



Input-Output Statistics

2021-2022 Input-Output Statistics

November 2024

Economic Statistics Department
Bank of Korea

1. Overview

- The 2021-2022 Input-Output Statistics are compiled at current prices based on the 2020 benchmark, using mainly the modified RAS method.
- The 2021-2022 Input-Output Statistics include the input-output tables, as well as employment tables.

2. Total Supply and Demand from the Input-Output Tables

- The total supply (total demand) of goods and services in 2022 amounted to 6,808.2 trillion won (at producer's prices).
 - Domestic output accounted for 84.0% of this total supply, and imports for 16.0%. The share of domestic output was 2.0%p lower than the 86.0% figure for 2021.
 - About 50.4% of the total supply was used as intermediate goods for domestic production, while 34.1% was used to meet domestic final demand and the remaining 15.5% was exported.
- The share of exports plus imports rose by 2.7%p, from 28.8% in 2021 to 31.5% in 2022.
 - This was due mainly to rises in the prices of raw materials including crude oil and LNG, as well as to an increase in export and import volumes.

Total Supply and Demand¹⁾

Unit: trillion won, %

	Total Supply		=	Total Demand				Exports and Imports (A + D)
	Domestic Output	Imports (A)		Domestic Demand (B+C)	Intermediate Demand (B)	Final Demand		
						Domestic ²⁾ (C)	Exports (D)	
2020	4,557.2 (87.3)	663.9 (12.7)	5,221.2 (100.0)	4,503.6 (86.3)	2,521.0 (48.3)	1,982.6 (38.0)	717.6 (13.7)	1,381.5 (26.4)
2021 (E)	5,118.5 (86.0)	829.7 (14.0)	5,948.2 (100.0)	5,069.0 (85.2)	2,922.0 (49.1)	2,147.0 (36.1)	879.2 (14.8)	1,708.9 (28.8)
2022 (F)	5,722.2 (84.0)	1,086.0 (16.0)	6,808.2 (100.0)	5,750.7 (84.5)	3,427.0 (50.4)	2,323.7 (34.1)	1,057.5 (15.5)	2,143.5 (31.5)
Changes in shares in total supply (F-E, %p)	<-2.0>	<2.0>		<-0.7>	<1.3>	<-2.0>	<0.7>	<2.7>

Notes: 1) The figures in parentheses represent the shares of total supply (total demand)

2) Final Domestic Demand consists of consumption and investment

3. Industrial Structure

- Services accounted for 46.8% of total domestic output and 65.1% of total value added, and manufactured goods for 42.8% and 26.2% respectively.
 - The ratios of manufactured goods to total output and to value added rose by 1.3%p and fell by 0.1%p, respectively, compared to 2021, while the proportions of services fell by 1.4%p and rose by 1.0%p, respectively.
- The composition of value added decreased by 1.0%p in the electricity, gas, and water supply, waste management category.
 - The composition of value added increased in services, primarily driven by transportation and food services and accommodation

Composition of Domestic Output and Value Added, by Commodity

Unit: %

	Composition of Output			Composition of Value Added		
	2020	2021	2022	2020	2021	2022
Agricultural, forest, and fishery products	1.4	1.5	1.3	1.6	1.7	1.5
Mined and quarried products	0.1	0.1	0.1	0.1	0.1	0.1
Manufactured goods	40.2	41.5	42.8	26.0	26.3	26.2
Consumer goods	6.2	6.1	6.0	3.6	3.3	3.4
Basic materials	14.4	16.1	17.3	8.8	9.8	9.7
Assembled and processed products	18.0	17.9	17.8	11.7	11.4	11.3
Manufacturing services, repair services of industrial equipment	1.6	1.5	1.7	1.8	1.7	2.0
Electricity, gas, and water supply, waste management	2.8	2.8	3.2	2.5	2.0	1.0
Construction	6.2	5.9	5.8	6.2	5.9	6.1
Services	49.3	48.2	46.8	63.8	64.1	65.1
Wholesale and retail trade, transportation	10.9	10.9	10.8	12.3	12.6	13.1
Producer services	22.0	21.6	20.4	30.6	30.9	30.4
Social services	10.4	10.1	9.7	15.7	15.5	15.9
Consumer services	6.0	5.6	6.0	5.1	5.0	5.7
Other	0.1	0.1	0.1	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

4. Intermediate Input and Value Added

- The total value added ratio fell from 42.9% in 2021 to 40.1% in 2022. In contrast the import dependency ratio rose from 12.5% to 14.9% during this period.
- The value added ratio of manufactured goods, which have a high import dependency, declined during the period due to rising prices of imported raw materials, such as crude oil and natural gas.
- Accordingly, localization rates of intermediate inputs fell by 3.1%p from 78.2% in 2021 to 75.1% in 2022.

