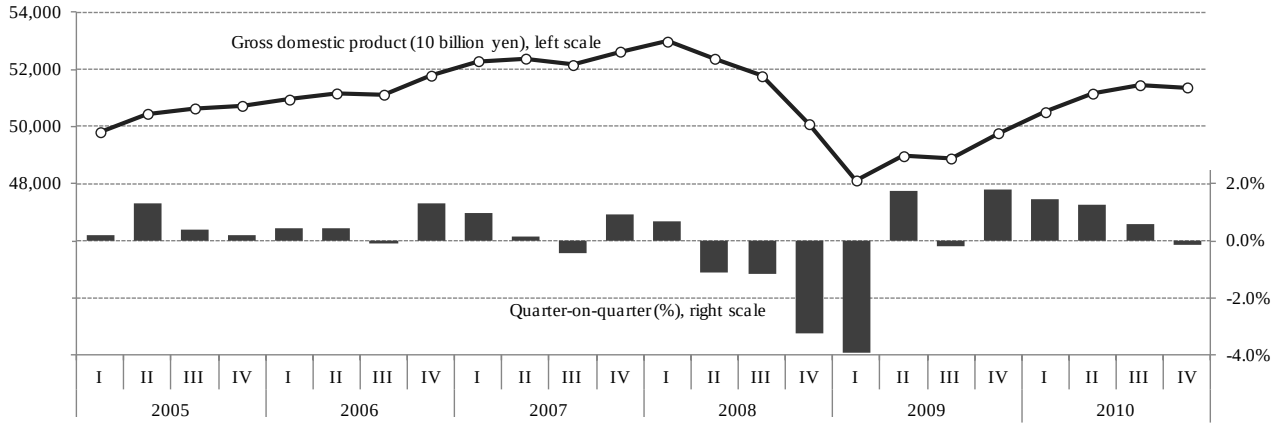
# II. Analysis using Updated Input-Output Tables

## 1. Changes in industrial structure of Japan's economy under the global economic recession following the Lehman Shock

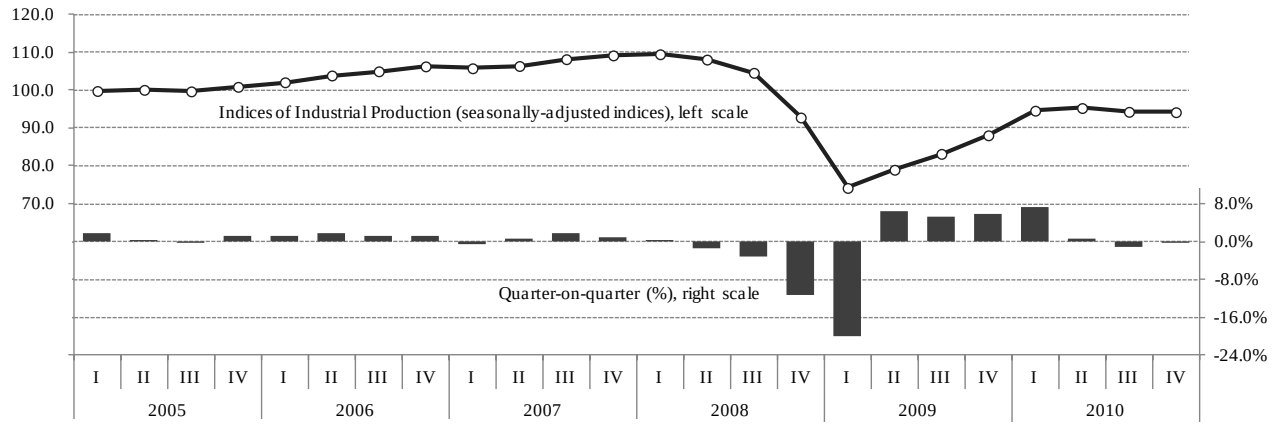
Under the influence of the once-in-a-century global economic recession following the Lehman Shock, Japan also suffered from a sharp economic downturn from the second half of 2008 to the first half of 2009. Although the trend turned to a recovery in the second half of 2009, major economic indicators across the board resulted in showing economic downturn for the full year of 2009, indicating gross domestic product (real) in the National Accounts of 471.1387 trillion yen, down 6.0% compared with the previous year, and the index of industrial production of 81.1 (2005=100.0 original index), 21.9% down compared with the previous year. (Chart 1, Chart 2)

Chart 1 Changes in gross domestic product (real, seasonally-adjusted values)




Source: "Annual Report on National Accounts" (Cabinet Office)

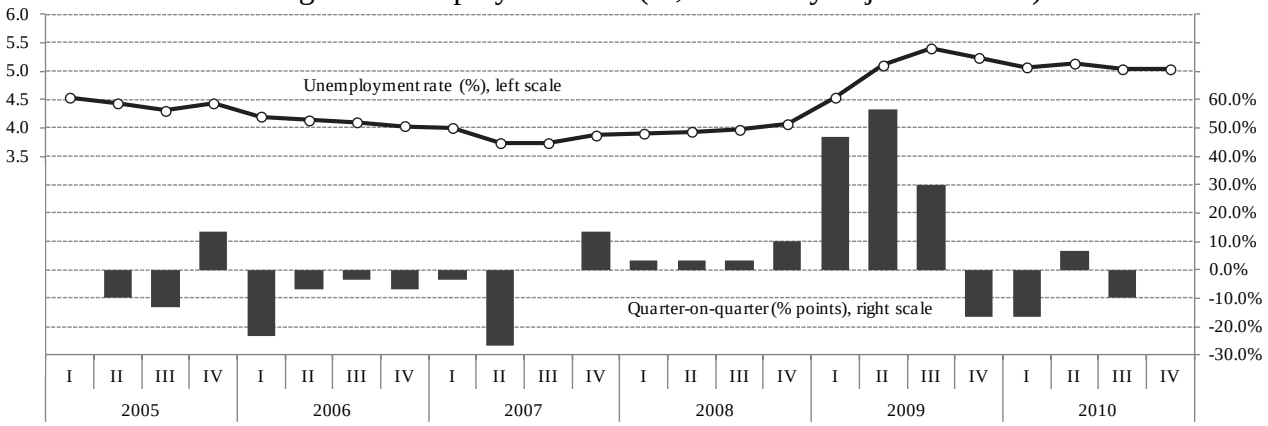
Chart 2 Changes in indices of industrial production (2005=100.0 seasonally-adjusted indices)




Source: "Indices of Industrial Production"

Reflecting these influences, the unemployment rate in 2009 was 5.1%, a substantial increase of 1.1% points from the 4.0% seen in the previous year. (Chart 3)

Chart 2 Changes in unemployment rate (%, seasonally-adjusted values)




Source: "Labour Force Survey" (Ministry of Internal Affairs and Communications)

Therefore, the changes in Japan's industrial structure through the huge, once-in-a-century global economic recession are analyzed, mainly by using the Updated Input-Output Tables (the 2010 Simple Updated Tables and the 2009 Updated Tables) compiled this time.

(1) Changes in domestic production

The total amount of domestic production (real) in the 2009 Updated Tables substantially decreased by 79.0979 trillion yen compared with the previous year (946.6855 trillion yen) to 867.5876 trillion yen (down 8.4%).

This was because the Japanese economy, despite the turn to a recovery trend seen in the second half of 2009, was deeply impacted by the damage to export demand, which had supported the economy until then. Such damage was a result of the global decline in consumption, the super-strong yen stemming from financial uncertainty, and other factors—all effects of the global financial crisis and economic recession triggered by the Lehman Shock, which occurred in 2008.

—Passenger motor cars made the largest contribution to the decline in domestic production—

Looking at the domestic production in the basic sector classification, "passenger motor cars" made the largest contribution to the decline in domestic production. This may have been caused by a significant decrease in exports, which had served as the engine of economic recovery, influenced by the global economic recession due to a rapid economic downturn in the first half of the year, although the economy was on the track to recovery partly due to the effects of policy measures, such as tax reductions and subsidies for eco-friendly car purchases in the second half of the year.

In addition, as a result of the decline in the domestic production of passenger motor cars, closely related sectors, including "motor vehicle parts and accessories" (third), "other electronic components" (fourth), and "internal combustion engines for motor vehicles and parts" (fifth) belonged in the upper rankings of sectors which made a large contribution to decline.

Following this, "wholesale trade" (second) made a large contribution to decline in domestic production. This may have been caused by the decrease in the distribution of products as a result of the decline in domestic production mainly in the manufacturing industry.

On the other hand, looking at the sectors which increased in terms of domestic production, “retail trade” saw the largest contribution to the increase. This was because “wholesale trade” declined substantially, while “retail trade,” mainly domestic, decreased only slightly due to the effect of a series of government economic stimulus measures, such as the eco-point system for home electric appliances and housing, and tax reductions and subsidies for eco-friendly car purchases, as well as a rise in the margin ratio compared with the previous year.

