table sectors, the import deflator associated with "mining," "petroleum and coal products," and "coal mining, crude petroleum and natural gas" increased greatly.

iv) Gross domestic supply deflator

The 2010 gross domestic supply deflator increased by 0.0128 points from 2005.

Dividing the gross domestic supply into goods and services reveals that the gross domestic supply deflator related to goods increased (by 0.0424 points from 2005) while that related to services decreased (by 0.0068 points).

Among goods sectors, the gross domestic supply deflator associated with all of "primary productions," "manufactured products," and "construction" increased (by 0.1766, 0.0272, and 0.0471 points, respectively from 2005).

A breakdown of "manufactured products" reveals that the gross domestic supply deflator associated with "raw material products" increased (by 0.1552 points from 2005) while that associated with "processed and assembled products" and "other products" decreased (by 0.0639 and 0.0091 points) (Table 2-9).

Among I-O table sectors, the gross domestic supply deflator associated with "mining," "coal mining, crude petroleum and natural gas," and "non-ferrous metals" greatly increased.

### (8) Skyline charts

Take a look at the skyline charts that visually illustrate the 2010 industrial structure as well as trade structure.

In the skyline chart representing all industries, along the horizontal axis, it shows that service sectors including "commerce" and "medical service, health, social security, and nursing care" accounted for a large market share. Along the vertical axis, it shows that service self-sufficiency rates amounted to nearly 100%, with small percentages being represented by exports and imports (as indicated by short shaded bars), indicating that most services are produced and consumed domestically.

Among manufacturing industries, which account for larger proportions of imports than other industries, sectors including "beverages and foods," "iron and steel," "general machinery," and "motor vehicle parts and accessories" represented a large domestic production share as indicated by their wide widths along the horizontal axis.

Along the vertical axis, it shows that sectors including "passenger motor vehicles," "other vehicles," and "other electrical machinery" are represented by self-sufficiency rates much higher than 100% with large percentages being accounted for exports. On the other hand, large proportions of production rates for sectors including "apparel and other textile products" and "electronic computing equipment and accessories" are accounted for imports as indicated by tall shaded bars. With regard to the "electronic computing equipment and accessories" sector, its large export ratio as well as large import ratio may be explained by the implementation of product differentiations and international division of labor (Figure 2-16).





### 3. Structure of production spillover as being analyzed in the 2010 Input-Output Table

### (1) Measure of production spillover strength

Manufacturing activities of each industry spillover to other sectors successively through the purchasing of raw materials and services. With this principle in mind, take a look at changes in the strength of production spillover exerted toward the domestic products of each industry in terms of the Leontief inverse matrix (hereafter, this is referred to as "production spillover strength"), a measurement of gross effects on production of the same or different sector induced directly or indirectly when the final demand of one industry increases by one unit.<sup>\*</sup>