* Localization rate = [domestic intermediate inputs ÷ (domestic intermediate inputs + imported intermediate inputs)] × 100

Value Added Ratios, Import Dependency Ratios and Localization Rates of Intermediate Inputs

	Unit: %								
	Value Added Ratios			Import Dependency Ratio			Localization Rates of Intermediate Inputs		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Agricultural, forest, and fishery products	50.5	49.9	46.4	3.3	3.4	4.3	93.4	93.3	92.1
Mined and quarried products	41.7	38.4	36.0	0.7	0.8	0.8	98.8	98.8	98.7
Manufactured goods	28.8	27.2	24.6	19.3	21.7	24.9	72.9	70.2	67.0
Consumer goods	25.9	23.5	22.4	15.2	16.2	18.1	79.5	78.9	76.7
Basic materials	27.2	26.2	22.4	24.8	28.7	34.4	66.0	61.2	55.7
Assembled and processed products	29.1	27.4	25.3	17.7	18.8	20.1	75.0	74.1	73.1
Manufacturing services, repair services of industrial equipment	52.3	49.6	47.6	2.7	3.1	2.9	94.4	93.8	94.5
Electricity, gas, and water supply, waste management	39.9	30.0	12.7	25.4	32.8	49.6	57.8	53.2	43.2
Construction	44.6	43.2	42.3	3.5	4.3	3.9	93.8	92.5	93.3
Services	57.8	57.1	55.9	4.2	4.7	5.1	90.2	89.1	88.5
Wholesale and retail trade, transportation	50.4	49.5	49.0	6.4	7.1	8.4	87.1	86.0	83.5
Producer services	62.3	61.6	59.8	3.2	3.6	3.7	91.6	90.8	90.7
Social services	67.3	66.4	65.9	3.6	4.2	4.4	88.9	87.5	87.1
Consumer services	38.2	38.0	38.5	4.5	5.1	4.9	92.7	91.7	92.1
Other	0.0	0.0	0.0	0.1	0.1	0.1	99.9	99.9	99.9
Total	44.7	42.9	40.1	10.7	12.5	14.9	80.6	78.2	75.1

5. Final Demand

- Consumption made up 45.8% of total final demand, while investment accounted for 22.9% and exports 31.3%
 - The shares of consumption (47.1% → 45.8%) fell during the year from 2021 to 2022, while that of exports (29.1% → 31.3%) increased.

Composition of Final Demand

Unit: %

	2020	2021	2022
Consumption	49.4	47.1	45.8
Private final consumption expenditure	36.4	34.6	33.7
Government final consumption expenditure	13.0	12.5	12.1
Investment	24.0	23.9	22.9
Private fixed capital formation	19.9	19.7	18.8
Government fixed capital formation	3.8	3.5	3.1
Changes in inventories	0.4	0.7	1.0
Exports	26.6	29.1	31.3
Final demand	100.0	100.0	100.0

- Among private final consumption expenditures, the share of services fell (73.6% → 73.1%) while that of non-durable goods (15.1% → 15.4%) increased.
- The share of intellectual property products in gross fixed capital formation increased (20.5% → 21.4%), while that of facilities investment (28.1% → 27.7%) declined.

Composition of Private Final Consumption Expenditure

Unit: %

	2020	2021	2022
Durable goods	7.5	6.9	6.8
Non-durable goods	14.9	15.1	15.4
Services	73.4	73.6	73.1
Wholesale and retail trade	12.3	12.0	11.1
Food services and accommodation	10.6	10.7	11.6
Finance and insurance	7.0	7.5	7.5
Real estate services	14.9	14.4	13.3
Education services	5.4	5.3	5.3
Other services	23.2	23.7	24.3
Other	4.2	4.4	4.7
Total private final consumption	100.0	100.0	100.0

Composition of Gross Fixed Capital Formation

Unit: %

	2020	2021	2022
Facilities investment	27.8	28.1	27.7
Computing machinery, electronic equipment and optical instruments	5.0	5.0	5.0
Electrical equipment	2.0	1.7	2.1
Machinery and equipment	11.8	12.8	13.0
Transport equipment	7.3	7.1	5.9
Other facilities investment	1.7	1.5	1.7
Construction	40.7	39.3	40.6
Intellectual property products	20.2	20.5	21.4
Professional, scientific, and technical services	14.9	14.7	15.6
Other	11.2	12.1	10.4
Total gross fixed capital formation	100.0	100.0	100.0