Other sectors which made a large contribution were in the service sectors, such as “financial services (imputed interest), private,” “public construction of roads,” “public administration (local),” and “medical service (non-profit foundations, etc.).” Domestic demand related industries which are relatively unaffected by economic fluctuations, such as public administration, public construction and medical services, belonged in the upper rankings of sectors which made a large contribution to an increase. Only 97 out of 518 sectors increased in domestic production in total. (Table 1)

Table 1 Sectors increased or decreased in domestic production (real) in the basic sector classification (in order of contribution ratio)

| | Ranking | Sector | | Domestic production (100 million yen) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 2008 | 2009 | | | 2010 | |
| | | | | Production amount | Production amount | Year-on-year | Contribution ratio | Production amount | Year-on-year |
| **Total amount of domestic production** | | | | 9,466,855 | 8,675,876 | - 8.4% | | 9,105,845 | 5.0% |
| **Sectors contributed to decline** | 1 | 3511011 | Passenger motor cars | 178,124 | 111,955 | - 37.1% | - 0.6989% | 143,937 | 28.6% |
| | 2 | 6111011 | Wholesale trade | 604,373 | 546,053 | - 9.6% | - 0.6160% | 565,725 | 3.6% |
| | 3 | 3541031 | Motor vehicle parts and accessories | 207,355 | 149,289 | - 28.0% | - 0.6134% | 195,774 | 31.1% |
| | 4 | 3421099 | Other electronic components | 98,732 | 72,810 | - 26.3% | - 0.2738% | 91,671 | 25.9% |
| | 5 | 3541021 | Internal combustion engines for motor vehicles and parts | 62,677 | 43,573 | - 30.5% | - 0.2018% | 56,143 | 28.8% |
| | 6 | 4111021 | Residential construction (non-wooden) | 77,200 | 59,834 | - 22.5% | - 0.1834% | 59,229 | - 1.0% |
| | 7 | 3521011 | Trucks, buses and other cars | 35,890 | 18,974 | - 47.1% | - 0.1787% | 26,663 | 40.5% |
| | 8 | 3021011 | Machinery and equipment for construction and mining | 28,260 | 12,453 | - 55.9% | - 0.1670% | 20,213 | 62.3% |
| | 9 | 5111001 | Electricity | 161,670 | 145,993 | - 9.7% | - 0.1656% | 159,069 | 9.0% |
| | 10 | 8222011 | Research and development (intra-enterprise) | 120,148 | 105,948 | - 11.8% | - 0.1500% | 102,316 | - 3.4% |
| **Sectors contributed to increase** | 1 | 6112011 | Retail trade | 329,413 | 358,007 | 8.7% | 0.3020% | 374,260 | 4.5% |
| | 2 | 6211012 | Financial service (imputed interest), private | 152,105 | 170,103 | 11.8% | 0.1901% | 144,047 | - 15.3% |
| | 3 | 4131011 | Public construction of roads | 63,500 | 73,210 | 15.3% | 0.1026% | 67,023 | - 8.5% |
| | 4 | 8112011 | Public administration (local) ** | 165,707 | 173,435 | 4.7% | 0.0816% | 171,722 | - 1.0% |
| | 5 | 8311021 | Medical service (non-profit foundations, etc.) | 79,583 | 84,785 | 6.5% | 0.0549% | 87,000 | 2.6% |
| | 6 | 8611031 | Amusement and recreation facilities | 40,867 | 45,683 | 11.8% | 0.0509% | 42,929 | - 6.0% |
| | 7 | 8519031 | Civil engineering and construction services | 37,812 | 41,919 | 10.9% | 0.0434% | 35,991 | - 14.1% |
| | 8 | 3622011 | Aircrafts | 8,214 | 11,966 | 45.7% | 0.0396% | 8,728 | - 27.1% |
| | 9 | 2061011 | Medicaments | 76,419 | 79,652 | 4.2% | 0.0341% | 81,511 | 2.3% |
| | 10 | 6422011 | House rent (imputed house rent) | 473,411 | 476,577 | 0.7% | 0.0334% | 465,822 | - 2.3% |

—Manufacturing sectors made a large contribution to changes in domestic production—

Looking at this in the 53-sector classifications, manufacturing sectors contributed to a decline in total domestic production in 2009, resulting in a decline in the composition ratio of manufacturing sectors. However, the sector showed a large contribution to the increase in the total domestic production in 2010, with a clear movement of recovering from the economic recession.

On the other hand, service sectors showed a relatively stable movement compared with the largely fluctuating manufacturing industry. In 2009, the composition ratio of service sectors to the total domestic production rose due to a decline in domestic production of the manufacturing industry. In 2010, although recovery of manufacturing industry resulted in a decline in the composition ratio of

many service sectors, the composition ratio to the total domestic production as a whole was on an upward trend, showing progress toward a service-oriented production structure.

As for commerce, construction, and finance and insurance, the composition ratios to total domestic production were on a downward trend, mainly due to the trend of distribution cost reduction, prolonged impacts of the global economic recession, and the effects of financial uncertainty. (Chart 4, Chart 5)

Chart 4 Contribution ratio to year-on-year growth rate of domestic production (real) by sector (53 sectors)

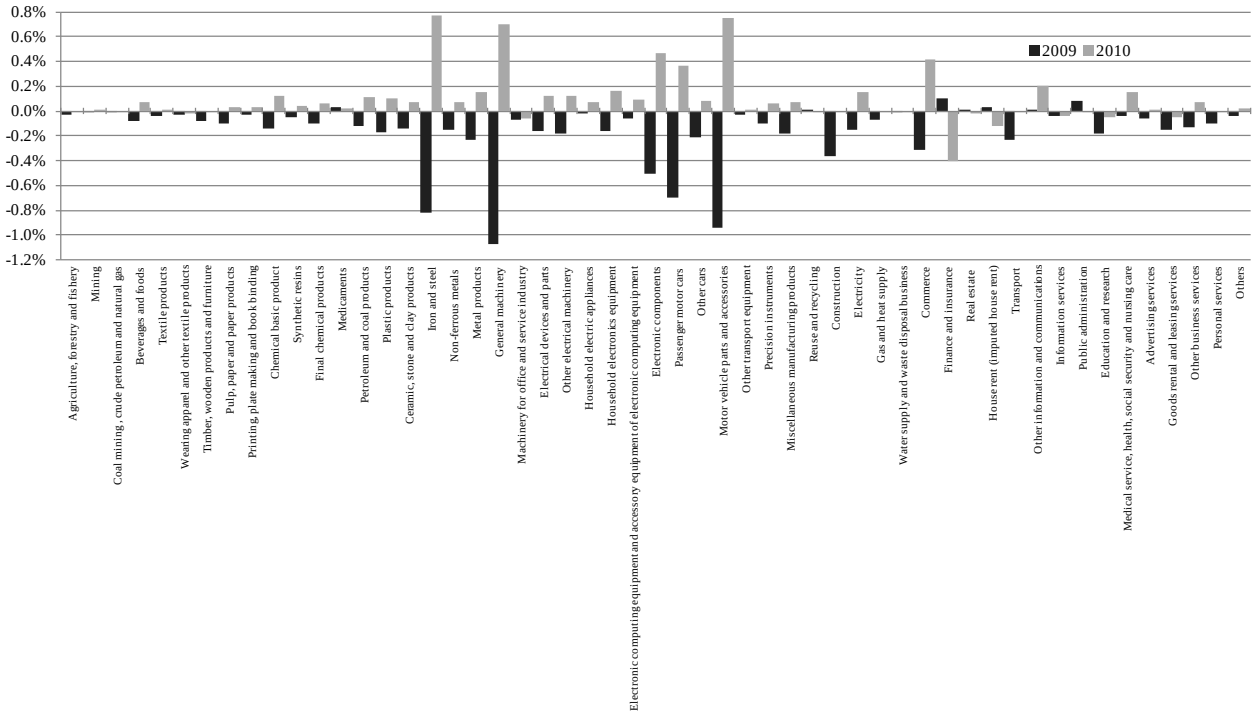
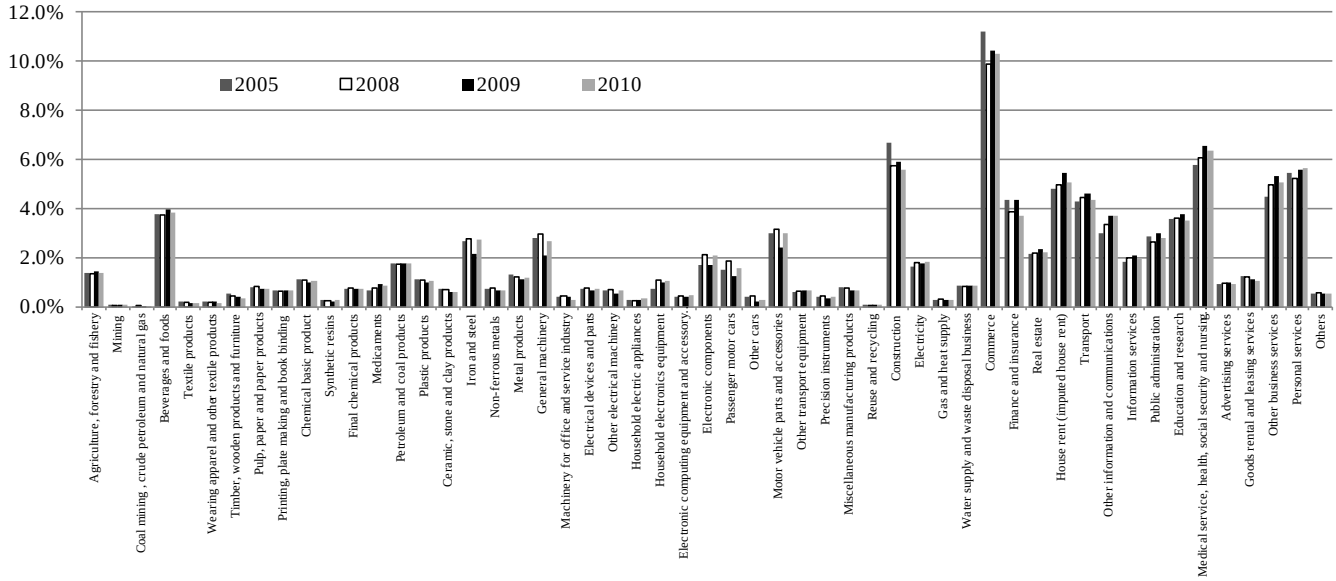
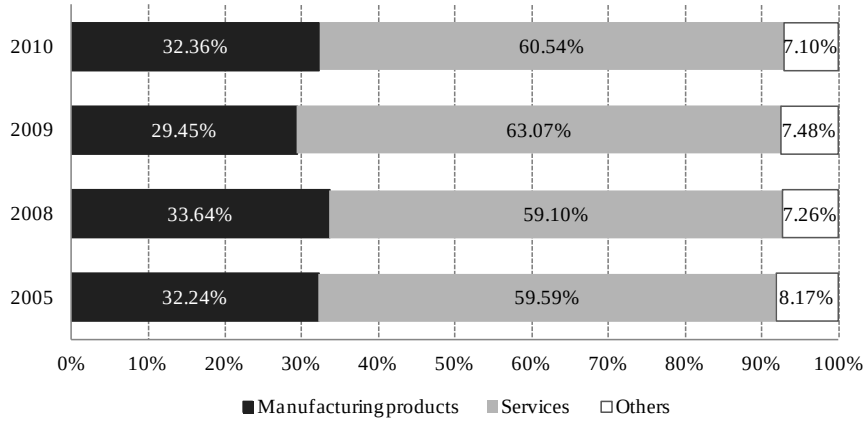