					I	Production spi	llover strengt	h				
				Total spillove	r			Spillo	ver to other s	ectors		Total spillover graph
		2005	2009	2010	difference from 2005	Difference from 2009	2005	2009	2010	difference from 2005	Difference from 2009	
	Average across all industries	1.9963	1.9841	1.9324	-0.0639	-0.0517	0.8002	0.7851	0.7458	-0.0544	-0.0393	
01	Agriculture, forestry and fishery	1.7673	1.7289	1.7406	-0.0268	0.0116	0.5499	0.5143	0.5299	-0.0200	0.0156	<b>2</b> 2005
02	Mining	1.8800	1.9703	1.8553	-0.0246	-0.1149	0.8773	0.9677	0.8531	-0.0242	-0.1146	2009
03	Coal mining , crude petroleumand natural gas	1.7277	1.8696	1.7360	0.0083	-0.1336	0.7273	0.8689	0.7355	0.0082	-0.1334	<b>2</b> 2010
04	Beverages and foods	2.0185	2.0192	2.0068	-0.0117	-0.0124	0.7261	0.7067	0.6943	-0.0318	-0.0124	
05	Textile products	2.1485	2.1620	2.0446	-0.1039	-0.1174	0.7585	0.7863	0.7300	-0.0285	-0.0563	
06	Wearing apparel and other textile products	2.0801	2.0239	1.9972	-0.0829	-0.0267	1.0647	1.0092	0.9856	-0.0791	-0.0236	
07	Timber, wooden products and furniture	2.0527	2.0811	2.0121	-0.0406	-0.0690	0.7908	0.8028	0.7511	-0.0397	-0.0517	
08	Pulp, paper and paper products	2.2201	2.2538	2.1939	-0.0262	-0.0599	0.5962	0.6188	0.5977	0.0015	-0.0211	
09	Printing, plate making and book binding	1.7987	1.7150	1.7318	-0.0669	0.0168	0.6920	0.6139	0.6199	-0.0721	0.0060	
10	Chemical basic product	2.2753	2.3327	2.1166	-0.1587	-0.2161	0.5557	0.5984	0.4751	-0.0806	-0.1233	
11	Synthetic resins	2.4213	2.4998	2.2475	-0.1737	-0.2523	1.4112	1.4900	1.2401	-0.1710	-0.2499	
12	Final chemical products	2.2854	2.2532	2.1867	-0.0987	-0.0665	1.0885	1.0555	0.9807	-0.1078	-0.0747	
13	Medicaments	2.0164	1.9588	1.9488	-0.0676	-0.0101	0.9393	0.8939	0.8858	-0.0535	-0.0081	
14	Petroleum and coal products	1.1491	1.2125	1.1189	-0.0302	-0.0936	0.1079	0.1586	0.0799	-0.0280	-0.0787	
15	Plastic products	2.3395	2.3187	2.1176	-0.2219	-0.2010	0.7942	0.7855	0.7056	-0.0886	-0.0799	
16	Ceramic, stone and clay products	1.8469	1.8670	1.8197	-0.0272	-0.0473	0.7059	0.7221	0.6892	-0.0167	-0.0329	
17	Iron and steel	2.6637	2.8053	2.5795	-0.0842	-0.2259	0.3182	0.3588	0.2688	-0.0494	-0.0900	
18	Non-ferrous metals	2.0465	2.0878	1.8730	-0.1735	-0.2149	0.4807	0.5363	0.4058	-0.0748	-0.1305	
19	Metal products	2.1289	2.1516	2.0261	-0.1029	-0.1256	1.0010	1.0190	0.8985	-0.1025	-0.1205	
20	General machinery	2.1671	2.1527	2.1392	-0.0279	-0.0135	0.7764	0.7982	0.7561	-0.0203	-0.0421	
21	Machinery for office and service industry	2.4247	2.3085	2.3283	-0.0963	0.0198	1.0324	0.9946	1.0495	0.0171	0.0549	
22	Electrical devices and parts	2.1690	2.1962	2.1357	-0.0333	-0.0605	0.9326	0.9439	0.8998	-0.0328	-0.0441	
23	Other electrical machinery	2.1147	2.0646	1.9709	-0.1438	-0.0936	1.0299	0.9894	0.9125	-0.1174	-0.0769	
24	Household electric appliances	2.2566	2.1297	2.1004	-0.1562	-0.0293	1.0983	0.9813	0.9957	-0.1026	0.0144	
25	Household electronics equipment	2.2345	1.8584	1.7285	-0.5060	-0.1299	1.2051	0.8413	0.7164	-0.4887	-0.1249	
26	Because computing explorent and accessive explorent of electronic computing explorent	2.1622	1.8855	1.7810	-0.3813	-0.1045	1.1165	0.8522	0.7500	-0.3666	-0.1022	
27	Electronic components	2.1729	2.0056	1.9277	-0.2452	-0.0779	0.6842	0.5654	0.4688	-0.2154	-0.0966	
28	Passenger motor cars	3.1010	3.0374	2.9375	-0.1634	-0.0999	2.1010	2.0374	1.9375	-0.1634	-0.0999	
29	Other cars	3.0785	3.0094	2.9115	-0.1670	-0.0979	2.0785	2.0094	1.9115	-0.1670	-0.0979	
30	Motor vehicle parts and accessories	2.8073	2.9225	2.8413	0.0340	-0.0813	0.6644	0.6779	0.5971	-0.0673	-0.0809	
31	Other transport equipment	2.2947	2.3699	2.3141	0.0195	-0.0558	0.9218	0.9077	0.9008	-0.0210	-0.0069	
32	Precision instruments	1.9932	2.0297	2.0698	0.0766	0.0401	0.9674	1.0073	1.0484	0.0811	0.0411	
55	Miscellaneous manufacturing products	2.0616	2.0888	1.9/52	-0.0864	-0.1136	0.9592	0.9910	0.8849	-0.0743	-0.1061	
54 25	Reuse and recycling	1.8417	1.8263	2.0523	0.1906	0.2060	0.8411	0.8257	1.0316	0.1905	0.2059	
55	Construction	1.9168	1.8813	1.8559	-0.0609	-0.0254	0.8988	0.8644	0.8397	-0.0591	-0.0247	
36	Electricity	1.60/7	1.5909	1.5164	-0.0913	-0.0/45	0.5422	0.5200	0.4509	-0.0913	-0.0691	
20	cas and neat supply	1.5868	1.0433	1.4126	-0.1/42	-0.2307	0.5622	0.6179	0.3841	-0.1/82	-0.2338	
38	water supply and waste disposal business	1.6612	1.64/6	1.6698	0.0086	0.0221	0.5569	0.5458	0.5695	0.0126	0.0237	
10	Commerce Einenne en dines	1.5080	1.3208	1.5257	0.01//	-0.0011	0.4585	0.4/4/	0.4/13	0.0129	-0.0034	
40	Panal estate	1.0055	1.0094	1.0439	0.0405	0.0345	0.4081	0.4180	0.4522	0.0440	0.0342	
41	Rear estate	1.3652	1.37/8	1.3918	0.0066	0.0140	0.3015	0.3355	0.5702	0.0087	0.0147	
42	Transport	1.1905	1.1809	1.1905	0.0061	0.0096	0.1905	0.1869	0.1965	0.0001	0.0096	
45	Transport	1.01/4	1.0143	1.0185	0.0011	0.0041	0.4436	0.4562	0.4458	0.0022	0.0096	
44	Information convicts	1.7545	1./393	1.859/	0.1052	0.1004	0.5057	0.4703	0.5152	0.0095	0.0449	
43	Public administration	1.0284	1.03/3	1.7202	0.0978	0.0086	0.3920	0.6102	0.0/3/	0.0857	0.0004	
40	Education and meansh	1.0054	1.0119	1.0000	-0.0054	-0.0119	0.0055	0.0099	0.3983	0.0000	-0.0110	
18	Malicial service health social security and mericine one	1.4552	1.4018	1.4001	0.0110	0.0043	0.44.04	0.4512	0.4555	0.0099	0.0041	
40	A dwartiging continues	2 1672	2 0714	2 1292	0.0125	-0.0042	1 1202	1.0310	1.0851	0.0102	-0.0070	
50	Goode rantal and lossing comila-	2.10/3	2.0710	2.1203	-0.0389	0.0308	0.4929	0.400/	0.4709	-0.0552	0.0552	
51	Other business services	1.5455	1.5525	1.3070	-0.0379	0.0247	0.4008	0.4603	0.4708	-0.0100	-0.0178	
52	Personal services	1.6900	1.5900	1.01/5	0.0508	0.0195	0.5520	0.4095	0.4075	0.0455	0.01/9	
53	Others	2 8490	2 8591	2 7887	-0.0612	-0.0202	1 8190	1 8792	1 7596	-0.0139	-0.0698	
55	ondis	2.0499	2.0591	2.7007	-0.0012	-0.0705	1.0199	1.0295	1.7590	-0.0005	-0.0098	

Figure 3-1. Measure of production spillover strengths (in real terms)

<sup>\* &</sup>quot;Spillover to other sectors" is calculated by the following steps: divide the inverse of the coefficient matrix by intersection point values representing the focal sector; the intersection point value is subtracted from each sum of the columns in the inverse matrix coefficient table; and column totals are summed up.