6. Exports and Imports

- Looking at exports of goods and services in 2022, those of manufactured goods accounted for 80.8% of the total, while exports of services made up 19.0%.
 - The composition of export products showed a mixed trend, with an increase in the share of basic materials and a decrease in assembled and processed products, resulting in a 0.2%p decline in the proportion of manufactured goods.
- As to the composition of imports in 2022, manufactured goods imports held a share of 60.5% of the total, followed by mined and quarried products (25.0%) and services (12.7%).
 - The change in the composition of imports between 2021 and 2022 was significant in mined and quarried products (19.0% → 25.0%) and manufactured goods (65.7% → 60.5%).

Composition of Exports and Imports

Unit: %

	Exports			Imports		
	2020	2021	2022	2020	2021	2022
Agricultural, forest, and fishery products	0.2	0.2	0.1	1.8	1.7	1.8
Mined and quarried products	0.0	0.0	0.0	16.1	19.0	25.0
Manufactured goods	82.1	81.0	80.8	67.4	65.7	60.5
Consumer goods	4.3	3.9	3.7	12.0	11.2	10.4
Basic materials	26.4	29.0	31.6	21.7	24.0	22.6
Assembled and processed products	50.9	47.9	45.2	32.1	29.3	26.5
Manufacturing services, repair services of industrial equipment	0.5	0.3	0.3	1.5	1.2	1.1
Electricity, gas, and water supply, waste management	0.1	0.1	0.1	0.0	0.0	0.0
Construction	0.0	0.0	0.0	0.0	0.0	0.0
Services	17.6	18.7	19.0	14.7	13.5	12.7
Wholesale and retail trade, transportation	9.6	10.6	11.2	3.3	2.9	3.0
Producer services	6.8	6.8	6.5	9.0	8.2	7.4
Social services	0.1	0.1	0.1	0.4	0.3	0.3
Consumer services	1.2	1.2	1.2	2.1	2.1	2.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

7. Inter-Industry Effects

- The production requirement coefficient* inclined from 1.806 in 2021 to 1.818 in 2022.

* The production requirement coefficient for a certain product measures the amount of production induced, both directly and indirectly, by an additional unit of final demand for that product.

- The value added requirement coefficient fell from 0.775 in 2021 to 0.729 in 2022, while the import requirement coefficient (0.225 → 0.271) rose.

Production, Value Added and Import Requirement Coefficients, by Commodity

	Production Requirement Coefficients			Value Added Requirement Coefficients			Import Requirement Coefficients		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Agricultural, forest, and fishery products	1.867	1.875	1.924	0.851	0.832	0.785	0.149	0.168	0.215
Mined and quarried products	2.022	2.087	2.135	0.876	0.844	0.800	0.124	0.156	0.200
Manufactured goods	1.973	1.958	1.945	0.668	0.624	0.560	0.332	0.377	0.440
Consumer goods	2.112	2.149	2.138	0.724	0.692	0.643	0.276	0.309	0.358
Basic materials	1.869	1.808	1.770	0.617	0.560	0.475	0.383	0.440	0.526
Assembled and processed products	2.003	2.010	2.027	0.673	0.638	0.591	0.327	0.362	0.410
Manufacturing services, repair services of industrial equipment	1.839	1.886	1.939	0.881	0.859	0.836	0.119	0.141	0.164
Electricity, gas, and water supply, waste management	1.613	1.655	1.665	0.658	0.557	0.336	0.342	0.443	0.664
Construction	1.970	1.980	2.006	0.833	0.802	0.772	0.167	0.198	0.229
Services	1.672	1.677	1.697	0.889	0.872	0.847	0.111	0.128	0.154
Wholesale and retail trade, transportation	1.768	1.772	1.762	0.860	0.840	0.807	0.141	0.161	0.193
Producer services	1.596	1.605	1.644	0.918	0.906	0.886	0.082	0.095	0.114
Social services	1.527	1.532	1.540	0.903	0.886	0.864	0.098	0.114	0.137
Consumer services	2.086	2.085	2.090	0.830	0.807	0.781	0.170	0.193	0.220
Other	2.663	2.659	2.620	0.875	0.847	0.835	0.125	0.153	0.165
Total	1.804	1.806	1.818	0.806	0.775	0.729	0.194	0.225	0.271

8. Employment Structure

- The number of employed persons (full-time equivalent) amounted to 25,432 thousands in 2022, having increased by 2.9% from 24,724 thousands in 2021.
 - The share accounted for by regular workers rose (58.6% → 59.6%), while that of temporary or daily workers (16.0% → 15.4%) and of self-employed or unpaid family workers (25.4% → 25.0%) both declined.
 - By commodity, the share of employment accounted for by services (71.0% → 71.1%) was higher than that in 2021, while that of manufactured goods (14.9% → 14.8%) and of construction (7.5% → 7.4%) was lower.