Chart 5 Changes in composition ratio of domestic production (real) by sector (53 sectors)




In this way, amid declining domestic production in 2009 due to the global economic recession following the Lehman Shock, ongoing progress toward a service-oriented industry structure was seen to accelerate temporarily. (Chart 6)

Chart 6 Composition ratio of domestic production (real)




Notes) Manufacturing products: 04 Beverages and Foods – 34 Reuse and recycling in the 53-sector classifications
Services: 36 Electricity – 53 Others in the 53-sector classifications
Others: 01 Agriculture, forestry and fishery – 03 Coal mining, crude petroleum and natural gas, and 35 Construction in the 53-sector classification

(2) Changes in demand structure

Next, the total amount of total demand (real) in the 2009 Updated Tables decreased by 89.1296 trillion yen compared with the previous year (1,022.9977 trillion yen) to 933.8681 trillion yen (down 8.7%).

Separating domestic demand and exports (foreign demand) reveals that the total amount of domestic demand (real) decreased by 66.8886 trillion yen compared with the previous year (935.9121 trillion yen) to 869.0235 trillion yen (down 7.1%), while the total amount of exports (real) decreased

by 22.2411 trillion yen compared with the previous year (87.0857 trillion yen) to 64.8445 trillion yen (down 25.5%).

—Motor vehicle parts and accessories, steel products, and other sectors contributed to the decline in domestic demand—

Looking at this in the 80 sector classifications, the intermediate goods manufacturing sectors, such as “motor vehicle parts and accessories,” “steel products,” and “other electronic components,” made a large contribution to the decline in domestic demand, affected by the decrease in domestic production of final demand goods in terms of domestic demand.

In contrast, the sectors which made a large contribution to increase in domestic demand were the same as those which made a large contribution to increase in domestic production, including public constructions, medical services, and public administration. (Table 2)

Table 2 Sector increase/decrease in terms of domestic demand (real) by sector
(80 sectors, in order of contribution ratio)

| | Ranking | Sector | | Domestic demand (100 million yen) | | | | Domestic demand ratio | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 2008 | 2009 | | | 2008 | 2009 | |
| | | | | Transaction values | Transaction values | Year-on-year | Contribution ratio | | | Point margin |
| **Total amount of domestic demand** | | | | 9,359,121 | 8,690,235 | - 7.1% | | 91.5% | 93.1% | 1.6% |
| **Contribution to a decline** | 1 | 52 | Motor vehicle parts and accessories | 269,411 | 185,083 | - 31.3% | - 0.9010% | 86.4% | 84.8% | - 1.6% |
| | 2 | 39 | Special industrial machinery | 98,829 | 55,813 | - 43.5% | - 0.4596% | 63.0% | 64.8% | 1.8% |
| | 3 | 31 | Steel products | 117,284 | 76,977 | - 34.4% | - 0.4307% | 79.6% | 75.3% | - 4.3% |
| | 4 | 57 | Building construction and Repair of construction | 353,605 | 314,211 | - 11.1% | - 0.4209% | 100.0% | 100.0% | 0.0% |
| | 5 | 49 | Other electronic components | 117,126 | 87,451 | - 25.3% | - 0.3171% | 78.4% | 78.5% | 0.2% |
| **Contribution to an increase** | 1 | 58 | Public construction | 129,093 | 141,114 | 9.3% | 0.1284% | 100.0% | 100.0% | 0.0% |
| | 2 | 64 | Finance and insurance | 369,911 | 379,195 | 2.5% | 0.0992% | 98.2% | 98.7% | 0.5% |
| | 3 | 73 | Public administration | 253,103 | 260,523 | 2.9% | 0.0793% | 100.0% | 100.0% | 0.0% |
| | 4 | 21 | Medicaments | 84,125 | 87,665 | 4.2% | 0.0378% | 95.7% | 95.5% | - 0.2% |
| | 5 | 66 | House rent (imputed house rent) | 473,411 | 476,577 | 0.7% | 0.0338% | 100.0% | 100.0% | 0.0% |

—Passenger motor cars, special industrial machinery, and other sectors contributed to the decline in exports—

As for exports: “passenger motor cars” declined in terms of global consumption due to the Lehman Shock; the processed and assembled product sectors, including “special industrial machinery” (machinery and equipment for construction and mining, semiconductor making equipment, etc.), declined in terms of capital investment demand; “commerce” declined in terms of wholesale trade as a result of a decrease in good exports; and other sectors made a large contribution to the decline in exports.

As for the sectors which made a large contribution to increase, intermediate goods manufacturing sectors, such as “organic chemical products (except petrochemical basic products)” (styrene monomer, other aliphatic intermediates, etc.), “petrochemical basic products” (ethylene, propylene), and “pig iron and crude steel,” belonged in the upper rankings. (Table 3)

Table 3 Sector increase/decrease in terms of exports (real) by sector
(80 sectors, in order of contribution ratio)

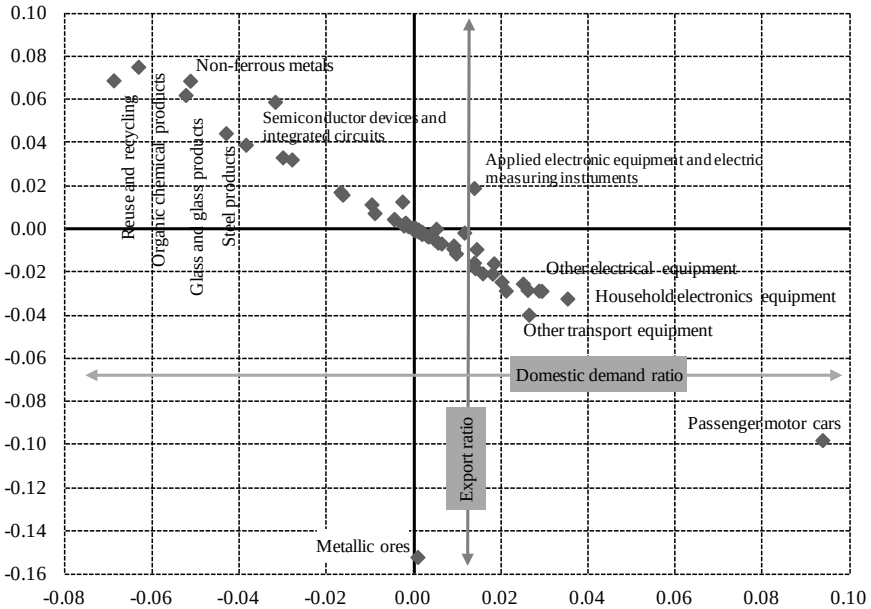
| | Ranking | Sector | | Exports (100 million yen) | | | | Export ratio | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 2008 | 2009 | | | 2008 | 2009 | |
| | | | | Transaction values | Transaction values | Year-on-year | Contribution ratio | | | Point margin |
| **Total amount of exports** | | | | 870,857 | 648,445 | - 25.5% | | 9.2% | 7.5% | - 1.7% |
| **Contribution to a decline** | 1 | 50 | Passenger motor cars | 107,675 | 56,714 | - 47.3% | - 5.8518% | 60.4% | 50.7% | - 9.8% |
| | 2 | 39 | Special industrial machinery | 58,162 | 30,340 | - 47.8% | - 3.1947% | 40.9% | 39.3% | - 1.6% |
| | 3 | 63 | Commerce | 99,068 | 73,016 | - 26.3% | - 2.9916% | 10.6% | 8.1% | - 2.5% |
| | 4 | 67 | Transport | 61,977 | 47,441 | - 23.5% | - 1.6692% | 14.7% | 11.9% | - 2.8% |
| | 5 | 52 | Motor vehicle parts and accessories | 42,378 | 33,253 | - 21.5% | - 1.0479% | 14.1% | 15.7% | 1.6% |
| **Contribution to an increase** | 1 | 17 | Organic chemical products (except petrochemical basic products) | 14,524 | 15,810 | 8.9% | 0.1477% | 29.0% | 36.5% | 7.5% |
| | 2 | 16 | Petrochemical basic products | 3,380 | 4,352 | 28.8% | 0.1116% | 12.1% | 16.0% | 3.9% |
| | 3 | 56 | Reuse and recycling | 1,932 | 2,856 | 47.8% | 0.1060% | 26.3% | 33.2% | 6.9% |
| | 4 | 30 | Pig iron and crude steel | 902 | 1,675 | 85.6% | 0.0887% | 1.1% | 2.9% | 1.7% |
| | 5 | 21 | Medicaments | 3,758 | 4,124 | 9.7% | 0.0420% | 4.9% | 5.2% | 0.3% |