Among production spillover strengths, the average 2010 total spillover across all industries was 1.9324 times that of the initial demand.

Comparing production spillover strengths among sectors, they were high in "passenger motor vehicles" (2.9375 times), "other vehicles" (2.9115 times), "motor vehicle parts and accessories" (2.8413 times), and "iron and steel" (2.5795 times). Industries dealing with "other vehicles" "passenger motor vehicles," and "motor vehicle parts and accessories" purchase raw materials and such with high production spillover strengths, and purchases are made from many industries, extending production spillover strengths. The "iron and steel" industry also has high production spillover strength toward the same sector because of the input of pig iron as well as crude iron and steel products, but has low production spillover strength toward other sectors.

The average strength of spillovers to other sectors across all industries was 0.7458 times that of initial demand. Comparing strengths of spillover to other sectors among sectors, they were high in "passenger motor vehicles" (1.9375 times), "other vehicles" (1.9115 times), and "synthetic resins" (1.2401 times) (Figure 3-1).

### 1) Comparisons with 2009

The 2010 total spillover decreased by 0.0517 points from 2009.

Comparing total spillover among sectors, it increased in 16 of 53 sectors, including "reuse and recycling," "other information and communications," and "information services," while it decreased in 37 of 53 sectors, including "synthetic resins," "gas and heat supply," and "iron and steel."

The 2010 spillover to other sectors decreased by 0.0393 points from 2009.

Comparing the spillover to other sectors among sectors, it decreased in 36 of 53 sectors including "medicaments," "synthetic resins," "gas and heat supply," and "coal mining, crude petroleum and natural gas" (Figure 3-1).

### 2) Comparisons with 2005

The 2010 total spillover decreased by 0.0639 points from 2005.

Comparing total spillover among sectors, it increased in 16 of 53 sectors, including "reuse and recycling," "other information and communications," and "information services," while it decreased in 37 of 53 sectors, including "household electronics equipment," "electronic computing equipment and accessories," and "electronic components."

The 2010 spillover to other sectors decreased by 0.0544 points from 2005.

Comparing among sectors, the spillover to other sectors increased in 16 of 53 sectors, including "reuse and recycling," "information services," and "precision instruments," while it decreased in 37 of 53 sectors, including "household electronics equipment," "electronic computing equipment and accessories," and "electronic components" (Figure 3-1).

Production spillovers generally decrease in response to:

1) lowered ratios of intermediate inputs (higher ratios of value added) by industries,

2) increased rates of import goods inputs (decreased rates of domestic goods inputs), or

3) increases in service industries.\*

\* The strengths of production spillovers by service industries are generally lower than those by goods industries; consequently, increases in ratios of services (= decreases in ratios of goods) in intermediate inputs result in decreases in spillover strengths.

With regard to the 2010 outcome, the increase in input rates of imported goods presumably contributed to increased intermediate inputs in various industries and decreased ratios of services in intermediate inputs.

### (2) Final demand and production inducement

Regarding the 2010 domestic production values being divided into final demand items, those induced by consumption, investment, and exports were 574.5, 166.9, and 169.1 trillion yen, respectively.

Regarding the 2010 production inducement dependency (composition ratios of production inducement values by final demand item), which indicates distribution of the 2010 domestic production values in terms of final demand items, that of final demand components is as follows (in order of high to low ratios): "private consumption expenditure" (46.8%), "exports" (18.6%), "public capital formation" (14.4%), "consumption expenditure of the government" (13.5%), and "public capital formation" (4.1%).

With regard to the 2010 production inducement coefficients, which indicate the domestic production value induced per unit of demand in each of the 2010 final demand items, those of "exports," "investment," and "consumption" were 2.0984, 1.7383, and 1.5342, respectively, in descending order (Table 3-1).

#### 1) Comparisons with 2009

The production inducement value for each of the 2010 final demand items: "consumption," "investments," and "exports," increased by 1.5, 2.4, and 22.0%, respectively, from 2009.

The production inducement dependency of "exports" and "increase in stocks" increased from 2009 while that of "private consumption expenditure," "private capital formation," "consumption expenditure of the government," "public capital formation," and "consumption expenditure outside households" decreased.

All of the 2010 production inducement coefficients decreased from 2009 except for that of "private consumption expenditure" (Table 3-1).

#### 2) Comparisons with 2005

Among the 2010 production inducement values by final demand item, that of consumption and investment decreased by 0.2 and 20.8%, respectively, from 2005, while that of exports increased by 4.9%.

Regarding the production inducement dependency, that of "private consumption expenditure," "exports," and "consumption expenditure of the government" increased while that of "private capital formation," "increase in stocks," and "public capital formation" decreased.

All of the production inducement coefficients decreased except for that of "consumption expenditure of the government" (Table 3-1).