Composition of Employment, by Type of Worker and Commodity¹⁾

(Unit: thousand persons, %)

	2020		2021		2022	
By Type of Worker						
Regular workers	14,223	(58.2)	14,489	(58.6)	15,163	(59.6)
Temporary or daily workers	3,953	(16.2)	3,962	(16.0)	3,906	(15.4)
Self-employed or unpaid family workers	6,260	(25.6)	6,273	(25.4)	6,363	(25.0)
By Commodity						
Agricultural, forest, and fishery products	1,338	(5.5)	1,349	(5.5)	1,412	(5.6)
Mined and quarried products	12	(0.0)	11	(0.0)	11	(0.0)
Manufactured goods	3,690	(15.1)	3,678	(14.9)	3,773	(14.8)
Consumer goods	831	(3.4)	838	(3.4)	825	(3.2)
Basic materials	999	(4.1)	1,016	(4.1)	1,057	(4.2)
Assembled and processed products	1,439	(5.9)	1,411	(5.7)	1,442	(5.7)
Manufacturing services, repair services of industrial equipment	421	(1.7)	412	(1.7)	450	(1.8)
Electricity, gas, and water supply, waste management	257	(1.1)	277	(1.1)	258	(1.0)
Construction	1,771	(7.2)	1,848	(7.5)	1,888	(7.4)
Services	17,368	(71.1)	17,561	(71.0)	18,090	(71.1)
Wholesale and retail trade, transportation	4,568	(18.7)	4,537	(18.3)	4,596	(18.1)
Producer services	4,709	(19.3)	4,869	(19.7)	5,031	(19.8)
Social services	4,775	(19.5)	4,953	(20.0)	5,170	(20.3)
Consumer services	3,316	(13.6)	3,202	(13.0)	3,293	(12.9)
Other	0	(0.0)	0	(0.0)	0	(0.0)
Total	24,437	(100.0)	24,724	(100.0)	25,432	(100.0)

Note: 1) The figures in parentheses represent the shares of total employment.

9. Employment Inducement Effects

□ The workers coefficient* in 2022 was 4.4 persons on average.

* The number of total workers per billion won of output.

- The coefficient of agricultural, forest, and fishery products (19.4 persons) was the highest, followed by services (6.8 persons) and construction (5.7 persons).

□ The workers requirement coefficient* was 8.1 persons in 2022.

* The number of total extra workers created by an additional 1 billion won increase in final demand, which measures the direct and indirect impact of changes in final demand on employment.

- The coefficient of services (10.0 persons) was more than twice as high as that of manufactured goods (4.9 persons).

Total Workers Requirement Coefficients & Employees Requirement Coefficients

(person per billion won)

	Total Workers Coefficients			Total Workers Requirement Coefficients		
	2020	2021	2022	2020	2021	2022
Agricultural, forest, and fishery products	20.8	18.2	19.4	25.3	22.3	23.4
Mined and quarried products	3.0	2.3	2.2	8.3	7.3	7.0
Manufactured goods	2.0	1.7	1.5	6.3	5.4	4.9
Consumer goods	2.9	2.7	2.4	10.6	9.6	8.8
Basic materials	1.5	1.2	1.1	4.9	4.0	3.4
Assembled and processed products	1.8	1.5	1.4	5.3	4.7	4.4
Manufacturing services, repair services of industrial equipment	5.9	5.4	4.8	10.0	9.3	8.6
Electricity, gas, and water supply, waste management	2.1	1.9	1.4	4.7	4.5	3.6
Construction	6.3	6.2	5.7	10.5	9.9	9.2
Services	7.7	7.1	6.8	11.5	10.6	10.0
Wholesale and retail trade, transportation	9.2	8.1	7.5	13.4	11.9	10.9
Producer services	4.7	4.4	4.3	7.7	7.2	7.1
Social services	10.1	9.6	9.3	12.8	12.0	11.5
Consumer services	12.2	11.1	9.7	18.2	16.6	14.8
Other	0.0	0.0	0.0	11.3	9.8	9.6
Total	5.4	4.8	4.4	9.7	8.7	8.1