—Demand structures of raw material products and processed and assembled products differ—

Looking at the domestic demand ratio (domestic demand/total demand) and export ratio (exports/domestic production) shows that intermediate goods manufacturing sectors, such as “reuse and recycling,” “organic chemical products,” “glass and glass products,” “steel products,” and “semiconductor devices and integrated circuits,” decreased in terms of the domestic demand ratio but increased in terms of the export ratio.

In contrast, final consumption goods manufacturing sectors, including “passenger motor cars,” “other electrical equipment,” and “household electronics equipment,” increased in terms of domestic demand ratio but decreased in terms of export ratio. (Chart 7)

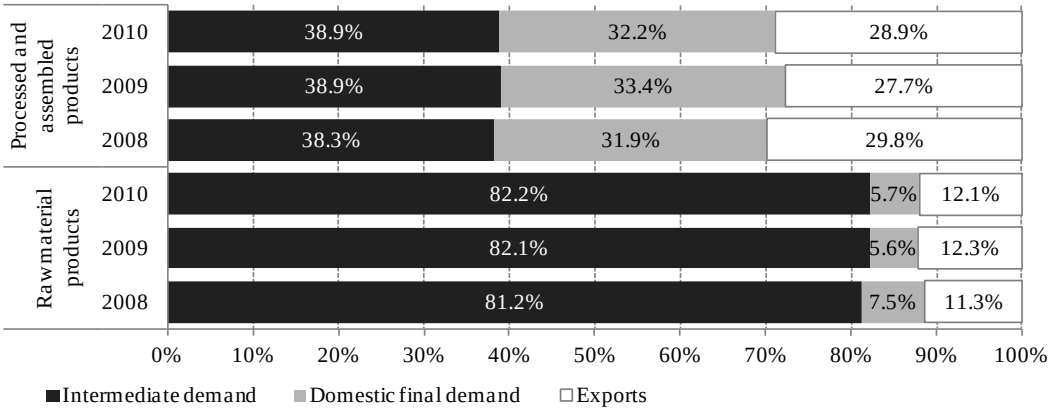
Chart 7 Relationship between the domestic demand ratio and the export ratio (unit: % points)
(differences between 2009 and the previous year; 80 sectors)



Looking at demand composition by “raw material products” and “processed and assembled products” reveals that, amid the increasing intermediate demand ratio of both “raw material products” and “processed and assembled products,” “processed and assembled products” increased in terms of dependence on domestic demand due to a drop in the export ratio as a result of a rise in the domestic final demand ratio, while “raw material products” increased in terms of dependence on foreign demand due to a drop in the domestic final demand ratio as a result of a rise in the export ratio, resulting in contrasting changes in demand composition.

In 2010, moving into a recovery phase from economic recession following the Lehman Shock on a global basis resulted in a rise in the export ratio of “processed and assembled products,” while no substantial change was caused in the composition ratio of “raw material products.” (Chart 8)

Chart 8 Comparison with demand compositions (real) of raw material products and of processed and assembled products




Notes) Raw material products: 5 Textile products, 7 Timber, wooden products and furniture, 8 Pulp, paper, paperboard, building paper, 10 Chemical basic product, 11 Synthetic resins, and 14- Petroleum and coal products – 19 Metal products in the 53-sector classifications
Processed and assembled products: 20 General machinery – 32 Precision instruments in the 53-sector classifications

Next, looking at domestic final demand shows that the total amount of consumption expenditure (private) (real) decreased by 1.5928 trillion yen compared with the previous year (278.0777 trillion yen) to 276.4849 trillion yen (down 0.6%). As for gross domestic fixed capital formation, the total amount of gross domestic fixed capital formation (private + public) (real) in the 2009 Updated Tables decreased by 11.0344 trillion yen compared with the previous year (108.4978 trillion yen) to 97.4635 trillion yen (down 10.2%).

—Passenger motor cars contributed to a decline in consumption expenditure (private)—

Looking at this in the 80-sector classifications reveals that, although “passenger motor cars” made the largest contribution to decline in consumption expenditure (private), the sector increased in terms of consumption expenditure (private) ratio, by 4.9% points compared with the previous year. This is assumed to be due to government support in the form of economic stimulus measures such as tax reductions and subsidies for eco-friendly car purchases.

These effects, including the eco-point system for home electric appliances, in addition to the switch to terrestrial digital broadcasting, show that “radio and television sets” (in the basic sector classification base) made the second largest contribution to the increase in consumption expenditure (private).

The sectors which made a large contribution to the decline in consumption expenditure (private) were “personal services” and “finance and insurance.”

On the other hand, as for the sectors which contributed to the increase in consumption expenditure (private), as a result of a favorable recovery of domestic demand compared with foreign demand partly due to the effects of the government economic stimulus measures, sectors such as the following belonged in the upper rankings: “commerce,” of which “retail trade” made the largest contribution to increase in consumption expenditure (private) in the basic sector classification base; “image information, character information production and distribution,” which increased in terms of the number of works due to the recovering popularity of Japanese films; and “communication.” (Table 4)

Table 4 Sector increase/decrease in terms of consumption expenditure (private) (real) by sector
(80 sectors, in order of contribution ratio)

| | Ranking | Sector | | Consumption expenditure (private) (100 million yen) | | | | Consumption expenditure (private) ratio | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 2008 | 2009 | | | 2008 | 2009 | |
| | | | | Transaction values | Transaction values | Year-on-year | Contribution ratio | | | Point margin |
| **Total amount of consumption expenditure (private)** | | | | 2,780,777 | 2,764,849 | - 0.6% | | 27.2% | 29.6% | 2.4% |
| **Contribution to a decline** | 1 | 50 | Passenger motor cars | 43,361 | 32,904 | - 24.1% | - 0.3760% | 23.4% | 28.3% | 4.9% |
| | 2 | 79 | Personal services | 383,943 | 375,853 | - 2.1% | - 0.2909% | 74.4% | 74.7% | 0.3% |
| | 3 | 64 | Finance and insurance | 111,895 | 106,355 | - 5.0% | - 0.1993% | 29.7% | 27.7% | - 2.0% |
| | 4 | 74 | Education and research | 75,763 | 70,330 | - 7.2% | - 0.1954% | 21.6% | 21.0% | - 0.5% |
| | 5 | 05 | Foods and tobacco | 201,908 | 197,006 | - 2.4% | - 0.1763% | 62.9% | 63.0% | 0.1% |
| **Contribution to an increase** | 1 | 63 | Commerce | 415,755 | 436,378 | 5.0% | 0.7416% | 44.0% | 47.7% | 3.7% |
| | 2 | 72 | Image information, character information production and distribution | 13,890 | 18,119 | 30.4% | 0.1521% | 18.1% | 24.2% | 6.1% |
| | 3 | 68 | Communication | 85,541 | 88,938 | 4.0% | 0.1222% | 47.5% | 48.9% | 1.4% |
| | 4 | 66 | House rent (imputed house rent) | 473,026 | 476,197 | 0.7% | 0.1140% | 99.9% | 99.9% | 0.0% |
| | 5 | 69 | Broadcasting | 13,146 | 16,031 | 21.9% | 0.1037% | 34.3% | 42.0% | 7.7% |

—Special industrial machinery, general industrial machinery, and other sectors contributed to the decline in gross domestic fixed capital formation—

Sectors such as “special industrial machinery” and “general industrial machinery” made a large contribution to the decline in gross domestic fixed capital formation, due to a decrease in “building construction and repair of construction” (residential construction, non-residential construction) and capital investment in the manufacturing industries.