		]	Induced dome	estic products (	billion yen, %)	)			
	2005	2009	2010	Difference from 2005	Growth rate compared to 2005	Difference from 2009	Growth rate compared to 2009		
Consumption	575,746	565,968	574,547	-1,199	-0.2	8,579	1.5		
Consumption expenditure outside households (row)	27,092	25,339	26,022	-1,070	-3.9	683	2.7		
Consumption expenditure (private)	426,398	417,611	426,002	-396	-0.1	8,391	2.0		
Consumption expenditure of general government	122,256	123,018	122,522	266	0.2	-496	-0.4		
Investment	210,740	162,987	166,897	-43,843	-20.8	3,910	2.4		
Capital formation (public)	44,468	37,850	37,612	-6,857	-15.4	-239	-0.6		
Capital formation (private)	162,122	133,251	131,239	-30,883	-19.0	-2,012	-1.5		
Increase in stocks	4,150	-8,114	-1,954	-6,103	-147.1	6,160	-75.9		
Exports	161,216	138,633	169,141	7,925	4.9	30,508	22.0		
Total final demand	947,702	867,588	910,585	-37,118	-3.9	42,997	5.0		
		Production	n inducement	coefficient		I	Production indu	acement distri	bution ratio (%)
	2005	2009	2010	Difference from 2005	Difference from 2009	2005	2009	2010	Difference from 2005
Consumption	1.5379	1.5343	1.5342	-0.0038	-0.0001	60.8	65.2	63.1	2.3
Consumption expenditure outside households (row)	1.6124	1.6024	1.5987	-0.0136	-0.0037	2.9	2.9	2.9	0.0
Consumption expenditure (private)	1.5181	1.5104	1.5122	-0.0059	0.0018	45.0	48.1	46.8	1.8
Consumption expenditure of general government	1.5942	1.6063	1.6012	0.0071	-0.0050	12.9	14.2	13.5	0.6
Investment	1.8187	1.7527	1.7383	-0.0805	-0.0144	22.2	18.8	18.3	-3.9
Capital formation (public)	1.8670	1.8219	1.7787	-0.0884	-0.0433	4.7	4.4	4.1	-0.6
Capital formation (private)	1.8017	1.7376	1.7194	-0.0822	-0.0181	17.1	15.4	14.4	-2.7
Increase in stocks	2.0052	1.8148	1.3379	-0.6673	-0.4769	0.4	-0.9	-0.2	-0.7
Exports	2.1854	2.1379	2.0984	-0.0870	-0.0395	17.0	16.0	18.6	1.6

 

 Table 3-1. Trends by year of production inducement values, production inducement coefficients, and production inducement dependency

### (3) Final demand and gross value-added inducement

Regarding the induced gross value added, which was obtained for each sector being induced by the final demand item by multiplying the 2010 domestic production value by the rate of gross value added, that of consumption, investment, and exports amounted to 331.4, 78.5, and 67.4 trillion yen, respectively.

Regarding the 2010 gross value-added inducement dependency (composition ratios of gross valueadded inducement values by final demand item), which indicates the distribution of the gross valueadded inducement values in terms of final demand item, those of final demand items are as follows (in order of high to low ratios): "private consumption expenditure" (51.6%), "consumption expenditure of the government" (14.9%), "exports" (14.1%), "private capital formation" (12.7%), and "public capital formation" (3.8%).

Next, with regard to the 2010 gross value-added inducement coefficients, which indicate a domestic production value induced per unit of demand in each of the 2010 final demand items, those of "consumption," "exports," and "investment" were 0.8849, 0.8363, and 0.8173, respectively, in descending order (Table 3-2).

### 1) Comparisons with 2009

The 2010 gross value-added inducement for "consumption," "investment," and "exports" increased by 0.8, 1.1, and 24.9%, respectively from 2009.

The 2010 gross value-added inducement dependency for "exports" and "increase in stocks" increased while that for "private consumption expenditure," "consumption expenditure of the government," "private capital formation," and "public capital formation" decreased.

The 2010 gross value-added inducement coefficients decreased for all final demand items except for that of "exports" (Table 3-2).

### 2) Comparisons with 2005

The 2010 gross value-added inducement values for "consumptions" and "investment" decreased by 0.2 and 19.2%, respectively, from 2005, while that for "exports" increased by 8.1%.

The 2010 gross value inducement dependency for "consumption expenditure of the government," "exports," and "public capital formation" increased, while "private capital formation," "public capital formation," and "increase in stocks" decreased.

The 2010 gross value-added inducement coefficients decreased for all final demand items except for "consumption expenditure outside households" (Table 3-2).

Table 3-2. Trends by year of gross value-added inducement values, gross value-added inducement
coefficients, and gross value-added inducement dependency
Induced gross value added (billion yen, %)
2005 2000 2010

	2005	2000	2010				r			
	2003	2009	2010	Difference from 2005	Growth rate compared to 2005	Difference from 2009	Growth rate compared to 2009			
Consumption	332,060	328,906	331,403	-658	-0.2	2,496	<u>0.8</u>			
Consumption expenditure outside households (row)	14,324	13,625	13,987	-337	-2.3	362	2.7			
Consumption expenditure (private)	245,859	243,666	246,291	432	0.2	2,625	1.1			
Consumption expenditure of general government	71,877	71,615	71,124	-753	-1.0	-491	-0.7			
Investment	97,113	77,584	78,473	-18,640	-19.2	889	1.1			
Capital formation (public)	21,064	18,244	18,282	-2,782	-13.2	38	0.2			
Capital formation (private)	74,287	62,018	60,769	-13,518	-18.2	-1,249	-2.0			
Increase in stocks	1,762	-2,678	-578	-2,340	-132.8	2,100	-78.4			
Exports	62,349	53,951	67,407	5,058	8.1	13,457	24.9			
Total final demand	491,522	460,441	477,283	-14,239	-2.9	16,842	3.7			
		Gross value-a	dded inducem	ent coefficien	t	gross value-added inducement dependency (%)		%)		
	2005	2009	2010	Difference from 2005	Difference from 2009	2005	2009	2010	Difference from 2005	Difference from 2009
Consumption	0.8870	0.8916	0.8849	-0.0021	-0.0067	67.6	71.4	69.4	1.9	-2.0
Consumption expenditure outside households (row)	0.8525	0.8616	0.8593	0.0069	-0.0023	2.9	3.0	2.9	0.0	0.0
Consumption expenditure (private)	0.8753	0.8813	0.8743	-0.0011	-0.0070	50.0	52.9	51.6	1.6	-1.3
Consumption expenditure of general government	0.9372	0.9351	0.9295	-0.0077	-0.0056	14.6	15.6	14.9	0.3	-0.7
Investment	0.8381	0.8343	0.8173	-0.0208	-0.0170	19.8	16.8	16.4	-3.3	-0.4
Capital formation (public)	0.8844	0.8782	0.8646	-0.0198	-0.0136	4.3	4.0	3.8	-0.5	-0.1
Capital formation (private)	0.8256	0.8087	0.7962	-0.0294	-0.0125	15.1	13.5	12.7	-2.4	-0.7
Increase in stocks	0.8513	0.5990	0.3958	-0.4555	-0.2032	0.4	-0.6	-0.1	-0.5	0.5
Exports	0.8452	0.8320	0.8363	-0.0089	0.0043	12.7	11.7	14.1	1.4	2.4
Total final demand	0.8715	0.8742	0.8660	-0.0055	-0.0081	100.0	100.0	100.0	0.0	0.0