On the other hand, sectors including “public construction,” “non-ferrous metal products,” and “transport” made a large contribution to an increase in gross domestic fixed capital formation. (Table 5)

Table 5 Sector increase/decrease in gross domestic fixed capital formation amounts (real) by sector (80 sectors, in order of contribution ratio)

| | Ranking | Sector | | Gross domestic fixed capital formation amounts (100 million yen) | | | | Gross domestic fixed capital formation ratio | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 2008 | 2009 | | | 2008 | 2009 | |
| | | | | Transaction values | Transaction values | Year-on-year | Contribution ratio | | | Point margin |
| **Total amount of gross domestic fixed capital formation** | | | | 1,084,978 | 974,635 | - 10.2% | | 10.6% | 10.4% | - 0.2% |
| **Contribution to a decline** | 1 | 57 | Building construction and Repair of construction | 264,872 | 229,166 | - 13.5% | - 3.2909% | 74.9% | 72.9% | - 2.0% |
| | 2 | 39 | Special industrial machinery | 66,028 | 43,399 | - 34.3% | - 2.0856% | 42.1% | 50.4% | 8.3% |
| | 3 | 38 | General industrial machinery | 47,990 | 37,597 | - 21.7% | - 0.9579% | 42.6% | 44.9% | 2.2% |
| | 4 | 51 | Other cars | 17,255 | 9,824 | - 43.1% | - 0.6849% | 39.8% | 42.9% | 3.1% |
| | 5 | 59 | Other civil engineering and construction | 65,149 | 58,148 | - 10.7% | - 0.6452% | 100.0% | 100.0% | 0.0% |
| **Contribution to an increase** | 1 | 58 | Public construction | 129,093 | 141,114 | 9.3% | 1.1079% | 100.0% | 100.0% | 0.0% |
| | 2 | 35 | Non-ferrous metal products | 4,322 | 5,043 | 16.7% | 0.0664% | 7.2% | 10.7% | 3.5% |
| | 3 | 67 | Transport | 9,327 | 9,656 | 3.5% | 0.0303% | 2.0% | 2.2% | 0.2% |
| | 4 | 01 | Agriculture, forestry and fishery | 2,161 | 2,458 | 13.7% | 0.0274% | 1.4% | 1.7% | 0.2% |
| | 5 | 07 | Textile products | 950 | 999 | 5.2% | 0.0045% | 4.3% | 5.5% | 1.2% |

Notes) Gross domestic fixed capital formation = Gross domestic fixed capital formation (public) + Gross domestic fixed capital formation (private)
Capital formation ratio = Gross domestic fixed capital formation amounts/Total demand

—the ratio of consumption expenditure (private) was on an upward trend—

Looking at the consumption expenditure (private) ratio (consumption expenditure (private)/total demand) and the capital formation ratio (gross domestic fixed capital formation amounts (private + public)/total demand) in the 53 sector classifications shows that the increases in the consumption expenditure (private) ratio and the capital formation ratio of “passenger motor cars,” and the increase in the capital formation ratio of “general machinery” expanded.

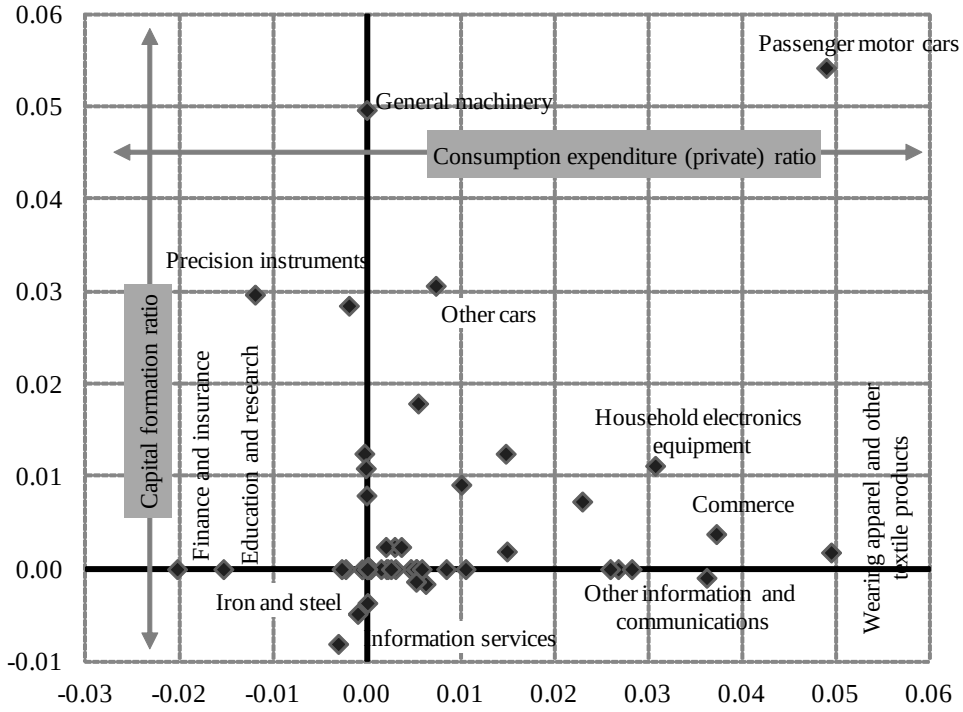
This was because exports decreased greatly, although both consumption expenditure (private) and gross domestic fixed capital formation amounts declined.

As for “wearing apparel and other textile products,” amid declining exports, the consumption expenditure (private) ratio increased due to an increase in the consumption expenditure (private) of “knitted apparel” and other sectors. (Chart 9)

Chart 9 Relationship between consumption expenditure (private) ratio and capital formation ratio

(Unit: % points)

(Differences between 2009 and the previous year, 80 sectors)




Notes) Consumption expenditure (private) ratio = Consumption expenditure (private)/Total demand

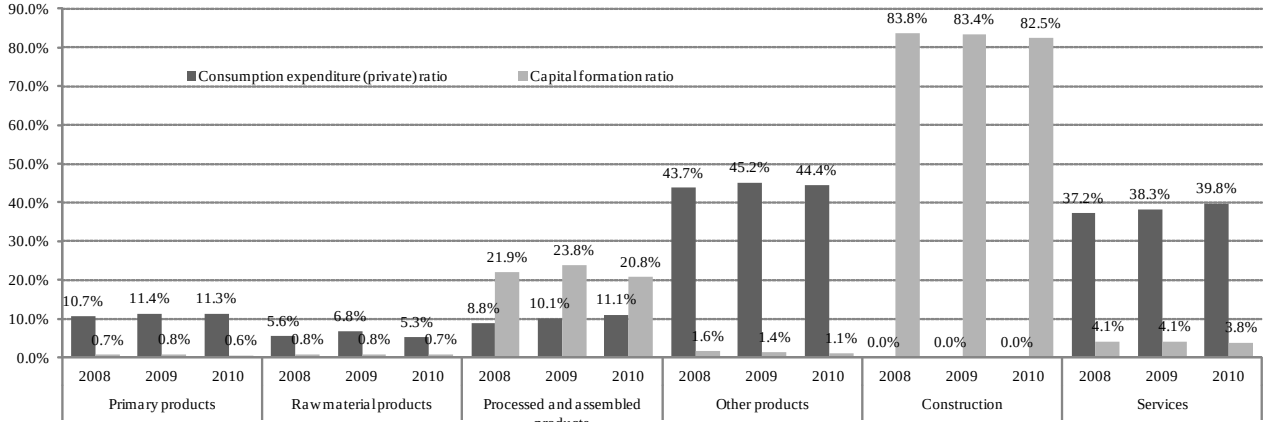
Capital formation ratio = Gross domestic fixed capital formation amounts/Total demand

Looking at these by goods and services, the consumption expenditure (private) ratio increased for all goods and services in 2009, and also increased for “processed and assembled products” and “services” in 2010, thus the ratio of the total demand was on a trend of expansion.

As for the capital formation ratio, in contradiction to the movement of exports, “processed and assembled products” increased in 2009, when exports substantially declined, but the sector turned to decline in 2010 when exports turned to recovery.

The capital formation ratio of “other products” and “construction” was on a downward trend. This was because demand for the public construction-related sector was brisk. However, residential and non-residential construction substantially decreased in 2009, and although residential and non-residential construction turned to increase, the public construction-related sector turned to decline in 2010, resulting in a relative decline in the capital formation ratio. (Chart 10)

Chart 10 Comparison with consumption expenditure (private) ratio and capital formation ratio




Notes) Consumption expenditure (private) ratio = Consumption expenditure (private)/Total demand
Capital formation ratio = Gross domestic fixed capital formation amounts/Total demand

Looking at the status of intermediate demand, the total amount of intermediate demand (real) in the 2009 Updated Tables decreased by 46.6227 trillion yen compared with the previous year (453.7695 trillion yen) to 407.1469 trillion yen (down 10.3%).

—Motor vehicle parts and accessories, steel products, and other sectors contributed to the decline in intermediate demand—

Looking at this in the 80 sector classification reveals that “motor vehicle parts and accessories,” “steel products,” and “other electronic components” made a large contribution to the decline in intermediate demand.

On the other hand, sectors such as “finance and insurance,” “other transport equipment,” and “medicaments” made a large contribution to the increase in intermediate demand.

“Other transport equipment” increased as a result of an increase in parts due to an increase in domestic products of “aircraft,” and an increase in internal combustion engines for vessels, etc. (Table 6)

Table 6 Sector increase/decrease in terms of intermediate demand (real) by sector
(80 sectors, in order of contribution ratio)

| | Ranking | Sector | | Intermediate demand (100 million yen) | | | | Intermediate demand ratio | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 2008 | 2009 | | | 2008 | 2009 | |
| | | | | Transaction values | Transaction values | Year-on-year | Contribution ratio | | | Point margin |
| **Total amount of intermediate demand** | | | | 4,537,695 | 4,071,469 | - 10.3% | | 44.4% | 43.6% | - 0.7% |
| **Contribution to a decline** | 1 | 52 | Motor vehicle parts and accessories | 268,029 | 186,228 | - 30.5% | - 1.8027% | 86.0% | 85.3% | - 0.7% |
| | 2 | 31 | Steel products | 116,116 | 79,981 | - 31.1% | - 0.7963% | 78.8% | 78.2% | - 0.6% |
| | 3 | 49 | Other electronic components | 115,136 | 88,185 | - 23.4% | - 0.5939% | 77.0% | 79.2% | 2.2% |
| | 4 | 63 | Commerce | 305,583 | 283,210 | - 7.3% | - 0.4930% | 32.3% | 31.0% | - 1.4% |
| | 5 | 30 | Pig iron and crude steel | 82,419 | 62,096 | - 24.7% | - 0.4479% | 99.0% | 102.7% | 3.8% |
| **Contribution to an increase** | 1 | 64 | Finance and insurance | 258,014 | 272,838 | 5.7% | 0.3267% | 68.5% | 71.0% | 2.5% |
| | 2 | 53 | Other transport equipment | 28,901 | 31,573 | 9.2% | 0.0589% | 37.9% | 44.1% | 6.2% |
| | 3 | 21 | Medicaments | 76,180 | 78,615 | 3.2% | 0.0537% | 86.7% | 85.6% | - 1.0% |
| | 4 | 70 | Information services | 85,605 | 86,006 | 0.5% | 0.0088% | 44.2% | 45.4% | 1.2% |
| | 5 | 14 | Chemical fertilizer | 3,301 | 3,681 | 11.5% | 0.0084% | 73.8% | 98.8% | 25.0% |

(3) Changes in import structure

Looking at the status of imports, the total amount of imports (real) in the 2009 Updated Tables decreased by 10.0317 trillion yen compared with the previous year (76.3123 trillion yen) to 66.2805 trillion yen (down 13.1%).

—Coal mining, crude petroleum and natural gas made the largest contribution to the decline in exports—

Looking at this in the 80 sector classification reveals that "coal mining, crude petroleum and natural gas" made the largest contribution to decline in exports, due to a substantial decline in the direct combustion of crude oil for power generation. The sectors which made a large contribution to decline were "semiconductor devices and integrated circuits" due to a substantial decline in integrated circuits, and "non-ferrous metals."

Meanwhile, the sectors which made a large contribution to the increase in imports include "household electronics equipment" as a result of an increase in imports of radio and television sets with brisk demand for flat-screen televisions mainly due to the eco-point system for home electric appliances, and cellular phones, "medicaments," and "wearing apparel and other textile products." (Table 7)

Table 7 Sector increase/decrease in terms of exports (real) by sector
(80 sectors, in order of contribution ratio)

| | Ranking | Sector | | Imports (100 million yen) | | | | Import ratio | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 2008 | 2009 | | | 2008 | 2009 | |
| | | | | Transaction values | Transaction values | Year-on-year | Contribution ratio | | | Point margin |
| **Total amount of imports** | | | | 763,123 | 662,805 | - 13.1% | | 8.2% | 7.6% | - 0.5% |
| **Contribution to a decline** | 1 | 04 | Coal mining , crude petroleum and natural gas | 136,115 | 121,748 | - 10.6% | - 1.8827% | 99.0% | 98.9% | - 0.1% |
| | 2 | 48 | Semiconductor devices and Integrated circuits | 33,615 | 27,512 | - 18.2% | - 0.7997% | 65.3% | 71.5% | 6.3% |
| | 3 | 34 | Non-ferrous metals | 20,210 | 14,274 | - 29.4% | - 0.7778% | 56.9% | 55.1% | - 1.9% |
| | 4 | 39 | Special industrial machinery | 14,802 | 8,977 | - 39.4% | - 0.7633% | 15.0% | 16.1% | 1.1% |
| | 5 | 52 | Motor vehicle parts and accessories | 10,746 | 6,097 | - 43.3% | - 0.6093% | 4.0% | 3.3% | - 0.7% |
| **Contribution to an increase** | 1 | 46 | Household electronics equipment | 18,028 | 19,520 | 8.3% | 0.1956% | 19.3% | 22.7% | 3.4% |
| | 2 | 21 | Medicaments | 11,465 | 12,137 | 5.9% | 0.0881% | 13.6% | 13.8% | 0.2% |
| | 3 | 08 | Wearing apparel and other textile products | 31,422 | 31,699 | 0.9% | 0.0363% | 62.0% | 65.7% | 3.6% |
| | 4 | 11 | Pulp, paper, paperboard, building paper | 3,008 | 3,234 | 7.5% | 0.0296% | 6.8% | 8.4% | 1.6% |
| | 5 | 06 | Beverage | 4,496 | 4,641 | 3.2% | 0.0190% | 5.4% | 5.7% | 0.3% |

* Imports = (Deducted) imports (ordinary trade) + (Deducted) imports (special trade) + (Deducted) imports (direct purchase) + (Deducted) customs duties + (Deducted) import commodity taxes

Import ratio = Imports/Domestic demand

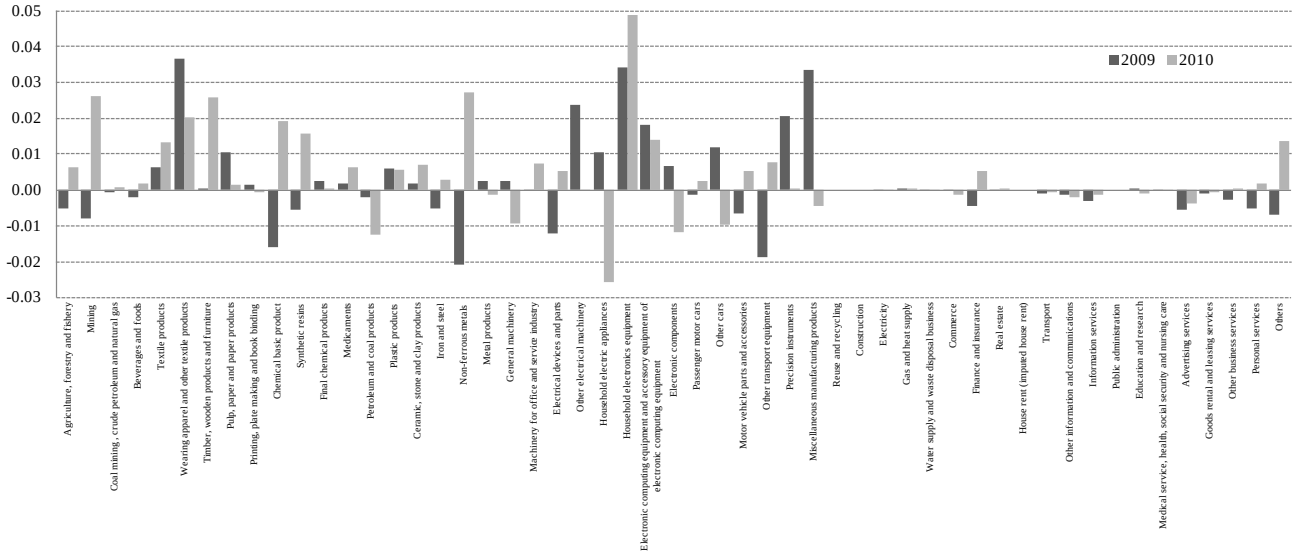
—The import ratio of household electronic equipment increased in 2009 and 2010—

Looking at the import ratio (imports/domestic demands) shows that the import ratios of manufacturing industries, including "other cars," "household electronics equipment," and "pulp, paper and processed paper products," increased in 2009.

In 2010, the import ratios of manufacturing industries increased in "household electronics equipment" and other sectors, with an increase in imports of "radio and television sets" due to demand associated with the eco-point system for home electric appliances and the switch to terrestrial digital broadcasting, and an increase in imports for the chemical industry and the iron and

steel industry due to an increase in demand associated with a recovery of domestic production activities. (Chart 11)

Chart 11 Differences compared to the previous year in terms of export ratio by sector
(53 sectors, unit: % points)




(4) Change factor of domestic production

—Changes in domestic production significantly influenced by specific sectors in manufacturing industries—

The status of changes in the demand structure by demand item has been shown. Now, how these changes influence domestic production in the 53 sector classification is shown here:

[1] Characteristics of changes in domestic production

It was shown that the factors of contribution to changes in domestic production in 2009 and 2010 were manufacturing industries, which were considered to be sensitive to the economy.

These factors were characterized by a large contribution of specific manufacturing sectors, such as “passenger motor cars” and “general machinery,” which produce final consumption goods, and “motor vehicle parts and accessories,” and “iron and steel,” which produce intermediate goods.