### (4) Final demand and import inducement

According to the import inducement value induced by the 2010 final demand, import inducement values induced by "consumption," "investment," and "exports" were 43.1, 17.5, and 13.2 trillion yen, respectively.

Regarding the 2010 import inducement dependency (composition ratios of import inducement values by final demand item), which indicates the distribution of export values in terms of final demand item, those of final demand items are as follows (in descending order): "private consumption expenditure" (48.0%), "private capital formation" (21.1%), "exports" (17.9%), "consumption expenditure of the government" (7.3%), and "public capital formation" (3.9%).

Secondly, with regard to the 2010 import inducement coefficients (which indicate an import value induced per unit of demand in each of the 2010 final demand items), those of "investment," "exports," and "consumption" were 0.1827, 0.1637, and 0.1151, respectively, in descending order (Table 3-3).

### 1) Comparisons with 2009

The 2010 import inducement values for "consumption," "investment," and "exports" increased by 7.8, 13.8, and 21.1%, respectively from 2009.

The 2010 import inducement dependency increased in "increase in stocks," "exports," and "public capital formation" while it decreased in "private consumption expenditure," "private capital formation," "consumption expenditure outside households," and "consumption expenditure of the government."

The 2010 import inducement coefficients increased for all final demand items except for "exports" (Table 3-3).

### 2) Comparisons with 2005

The 2010 inducement value for "consumption" increased by 1.9% from 2005, that for "investment" decreased by 6.5%, and that for "exports" increased by 15.6%.

The 2010 import inducement dependency for "imports," "consumption expenditure of the government," and "public capital formation" increased while that for "increase in stocks," "private capital formation," "consumption expenditure outside households," and "private consumption expenditure" decreased.

The 2010 import inducement coefficients increased for all final demand items except for "consumption expenditure outside households" (Table 3-3).

			Import induc	ement value (b	villion yen, %)					
	2005	2009	2010	Difference from 2005	Growth rate compared to 2005	Difference from 2009	Growth rate compared to 2009			
Consumption	42,305	39,978	43,099	793	1.9	3,120	7.8			
Consumption expenditure outside households (row)	2,479	2,188	2,290	-189	-7.6	101	4.6			
Consumption expenditure (private)	35,014	32,819	35,416	402	1.1	2,597	7.9			
Consumption expenditure of general government	4,813	4,971	5,393	580	12.1	422	8.5			
Investment	18,758	15,408	17,539	-1,219	-6.5	2,131	13.8			
Capital formation (public)	2,754	2,531	2,864	110	4.0	333	13.2			
Capital formation (private)	15,697	14,670	15,558	-139	-0.9	887	6.0			
Increase in stocks	308	-1,793	-882	-1,190	-386.8	911	-50.8			
Exports	11,419	10,894	13,197	1,777	15.6	2,303	21.1			
Total final demand	72,483	66,281	73,835	1,351	1.9	7,554	11.4			
		Import i	nducement co	efficient			Import indu	cement deper	ndency(%)	
	2005	2009	2010	Difference from 2005	Difference from 2009	2005	2009	2010	Difference from 2005	Difference from 2009
Consumption	0.1130	0.1084	0.1151	0.0021	0.0067	58.4	60.3	58.4	0.0	-1.9
Consumption expenditure outside households (row)	0.1475	0.1384	0.1407	-0.0069	0.0023	3.4	3.3	3.1	-0.3	-0.2
Consumption expenditure (private)	0.1247	0.1187	0.1257	0.0011	0.0070	48.3	49.5	48.0	-0.3	-1.5
Consumption expenditure of general government	0.0628	0.0649	0.0705	0.0077	0.0056	6.6	7.5	7.3	0.7	-0.2
Investment	0.1619	0.1657	0.1827	0.0208	0.0170	25.9	23.2	23.8	-2.1	0.5
Capital formation (public)	0.1156	0.1218	0.1354	0.0198	0.0136	3.8	3.8	3.9	0.1	0.1
Capital formation (private)	0.1744	0.1913	0.2038	0.0294	0.0125	21.7	22.1	21.1	-0.6	-1.1
Increase in stocks	0.1487	0.4010	0.6042	0.4555	0.2032	0.4	-2.7	-1.2	-1.6	1.5
Exports	0.1548	0.1680	0.1637	0.0089	-0.0043	15.8	16.4	17.9	2.1	1.4
Total final demand	0.1285	0.1258	0.1340	0.0055	0.0081	100.0	100.0	100.0	0.0	0.0

 Table 3-3. Trends by year of import inducement values, import inducement coefficients, and import inducement dependency

(5) Indices of the power of dispersion and sensitivity of dispersion

The 2010 indices of the power of dispersion and sensitivity of dispersion indicated that many goods sectors have high index values for the power of dispersion and low index values for the sensitivity of dispersion. Of the goods sectors, 24 have index values for the power of dispersion higher than 1, while 11 goods sectors have values less than 1. In addition, 9 goods sectors have index values for the sensitivity of dispersion above 1 while 26 goods sectors have values less than 1.