[2] Characteristics of changes by demand item

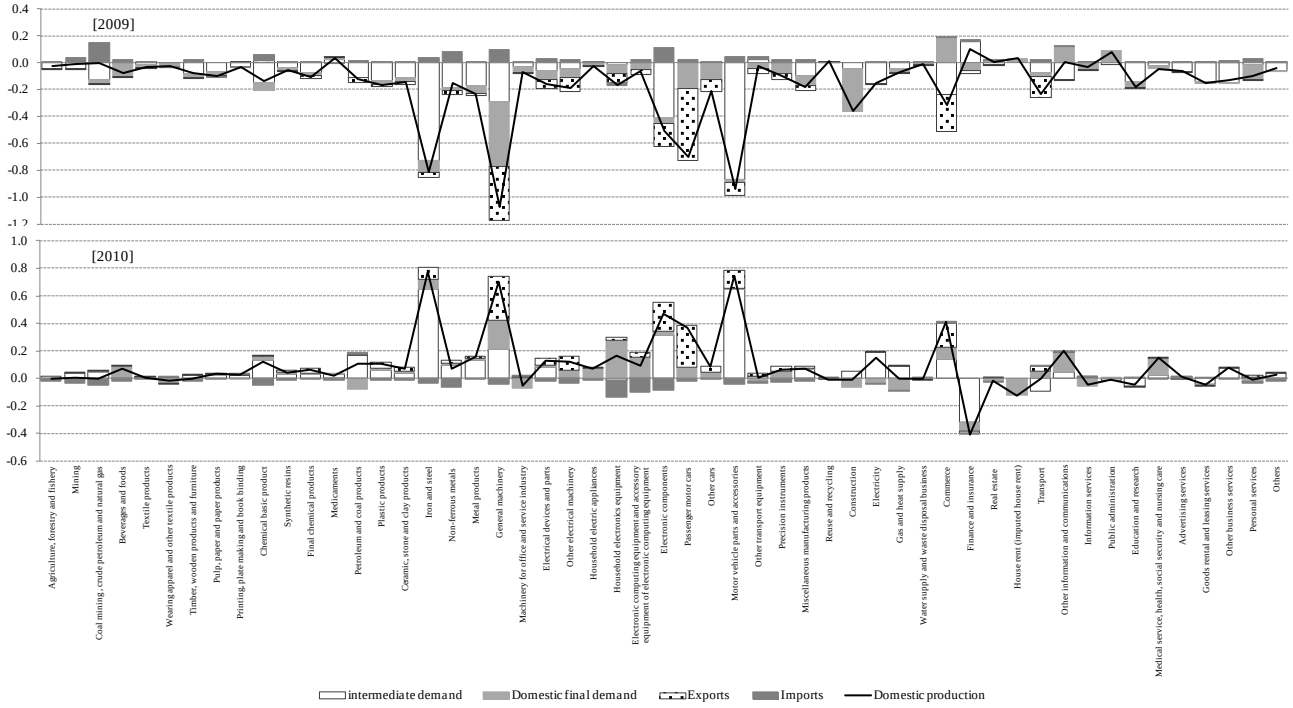
“Passenger motor cars” and “general machinery,” which produce final consumption goods, were characterized by a significant influence from exports.

It was shown that “motor vehicle parts and accessories” and “iron and steel,” which produce intermediate goods, had a large contribution to intermediate demand, and were affected by consecutive changes in the domestic production of relevant “passenger motor cars” and “general machinery.”

In addition, the following characteristics were seen: an increase in imports of information and communication equipment, such as “household electronics equipment” (radio and television sets, etc.) and “electronic computing equipment and accessory equipment of electronic computing equipment,” due to demand associated with the eco-point system for home electric appliances and

the switch to terrestrial digital broadcasting became a factor of stagnant domestic production in 2010. (Chart 12)

Chart 12 Contribution ratio to year-on-year growth rate of domestic production by demand item by sector (53 sectors, unit: %)




(5) Changes in value added structure

The total amount of gross value-added values (real) in the 2009 Updated Tables decreased by 32.4752 trillion yen compared with the previous year (492.9159 trillion yen) to 460.4407 trillion yen (down 6.6%).

—Motor vehicle parts and accessories, steel products, and other sectors contributed to decline in value added values—

Looking at this in the 80 sector classification reveals that sectors that decreased in terms of domestic production, such as the following, made a large contribution to decline in gross value-added values: “motor vehicle parts and accessories,” with a substantial decrease especially in motor vehicle parts and accessories affected by a decrease in domestic production of passenger motor cars; “special industrial machinery,” including machinery and equipment for construction and mining, and semiconductor making equipment; and “commerce.”

Similarly, sectors which made a large contribution to the increase in domestic production made a large contribution to increase in gross value-added values, including “public construction,” “communication,” and “finance and insurance.” (Table 8)

Table 8 Sector increase/decrease in terms of gross value-added values (real) by sector
(80 sectors, in order of contribution ratio)

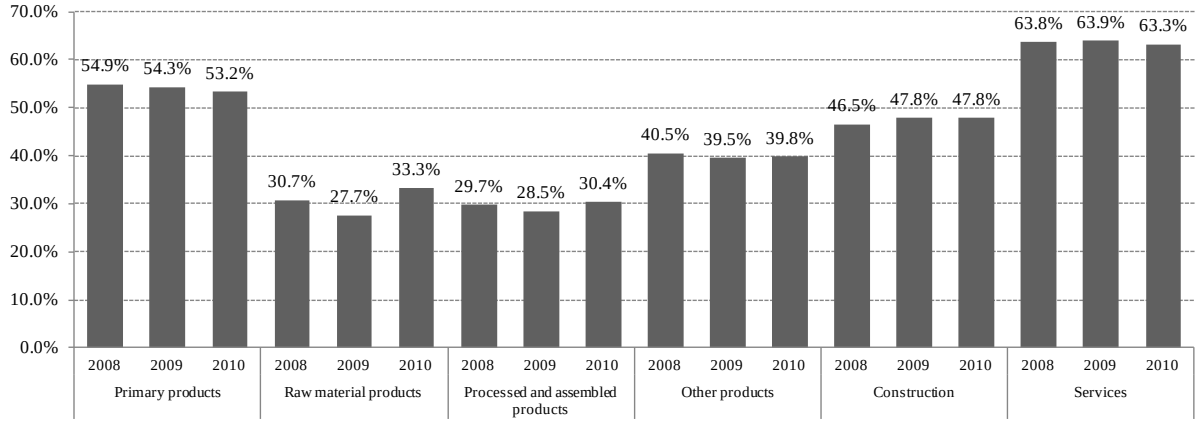
| | Ranking | Sector | | Gross value-added values (100 million yen) | | | | Gross value-added rate | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 2008 | 2009 | | | 2008 | 2009 | |
| | | | | Transaction values | Transaction values | Year-on-year | Contribution ratio | | | Point margin |
| **Total amount of gross value added** | | | | 4,929,159 | 4,604,407 | - 6.6% | | 52.1% | 53.1% | 1.0% |
| **Contribution to a decline** | 1 | 52 | Motor vehicle parts and accessories | 69,954 | 36,556 | - 47.7% | - 0.6775% | 23.2% | 17.2% | - 6.0% |
| | 2 | 39 | Special industrial machinery | 52,871 | 28,040 | - 47.0% | - 0.5037% | 37.2% | 36.3% | - 0.9% |
| | 3 | 63 | Commerce | 623,177 | 606,507 | - 2.7% | - 0.3382% | 66.7% | 67.1% | 0.4% |
| | 4 | 57 | Building construction and Repair of construction | 164,998 | 149,671 | - 9.3% | - 0.3110% | 46.7% | 47.6% | 1.0% |
| | 5 | 49 | Other electronic components | 41,846 | 28,228 | - 32.5% | - 0.2763% | 31.6% | 28.6% | - 3.0% |
| **Contribution to an increase** | 1 | 58 | Public construction | 59,979 | 68,137 | 13.6% | 0.1655% | 46.5% | 48.3% | 1.8% |
| | 2 | 68 | Communication | 113,920 | 120,758 | 6.0% | 0.1387% | 63.7% | 66.8% | 3.1% |
| | 3 | 64 | Finance and insurance | 230,825 | 236,404 | 2.4% | 0.1132% | 62.8% | 62.8% | - 0.0% |
| | 4 | 66 | House rent (imputed house rent) | 419,188 | 424,680 | 1.3% | 0.1114% | 88.5% | 89.1% | 0.6% |
| | 5 | 76 | Advertising services | 28,394 | 31,700 | 11.6% | 0.0671% | 31.2% | 37.1% | 5.9% |

Looking at the gross value-added rate (gross value added values/domestic production) shows that "primary products" were on a downward trend in terms of the gross value-added rate.

Although "raw material products," "processed and assembled products," and "other products" decreased in terms of the gross value-added rate in 2009, they turned to an increase in 2010, and moreover, "raw material products" and "processed and assembled products" indicated higher gross value-added rates than those in 2008, showing a brisk recovery from the economic recession following the Lehman Shock.