Sectors plotted in Quadrant "I" exert strong influence on entire industries and are highly affected by external influences; they include "iron and steel," "motor vehicle parts and accessories," and "chemical basic product."

Sectors plotted in Quadrant "IV" exert strong influence on entire industries and are weakly affected by external influences; they include "passenger motor vehicles," "other vehicles," and "machinery for office and service industry."

Sectors plotted in Quadrant "II" exert a weak influence on entire industries and are sensitive to external influences; they include "petroleum and coal products."

Sectors plotted in Quadrant "III" exert weak influence on entire industries and are weakly affected by external influences; they include "household electronics equipment," "coal mining, crude petroleum, and natural gas," "printing, plate making, and book binding," and "agriculture, forestry, and fishery" (Figure 3-2).

### Index of the power of dispersion

The index is calculated by the following procedure: each sum of the columns in the inverse matrix coefficient table is divided by the mean value of the entire vertical sum in the inverse matrix coefficient table. The index allows measurement of a relative strength being exerted by the corresponding industry toward entire industries. Industries with an index value greater than 1 exert above average influence.

#### Index of the sensitivity of dispersion

The index is calculated by the following procedure: each sum of the rows in the inverse matrix coefficient table is divided by the mean value of the entire horizontal sum in the inverse matrix coefficient table. The index allows measurement of a relative strength of influence that the corresponding industry receives from all other industries. Industries with an index value greater than 1 have above average sensitivity to external influence.



## Figure 3-2. Indices of the power of dispersion and sensitivity of dispersion (goods)

Figure 3-Mindices of the power of dispersion and sensitivity of dispersion (goods) (enlarged figure)



Most service sectors had a low index value for the power of dispersion— two service sectors had index values greater than 1 while 16 service sectors had index values less than 1. In addition, nine service sectors had index values for the sensitivity of dispersion greater than 1 and another nine service sectors had index values less than 1.

Sectors plotted in Quadrant "II" exert weak influence on entire industries and are sensitive to external influences; they include "other business services," "commerce," "finance and insurance," and "transport."

Sectors plotted in Quadrant "III" exert weak influence on entire industries and are weakly affected by external influences; they include "house rent (imputed house rent)," "real estate," and "gas and heat supply" (Figure 3-3).



Figure 3-3. Indices of the power of dispersion and sensitivity of dispersion (services)

### 4. Analysis of factors contributing to fluctuation of production

An analysis of factors<sup>\*1</sup> was attempted based on equilibrium output models derived from inputoutput tables to explain the changes in 2010 domestic production values by year from the perspective of changes in production technology structure, changes in final demand scale,<sup>\*22</sup> changes in final demand inter-item structure, and changes in final demand merchandise composition.

### (1) Comparisons with 2009

An examination of changes in production technology structure and changes in final demand found that the degree of contribution to growth rate associated with the change in production technology structure decreased by 0.66% while that associated with the change in final demand increased by 5.64%.

Among factors contributing to changes in final demand, changes in final demand scale (with the degree of contribution to growth rate increased by 4.23%) contributed the most to the 2010 domestic production value, followed by the change in final demand inter-item structure (with its contribution increased by 0.85%) and the change in final demand merchandise composition (with its contribution increased by 0.56%) (Table 4-1).

		2010		2010		
		Difference in value (billion yen)		Degree of contribution to growth rate (%		
		from 2005	from 2009	from 2005	from 2009	
Production value		-37,118	42,997	-3.9	5.0	
	Change in production technology structure	-12,607	-5,695	-1.33	-0.66	
	Change in final demand	-22,323	48,947	-2.36	5.64	
	Change in final demand scale	-23,795	36,722	-2.51	4.23	
	Change in final demand inter-item structure	-1,411	7,355	-0.15	0.85	
	Change in final demand merchandise composition	2,883	4,870	0.30	0.56	
	Confounding item	-2,187	-255	-0.23	-0.03	

Table 4-1 Factors contributing to fluctuation of production (production technology structure and changes in final demand)

Next, we examine each of the following factors contributing to changes in final demand: 1) changes in final demand inter-item structure, 2) changes in final demand merchandise composition, and 3) changes in production technology structure.

1) Changes in final demand inter-item structure

Measurement of changes in inter-item composition reveals that the degree of contribution to growth rate in consumption and investment decreased by 1.99 and 0.24%, respectively, while that in exports increased by 3.08% (Table 4-2).

<sup>\*&</sup>lt;sup>1</sup> See "annotation" regarding models used for analysis of factors contributing to fluctuation of production.

 $<sup>*^2</sup>$  These factors: changes in final demand scale, changes in final demand inter-item structure, and changes in final demand merchandise composition, are considered to jointly contribute to changes in final demand.

### 2) Changes in final demand merchandise composition

Measurement of the change in final demand merchandise indicates that the degree of contribution to growth rate in consumption, investment, and exports increased by 0.26, 0.05, and 0.25%, respectively (Table 4-2).