The gross value-added rate of "services" showed little change in 2009; however, it turned to a decline due to a decrease in the gross value-added rate associated with a decline in domestic production of "finance and insurance" in 2010. (Chart 13)

Chart 13 Comparison of gross value-added rate (by goods and service, unit: %)




(6) Changes in the intermediate input structure

—Changes in the input structure of passenger motor cars and radio and television sets—

The status of changes in domestic production, demand, and gross added value were shown above, and now, finally, intermediate input is addressed.

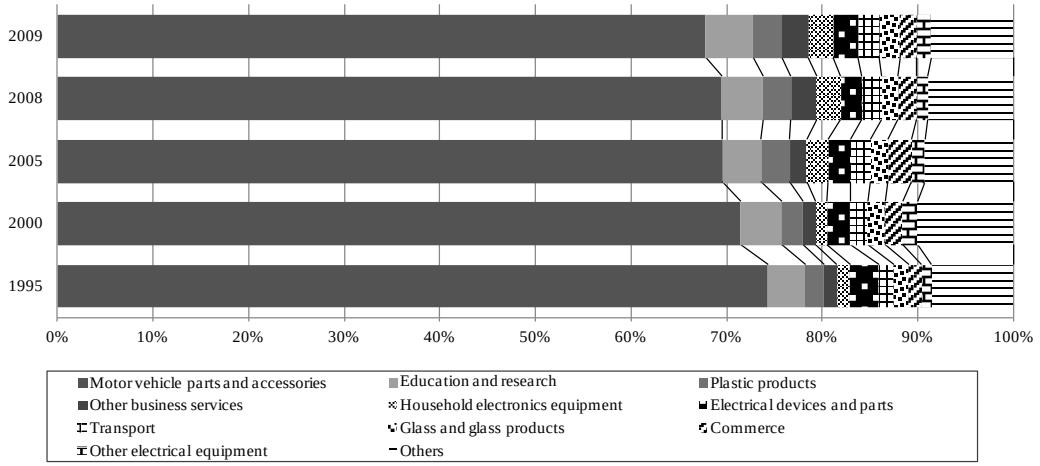
Here, changes in intermediate input structure over the slightly long term were shown, taking up

"passenger motor cars," which had the most influence on production activities in 2009, and "radio and television sets," which was in a good condition due to an increase in demand associated with the eco-point system for home electric appliances and the switch to terrestrial digital broadcasting.

To begin with, looking at "passenger motor cars" reveals that "motor vehicle parts and accessories" with the highest intermediate input ratio tended to decline in terms of input ratio, while the input ratios of "plastic products," which increased in the amount used as alternatives to metal parts, and of "household electronic equipment," with a higher rate of installment of in-car televisions and car navigation systems, increased.

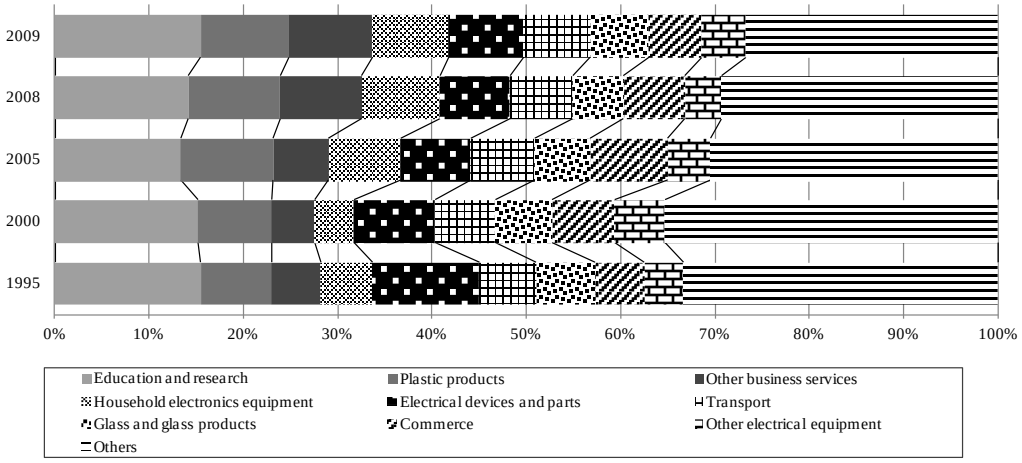
Moreover, the input ratio of "other business services," such as design development also increased. (Chart 14, Chart 15)

Chart 14 Changes in intermediate input structure of passenger motor cars
(Ratio to total intermediate sectors in the 80 sector classification)




Note: The extracted sectors were the top ten sectors of intermediate input amounts into passenger motor cars in 2009

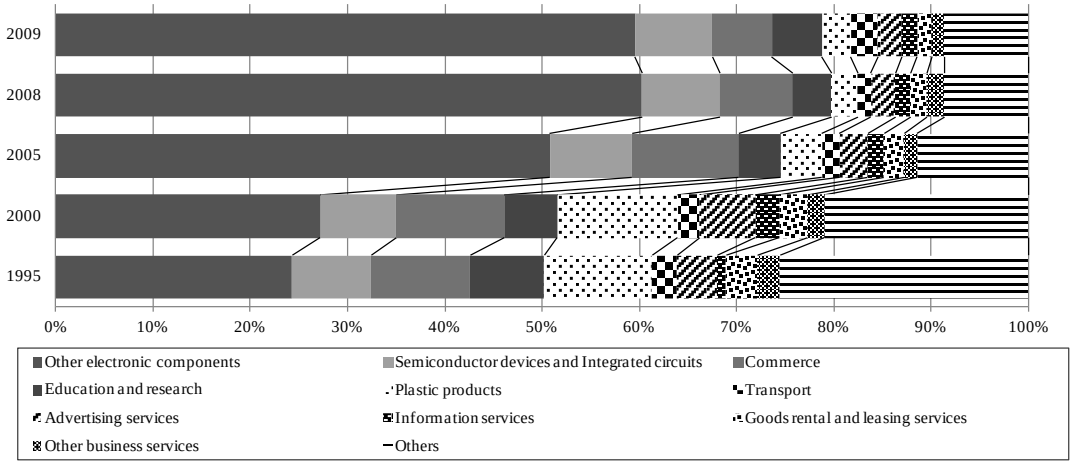
Chart 15 Change in intermediate input structure of passenger motor cars
(excluding motor vehicle parts and accessories)
(Ratio to total intermediate sectors by each of the 80 sectors
(excluding motor vehicle parts and accessories))



Next, looking at “radio and television sets” shows that the input ratio of “other electronic components” with the highest intermediate input ratio increased, as contrasted with “passenger motor cars.” This was because the inputs to “liquid crystal elements” substantially increased due to a product shift from CRT-based televisions to liquid crystal television, as well as expanding screen sizes in liquid crystal televisions.

On the other hand, “plastic products,” the input ratio of which in “passenger motor cars” increased, tended to decline in terms of input ratio due to a decrease in the amount of plastic used as outer packages associated with the shift to liquid crystal televisions (Chart 16)

Chart 16 Changes in intermediate input structure of radio and television sets




Note: The extracted sectors were the top ten sectors of intermediate input amounts into radio and television sets in 2009

(7) Conclusion

Considering the above, in 2009, domestic production substantially decreased due to the global economic recession following the Lehman Shock, and the composition of domestic production showed that the domestic production of goods centered on the manufacturing industry’s substantial decrease in particular, resulting in a temporary major advance in ongoing progress toward a service-oriented industry structure.

In 2010, the domestic production of the manufacturing industry which substantially decreased in 2009 turned to an increase, and the composition ratio of the manufacturing industry to domestic production rose, showing signs of a pickup in the domestic production of the manufacturing industry in the short term.

Looking at the demand structure, the domestic demand ratio came to increase, influenced by a substantial decrease in exports amid declining demand as a whole in 2009.

Of these, in manufacturing industries, raw material products, which mainly produce intermediate goods, increased in terms of export ratio as a result of the dependence on foreign demand affected by the decline in the domestic production of final consumption goods. On the other hand, processed and assembled products, which mainly produce final consumption goods, increased in terms of domestic demand ratio due to faster demand recovery compared with foreign demand thanks to

government economic stimulus measures, etc. This shows that there is wide variation.

In 2010, although recovery from economic recession overseas progressed, resulting in the recovery of exports and an increase in the export ratio, the pace of recovery was slower than that of domestic demand, thus the domestic demand ratio rose compared with the ratio in 2008.

Regarding domestic final demand, consumption expenditure (private) was steady, while gross domestic fixed capital formation showed a movement in contrast to exports, thus showing that the consumption expenditure (private) ratio was expanding among domestic final demand.

In this way, factors of substantial changes in domestic production from 2009 to 2010 were attributed to the movement of manufacturing industries, which were considered to be sensitive to the economy.

These factors showed that the effects of exports in sectors which produce specific final consumption goods, such as “passenger motor cars” and “general machinery,” greatly affected domestic production.

Moreover, they also showed that consecutive changes in the domestic production of “passenger motor cars” and “general machinery” influenced relative sectors which produce intermediate goods, including “motor vehicle parts and accessories” and “iron and steel.”

Furthermore, it was seen as a characteristic that the increase in imports of information and communication equipment became a factor of stagnant domestic production in 2010. Thus, reflecting the huge damage caused by the global financial crisis and economic recession following the Lehman Shock, changes in industry structure were seen in accordance with changes in demand structure, mainly centered in the manufacturing industry.