		20	2010		2010		
		Difference in va	lue (billion yen)	Degree of contribution	on to growth rate (%)		
		from 2005	from 2009	from 2005	from 2009		
Change in final demand		-22,323	48,947	-2.36	5.64		
	Change in final demand scale	-23,795	36,722	-2.51	4.23		
	Change in final demand inter-item structure	-1,411	7,355	-0.15	0.85		
	Consumption	14,260	-17,225	1.50	-1.99		
	Investment	-35,147	-2,114	-3.71	-0.24		
	Exports	19,475	26,695	2.06	3.08		
	Change in final demand merchandise composition	2,883	4,870	0.30	0.56		
	Consumption	386	2,276	0.04	0.26		
	Investment	1,572	448	0.17	0.05		
	IExports	924	2.146	0.10	0.25		

Table 4-2. Changes in final demand

Next, we look at consumption, investment, and exports.

i) Factors contributing to fluctuation of consumption

Classifying the 2010 final demand merchandise composition in consumption (with its degree of contribution to growth rate increased by 0.26% from 2009) into goods and services shows that the degree of contribution to growth rate in goods increased by 0.34% while that in services decreased by 0.08%.

Among goods sectors, the degree of contribution to growth rate in "primary products" decreased by 0.01%, that in "manufactured products" increased by 0.37%, and that in "construction" decreased by 0.02%. In addition, a breakdown of "manufactured products" showed that the degree of contribution to growth rate in "processed and assembled products" increased by 0.38% while that in two other subsectors decreased.

Among service sectors, the degree of contribution to growth rate in "finance and real estate" and "other services" decreased by 0.33 and 0.10%, respectively, while that in three other sectors increased (Table 4-3).

		Consumption					
		20	10	2010			
		Difference in va	lue (billion yen)	Degree of contribution to growth rate (%)			
		from 2005	from 2009	from 2005	from 2009		
To	tal	386	2,276	0.04	0.26		
	Goods	-1,444	2,970	-0.15	0.34		
	Primary products	-377	-100	-0.04	-0.01		
	Manufacturing products	-1,060	3,207	-0.11	0.37		
	Raw material products	-1,215	-88	-0.13	-0.01		
	Processed and assembled products	1,604	3,334	0.17	0.38		
	Other products	-1,448	-40	-0.15	0.00		
	Construction	-7	-137	0.00	-0.02		
	Services	1,830	-694	0.19	-0.08		
	Commerce	-2,054	1,269	-0.22	0.15		
	Finance and real estate	-1,000	-2,824	-0.11	-0.33		
	Transport and information and communications	6,128	1,654	0.65	0.19		
	Public services	1,167	77	0.12	0.01		
	Other services	-2,412	-870	-0.25	-0.10		

Table 4-3. Changes in merchandise composition related to consumption

ii) Factors contributing to fluctuation of investment

Categorizing the change in final demand merchandise composition in investment (with degree of contribution to growth rate increased by 0.05%) into goods and services shows that the degree of contribution to growth rate associated with goods increased by 0.19% while that associated with services decreased by 0.14%.

Among goods sectors, the degree of contribution to growth rate in "primary products" increased by 0.27% while that in "manufactured products" and "construction" decreased by 0.04%. In addition, a breakdown of "manufactured products" reveals that the degree of contribution to growth rate in "other products" increased by 0.07% while that in two other subsectors decreased.

Among service sectors, the degree of contribution to growth rate in "commerce" stayed nearly level (0.00% increase) while that in all other sectors decreased (Table 4-4).

		Investment					
		20	10	2010			
		Difference in va	lue (billion yen)	Degree of contribution to growth rate (%)			
		from 2005	from 2009	from 2005	from 2009		
Γot	tal	1,572	448	0.17	0.05		
	Goods	587	1,681	0.06	0.19		
	Primary products	-2,521	2,365	-0.27	0.27		
	Manufacturing products	7,171	-341	0.76	-0.04		
	Raw material products	1,171	-240	0.12	-0.03		
	Processed and assembled products	6,667	-676	0.70	-0.08		
	Other products	-666	575	-0.07	0.07		
	Construction	-4,064	-342	-0.43	-0.04		
	Services	985	-1,233	0.10	-0.14		
	Commerce	-2,114	6	-0.22	0.00		
	Finance and real estate	-62	-72	-0.01	-0.01		
	Transport and information and communications	2,019	-917	0.21	-0.11		
	Public services	480	-90	0.05	-0.01		
	Other services	663	-160	0.07	-0.02		

Table 4-4. Changes in merchandise structure associated with investment

iii) Factors contributing to fluctuation of exports

Classifying the change in final demand merchandise composition in exports (with the degree of contribution to growth rate increased by 0.25%) into goods and services illustrates that the degree of contribution to growth rate in goods increased by 0.39% while that in services decreased by 0.14%.

Among goods sectors, the degree of contribution to growth rate in "manufactured products" increased by 0.39%; in addition, a breakdown of "manufactured products" reveals that the degree of contribution to growth rate in "raw material products" decreased by 0.04%, that in "processed and assembled products" increased by 0.46%, and that in "other products" decreased by 0.03%.

Among service sectors, the degree of contribution to growth rate in "public services" increased by 0.01% while that in all other sectors decreased (Table 4-5).

	Exports				
	20	10	2010		
	Difference in va	lue (billion yen)	Degree of contribution to growth rate (%)		
	from 2005	from 2009	from 2005	from 2009	
Total	924	2,146	0.10	0.25	
Goods	2,478	3,344	0.26	0.39	
Primary products	18	-25	0.00	0.00	
Manufacturing products	2,452	3,372	0.26	0.39	
Raw material products	2,064	-334	0.22	-0.04	
Processed and assembled products	437	4,002	0.05	0.46	
Other products	-49	-296	-0.01	-0.03	
Construction	7	-3	0.00	0.00	
Services	-1,553	-1,198	-0.16	-0.14	
Commerce	-413	-22	-0.04	0.00	
Finance and real estate	-358	-235	-0.04	-0.03	
Transport and information and communications	-1,177	-818	-0.12	-0.09	
Public services	175	47	0.02	0.01	
Other services	219	-171	0.02	-0.02	

Table 4-5. Changes in merchandise composition associated with imports

3) Changes in production technology structure

Categorizing the change in production technology structure (with the degree of contribution to growth rate decreased by 0.66%) into goods and services reveals that the degree of contribution to growth rate in goods increased by 0.40% while that in services decreased by 1.06%.

Among goods sectors, the degree of contribution to growth rate in "primary products" decreased by 0.02%, that in "manufactured products" increased by 0.38%, and that in "construction" increased by 0.03%. In addition, a breakdown of "manufactured products" indicated that the degree of contribution to growth rate in all its subsectors increased.

Among service sectors, the degree of contribution to growth rate in all sectors decreased, including "finance and real estate," with a 0.44% decrease (Table 4-6).

	Change	Change in production technology structure					
	20	10	2010				
	Difference in va	due (billion yen)	Degree of contribution to growth rate (%)				
	from 2005	from 2009	from 2005	from 2009			
Total	-12,607	-5,695	-1.33	-0.66			
Goods	-5,931	3,474	-0.63	0.40			
Primary products	-93	-152	-0.01	-0.02			
Manufacturing products	-5,801	3,340	-0.61	0.38			
Raw material produ	cts -5,525	2,095	-0.58	0.24			
Processed and assembled prod	ucts -338	1,148	-0.04	0.13			
Other products	63	97	0.01	0.01			
Construction	-38	286	0.00	0.03			
Services	-6,676	-9,169	-0.70	-1.06			
Commerce	-6,133	-473	-0.65	-0.05			
Finance and real estate	-4,498	-3,797	-0.47	-0.44			
Transport and information and communica	tions 1,052	-2,367	0.11	-0.27			
Public services	864	-499	0.09	-0.06			
Other services	2.039	-2.032	0.22	-0.23			

Table 4-6. Changes in production technology structure

#### (2) Comparisons with 2005

The degree of contribution to growth rate associated with change in production technology structure decreased by 1.33% and that associated with the change in final demand decreased by 2.36%.

Of factors contributing to the change in final demand, the change in final demand scale (with the degree of contribution to growth rate decreased by 2.51%) contributed the most to the reduction in the 2010 domestic production value, followed by the change in final demand inter-item structure (degree of contribution decreased by 0.15%) (Table 4-1).

Next, we examine each of the following factors contributing to changes in final demand: 1) changes in final demand inter-item structure, 2) changes in final demand merchandise composition, and 3) changes in production technology structure.

#### 1) Changes in final demand inter-item structure

Categorizing the change in final demand inter-item structure into consumption, investment, and exports reveals that the degree of contribution to growth rate in consumption increased by 1.50%, that in investment decreased by 3.71%, and that in exports increased by 2.06% (Table 4-2).

### 2) Changes in final demand merchandise composition

Classifying the change in final demand merchandise composition into consumption, investment, and imports shows that the degree of contribution to growth rate in consumption, investment, and imports increased by 0.04, 0.17, and 0.10%, respectively (Table 4-2).

Next, we look at consumption, investment, and imports by sector.

### i) Factors contributing to fluctuation of consumption

Categorizing the change in final demand merchandise composition associated with consumption (with the degree of contribution to growth rate decreased by 0.04%) into goods and services shows that the degree of consumption to growth rate in goods decreased by 0.15% while that in services increased by 0.19%.

Among goods sectors, the degree of contribution to growth rate in "primary products," "manufactured products," and "construction" decreased by 0.04, 0.11, and 0.00%, respectively. In addition, a breakdown of "manufactured products" illustrates that the degree of contribution to growth rate in "processed and assembled products" increased by 0.17% while that in two other subsectors decreased.

Among service sectors, the degree of contribution to growth rate in "transport / information and communications" and "public services" increased by 0.65 and 0.12%, respectively, while that of other sectors decreased (Table 4-3).

### ii) Factors contributing to fluctuation of investment

Categorizing final demand merchandise composition in investment (with the degree of contribution to growth rate increased by 0.17%) into goods and services shows that the degree of contribution to growth rate in goods increased by 0.06% and that in services increased by 0.10%.

Among goods sectors, the degree of contribution to growth rate in "primary products" decreased by 0.27%, that in "manufactured products" increased by 0.76%, and that in "construction" decreased by 0.43%. In addition, a breakdown of "manufactured products" reveals that the degree of contribution to growth rate in "other products" decreased by 0.07% while that in other subsectors increased.

Among service sectors, the degree of contribution to growth rate in "commerce" and "finance and real estate" decreased by 0.22 and 0.01%, respectively, while that of other sectors increased (Table 4-4).

### iii) Factors contributing to fluctuation of exports

Classifying the change in final demand merchandise composition in exports (with the

degree of contribution of growth rate increased by 0.10%) into goods and services shows that the degree of contribution to growth rate in goods increased by 0.26% while that in services decreased by 0.16%.

Among goods sectors, the degree of contribution to growth rate in "manufactured products" increased by 0.26%; in addition, a breakdown of "manufactured products" illustrates that the degree of contribution to growth rate in "other products" decreased by 0.01% while that of other sectors increased.

Among service sectors, the degree of contribution to growth rate in "public services" and "other services" increased by 0.02% while that of other sectors decreased (Table 4-5).

### 3) Changes in production technology structure

Classifying the change in production technology structure (with the degree of contribution to growth rate decreased by 1.33%) into goods and services reveals that the degree of contribution to growth rate in goods decreased by 0.63% and that in services also decreased by 0.70%.

Among goods sectors, the degree of contribution to growth rate in "primary products," "manufactured products," and "construction" decreased by 0.01, 0.61, and 0.00%, respectively. In addition, a breakdown of "manufactured products" illustrates that the degree of contribution to growth rate in "other products" increased by 0.01% while that in other subsectors decreased.

Among service sectors, the degree of contribution to growth rate in "commerce" and "finance and real estate" decreased by 0.65 and 0.27%, respectively, while that of other sectors increased (Table 4-6).